PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT

1047 Richmond Road, Ottawa, Ontario

CO972.00

FINAL REPORT

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Prepared for:

FENGATE ASSET MANAGEMENT

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1.0 EXECUTIVE SUMMARY

Terrapex was retained by Fengate Asset Management (the Client) to conduct a Phase Two Environmental Site Assessment (ESA) on a portion of the property located at 1047 Richmond Road, Ottawa, ON (the Phase Two Property, hereinafter also referred to as the Site).

It is understood that the Client intends on redeveloping the Site to a more sensitive property use (from commercial to mixed residential and commercial, or parkland use), which will require Phase One and Phase Two Environmental Site Assessments (ESAs) compliant with Ontario Regulation (O. Reg. 153/04) under the Environmental Protection Act (*Records of Site Condition – Part XV.1 of the Act*) such that a Record of Site Condition (RSC) could be filed for the Site.

The date the last work on all of the planning of the site investigation, conducting the site investigation and reviewing and evaluating the information gathered through the site investigation required for the Phase Two ESA (per Section 35.5 (1) (a) of O. Reg. 153/04) is April 4, 2025, the date the last monitoring event was conducted at the Site.

The Certification Date (per Section 17 (3) of O. Reg. 153/04) is March 18, 2025, the last day on which sampling was done that confirmed the property meets the applicable Site Condition Standard, in relation to a contaminant.

A Phase One ESA was completed by Terrapex in June 2025 in accordance with the requirements of O. Reg. 153/04; the date of last work being June 11, 2025. The Phase One ESA identified seven Areas of Potential Environmental Concern (APECs) at the Site, resulting from past uses of the Site as a car dealership and autobody shop. The rationale pertaining to the selection of contaminants of potential concern (COPCs) relating to each of the identified APECs on the Phase One Property is provided in the following table.

CONTAMINANTS OF POTENTIAL CONCERN (COPC) RATIONALE

APEC	PCA	COPCs	Rationale
APEC 1	PCA 1: 10 - Commercial Autobody Shops	PHCs BTEX VOCs	COPCs related to the historical autobody shop operations at the Site
APEC 2	PCA 2: 28 - Gasoline and Associated Products Storage in Fixed Tanks	PHCs BTEX Metals	COPCs related to the historical storage of waste oil at the Site
APEC 3	PCA 3: 28 - Gasoline and Associated Products Storage in Fixed Tanks	PHCs BTEX Metals	COPCs related to the historical storage of waste oil at the Site
APEC 4	PCA 4: 39 - Paints Manufacturing, Processing and Bulk Storage	VOCs PHCs Metals Hydride-Forming Metals ORPs	COPCs related to the historical paint booth associated with the commercial body shop

APEC	PCA	COPCs	Rationale
APEC 5	PCA 5: 30 - Importation of Fill Material of Unknown Quality	PHCs Metals Hydride-Forming Metals ORPs	COPCs related to fill of unknown quality at the Site
APEC 6	PCA 6: 55 - Transformer Manufacturing, Processing and Use	PHCs PCBs	COPCs related to the former pole-mounted transformer at the Site
APEC 7	PCA 7: Other - De-icing Activities	SAR EC Na Cl	COPCs related to salt use at the Site

The Phase Two ESA was conducted to investigate the environmental quality of soil and groundwater at and in the vicinity of the APECs identified at the Site. The Phase Two ESA consisted of the completion of one test pit and 15 boreholes to a maximum depth of 15.5 m below ground surface (bgs), installation of 12 groundwater monitoring wells, and the collection of soil and groundwater samples for laboratory analysis of COPCs identified for the Site. A summary of the sampling locations for each APEC and potentially affected media is provided in the table below.

SUMMARY OF SAMPLING LOCATIONS

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SAMPLING LOCATIONS	
			SOIL (SAMPLE DEPTH)	GROUNDWATER (SCREENED INTERVAL)
APEC 1	Soil & Groundwater	PHCs and BTEX	MW21-01 SA3 (1.2- m bgs) MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-03 SA2 (0.6-1.2 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) MW21-19 SA1 (0.2-0.6 m bgs) MW21-20 SA2 (0.8-1.5 m bgs) MW22-05 SA4 (2.4-3.0 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs) MW21-11 (2.5-5.5 m bgs) MW21-19 (2.7-5.1 m bgs) MW21-20 (3.3-5.2 m bgs) MW22-05 (7.6-10.7 m bgs)
		VOCs	MW21-01 SA3 (1.2- m bgs) MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) MW21-19 SA1 (0.2-0.6 m bgs) MW21-20 SA2 (0.8-1.5 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs) MW21-11 (2.5-5.5 m bgs) MW21-19 (2.7-5.1 m bgs) MW21-20 (3.3-5.2 m bgs) MW22-05 (7.6-10.7 m bgs)
APEC 2	Groundwater	PHCs and BTEX	NA	MW21-02 (4.0-7.0 m bgs) MW22-04 (4.9-7.9 m bgs)
		Metals	NA	MW21-02 (4.0-7.0 m bgs)

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SAMPLING LOCATIONS	
			SOIL (SAMPLE DEPTH)	GROUNDWATER (SCREENED INTERVAL)
APEC 3	Soil & Groundwater	PHCs and BTEX	MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-03 SA2 (0.6-1.2 m bgs) MW22-04 SA1 (0-0.8 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs) MW22-04 (4.9-7.9 m bgs) MW202 (6.0-9.0 m bgs)
		Metals	MW21-02 SA2 (0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs) BH21-13 SA2 (0.8-1.5 m bgs) BH21-13 SA3 (1.5-2.1 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs)
APEC 4	Soil & Groundwater	PHCs	MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-19 SA1 (0.2-0.6 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs) MW21-19 (2.7-5.1 m bgs)
		VOCs	MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-19 SA1 (0.2-0.6 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs) MW21-19 (2.7-5.1 m bgs)
		Metals	MW21-02 SA2 0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs)
		ORPs	MW21-02 SA2 0.6-1.2 m bgs) MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-03 SA2 (0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs)
		Hydride-Forming Metals	MW21-02 SA2 0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs)
APEC 5	Soil	PHCs and BTEX	MW21-01 SA3 (1.2- 1.8 m bgs) MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-03 SA2 (0.6-1.2 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) MW21-19 SA1 (0.2-0.6 m bgs) MW21-20 SA2 (0.8-1.5 m bgs) BH21-25 SA4 (3.1-3.4 m bgs) MW22-04 SA1 (0-0.8 m bgs) MW22-05 SA4 (2.4-3.0 m bgs) MW23-1 SA1 (0.2-0.6 m bgs) MW23-2 SA2 0.5-1.2 m bgs) MW23-3 SA2 (0.6-0.9 m bgs) TP21-01 (0-0.2 m bgs)	NA

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SAMPLING LOCATIONS	
			SOIL (SAMPLE DEPTH)	GROUNDWATER (SCREENED INTERVAL)
APEC 5 (cont'd)	Soil	Metals	MW21-01 SA1 (0.1-0.6 m bgs) MW21-02 SA2 (0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) MW21-11 SA3 (1.5-2.3 m bgs) BH21-12 SA2 (0.6-1.2 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) BH21-13 SA2 (1.5-2.3 m bgs) BH21-13 SA3 (1.5-2.3 m bgs) MW23-1 SA1 (0.2-0.6 m bgs) MW23-2 SA2 0.5-1.2 m bgs) MW23-3 SA2 (0.6-0.9 m bgs) SA1A (0.6-0.9 m bgs) SA2A (0.6-0.9 m bgs) SA3A (0.6-0.9 m bgs) SA4A (0.6-0.9 m bgs)	NA
		Hydride-Forming Metals	MW21-01 SA1 (0.1-0.6 m bgs) MW21-02 SA2 (0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) MW21-11 SA3 (1.5-2.3 m bgs) BH21-12 SA2 (0.6-1.2 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) BH21-13 SA2 (1.5-2.3 m bgs) BH21-13 SA3 (1.5-2.3 m bgs) MW23-1 SA1 (0.2-0.6 m bgs) MW23-2 SA2 0.5-1.2 m bgs) MW23-3 SA2 (0.6-0.9 m bgs) SA1A (0.6-0.9 m bgs) SA2A (0.6-0.9 m bgs) SA3A (0.6-0.9 m bgs) SA4A (0.6-0.9 m bgs)	NA

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SAMPLING LOCATIONS	
			SOIL (SAMPLE DEPTH)	GROUNDWATER (SCREENED INTERVAL)
APEC 5 (cont'd)	Soil	ORPs	MW21-01 SA1 (0.1-0.6 m bgs) MW21-01 SA3 (1.2-1.8 m bgs) MW21-02 SA2 (0.6-1.2 m bgs) MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-03 SA2 (0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) MW21-11 SA3 (1.5-2.3 m bgs) BH21-12 SA2 (0.6-1.2 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) BH21-13 SA2 (0.8-1.5 m bgs) BH21-13 SA3 (1.5-2.1 m bgs) MW23-1 SA1 (0.2-0.6 m bgs) MW23-2 SA2 0.5-1.2 m bgs) MW23-3 SA2 (0.6-0.9 m bgs) SA1A (0.6-0.9 m bgs) SA2A (0.6-0.9 m bgs) SA3A (0.6-0.9 m bgs) SA4A (0.6-0.9 m bgs)	NA
APEC 6	Soil	PHCs	TP21-01 (0.0.2 m bgs)	NA
		PCBs	TP21-01 (0-0.2 m bgs)	NA
APEC 7	Soil & Groundwater	SAR	MW21-01 SA1 (0.1-0.6 m bgs) MW21-01 SA3 (1.2-1.8 m bgs) MW21-02 SA2 (0.6-1.2 m bgs) MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-03 SA2 (0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) MW21-11 SA3 (1.5-2.3 m bgs) BH21-12 SA2 (0.6-1.2 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) BH21-13 SA2 (0.8-1.5 m bgs) BH21-13 SA3 (1.5-2.1 m bgs) MW23-1 SA1 (0.2-0.6 m bgs) MW23-2 SA2 0.5-1.2 m bgs) MW23-3 SA2 (0.6-0.9 m bgs) SA1A (0.6-0.9 m bgs) SA2A (0.6-0.9 m bgs) SA3A (0.6-0.9 m bgs) SA4A (0.6-0.9 m bgs)	NA

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SAMPLING LOCATIONS	
			SOIL (SAMPLE DEPTH)	GROUNDWATER (SCREENED INTERVAL)
APEC 7 (cont'd)	Soil & Groundwater	EC	MW21-01 SA1 (0.1-0.6 m bgs) MW21-02 SA2 (0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) MW21-11 SA3 (1.5-2.3 m bgs) BH21-12 SA2 (0.6-1.2 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) BH21-13 SA2 (1.5-2.3 m bgs) BH21-13 SA3 (1.5-2.3 m bgs) MW23-1 SA1 (0.2-0.6 m bgs) MW23-2 SA2 0.5-1.2 m bgs) MW23-3 SA2 (0.6-0.9 m bgs) SA1A (0.6-0.9 m bgs) SA2A (0.6-0.9 m bgs) SA3A (0.6-0.9 m bgs) SA4A (0.6-0.9 m bgs)	NA
		Na	NA	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs) MW21-11 (2.5-5.5 m bgs) MW23-1 (10.2-13.2 m bgs) MW23-2 (11.9-14.9 m bgs) MW23-3 (11.6-14.6 m bgs)
		Cl	NA	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs) MW21-11 (2.5-5.5 m bgs) MW23-1 (10.2-13.2 m bgs) MW23-2 (11.9-14.9 m bgs) MW23-3 (11.6-14.6 m bgs)

NA: *Not applicable*
BTEX: *Benzene, toluene, ethylbenzene, xylene*
PHCs: *Petroleum hydrocarbons (fractions F1 to F4)*
PAHs: *Polycyclic aromatic hydrocarbons*
VOCs: *Volatile Organic Compounds*
As, Sb, Se: *Hydride forming metals*
EC: *Electrical conductivity*
SAR: *Sodium absorption ratio*
ORPs *Other regulated parameters including Hexavalent Chromium (Cr (VI)), Mercury (Hg), Methyl Mercury, Cyanide (CN-), and the following media-specific parameters:*

- *Soil: hot water soluble Boron (B-HWS), Electrical Conductivity (EC), Sodium Adsorption Ratio (SAR), pH*
- *Groundwater: Sodium (Na), Chloride (Cl-)*

Due to the proposed development of the Site for mixed residential and commercial property use, the generic full-depth Ministry of the Environment, Conservation and Parks (MECP) Site Condition Standards (SCS) applicable to residential property use for shallow soils in a non-potable groundwater condition with coarse-textured soil (Table 7 SCS) was selected to evaluate soil and groundwater quality at the Site.

Based on field observations and an evaluation of soil and groundwater quality data, the following conclusions are provided:

- The stratigraphy encountered in the boreholes generally consisted of sand and silty sand fill overlying limestone bedrock at depths between 0.9 and 3.4 m bgs with some silty clay observed where bedrock was deeper.
- The two groundwater monitoring events that included the most monitoring wells were November 2021 and June 2024. On November 30, 2021, the depth to groundwater was identified between 3.0 m bgs (MW21-11) and 7.63 m bgs (MW21-1). On June 24, 2024, the depth to groundwater ranged between 0.80 m bgs (MW21-3) and 7.52 m bgs (MW22-5).
- The findings of the November 2021 and June 2024 monitoring events indicated that the groundwater flow was generally towards the north/northeast with a component of flow to the southeast. It would be anticipated that groundwater flow would generally be toward the Ottawa River, to the north/northwest of the Site. However, the potential influence from the open transit channel cut into the bedrock immediately south of the Site which could also have temporarily been intensified by active dewatering for construction purposes during the Phase Two ESA, may also have an impact on the local groundwater flow regime.
- Hydrocarbon sheen was noted at monitoring well MW22-04. WSP reported that sheen was observed at that location during bedrock coring during the installation of the well. Terrapex noted sheen at the well during monitoring and sampling conducted June 27, 2024 (i.e., prior to remediation).
- The majority of the soil samples had concentrations metals, HFMs, ORPs, PAHs, BTEX, PHCs, VOCs, and PCBs that met the applicable Table 7 SCS with the exception of sample MW23-3 SA2 which exceeded the Table 7 SCS for cobalt for a sample collected between 0.6 and 0.9 m bgs.
- The majority of the groundwater samples had concentrations metals, HFMs, ORPs, PAHs, BTEX, PHCs and VOCs that met the applicable Table 7 SCS with the exception of sample at MW24-02 (screened between 4.9 and 7.9 m bgs) which exceeded the Table 7 SCS for PHC F2, F3 and/or F4 fractions during various sampling events.

Based on the findings of the Phase Two ESA, the environmental quality of soil and groundwater beneath the Site did not initially meet the Table 7 SCS. Therefore, a RSC could not be filed for the Site unless a full-depth soil remediation and/or a risk assessment is completed in accordance with the requirements of O. Reg. 153/04.

An excavation to remediate the above soil impacts at MW23-3 was conducted by WSP on November 17, 2023. The remediation activities included the excavation of contaminant-impacted soil and subsequent removal off-site, and verification sampling.

An estimated 8.2 m^3 of impacted soil was excavated and removed from the Phase Two Property on November 17, 2023 (last date of remediation). No soil was treated on the Phase Two Property. Soils were excavated and immediately transported off-site to an approved waste disposal facility. Confirmatory soil samples were collected from the walls of the excavation and were submitted for chemical analysis to confirm the quality of soil remaining on the Phase Two Property.

An area estimated at 9 m^2 was excavated, centered on MW23-3. Five confirmatory soil samples (including one duplicate sample) were collected from the side walls of the remedial excavation. The excavation was extended to bedrock and therefore no floor samples were collected. The samples were submitted to AGAT Laboratories for analyses of metals, HFMs, and ORPs. The final confirmatory soil results were all less than the Table 7 SCS.

An excavation to remediate the above-mentioned groundwater impacts at MW22-04 was conducted by Terrapex between August 19 and September 20, 2024. The excavation centered around monitoring well MW22-04 and was extended to the northwestern and northeastern site boundaries and the next closest sampling locations with soil and/or groundwater concentrations less than the Table 7 SCS (i.e., MW21-02 and MW21-03).

Between August 19 and 28, 2024, soil from the remediation area was excavated and loaded directly onto trucks for transfer off-site. A total of 2,939.97 metric tonnes (MT) was sent for beneficial re-use for an aggregate site rehabilitation at the Lafarge Canada Inc. (Lafarge) quarry located at 5121 Hawthorne Road, Ottawa, Ontario. A total of 23.02 MT of soil was sent off-site for disposal to the Waste Connections of Canada (WCC) landfill located at 3354 Navan Road, Ontario, Ontario.

Bedrock was encountered throughout the remedial area at depths ranging from approximately 1.5 to 2.7 m bgs. To progress the excavation, the bedrock was broken into smaller pieces by blasting to reach the target depth of 9.0 m bgs to excavate the entire screened interval of MW22-04. Based on surveys, it was estimated that 1,719.7 m^3 of rock was removed from the Site. No free-flowing product was observed during or upon completion of the remediation activities. Removal of rock from the Phase Two Property was completed on September 20, 2024. A total of 35,000 L of water was from the excavation was treated as part of the remediation.

Following completing the remedial excavation activities, the excavation was backfilled using imported gravel fill. The gravel fill was new material imported from Lafarge, located 998 Moodie Drive in Ottawa, Ontario. Based on information provided by Taggart, a total of 3,462.95 MT of select subgrade material (SSM) gravel chips, and 1,795.24 MT of 0-5 mm limestone screening material were imported between October 1 and 7, 2024.

On December 2, 2024, new monitoring well MW202 was installed within the excavation to confirm the post-remediation groundwater conditions. Post-remediation groundwater samples were collected from MW202 on December 19, 2024, and March 18, 2025. During both events, concentrations of BTEX, PHC F1-F4 and VOCs in all groundwater samples were less than the Table 7 SCS. Further, all parameters were not detected at the laboratory reportable detection limit (RDL).

The primary exposure pathways for the identified soil and groundwater impacts would be dermal contact, ingestion and inhalation of particles. There is the possibility of inhalation of vapours from the lighter, volatile PHC F2 fraction in the groundwater. As the Phase Two Property is located in an urban area where groundwater is not extracted for potable consumption, these pathways are not considered viable. There are no surface water bodies or areas of sediment present on the Phase Two Property, and as such these do not represent contaminant sources. Completed ecological pathways include the following: plants and soil invertebrates may be in direct soil contact (root uptake or dermal and/or ingestion), indirect soil contact (inhalation of particulate in ambient air); mammals and birds may be in direct contact with impacted soil, ingestion of prey items, inhalation of particulates in ambient air. Off-site aquatic reception may be exposed through uptake by aquatic life and/or ingestion or direct contact with impacted surface water.

As a result of the findings of the Phase Two ESA and subsequent remediation of impacted soil and groundwater, sources of contaminants of concern have been removed, and as such areas of potential environmental concern (APECs) are no longer present at the Phase Two Property. Therefore, release mechanisms and transport pathways are highly unlikely and no appreciable impacts to the subsurface are inferred. Consequently, no further assessment or remedial actions are required at the Phase Two Property in preparation for the proposed redevelopment.

Based on the findings of the Phase Two ESA and the subsequent remediation programs, the environmental quality of soil and groundwater at the Site is deemed to meet the applicable Table 7 SCS. Therefore, a RSC may be filed for the Site in accordance with the requirements of O. Reg. 153/04.

2.0 INTRODUCTION

Terrapex was retained by Fengate Asset Management (Fengate) to conduct a Phase Two Environmental Site Assessment (ESA) of a portion of the property located at 1047 Richmond Road in Ottawa, Ontario (the Phase 1 Development Parcel, the Phase One Property, hereinafter also referred to as the Site).

It is understood that the Client intends on redeveloping the Site to a more sensitive property use (from commercial to mixed residential and commercial or parkland use), which will require Phase One and Phase Two Environmental Site Assessments (ESAs) compliant with Ontario Regulation (O. Reg. 153/04) under the Environmental Protection Act (*Records of Site Condition – Part XV.1 of the Act*) such that a Record of Site Condition (RSC) could be filed for the Site.

The objective of the investigation was to assess Areas of Potential Environmental Concern (APECs) identified during a previous Phase One ESA work program at the Site to identify the location and concentration of contaminants in the soil or groundwater on, in, or under the Phase Two property.

This report was prepared to update previous Phase Two ESAs completed for the Site by WSP Canada Inc. (WSP). Where indicated, Terrapex has relied on information / data from the previous report and has updated information where needed based on work conducted by Terrapex.

The findings of the Phase One ESA are documented in Terrapex's report entitled *Draft Phase One Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario*, prepared for Fengate by Terrapex and dated July 29, 2025.

2.1 SITE DESCRIPTION

Information regarding the location and identification of the Phase One Property and the party authorizing this study is provided in the table below. Refer to Figure 1 for the location of the Site, and to Figure 2 for the general layout and features of the Site at the time of the site reconnaissance.

PHASE TWO PROPERTY INFORMATION

Address:	1047 Richmond Road, Ottawa, Ontario
Current Plan of Survey:	*PART OF LOTS 24 AND 25, CONCESSION 1 (OTTAWA FRONT) GEOGRAPHIC TOWNSHIP OF NEPEAN CITY OF OTTAWA,* surveyed by Annis, O'Sullivan, Vollebekk Ltd., dated August 6, 2025
Property Identification Number:	Parts of 03970-0109 (LT) and 03970-0105 (LT), as indicated on the annotated plan of survey provided in Appendix I
Legal Description:	PART OF LOTS 24 AND 25, CONCESSION 1 (OF), AS IN N545545, SAVE AND EXCEPT PART 1 ON PLAN 5R-3653, OTTAWA; and, PT LT 25, CON 10F, AS IN N707740 ; OTTAWA / NEPEAN

UTM Coordinates (centre of site, NAD83):	18T 439,032 m 5,024,858 m
Approximate Site Area:	Part 1 – 74.3 m^2 (future conveyance to City) Part 2 – 48.2 m^2 (future transit stop) Part 3 – 1,000 m^2 (future dedicated parkland) Part 4 – 5,034 m^2 (future 36-storey mixed use building) Part 6 - 29.0 m^2 (future at grade area with intake / exhaust grate) **Total – 6,185.5 m^2**
Structures:	None
Occupants (current):	None
Other facilities of note:	None

The plan of survey for the Site is provided in Appendix I.

2.2 PROPERTY OWNERSHIP

Contact information for the registered owner of the Site and the party authorizing this Phase Two ESA is provided in the table below.

Name and Address of Registered Owner:	1047 Richmond Nominee Inc. c/o Fengate Asset Management 2275 Upper Middle Road East, Suite 700 Oakville, Ontario, L6H 0C3
Name and Address of Authorizing Party:	Alison Kimmell Managing Director, Development and Portfolio Management 1047 Richmond Nominee Inc., c/o Fengate Asset Management 2275 Upper Middle Road East, Suite 700 Oakville, Ontario, L6H 0C3

2.3 CURRENT AND PROPOSED FUTURE USES

The Site was last used as car dealership and autobody shop, which is a commercial property use per O. Reg. 153/04. (Records of Site Condition – Part XV.1 of the Act).

The Client is proposing the development of the Site with mixed commercial and residential development, which is a residential property use per O. Reg. 153/04.

2.4 APPLICABLE SITE CONDITION STANDARDS

Generic Site Condition Standards for evaluating laboratory analytical results for soil and groundwater were determined on the basis of Site-specific criteria specified in O. Reg. 153/04, and are summarized below:

SITE-SPECIFIC CRITERIA TO DETERMINE APPLICABLE SITE CONDITION STANDARDS

Environmental Sensitivity:	pH of surface soil less than 5 or greater than 9? pH of subsurface soil less than 5 or greater than 11?	No (6.88-7.53) No (7.43-7.68)
	Includes, or within 30 m of, an area of natural significance?	No
	Includes, or within 30 m of, a body of water?	No
Stratigraphy and Hydrogeology:	Is bedrock shallower than 2 m beneath the site?	Yes
	Does the site lend itself to the application of stratified SCS?	No
	Is the site located in an area designated in the municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of groundwater?	No
	Is potable water at the Site, and all other properties wholly or partially within 250 m radius of the Site, supplied by municipal drinking water system as defined in the *Safe Drinking Water Act, 2002*?	Yes
	Is the Site, or any other property wholly or partially within 250 m radius of the Site, equipped with a well that is used or intended for use as a source of water for human consumption or for agriculture?	No
	Has appropriate tier municipalities consented to the use of non-potable site condition standards?	Yes
	Is at least ⅓ of the volume of soil beneath the property coarse textured?	Yes
Proposed Land Use:	Agricultural or Other; Residential; Parkland; Institutional; Industrial; Commercial; Community use?	Residential and Parkland

Based on the above, the Table 7 SCS of the April 15, 2011 MECP *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* are considered appropriate for evaluating laboratory analytical results.

In accordance with the requirements of Section 35 of O. Reg. 153/04, notification of the intent to use standards corresponding to a non potable groundwater condition was provided to the Clerk of the City of Ottawa on June 19, 2025, of the intent to use standards corresponding to a non potable groundwater condition. In a letter dated July 22, 2025, the municipality confirmed it did not object to the application of non potable groundwater site condition standards at the Site. A copy of the notification correspondence is provided in Appendix II.

3.0 BACKGROUND INFORMATION

3.1 PHYSICAL SETTING

3.1.1 Water Bodies & Areas of Natural Significance

Based on the review of the aerial photographs, satellite images, and topographic maps completed as part of the previous Phase One ESA, a summary of water bodies, areas of natural significance, and groundwater sensitivity information within the Phase One study area is provided in the table below, and on Figure 3.

WATER BODIES AND AREAS OF NATURAL SIGNIFICANCE

Surface Water:	The Site does not include, and is not adjacent to, or within 30 m of a water body, as defined in O. Reg. 153/04. The nearest water body is the Ottawa River situated approximately 225 m to the north of the Site.
Area of Natural Significance:	None at, or within 30 m of the Site.
Wellhead and Intake Protection Zones	Wellhead protection areas are not located within the Phase One Property, or within the Phase One Study Area. However, the entire Study Area is located in an intake protection area.
Municipal Drinking Water System	The presence of potable water supply wells within the Phase One Study Area infers that not all properties within the Study Area may be connected to a municipal drinking water system. Confirmation of non-potable conditions with the Municipality is required.

3.1.2 Topography & Surface Water Drainage

Based on a review of the site reconnaissance records, the topographic map of the Site, and Phase One Study area determined as part of the previous Phase One ESA, a summary of topography and surface water drainage is presented in the table below:

SUMMARY OF TOPOGRAPHY & SURFACE WATER DRAINAGE

Site & Regional Topography:	The Site is generally flat. No major topographic features are mapped on the Site. The Phase One Study Area slopes uniformly to the north toward the Ottawa River (located approximately 225 m north of the Site)
Approximate Elevation:	64 m above sea level (asl).
Surface Water Drainage:	Overland.

3.2 PAST INVESTIGATIONS

Terrapex was provided with three previous Phase One ESAs for review, one entitled *Phase One Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario*, prepared for Fengate Development Holdings LP by Golder Associates Ltd. (Golder), and dated November 2021; and, two entitled *Phase One Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario*, prepared for 1047 Richmond Nominee Inc. by WSP Canada Inc. (WSP), dated May 2024.

The 2021 Golder Phase One ESA included the whole of the 1047 Richmond Road property, whereas the 2024 WSP Phase One ESAs segregated the property into smaller parcels (one report for each of Parts 2&3; and, Parts 4,5,6&7 as delineated in the plan of survey in Appendix I). Each of the previous Phase One ESAs informed the Terrapex 2025 Phase One ESA conducted for the Phase 1 Development Parcel.

A review of the previous Phase One ESAs found that the 1047 Richmond Road property operated as a new and used car sales and service facility between 1959 and 2022. A summary of the observations and pertinent findings are provided below:

- The property was occupied by a 1,600 m^2, two-storey slab-on-grade commercial building that was used as an office, showroom, automotive service garage, body shop, and paint booth. The majority of the former building was located on the current Site. Vehicles were stored throughout the property.
- Four ASTs were observed on the property. Three were observed within the garage for the storage of motor oil (although exact locations were not provided) and one for the storage of waste oil located outside to the north of the building. Staining was observed at that location and within the garage area.
- Fifteen hoists were observed in the garage area, one of which was hydraulic (not in-ground). However, evidence of former in-ground hydraulic hoists was observed.
- The property was fully serviced with municipally supplied potable water, sanitary and storm sewers, gas and communications (all of which were subsurface utilities). Suspended transformers were located in the eastern portion of the Site, providing overhead hydro service to the building.
- Building heating was from natural gas.
- References were made to an oil/water separator (OWS), a service station with associated USTs, and a waste oil UST. These references were based on as-built drawings provided for a property other than the Site and are assumed to not be representative based on other information collected during the Phase One ESA.
- Property-use in the vicinity of the Site was noted to be residential and commercial. No Potentially Contaminating Activities (PCAs) were observed off-Site on the surrounding properties during the Site reconnaissance. However, historical PCAs in the vicinity of the Site were noted.

Terrapex was also provided with three previous Phase Two ESAs for review:

- *Phase Two Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario*, prepared for LPF Development Fund 3 LP by Golder, and dated February 2022;

- *Phase Two Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario*, prepared for 1047 Richmond Nominee Inc. by WSP, and dated September 2024; and,
- *Phase Two Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario*, prepared for 1047 Richmond Nominee Inc. by WSP, and dated May 2024.

Historical soil and groundwater analytical results included in these reports have been used to characterize the environmental conditions at the Site and relevant results have been incorporated into this report. Understanding that some previously investigated areas were not located on the Phase 1 Development property, the findings and analytical results of off-Site investigations have been omitted from this report.

Full copies of the pertinent previous environmental reports/documents are included in Appendix III.

Based on Terrapex's review of the reports provided in Appendix III, previous investigations conducted by Golder and WSP at the Site were O. Reg. 153/04 compliant at the time the investigations were undertaken and, as such, findings and data collected and presented in the previous reports are considered reliable for the purpose of evaluating soil and groundwater conditions in APECs at the Site.

Based on Terrapex's review of previous results, it was noted that sample nomenclature was not always consistent (e.g., BH21-1, MW21-1, 21-1 used interchangeably). To avoid confusion, Terrapex has referenced samples collected from boreholes (i.e., where no monitoring well was installed) as 'BH' (e.g., BH21-12), and samples collected from monitoring wells as 'MW' (e.g., MW22-04). Original sample IDs provided by Golder / WSP are also provided in the attached tables.

Further discussion about previous results and their interpretation are provided in the relevant sections that follow.

3.2.1 Summary of Phase One ESA

A Phase One ESA of the Site was carried out by Terrapex in June 2025 in accordance with the requirements of O. Reg. 153/04, as amended, to support the redevelopment of the Site for residential purposes. The Phase One and Two Properties are identical.

The Phase One ESA identified six potentially contaminating activities (PCAs) on the Phase One Property and 17 PCAs within the Phase One Study Area (refer to Table 2, appended). Through an evaluation of the information gathered from the records review, interviews, and the site reconnaissance, a total of seven APECs were identified within the Phase One Property, as summarized in Table 3 (also appended). The Phase One Conceptual Site Model (CSM) is presented in Section 4.3.

4.0 SCOPE OF INVESTIGATION

4.1 OVERVIEW OF SITE INVESTIGATION

The scope of Phase Two assessment comprised the following:

- Preparation of a Sampling and Analysis Plan that identified target sampling locations with associated rationale, a proposed laboratory analytical program, and the number and type of Quality Control (QC) samples.
- Drilling of three boreholes by Golder between September 21 and 24, 2021, to depths ranging between 7.1 and 7.6 m bgs, all of which were completed as groundwater monitoring wells.
- Drilling of six boreholes by Golder between November 11 and December 21, 2021, to depths ranging between 1.7 and 5.5 m bgs, of which three were completed as monitoring wells.
- One test pit was excavated by Golder on November 22, 2021 to a depth of 0.15 m bgs.
- Drilling of two boreholes by Golder between May 9 and 11, 2022, to depths ranging between 7.9 and 10.7 m bgs, each of which were completed as monitoring wells.
- Drilling of three boreholes by WSP between May 15 and 17, 2023, to depths ranging between 13.9 and 15.6 m bgs, each of which were completed as monitoring wells.
- Drilling of one borehole by Terrapex on December 2, 2025, to a depth of 9.0 m bgs, each of which was completed as a monitoring well.
- Collection of soil samples and logging of visual, olfactory and tactile soil characteristics.
- Screening of total organic vapour (TOV) and combustible soil vapour (CSV) concentrations in soil.
- Measurement of the elevation of each monitoring well relative to a geodetic benchmark.
- Measurement of groundwater conditions within each monitoring well on various dates between October 2021 and April 2025.
- Collection of groundwater samples from the monitoring wells on various dates between October 2021 and March 2025.
- Review and assessment of all available chemical data pertaining to the subject Site, including (but not necessarily limited to) the following contaminants of potential concern (COPCs):
    - Metals
    - Hydride-Forming Metals (HFMs); namely Antimony (Sb), Arsenic (As), and Selenium (Se)

- Other Regulated Parameters (ORPs); including Hexavalent Chromium [Cr (VI)], Mercury (Hg), Methyl Mercury, Cyanide (CN-), and the following media-specific parameters:
  - Soil: hot water soluble Boron (B-HWS), Electrical Conductivity (EC), Sodium Adsorption Ratio (SAR), pH
  - Groundwater: Sodium (Na), Chloride (Cl-)
- Polycyclic Aromatic Hydrocarbons (PAHs)
- Benzene, Toluene, Ethylbenzene, Xylenes (collectively referred to as BTEX)
- Petroleum Hydrocarbons (PHCs) fractions F1 through F4
- Volatile Organic Compounds (VOCs)
- Polychlorinated Biphenyls (PCBs)

- Evaluation of laboratory analytical results with respect to the selected SCS.
- Refinement of the existing Conceptual Site Model (developed during the previous Terrapex Phase One ESA) to reflect the information collected during the Phase Two ESA activities.

The Sampling and Analysis Plans are provided in Appendix IV. The sampling procedures are documented in detail in Section 5.0.

The Phase Two ESA was supervised by Mr. Keith Brown, P.Eng., of Terrapex, located at 20 Gurdwara Rd. in Ottawa, Ontario. Mr. Brown has a license under the Professional Engineers Act and meets the qualifications to be considered a Qualified Person for the purposes of conducting or supervising environmental site assessments in Ontario (per Section 5 (2) (a) of O. Reg. 153/04).

4.2 MEDIA INVESTIGATED

Based on the Phase One ESA findings, the Phase Two ESA work program documented herein included investigation of the environmental quality of both soil and groundwater at the Site. The environmental quality of sediment was not investigated as sediment is not present at the Site.

Soil and groundwater were investigated by drilling boreholes, installing monitoring wells, and groundwater sampling, as described above, and in Section 5.0.

4.3 PHASE ONE CONCEPTUAL SITE MODEL

The Phase One Conceptual Site Model (CSM) presented in the Phase One ESA report (Terrapex, 2025) includes figures and narrative that provided the logical basis for the interpretation of PCAs and APECs on the Phase Two Property. The Phase One CSM is reproduced in the sections below.

The Phase One CSM includes the following figures appended to this report:

PHASE ONE CSM FIGURES

Requisite Feature	Figure
i. Show any existing buildings and structures,	Figure 1: Site Location Figure 2: Site Features
ii. Identify and locate water bodies located in whole or in part in the Phase One Study Area,	Figure 3: Conceptual Site Model – Phase One Study Area
iii. Identify and locate any areas of natural significance located in whole or in part on the Phase One Study Area,	Figure 3: Conceptual Site Model – Phase One Study Area
iv. Locate any drinking water wells at the Phase One Property	Figure 3: Conceptual Site Model – Phase One Study Area
v. Show roads, including names, within the Phase One Study Area,	Figure 3: Conceptual Site Model – Phase One Study Area
vi. Show uses of properties adjacent to the Phase One Property,	Figure 3: Conceptual Site Model – Phase One Study Area
vii. Identify and locate areas where any potentially contaminating activity has occurred, and show tanks in such areas,	Figure 3: Conceptual Site Model – Phase One Study Area Figure 4: Conceptual Site Model – Potentially Contaminating Activities
viii. Identify and locate any areas of potential environmental concern.	Figure 5: Conceptual Site Model – Areas of Potential Environmental Concern

The Phase One CSM comprises the narrative provided in the following table:

PHASE ONE CSM NARRATIVE

Requisite Component	Description & Assessment
i. Areas where potentially contaminating activity on, or potentially affecting the Phase One Property has occurred,	A total of six on-Site and 17 off-Site PCAs are deemed to have affected the property, as summarized in Table 2, appended. The PCA locations are shown in Figure 4. A total of seven APECs were identified associated with the aforementioned PCAs, as summarised in Table 3 (also appended) and shown on Figure 5A.

Requisite Component	Description & Assessment	
ii. Any contaminants of potential concern,	As summarized in Table 3 (appended), media beneath the Site are considered to be potentially affected by the following contaminants of potential concern: • Petroleum hydrocarbons including benzene, toluene, ethylbenzene, and xylenes (collectively BTEX) and PHC fractions F1 to F4 (PHC F1-F4) in soil and groundwater; • Metals including hydride forming metal (HFMs) and other regulated parameters (ORPs) in soil and groundwater; • Volatile Organic Compounds (VOCs) in soil and groundwater; and, • Polychlorinated Biphenyls (PCBs) in soil.	
iii. The potential for underground utilities, if present, to affect contaminant distribution and transport,	In general, potential migration pathways for subsurface contaminants at the Site would consist of buried services or remnants of former buried services. Locations of former services are provided in Figure 2.	
iv. Available regional or site specific geological and hydrogeological information, and	Site & Regional Topography:	The Site is generally flat. No major topographic features are mapped on the Site. The Phase One Study Area slopes uniformly toward the Ottawa River (located approximately 225 m north of the Site)
	Approximate Site Elevation:	64 m above sea level (asl).
	Surface Water Drainage:	Overland
	Inferred Groundwater Flow Direction:	Based on the topography and the shallow groundwater flow as an inherently subdued reflection of the topography, shallow regional groundwater flow is anticipated to be to the northwest. However, periodic changes in the local groundwater flow regime may be affected by dewatering operations in the vicinity of the Site associated with construction activities.
	Physiography and Soil Stratigraphy:	Quaternary geology maps describe the Study Area in an area of undifferentiated, predominantly a sandy silt to silt matrix, commonly rich in clasts, often high in total matrix carbonate content. Surficial geology maps describe the Study Area in an area of stone-poor, sandy silt to silty sand-textured till on Paleozoic terrain. Fluvial terraces (former edges of flood plains) oriented similar too the Ottawa River were noted to the northeast and south of the Site. Meltwater channels were noted to the west and south of the Site similarly oriented similar to the Ottawa River. Physiography maps describe the Study Area in an area of limestone plains. Bedrock geology is described as limestone, dolostone, shale, arkose, and sandstone of the Ottawa Group; Simcoe Group; and, Shadow Lake Formation
	Bedrock and Approximate Depth:	Geotechnical boreholes in the vicinity of the Site describe the drift thickness between 0 and 2 m bgs. Previous assessments at the Site are in general agreement with this observation with some limited location specific variability.
	Surface Water:	The Site does not include, and is not adjacent to, or within 30 m of a water body, as defined in O. Reg. 153/04. The nearest water body is the Ottawa River situated approximately 225 m to the north of the Site

Requisite Component	Description & Assessment
	Area of Natural Significance: None at, or within 30 m of the Site. Wellhead and Intake Protection Areas: Wellhead protection areas are not located within the Phase One Property, or within the Phase One Study Area. However, the entire Study Area is located in an intake protection area. Municipal Drinking Water System: The City of Ottawa provided confirmation that all properties within the Phase One Study Area are connected to the municipal drinking water system. Well For Consumption/ Agricultural Use: The City of Ottawa provided confirmation that all properties within the Phase One Study Area are connected to the municipal drinking water system. Based on this, it is assumed that the water supply wells (generally drilled between 1949 and 1954) are no longer in use.
v. How uncertainty or absence of information obtained in each of the components of the Phase One ESA could affect the validity of the model.	All areas of the Site were accessible during the Site inspection. Cursory observations of the surrounding properties within the Phase One Study Area made during the Site reconnaissance were limited to areas visible from the Site or from publicly accessible areas and vantage points. It should be noted that although Terrapex has attempted to verify information wherever possible, except where explicitly noted, we have relied upon the accuracy of information collected during the records review and interview components. This includes Phase One ESA work done by Golder in 2021, that was conducted while the building was still present on the property. Terrapex has relied on historical records were collected as part of the previous Phase One ESA. The findings of this Phase One ESA are in generally agreement with the Phase One ESA work conducted by Golder in 2021. Notwithstanding the above, it should be noted that Phase One ESAs have inherent limitations, and therefore findings cannot be considered definitive (i.e., the findings of a Phase One ESA are inherently associated with some uncertainty).

The following table describes the rationale pertaining to any applicable reliance on exemptions provided by Paragraphs 1, 1.1, 2 and 3 of Section 49.1 of O. Reg. 153/04.

RELIANCE ON EXEMPTIONS

Exemption(s) Circumstances	Rationale
(1.) Substance(s) applied to surfaces for safety of vehicular or pedestrian traffic under conditions of snow or ice or both.	Relied upon.
(1.1) Excess soil deposited at the property for final placement meets the soil quality standards that apply to the property as determined in accordance with the Excess Soil Standards.	Not relied upon.
(2.) There has been a discharge of drinking water within the meaning of the Safe Drinking Water Act, 2002.	Not relied upon.
(3.) Applicable site condition standard deemed not exceeded if the concentrations do not exceed the naturally occurring range of concentrations typically found within the vicinity of the Site.	Not relied upon

The rationale pertaining to the selection of COPCs relating to each of the identified APECs on the Phase One Property is provided in the following table.

CONTAMINANTS OF POTENTIAL CONCERN (COPC) RATIONALE

APEC	PCA	COPCs	Rationale
APEC 1	PCA 1: 10 - Commercial Autobody Shops	PHCs BTEX VOCs	COPCs related to the historical autobody shop operations at the Site
APEC 2	PCA 2: 28 - Gasoline and Associated Products Storage in Fixed Tanks	PHCs BTEX Metals ORPs	COPCs related to the historical storage of waste oil at the Site
APEC 3	PCA 3: 28 - Gasoline and Associated Products Storage in Fixed Tanks	PHCs BTEX Metals ORPs	COPCs related to the historical storage of waste oil at the Site
APEC 4	PCA 4: 39 - Paints Manufacturing, Processing and Bulk Storage	VOCs PHCs Metals Hydride-Forming Metals ORPs	COPCs related to the historical paint booth associated with the commercial body shop
APEC 5	PCA 5: 30 - Importation of Fill Material of Unknown Quality	PHCs Metals Hydride-Forming Metals ORPs	COPCs related to fill of unknown quality at the Site
APEC 6	PCA 6: 55 - Transformer Manufacturing, Processing and Use	PHCs PCBs	COPCs related to the former pole-mounted transformer at the Site
APEC 7	PCA 7: Other - De-icing Activities	SAR EC Na Cl	COPCs related to salt use at the Site

4.4 DEVIATIONS FROM THE SAMPLING AND ANALYSIS PLAN

The following deviations from the sampling and analysis plan were noted by WSP:

- Monitoring well BH21-01 was dry following well installation and groundwater samples could not be collected. WSP reported that the well was monitored again during subsequent monitoring events but there was never sufficient water in the well to collect a sample. WSP suspected that the low water level at this location was likely related to dewatering operations at for the light-rail transit (LRT) construction to the southeast of the Site.

No other deviations were noted. Copies of the Sampling and Analysis Plans are provided in Appendix IV.

4.5 IMPEDIMENTS

Access to the Site was not impeded at any time during the Phase Two ESA work program.

5.0 INVESTIGATION METHOD

5.1 GENERAL

The soil and groundwater quality at the Site were investigated at the locations shown on Figure 5B and included the review of work conducted by others (Golder, and WSP) to characterize environmental conditions at the APECs identified in the Phase One ESA. Soil and groundwater were assessed through the excavation of test pits, advancement of boreholes and installation of groundwater monitoring wells.

5.2 DRILLING AND EXCAVATING

Borehole drilling and monitoring well installation services for this work programs were provided by CCC Group (CCC) of Ottawa, Ontario, Marathon Drilling Inc. (Marathon) of Ottawa, Ontario, and Strata Drilling Group (Strata) of Markham, Ontario using a direct push drill rig or a conventional drilling rig. CCC, Marathon and Strata are MECP licensed well drilling contractors.

The boreholes were advanced at locations shown on Figure 5B. Boreholes were generally drilled until auger refusal on competent bedrock. Selected boreholes were advanced into the bedrock using a down-hole air hammer or HQ coring to intercept the depth of the water table to reach the target depths for the installation of monitoring wells (further described in Section 5.4.1).

Measures to minimize potential cross-contamination or other potential bias are described in the WSP reports. There were no deviations from sampling procedures reported by WSP during this investigation.

5.3 SOIL

5.3.1 Soil Sampling

Soil assessment in each of the APECs was conducted by WSP. A copy of the Phase Two ESA reports that described the investigative methods are provided in Appendix III.

Based on Terrapex's review, soil samples were collected from the boreholes at regular depth intervals. All boreholes were drilled to auger refusal on competent bedrock, encountered at depths between approximately 0.9 and 3.4 m bgs. Soil samples were collected at continuously using a 1.52 m macrocore.

WSP indicated that each recovered sample was divided into two portions. One portion was placed in a clear sampling bag for field screening/logging. The second portion was collected using laboratory supplied sampling containers for analysis of selected COPCs.

Soil samples were collected directly into pre cleaned, laboratory supplied sampling containers, packed in a cooler with ice, and shipped under a signed chain of custody to the analytical laboratory for analysis.

Borehole locations are shown on Figure 5B. Borehole logs illustrating the stratigraphy encountered, chemical analysis samples and measured SV concentrations are included in Appendix V.

5.3.2 Field Screening Measurements

WSP indicated that Total Organic Vapour (TOV) and Combustible Vapour (CV) concentrations were measured in each soil sample using a RKI Eagle 2 equipped with both a photoionization detector (PID) calibrated to isobutylene, and a combustible gas meter calibrated to hexane. WSP indicted that the RKI Eagle 2 was calibrated according to the manufacturer's instructions before the field investigation.

Apparent “worst-case” soil samples from each sampling locations were identified on the basis of vapour screening, visual and olfactory evidence of contamination, and sample location in relation to potential point sources of impact.

5.4 GROUNDWATER

5.4.1 Monitoring Well Installation

Monitoring well installation services for this work program were provided by CCC, Marathon and Strata. In order to facilitate monitoring well installation, the drill rigs were equipped with hollow stem augers.

A monitoring well was installed in select boreholes, as shown on Figure 5B. The monitoring wells were constructed using either 38 mm or 50 mm inside diameter schedule 40 PVC well pipe and #10 slot screen interval. The annulus of each monitoring well was backfilled with washed # 2 silica well sand to a depth of approximately 0.3 m above the screened interval. A hydrated bentonite seal was placed above the sand pack to prevent infiltration of surface water into the monitoring well. A flush-mount well casing was cemented in place over each monitoring well for protection. Well installation details are provided within the borehole logs in Appendix V.

The depths to the bottom of the screened intervals of the monitoring wells varied from approximately 5.1 m to 14.9 m bgs generally within the limestone bedrock. The screened interval depths were established to assess the surface of the groundwater table for the potential on-Site and off-Site sources of contamination.

Prior to developing and sampling, the monitoring wells were monitored for combustible vapours in the well headspace, and depths to water and to the bottom were measured in each well. The monitoring wells were then subsequently developed in order to remove entrained particulate in the well standpipe, well screen and filter pack as well as surrounding formation materials. Development of each monitoring well was conducted with a dedicated inertial sampler comprising low density polyethylene (LDPE) tubing and a LDPE foot valve.

5.4.2 Field Measurements of Water Quality Parameters

Prior to conducting groundwater sampling activities, the depth to groundwater and apparent thickness, if any, of any light non aqueous phase liquids (LNAPL) were then measured using an oil-water interface probe. During groundwater monitoring events conducted by Terrapex, CV concentrations within the headspace of each monitoring well immediately following removal of the well standpipe cap using a RKI Eagle II Hydrocarbon Surveyor calibrated to *n*-hexane and operated in “methane elimination” mode.

Water quality parameters (i.e., temperature, pH, specific conductivity, dissolved oxygen, and oxidation reduction potential) were measured in monitoring wells prior to sampling activities using a flow-through multi-parameter probe.

5.4.3 Groundwater Sampling

Low flow sampling was conducted in order to minimize drawdown of the water table. After water quality parameters stabilized, groundwater samples from the monitoring wells were collected. Sampling was conducted using “low-flow” methodology using a peristaltic pump and dedicated sample tubing. Groundwater samples to be analyzed for dissolved metals were field filtered at the time of collection using a dedicated 0.45 µm inline filter

Groundwater samples were collected directly into pre cleaned, laboratory supplied sampling bottles, packed in a cooler with ice, and shipped under a signed chain of custody to the analytical laboratory for analysis.

5.5 SEDIMENT

Sediment sampling was not completed as sediment is not present at the Site.

5.6 ANALYTICAL TESTING

Soil and groundwater samples were analysed as per the sampling and analysis plan to address the identified APECs from the Phase One ESA. Laboratory analytical services for this work program involving soil and groundwater media were provided by AGAT Laboratories Inc. (AGAT) facility in Mississauga, Ontario, and Bureau Veritas Laboratories (BV Labs) facility in Mississauga Ontario.

Both of the labs Mississauga facilities are accredited to International Standard ISO/IEC 17025:2017, *General Requirements for the Competence of Testing and Calibration Laboratories* for the parameters included in the analytical program.

WSP noted that AGAT was chosen as a secondary laboratory due to a security breach at BV Labs that occurred during the Phase Two ESA.

5.7 RESIDUE MANAGEMENT

WSP reported that soil cuttings, purged water and wash water generated during the work program were contained on-Site and disposed of off-Site.

5.8 ELEVATION SURVEYING

WSP completed a survey of the geodetic elevations of the top of the pipe and ground surface for each monitoring well and borehole location. A Trimble R10 Model 2 Global Navigation Satellite System (GNSS) Receiver was used to establish geodetic elevations with reference to NAD 1983.

Terrapex also completed a survey of the geodetic elevations of the top of the pipe and ground surface for each monitoring well using a Trimble Catalyst DA2 GNSS Receiver to establish geodetic elevations with reference to NAD 1983.

5.9 QUALITY ASSURANCE AND QUALITY CONTROL MEASURES

Quality Assurance and Quality Control (QA/QC) measures were implemented during the Phase Two ESA in accordance with Terrapex Standard Operating Procedures. A summary of these measures follows.

5.9.1 Sample Collection Avoidance of Cross-Contamination

During drilling, to mitigate cross-contamination, dual tube sample liners were disposed and split spoons were cleaned after the collection of each sample. Fresh nitrile gloves were worn for the handling of each sample.

During groundwater sampling, dedicated sampling equipment was used at each monitoring well location. Multiple containers (including duplicate samples) were drawn concurrently, not sequentially. To mitigate cross-contamination, the interface probe was washed with a liquid solution of Alconox detergent and rinsed with potable water between each monitoring well. A fresh pair of nitrile gloves was donned at each well location.

Pre-cleaned groundwater sample containers for the specific parameters of interest were provided by the laboratory and used at each borehole and monitoring well location for the collection of soil and groundwater samples. Samples for analyses were placed in an enclosed cooler with loose ice and shipped under a signed chain of custody to the laboratories for chemical analysis.

5.9.2 Field Quality Assurance Sampling

The following type of Quality Assurance (QA) field sampling was conducted by Terrapex during the execution of field programs:

SUMMARY FIELD QA SAMPLING

QA Sample Type	Field QA Sampling
Field Duplicate	A second sample concurrently collected from the same location as another sample and submitted for duplicated analyses.
Field Blank (Soil)	A sample comprising a container pre-charged with methanol preservative into which no soil is placed and subsequently submitted for laboratory analyses
Field Blank (Water)	A sample of analyte-free water prepared in the field and submitted for laboratory analyses.
Trip Blank	A sample prepared by the contract laboratory using analyte-free water that accompanies Terrapex during execution of sampling programs but remains unopened.
Equipment Blank	A sample prepared by exposing analyte-free water to sampling equipment employed during the sampling activities.
Trip Spike	A sample prepared by the contract laboratory using water containing known concentrations of target parameters.

With the exception of samples prepared by the laboratory, the laboratory was not informed of the nature or number of the field QA/QC samples outlined above. Notwithstanding, the nature of the field blank for soil (namely, a soil sampling container into which no soil has been placed) was likely obvious to the laboratory at sample reception.

5.9.3 Laboratory Quality Assurance Sampling

Commercial contract laboratories will have their own internal quality assurance and quality control programs. These programs typically include quality assurance samples in analytical runs, the results of which are provided (in summary form) in the Certificate of Analysis documenting analytical results for a sample submission. Examples of Laboratory QA sample types are summarized below.

TYPICAL LABORATORY QA SAMPLING

QA Sample Type	Field QA Sampling
Method Blank	An aliquot prepared using analyte-free water and processed through the entire analytical method, including extracting, digestion, and other preparation procedures.
Blank Spike	An aliquot prepared using water containing known concentrations of target parameters and processed through the entire analytical method, including extracting, digestion, and other preparation procedures.

QA Sample Type	Field QA Sampling
Matrix Spike	A second aliquot from an analytical sample that is fortified with known concentrations of the target parameters and processed through the entire analytical method, including extracting, digestion, and other preparation procedures.
Laboratory Duplicate	A second aliquot from an analytical sample that is included in the analytical run for comparison to results from the corresponding sampling pair.
Certificate Reference Material (CRM)	An aliquot that has been certified by a recognized agency to contain specific concentrations of target parameters and which is included in the analytical run.
Surrogate Recovery	Surrogates are parameters not normally found in nature but that behave chemically and physically similar to the analytical run target parameters, and that are introduced into the aliquot of an analytical sample

6.0 REVIEW AND EVALUATION

6.1 GEOLOGY

6.1.1 Background

Surficial geology is described in the Study Area as stone-poor, sandy silt to silty sand-textured till on Paleozoic terrain. Fluvial terraces (former edges of flood plains) oriented similar to the Ottawa River were noted to the northeast and south of the Site. Meltwater channels were noted to the west and south of the Site similarly oriented to the Ottawa River.

Physiography maps describe the Study Area as an area of limestone plains. Bedrock geology is described as limestone, dolostone, shale, arkose, and sandstone of the Ottawa Group; Simcoe Group; and, Shadow Lake Formation. Bedrock was encountered throughout the Site at depths ranging from approximately 0.9 m and 3.4 m bgs.

6.1.2 Encountered Stratigraphy

The Phase Two ESA fieldwork programs encountered three hydro stratigraphic units at the Site, as summarized in the following table.

SUMMARY OF HYDRO STRATIGRAPHIC UNITS ENCOUNTERED BENEATH THE SITE

Stratigraphic Unit	General Description	Depth Range (m bgs)	Hydrogeological Condition
Fill (Heterogeneous)	Silty sand to sand with varying amounts of gravel	0.1- 2.7	Dry
Native	Silty clay	1.5-2.3	Dry
Bedrock	Limestone Highly weather sections noted at some boreholes in the northern portion of the Site at depths between 0.9 and 3.4 m bgs	0.9-15.5 (maximum depth of investigation)	N/A

No aquitards were encountered during the intrusive investigations.

The general soil stratigraphy at the Site is shown on the borehole logs in Appendix V and on cross sections in Figures 6A, B and C.

6.2 GROUNDWATER ELEVATIONS AND FLOW DIRECTION

Twelve groundwater monitoring wells were installed at the Site between September 2021 and December 2024. Current and historical groundwater monitoring data is provided in Table 4. Site visits where a sufficient number of wells were monitoring to evaluate groundwater elevations and flow direction at the Site occurred in October 2021, November 2021, August 2023, May 2023, and June 2024.

The overburden at the Site was found to be dry and all monitoring wells were screened within the bedrock (with the exception of MW202 installed within the former remedial excavation). As shown in Table 4, three distinct piezometric groundwater horizons were encountered (at approximately 62 m, 58 m, and 53 m amsl). The encountered groundwater horizons did not necessarily correlate with screened intervals, an indication that saturated and irregular bedrock fractures, that are not hydraulically connected, dominate the groundwater flow regime rather than through uniform (isotropic) porosity or a well connect bedrock fracture system.

Two of the events that included the most monitoring wells were November 2021 and June 2024. On November 30, 2021, the depth to groundwater was identified between 3.0 m (MW21-11) and 7.63 m bgs (MW21-1). On June 24, 2024, the depth to groundwater ranged between 0.80 m bgs (MW21-3) and 7.52 m bgs (MW22-5). The groundwater monitoring data is summarised in Table 4 and the interpreted groundwater elevation contours are shown on Figures 7A and 7B.

The findings of the November 2021 and June 2024 monitoring events indicated that the groundwater flow was generally towards the north/northeast with a component of flow to the southeast. These finding are consistent with the previous results reported by WSP. This is also consistent with topography at and in the vicinity of the Site. It would be anticipated that groundwater flow would generally be toward the Ottawa River to the north/northwest of the Site. However, the potential influence from the open transit channel cut into the bedrock, immediately south of the Site (at a lower elevation than some of the groundwater measurements taken), which could also have been temporarily intensified by active dewatering during the construction of the LRT, may also have had an impact on the local groundwater flow regime.

It is further anticipated that given the gravel covered nature of some locations at the Site (e.g., the former building footprint), infiltration of surficial water would recharge the groundwater at the Site to some extent and that there may be some preferential flow along the bedrock surface as infiltrated water dissipates in bedrock fractures. The bedrock surface may not slope in the same direction as anticipated flow based on piezometric head.

There was not enough information to evaluate the deeper groundwater horizons encountered at MW22-25 and, MW23-01 to MW23-03 installed on the southern portion of the Site. Although it is understood that boreholes MW22-05 and MW23-01 to MWH23-03 were drilled and screened deeper to intercept the water table and that groundwater in those locations (along the southern property limit) is more likely to have been affected by the transit channel and dewatering activities to the south of the Site.

Hydrocarbon sheen was noted at monitoring well MW22-04. WSP reported that sheen was observed at that location during bedrock coring. However, sheen was not observed by WSP during subsequent monitoring and sampling. Terrapex noted sheen at the well during monitoring and sampling conducted June 27, 2024.

6.3 GROUNDWATER HYDRAULIC GRADIENTS AND CONDUCTIVITY

Based on a visual examination of the measured water levels provided in Table 4 (particularly between monitoring wells MW21-02 and MW22-04 in the northern portion of the Site and MW21-01 and MW22-05 in the southern portion), the vertical hydraulic gradient direction is downward, indicating the Site generally functions as a recharge area. Groundwater found within the overburden (through infiltration) is assumed to recharge into the bedrock through fractures and other paths-of-least-resistance.

Based on a visual examination of the interpreted shallow groundwater surface provided in Figure 7B (June 27, 2024), the shallow horizontal gradient in the northern portion of the Site was approximately 0.075 m/m to the north.

Single Well Response tests were conducted by Terrapex on monitoring wells MW22-04 in the northern portion and MW21-01 in the southern portion on July 2, 2024. The tests were carried out by rapidly removing a volume of water from the well (Rising Head Test) or adding a volume of water from a well (Falling Head Test) and monitoring the subsequent water level recovery to the static water level conditions. The Bouwer and Rice (1976) method was applied to test data, using the unconfined solution. The data was analyzed using the AQTESOLV™ (v. 4.50).

Test reports are provided in Appendix III. As shown, measured hydraulic conductivities were $2.1x10^{-6}$ and $1.3x10^{-7}$ m/sec, respectively.

6.4 SOIL TEXTURE

Representative soil samples from the Site (collected at boreholes BH21-01 and BH21-02 by Golder, further described in Appendix III) were submitted for grain size distribution analysis. Golder noted that the representative samples submitted for analysis were considered sufficient given the consistency observed in the overburden across the Site.

Based on the grain size distribution analytical results, greater than 50% of particles (by mass) were equal or greater than 75 µm in mean diameter; or, that the soil at the Site can be considered “coarse-textured” per O. Reg. 153/04.

Results of the grain size analysis are provided in Appendix VII.

6.5 SOIL FIELD SCREENING

All soil material exposed to anthropogenic interaction or disturbance may be classified as fill material, including soil that is essentially reworked (or turned-over) native soil. The identification of fill material at the Site does not directly infer potential chemical impairment, unless it is known to have been imported to the Site. In this regard, Terrapex considers the physical composition of a fill material to be a prime indicator of potential chemical impairment, and as such field screening includes a visual inspection for the presence of deleterious components (fragments of wood, brick, ash, asphalt, concrete, and similar materials).

Heterogeneous fill material was encountered throughout the Site generally from depths between 0.1 and 2.7 m bgs. WSP noted that brick fragments were observed at MW21-02 (between approximately 1.2 and 1.8 m bgs).

In addition, potential impacts associated with spills, leaks, or other releases were screened by measuring TOV and CV concentrations in the headspace of the portion of recovered soil samples.

During the Phase Two ESA, the following headspace vapour screening measurements were recorded:

- TOV concentrations ranged from non-detect to 7 ppm.
- CV concentrations ranged from non-detect to 420 ppm.

The TOV and CV concentrations measured for each soil sample are included on the borehole logs (Appendix V).

6.6 SOIL QUALITY

Laboratory results for the soil samples submitted for analyses of metals, HFMs, ORPs, PAHs, BTEX, PHCs, VOCs, and PCBs are summarized in the appended Tables 5A through 5E, respectively, with the laboratory Certificates of Analysis enclosed in Appendix VI. As indicated in the tables, the majority of the soil samples had concentrations that met the applicable Table 7 SCS for the parameters analysed except for the following:

- MW23-03 SA2 which exceeded the Table 7 SCS for cobalt for a sample collected between 0.6 and 0.9 m bgs.

Lateral and vertical delineation of parameter impacts to soil are depicted as plan and cross-sectional views presented in Figures 8A through 8H.

6.7 GROUNDWATER QUALITY

Laboratory results for the groundwater samples submitted for analyses of metals, HFMs, ORPs, PAHs, BTEX, PHCs and VOCs are summarized in the appended Tables 6A through 6D, respectively, with the laboratory Certificates of Analysis enclosed in Appendix VI. As indicated in the tables, most of the groundwater samples had concentrations that met the applicable Table 7 SCS for the parameters analysed except for the following:

- MW24-02 which exceeded the Table 7 SCS for PHC F2, F3 and/or F4 fractions.

Lateral and vertical delineation of parameter impacts to groundwater are depicted as plan and cross-sectional views presented in Figures 9A through 9H.

6.8 SEDIMENT QUALITY

The environmental quality of sediment was not investigated as sediment is not present at the Site.

6.9 QUALITY ASSURANCE AND QUALITY CONTROL RESULTS

Quality assurance samples involving comparisons of actual results to expected results are evaluated on the basis of Recovery, or recovery percentage. Note that Recovery does not necessarily relate to the ability to provide consistent (similar) quantitations between successive analyses.

Recovery is calculated as follows:

$$Recovery = \frac{reported\ concentration}{actual\ (expected) concentration}\ x\ 100\%$$

Quality assurance samples involving comparisons of 'duplicate' analysis are evaluated on the basis of ***Relative Percent Difference (RPD)***. RPD provides a measure of the ability to provide consistent results on successive analyses, but does not necessarily relate to the ability to provide results that are representative of the actual concentration of the target parameter (e.g., the expected result when comparing against a known standard).

RPD is calculated as follows:

$$RPD\ = \left| \frac{result_1 - result_2}{\frac{1}{2}\ x\ (result_1 + result_2)} \right| x\ 100\%$$

RPD values should not be calculated where one or both results do not yield quantifiable results (i.e., non-detect findings), or where one or both results are less than five times the reported detection limits. RPD values should not be calculated for parameters which are based on calculations using raw data (e.g., sodium adsorption ratio, total xylenes); instead, where applicable, RPD values should be calculated for the 'raw' data (e.g., the m&p-xylenes, o-xylenes parameters).

Note that the mere absence of a calculated RPD is not considered a quality assurance failure, but simply a situation where alert criteria cannot be quantifiably evaluated. Similarly, the absence of a RPD value is not necessarily considered to be an acceptable field quality assurance result.

6.9.1 Field Quality Control Objectives

A summary of the field quality control objectives for sampling and analysis conducted as part of the Phase Two ESA is provided in the table below based on Terrapex review of the WSP report and the laboratory certificates of analysis.

FIELD QC OBJECTIVES

Metric	QC Objective	QC Objectives Satisfied
Sample Integrity	No deviations from SOPs recorded within field notes	Yes
	No significant variance in field screening results (if applicable) recorded within field notes between duplicate samples	Yes
	Laboratory reports average sample temperature at time of receipt less than 10ºC	Yes
	Correct sampling containers employed	Yes
	No broken or leaking sampling container(s) reported by laboratory	Yes
	Laboratory does not report excessive particulate within received water sample(s)	Yes
Sample Identification Integrity	No reported discrepancies between samples listed on Chain of Custodies and those actually received (as per sampling container labels)	Yes
	No unlabelled samples received by laboratory (sample identification missing)	Yes
Chain Of Custody Integrity	Custody seal present, intact, undamaged	Yes
	Chain of Custody form present, intact, legible	Yes
	Date/time of sample recovery recorded on Chain of Custody form	Yes

Metric	QC Objective	QC Objectives Satisfied
Sample Storage (Hold Time) Integrity	Preservative applied within 24 hours of recorded sample collection (or 48 hours for samples collected and maintained in hermetic sampling devices), or prior to filtration (if filtration is required)	Yes
	Field-preserved soil/sediment samples for analysis of BTEX / PHCs (F1) / THMs / VOCs / Bromomethane received by laboratory such that sample preparation/analysis is within 14 days of recorded sample collection	Yes
	Un-preserved soil/sediment samples collected and maintained in hermetic sampling devices for analysis of BTEX / PHCs (F1) / THMs / VOCs / Bromomethane received and extracted by laboratory within 48 hours of recorded sample collection	NA
	Samples for analysis other than BTEX / PHCs (F1) / THMs / VOCs / Bromomethane received by laboratory such that sample preparation/analysis is within the hold-time applicable for the required parameter	Yes

Based on the above, the field QC objectives for the project were met.

6.9.2 Field Quality Assurance Objectives

Analytical concentrations for soil and groundwater field duplicate, blank and spike samples, together with the calculated RPDs are presented in the tables. A summary of the field quality assurance objectives is provided below.

FIELD QA OBJECTIVES

QA Sample Type	Field QA Sampling
Field Duplicate	Acceptable correlation of parameter concentrations between parent field duplicate and its parent sample, expressed as RPD
Field Blank	All concentrations for parameters analysed should be less than detection.
Trip Blank	All concentrations for parameters analysed should be less than detection.
Equipment Blank	All concentrations for parameters analysed should be less than detection.
Trip Spike	Acceptable recoveries of the target parameters were reported by the laboratory.

The following field QA samples were collected as part of the Phase Two investigation program:

SUMMARY FIELD QA SAMPLING

QA Sample Type	QA Sample ID & (Parent Sample ID)	Sample Date	Scope of Analysis	QA Objectives Satisfied
Soil Duplicates	21-3 DUP-1 (MW21-03 SA3)	September 22, 2021	Metals, HFMs, ORPs	No
	23-1 SA11 (MW23-01 SA1)	May 17, 2023	Metals, HFMs, ORPs, PAHs, BTEX, PHC, VOCs	Yes
	DUP-1 (BH21-20 SA2)	November 24, 2021	BTEX, PHCs, VOCs	Yes

QA Sample Type	QA Sample ID & (Parent Sample ID)	Sample Date	Scope of Analysis	QA Objectives Satisfied
	SA1A DUP (SA1A)	November 17, 2023	Metals, HFMs, ORPs	No
Groundwater Duplicates	DUP-2 (MW21-11)	November 30, 2021	Metals, HFMs, ORPs	Yes
	DUP-1 (MW23-2)	May 26, 2023	Metals, HFMs, ORPs, PAHs, BTEX, PHCs, VOCs	Yes
	DUP-2 (MW22-04)	July 7, 2023	BTEX, PHCs, VOCs	Yes
	BH22-114 (MW22-04)	June 27, 2024	BTEX, PHC F1, VOCs	Yes
Field Blank	F-Blank	October 4, 2021	VOCs. BTEX, PHC F1	Yes
	Field Blank	May 26, 2022	VOCs. BTEX	Yes
Trip Blanks	Trip Blank	October 4, 2021	VOCs, BTEX	Yes
	Trip Blank	May 26, 2022	VOCs, BTEX	Yes
	Trip Blank	November 15, 2022	VOCs, BTEX	Yes
	Trip Blank	June 27, 2024	VOCs, BTEX, PHC F1	Yes
	Trip Blank	December 19, 2024	VOCs, BTEX, PHC F1	Yes
	Trip Blank	March 18, 2025	BTEX, PHC F1	Yes
Trip Spike	Trip Spike	June 17, 2024	BTEX	Yes
	Trip Spike	December 19, 2024	VOCs, BTEX	Yes

- The RPD values for 21-3 DUP-1 (MW21-03 SA3) for beryllium, boron, copper, lead, nickel, thallium, zinc, antimony, arsenic were greater than the alert criteria of 30% (RPDs ranged between 31% and 108%). The RPD for EC also exceeded the alert criteria of 10%. The variances in the analytical result between the parent and duplicate sample are attributed to the heterogeneity of the fill material.
- The RPD values for SA1A DUP (SA1A) for barium, boron, chromium, cobalt, nickel, and arsenic were greater than the alert criteria of 30% (RPDs ranged between 33% and 67%). The RPD for EC also exceeded the alert criteria of 10%. The variances in the analytical result between the parent and duplicate sample are attributed to the heterogeneity of the fill material.

6.9.3 Laboratory Quality Assurance Objectives

The laboratory's QA/QC program consisted of the analysis of laboratory replicates, method and spiked blanks, process percent recoveries, matrix spikes, and surrogate percent recoveries, as appropriate for the particular analysis protocol.

The QA section(s) of the laboratory Certificates of Analyses were reviewed to identify any contraventions to the following QA objectives:

LABORATORY QA OBJECTIVES

Laboratory QA Objectives	Objective Satisfied	Remarks
QA/QC samples within QC limits.	Confirmed	NA
RPDs for laboratory duplicates within acceptable limits.	No concerns were identified	NA
Matrix spike recoveries within acceptable limits	**Lab report # C1S1463** The matrix spike recovery for chromium VI in soil matrix was outside the acceptable range (below the lower control limit). This was attributed to the reducing environment of the sample.	**Not deemed a concern.** This is unlikely to affect the interpretation of the analytical results given that chromium VI was not detected at the laboratory's RDL in all the soil samples on this certificate of analysis.
	Lab report # C1S7480 The matrix spike recovery for dibromochloromethane in the groundwater matrix spike recovery was outside the acceptable range (above the upper control limit) which may represent a high bias for the specific analyte.	**Not deemed a concern.** This is unlikely to affect the interpretation of the analytical results given that dibromochloromethane was not detected at the laboratory's RDL in all the groundwater samples on this certificate of analysis.
	Lab report # C1X6358 The matrix spike recovery for chromium VI in the soil matrix was outside the acceptable range (below the lower control limit). This was attributed to the reducing environment of the sample.	**Not deemed a concern.** This is unlikely to affect the interpretation of the analytical results given that chromium VI was not detected at the laboratory's RDL in all the soil samples on this certificate of analysis.
	Lab report # C4BO251 The matrix spike recovery for bromoform in the groundwater matrix was outside the acceptable range (above the upper control limit) which may represent a high bias for the specific analyte.	**Not deemed a concern.** This is unlikely to affect the interpretation of the analytical results given that bromoform was not detected at the laboratory's RDL in all the groundwater samples on this certificate of analysis.
Variation of Detection limits.	**Lab report # 21Z837880** Detection limits for metals and inorganics were increased for samples MW21-11 and DUP-2 due to a laboratory dilution.	**Not deemed a concern.** All detection limits were less the applicable SCS.
Deviation from standard protocol	No concerns were identified	NA

6.9.4 Summary of QA/QC Results

Based on the above analysis of the QA/QC program, no concerns regarding the adequacy or representativeness of the sampling and analytical program were identified and, as a result, the decision-making was not affected, and the overall objectives of the investigation and the assessment were met.

6.10 PHASE TWO CONCEPTUAL SITE MODEL

A preliminary conceptual site model (CSM) was developed as part of the Phase One ESA which is discussed in Section 4.3. Following completion of the Phase Two ESA field program, the CSM has been updated to present the Site characteristics (prior to any efforts to reduce contaminant concentrations), identify and evaluate areas of contaminant impact, including their sources, exposure routes, and receptors at risk.

The Phase Two CSM comprises the tabulated narrative in Appendix VIII and the Figures contained in this report.

7.0 CONCLUSIONS

Based on the findings of the Phase Two ESA, the environmental quality of soil and groundwater beneath the Site did not meet the Table 7 SCS. Therefore, a RSC cannot be filed for the Site unless a full-depth soil remediation and/or a risk assessment is completed in accordance with the requirements of O. Reg. 153/04.

An account of the remediation program undertaken to reduce contaminant concentrations in soil and groundwater to below the applicable SCS is included as Appendix X. In summary, soil that exhibited contaminant concentrations greater than the applicable Table 7 SCS was excavated and removed off-Site. An excavation was also conducted to remediate groundwater with contaminant concentrations greater than the applicable Table 7 SCS that included the pumping and treatment of groundwater from the excavation.

A report on excess soil excavated at or brought to the Phase Two Property is provided in Appendix XI.

7.1 SIGNATURES

This report has been completed in accordance with the terms of reference for this project as agreed upon by Fengate Asset Management (Client) and Terrapex Environmental Ltd. (Terrapex) and generally accepted engineering or environmental consulting practices in this area.

The reported information is believed to provide a reasonable representation of the general environmental conditions at the site; however, studies of this nature have inherent limitations. The data were collected at specific locations and conditions may vary at other locations, or with the passage of time. The assessment was also limited to a study of those chemical parameters specifically addressed in this report.

Terrapex has relied in good faith on information and representations obtained from the Client and third parties and, except where specifically identified, has made no attempt to verify such information. Terrapex accepts no responsibility for any deficiency or inaccuracy in this report as a result of any misstatement, omission, misrepresentation, or fraudulent act of those providing information. Terrapex shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time of the study.

This report has been prepared for the sole use of Fengate Asset Management. Terrapex accepts no liability for claims arising from the use of this report, or from actions taken or decisions made as a result of this report, by parties other than Fengate Asset Management.

The objectives and requirements set out in Schedule E of O. Reg. 153/04 have been applied in carrying out this environmental site assessment.

Respectfully submitted,
TERRAPEX ENVIRONMENTAL LTD.

Jason O'Bright, P.Eng., QP_{ESA}
Project Engineer

Keith Brown, P.Eng., QP_{ESA}
Senior Project Manager

8.0 REFERENCES

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Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. Ministry of Environment, Conservation and Parks. April 15, 2011.

Phase One Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario. Golder Associates Ltd. November 2021.

Phase Two Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario. WSP Canada Inc. November 2021.

Phase One Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario. Golder Associates Ltd. November 2021.

Phase Two Environmental Site Assessment, Parkland Area - 1047 Richmond Road, Ottawa, Ontario (DRAFT). WSP Canada Inc. May 2024.

FIGURES

LEGEND

SITE BOUNDARY

DATA SOURCE: ESRI
MAP PROJECTION: NAD 1983 UTM Zone 18N

CLIENT: FENGATE

SITE LOCATION: PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE: **SITE LOCATION**

DRAWN BY: JS	PROJECT NO.: CO972.00	CHECKED BY: KWB
REVISION: 00	DATE: JULY 2025	**FIGURE: 1**

JSerroul \C:\Users\JSerroul\OneDrive - Terrapex Environmental Ltd\PROJECTS\Ottawa\CO900\CO972.00 1047 Richmond Rd, Ottawa\CO972.00 Phase TWO ESA.aprx

LEGEND

- SITE BOUNDARY
- REMEDIAL EXCAVATIONS
- FORMER BUILING

UNDERGROUND UTILITES

- ELECTRICAL
- WATER
- SANITARY SEWER
- STORM SEWER
- COMMUNICATION

NOTE: BUILDING DEMOLISHED IN NOVEMBER 2023.

0 10 20 30 40
Metres

DATA SOURCE: GOOGLE EARTH
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SITE FEATURES

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/SW/SF	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **2**

JSerroul IC:\Users\JSerroul\OneDrive - Terrapex Environmental Ltd\PROJECTS\Ottawa\CO900\CO972.00 1047 Richmond Rd, Ottawa\CO972.00 PHASE TWO 1047 Richmond Road, Ottawa.aprx

LEGEND

- SITE BOUNDARY
- STUDY AREA
- MECP WATER WELL RECORDS -WATER SUPPLY
- MECP WATER WELL RECORDS

0 50 100 150
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
PHASE ONE STUDY AREA AND SURROUNDING LAND USES

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/SF	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **3**

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LEGEND

- SITE BOUNDARY
- STUDY AREA
- TANKS

CONTRIB_APEC

- ON-SITE PCA LEADING TO APEC
- OFF-SITE PCA LEADING TO APEC
- OFF-SITE PCA NOT LEADING TO APEC

POTENTIALLY CONTAMINATING ACTIVITY TYPES

10. COMMERCIAL AUTOBODY SHOPS
18. ELECTRICITY GENERATION, TRANSFORMATION AND POWER STATIONS
28. GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
30. IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
37. OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
39. PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
46. RAIL YARDS, TRACKS AND SPURS
55. TRANSFORMER MANUFACTURING, PROCESSING AND USE
OT1. OTHER - APPLICATION OF DE-ICING SALT
OT2. OTHER - SPILLS
OT3. OTHER - WASTE GENERATION

NOTE:

- PCA ID (PCA TYPE)

REFER TO THE REPORT FOR ADDITIONAL DETAILS.

0 50 100 150
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
CONCEPTUAL SITE MODEL AND POTENITALLY CONTAMINATING ACTIVITIES

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/SF	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **4**

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LEGEND

- SITE BOUNDARY
- EXTERIOR AST
- FORMER UST

POTENTIALLY CONTAMINATING ACTIVITIES

- ON-SITE PCA LEADING TO APEC
- OFF-SITE PCA LEADING TO APEC

AREA OF POTENTIAL ENVIRONMENTAL CONCERN

- APEC-1
- APEC-2
- APEC-3
- APEC-4
- APEC-5,7 (ENTIRE SITE)
- APEC-6

APEC	PCA ID	PCA TYPE	DESCRIPTION
1	1	10	COMMERCIAL AUTOBODY SHOPS
2	2	28	GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
3	3	28	GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
4	4	39	PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
5	5	30	IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
6	6	55	TRANSFORMER MANUFACTURING, PROCESSING AND USE
7	7	OT1	APPLICATION OF DE-ICING SALT

0 10 20 30
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE: **CONCEPTUAL SITE MODEL - AREAS OF POTENTIAL ENVIRONMENTAL CONCERN**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/SF	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **5A**

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LEGEND

- SITE BOUNDARY
- EXTERIOR AST
- FORMER UST
- CROSS SECTIONS
- BOREHOLE
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- TEST PIT
- CONFIRMATORY SAMPLE
- REMEDIAL EXCAVATIONS

POTENTIALLY CONTAMINATING ACTIVITIES

- ONSITE PCA LEADING TO APEC

AREA OF POTENTIAL ENVIRONMENTAL CONCERN

- APEC-1
- APEC-2
- APEC-3
- APEC-4
- APEC-5,7 (ENTIRE SITE)
- APEC-6

APEC	PCA ID	PCA TYPE	DESCRIPTION
1	1	10	COMMERCIAL AUTOBODY SHOPS
2	2	28	GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
3	3	28	GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
4	4	39	PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
5	5	30	IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
6	6	55	TRANSFORMER MANUFACTURING, PROCESSING AND USE
7	7	OT1	APPLICATION OF DE-ICING SALT

0 10 20 30
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN AND SAMPLE LOCATIONS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **5B**

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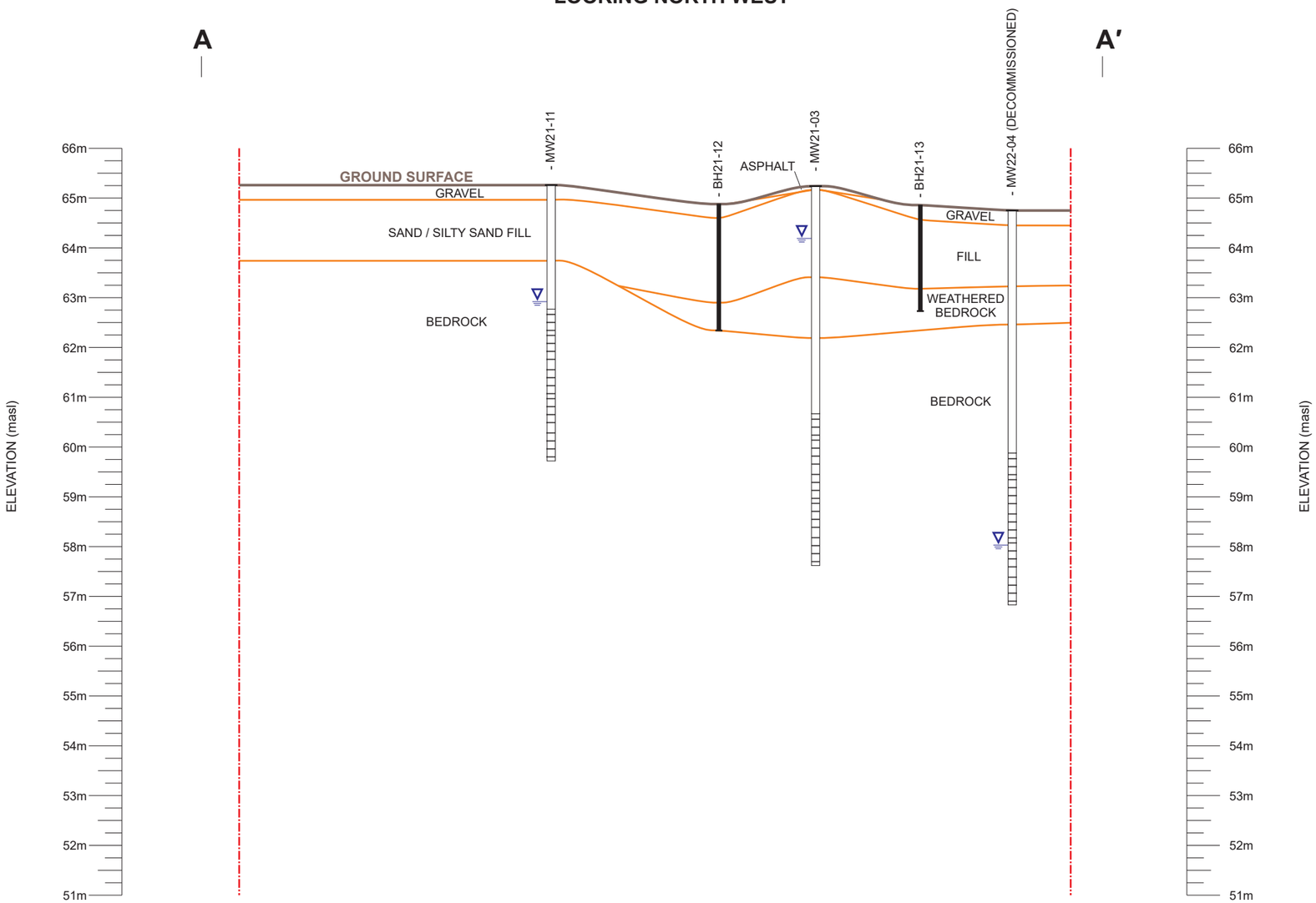
LOOKING NORTH WEST



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- GROUNDWATER LEVEL (AS OF JUNE 27, 2024)
- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE

HORIZONTAL SCALE

0 10m 20m

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.

CLIENT: FENGATE

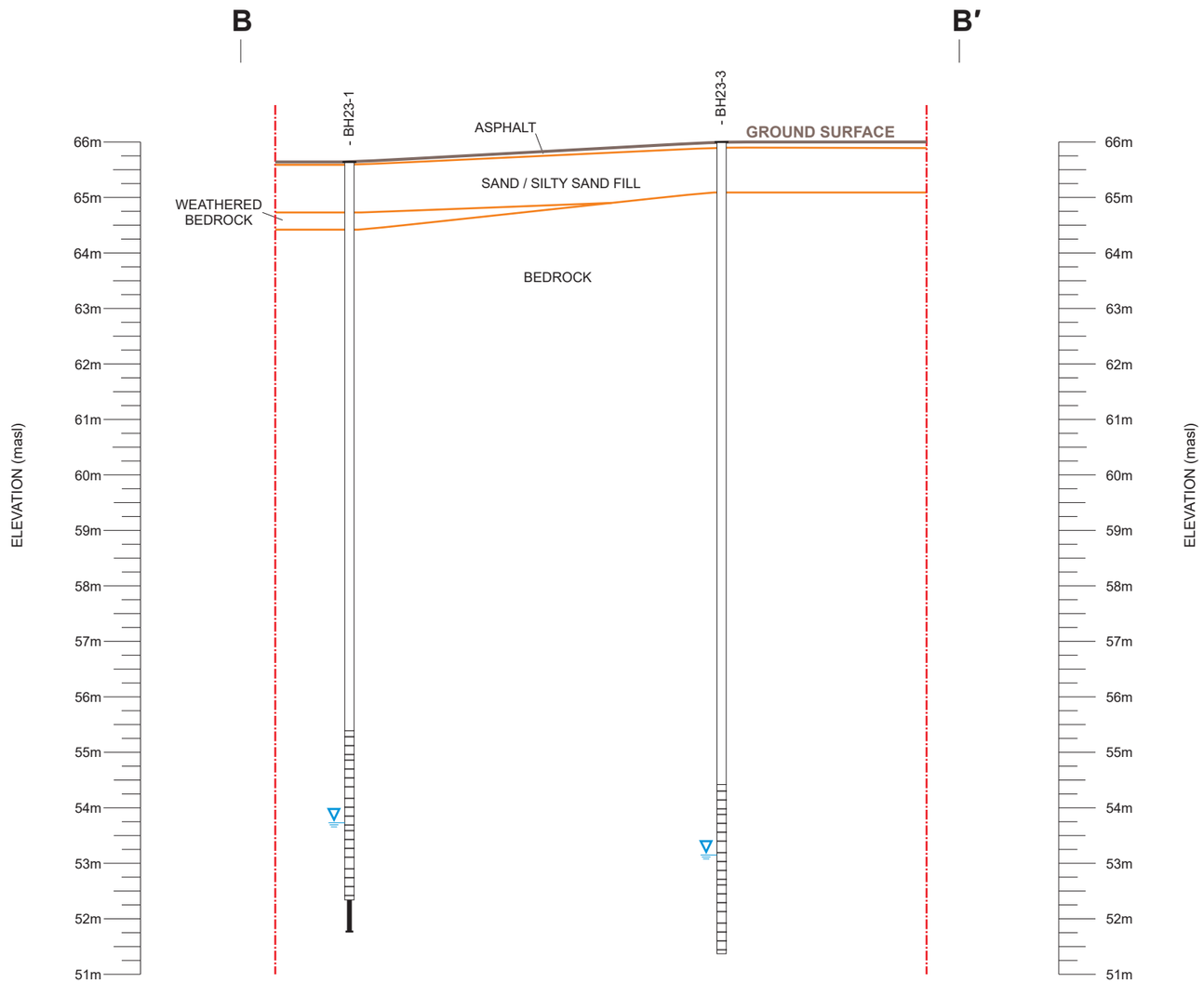
SITE LOCATION: PORTION OF 1047 RICHMOND ROAD OTTAWA, ONTARIO

TERRAPEX

TITLE: **GENERAL STRATIGRAPHY - CROSS SECTION A-A'**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SF	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **6A**

LOOKING NORTH



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- GROUNDWATER LEVEL MEASURED BY WSP (AS OF MAY 23, 2023)
- MONITORING WELL
  - SCREENED LEVEL
- BOREHOLE

HORIZONTAL SCALE

0 10m 20m

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.

CLIENT: FENGATE

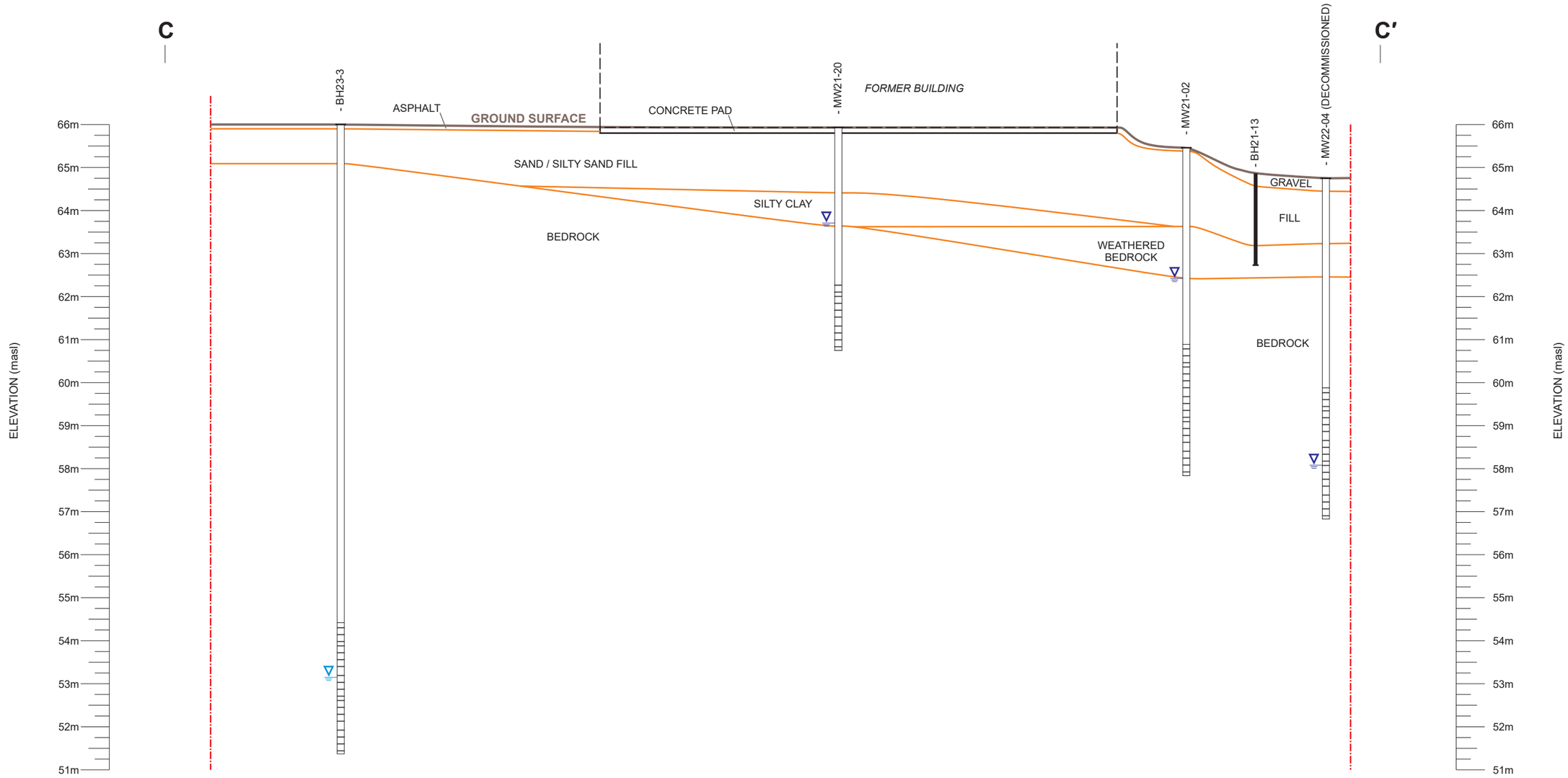
SITE LOCATION: PORTION OF 1047 RICHMOND ROAD OTTAWA, ONTARIO

TERRAPEX

TITLE: **GENERAL STRATIGRAPHY - CROSS SECTION B-B'**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SF	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **6B**

LOOKING WEST



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- GROUNDWATER LEVEL (AS OF JUNE 27, 2024)
- GROUNDWATER LEVEL MEASURED BY WSP (AS OF MAY 23, 2023)
- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE

HORIZONTAL SCALE

0 10m 20m

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.

CLIENT: FENGATE

SITE LOCATION: PORTION OF 1047 RICHMOND ROAD OTTAWA, ONTARIO

TERRAPEX

TITLE: **GENERAL STRATIGRAPHY - CROSS SECTION C-C'**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SF	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **6C**

LEGEND

- SITE BOUNDARY
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- GROUNDWATER FLOW DIRECTION
- GROUNDWATER CONTOURS

0 10 20 30
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER CONTOURS
(AS OF NOVEMBER 30, 2021)

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **7A**

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LEGEND

- SITE BOUNDARY
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- GROUNDWATER CONTOURS
- GROUNDWATER FLOW DIRECTION

0 10 20 30
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER CONTOURS (AS OF JUNE 27, 2024)

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **7B**

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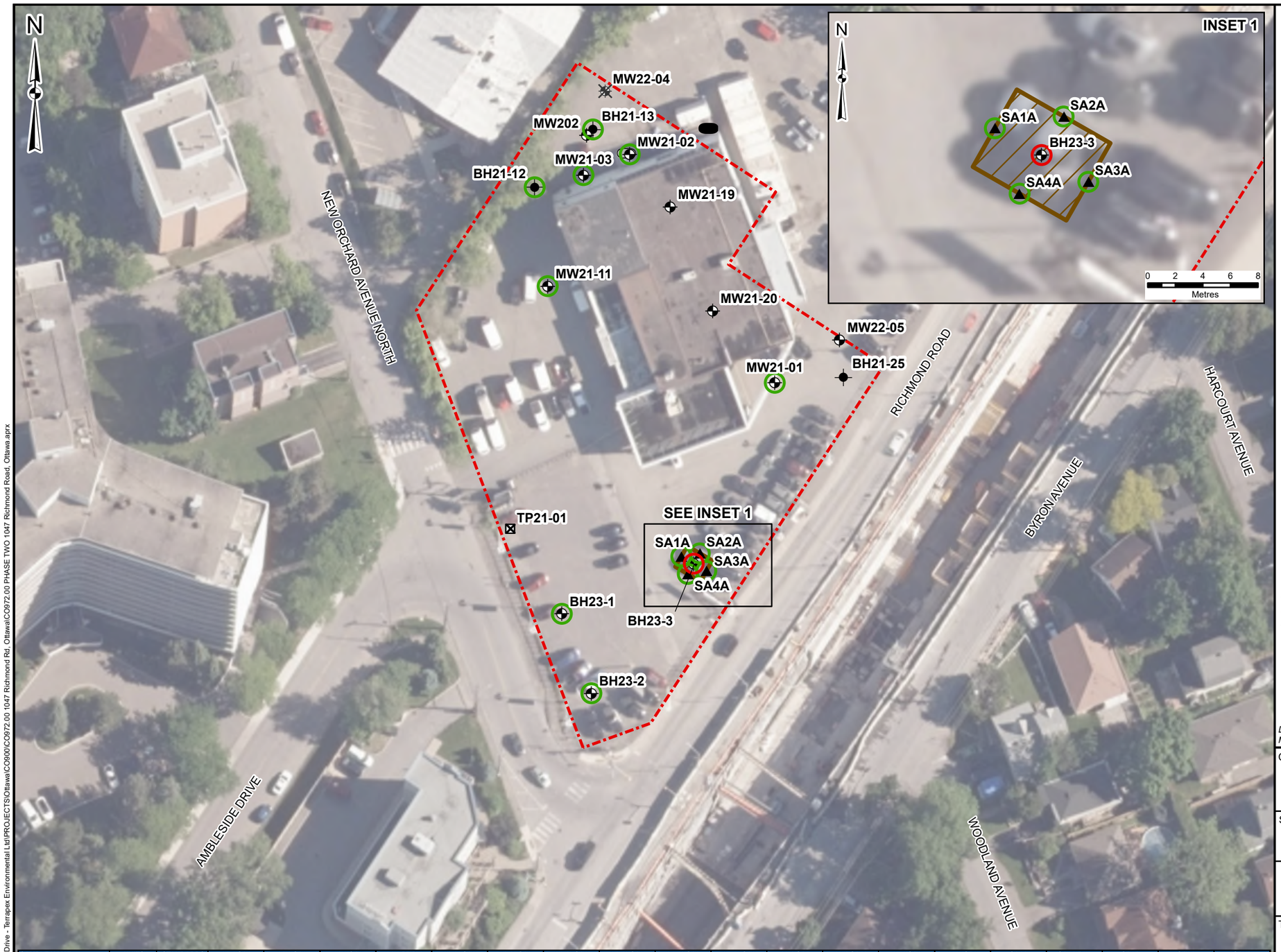

SAMPLE NAME	UNITS	STANDARDS Table 7 R/P/I coarse	21-1 SA1	21-2 SA2	21-3 SA3	21-3 DUP-1 Duplicate of 21-3 SA3	21-11 SA2	21-11 SA3	21-12 SA2	21-12 SA3	21-13 SA2	21-13 SA3	23-1 SA1	23-1 SA11 Duplicate of 23-1 SA1	23-2 SA2	23-3 SA2	SA1A	SA1A Dup Duplicate of SA1A	SA2A	SA3A	SA4A
Sample Depth	m bgs	-	0.1 - 0.6	0.6 - 1.2	1.2 - 1.8	1.2 - 1.8	0.8 - 1.5	1.5 - 1.8	0.6 - 1.2	1.5 - 2.3	0.8 - 1.5	1.5 - 2.1	0.2 - 0.6	0.2 - 0.6	0.5 - 1.2	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9
Sampling Date	dd-mmm-yy	-	24-Sep-21	21-Sep-21	22-Sep-21	22-Sep-21	12-Nov-21	12-Nov-21	11-Nov-21	11-Nov-21	11-Nov-21	11-Nov-21	17-May-23	17-May-23	17-May-23	15-May-23	17-Nov-23	17-Nov-23	17-Nov-23	17-Nov-23	17-Nov-23
Certificate of Analysis No.	-	-	C1S1463	C1S1463	C1S1463	C1S1463	C1X6358	C1X6358	C1X6358	C1X6358	C1X6358	C1X6358	23Z026646	23Z026646	23Z026646	23Z026646	23Z094471	23Z094471	23Z094471	23Z094471	23Z094471
METALS																					
Cobalt	ug/g	22	7.6	3.1	13	14	11	7.2	4.3	8.5	2.8	20	3.2	3.4	18.8	**25.5**	21.2	12.4	4.2	21.2	17.3

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- TEST PIT
- CONFIRMATORY SAMPLE
- EXTERIOR AST
- FORMER UST
- REMEDIAL EXCAVATION

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS
- GREATER THAN TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

0 10 20 30 40
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SOIL SAMPLE DISTRIBUTION - METALS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **8A**

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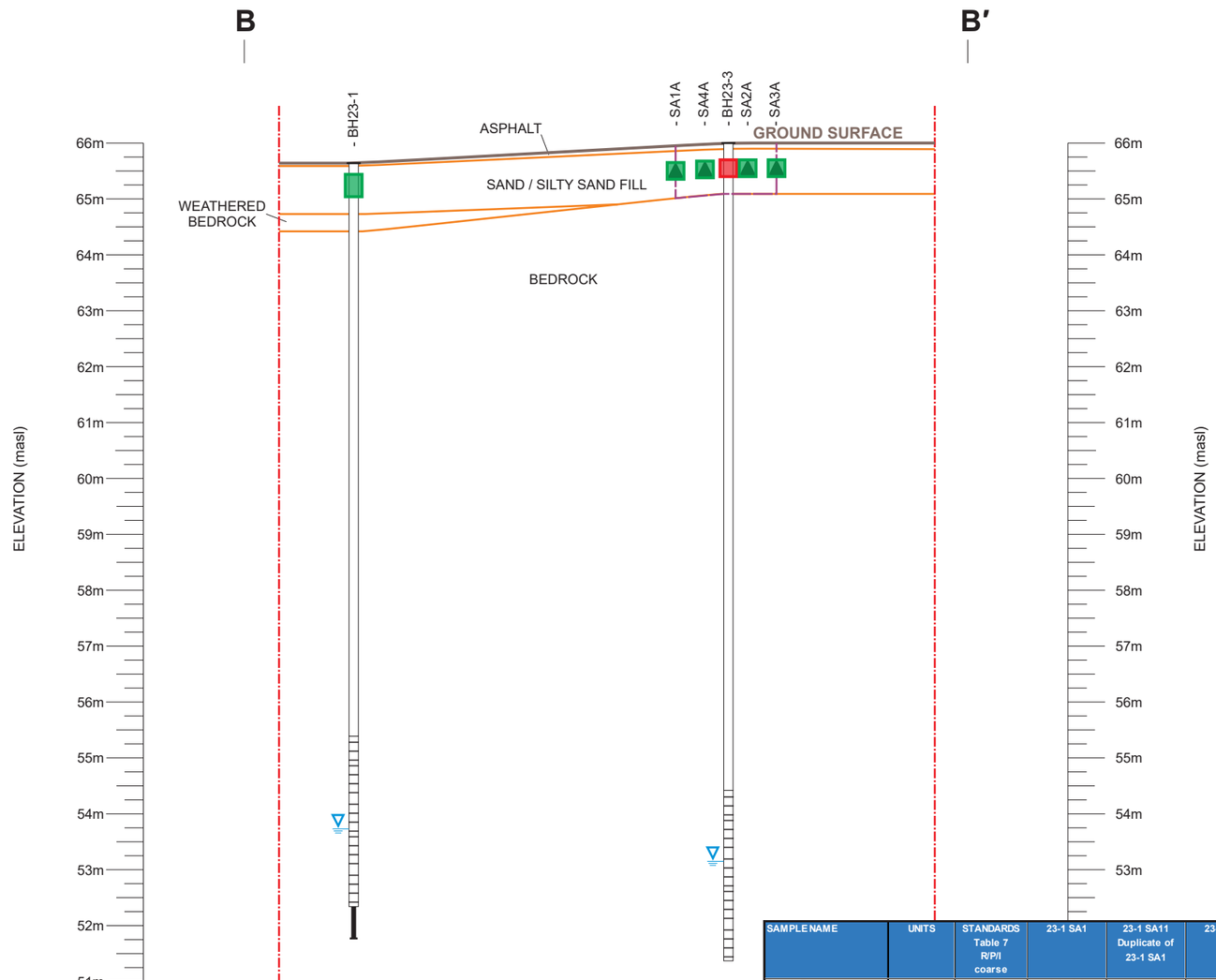
LOOKING NORTH



SAMPLE NAME	UNITS	STANDARDS Table 7 R/P/I coarse	23-1 SA1	23-1 SA11 Duplicate of 23-1 SA1	23-3 SA2	SA1A	SA1A Dup Duplicate of SA1A	SA2A	SA3A	SA4A
Sample Depth	m bgs	-	0.2 - 0.6	0.2 - 0.6	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9
Sampling Date	dd-mmm-yy	-	17-May-23	17-May-23	15-May-23	17-Nov-23	17-Nov-23	17-Nov-23	17-Nov-23	17-Nov-23
Certificate of Analysis No.	-	-	23Z026646	23Z026646	23Z026646	23Z094471	23Z094471	23Z094471	23Z094471	23Z094471
METALS										
Cobalt	ug/g	22	3.2	3.4	**25.5**	21.2	12.4	4.2	21.2	17.3

LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- GROUNDWATER LEVEL MEASURED BY WSP (AS OF MAY 23, 2023)
- REMEDIAL EXCAVATION
- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- CONFIRMATORY SAMPLE

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS
- GREATER THAN TABLE 7 SCS

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL PROPERTY USE WITH COARSE TEXTURED SOIL.

HORIZONTAL SCALE

0 10m 20m

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.

CLIENT: FENGATE

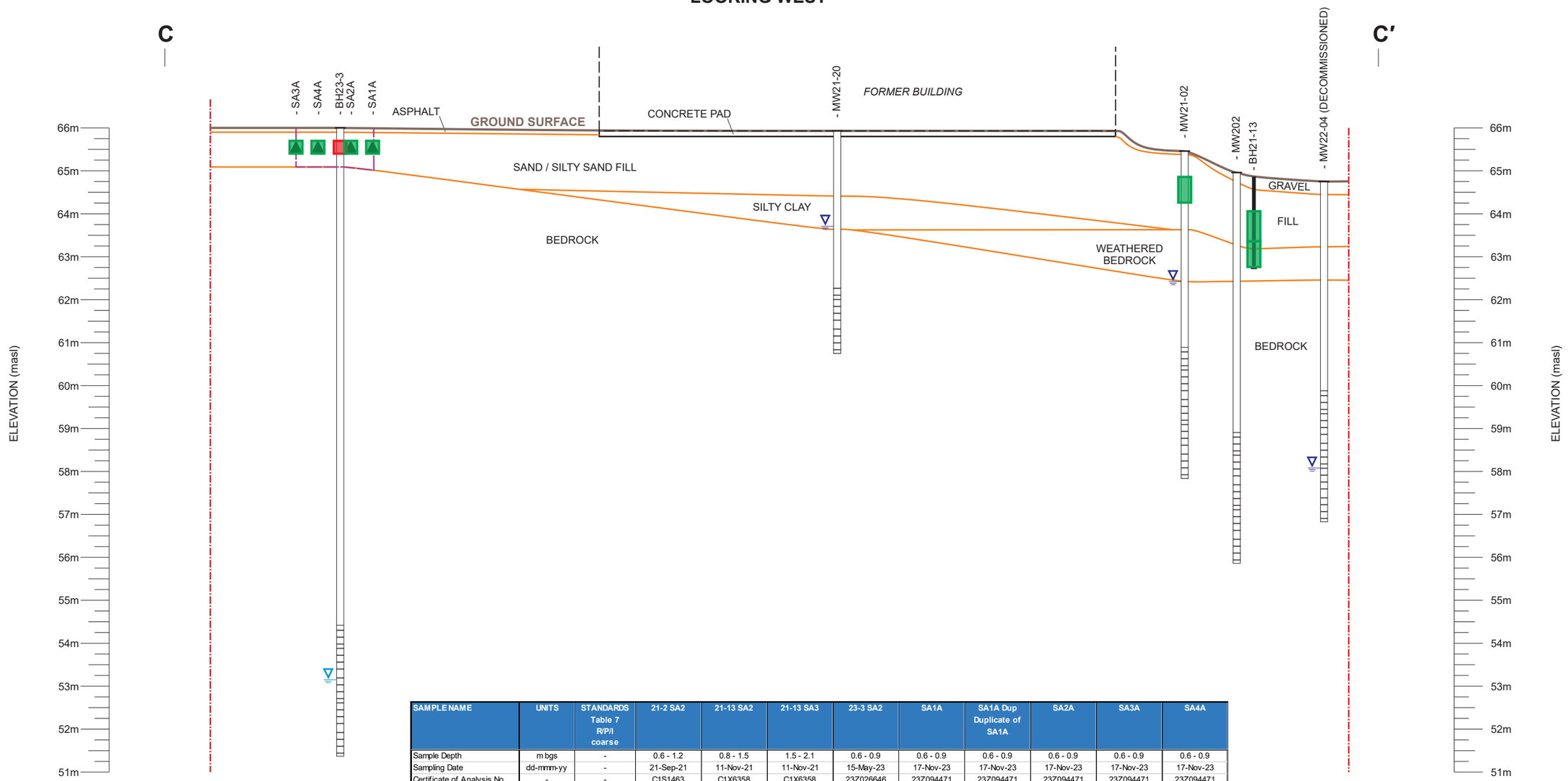
SITE LOCATION: PORTION OF 1047 RICHMOND ROAD OTTAWA, ONTARIO

TERRAPEX

TITLE: **SOIL SAMPLE DISTRIBUTION CROSS SECTION B-B' - METALS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SF	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **8A-I**

LOOKING WEST



SAMPLE NAME	UNITS	STANDARDS Table 7 R/P/I coarse	21-2 SA2	21-13 SA2	21-13 SA3	23-3 SA2	SA1A	SA1A Dup Duplicate of SA1A	SA2A	SA3A	SA4A
Sample Depth	m bgs	-	0.6 - 1.2	0.8 - 1.5	1.5 - 2.1	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9
Sampling Date	dd-mmm-yy	-	21-Sep-21	11-Nov-21	11-Nov-21	15-May-23	17-Nov-23	17-Nov-23	17-Nov-23	17-Nov-23	17-Nov-23
Certificate of Analysis No.	-	-	C1S1463	C1X6358	C1X6358	23Z026646	23Z094471	23Z094471	23Z094471	23Z094471	23Z094471
METALS											
Cobalt	ug/g	22	3.1	2.8	20	**25.5**	21.2	12.4	4.2	21.2	17.3

LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- GROUNDWATER LEVEL (AS OF JUNE 27, 2024)
- GROUNDWATER LEVEL MEASURED BY WSP (AS OF MAY 23, 2023)
- REMEDIAL EXCAVATION
- - MONITORING WELL
- - SCREENED LEVEL
- - BOREHOLE
- ▲ - CONFIRMATORY SAMPLE

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS
- GREATER THAN TABLE 7 SCS

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL PROPERTY USE WITH COARSE TEXTURED SOIL.

HORIZONTAL SCALE

0 — 10m — 20m

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.

CLIENT: FENGATE

SITE LOCATION: PORTION OF 1047 RICHMOND ROAD OTTAWA, ONTARIO

TERRAPEX

TITLE: **SOIL SAMPLE DISTRIBUTION CROSS SECTION C-C' - METALS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SF	CO972.00	KWB
REVISION:	DATE:	FIGURE:
00	JULY 2025	**8A-II**

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- TEST PIT
- CONFIRMATORY SAMPLE
- EXTERIOR AST
- FORMER UST
- REMEDIAL EXCAVATION

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

0 10 20 30 40
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

SAMPLE NAME	UNITS	STANDARDS Table 7 R/P/I coarse	21-1 SA1	21-2 SA2	21-3 SA3	21-3 DUP-1 Duplicate of 21-3 SA3	21-11 SA2	21-11 SA3	21-12 SA2	21-12 SA3	21-13 SA2	21-13 SA3	23-1 SA1	23-1 SA11 Duplicate of 23-1 SA1	23-2 SA2	23-3 SA2	SA1A	SA1A Dup Duplicate of SA1A	SA2A	SA3A	SA4A
Sample Depth	m bgs	-	0.1 - 0.6	0.6 - 1.2	1.2 - 1.8	1.2 - 1.8	0.8 - 1.5	1.5 - 1.8	0.6 - 1.2	1.5 - 2.3	0.8 - 1.5	1.5 - 2.1	0.2 - 0.6	0.2 - 0.6	0.5 - 1.2	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9
Sampling Date	dd-mmm-yy	-	24-Sep-21	21-Sep-21	22-Sep-21	22-Sep-21	12-Nov-21	12-Nov-21	11-Nov-21	11-Nov-21	11-Nov-21	11-Nov-21	17-May-23	17-May-23	17-May-23	15-May-23	17-Nov-23	17-Nov-23	17-Nov-23	17-Nov-23	17-Nov-23
Certificate of Analysis No.	-	-	C1S1463	C1S1463	C1S1463	C1S1463	C1X6358	C1X6358	C1X6358	C1X6358	C1X6358	C1X6358	23Z026646	23Z026646	23Z026646	23Z026646	23Z094471	23Z094471	23Z094471	23Z094471	23Z094471

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SOIL SAMPLE DISTRIBUTION - HYDRIDE FORMING METALS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **8B**

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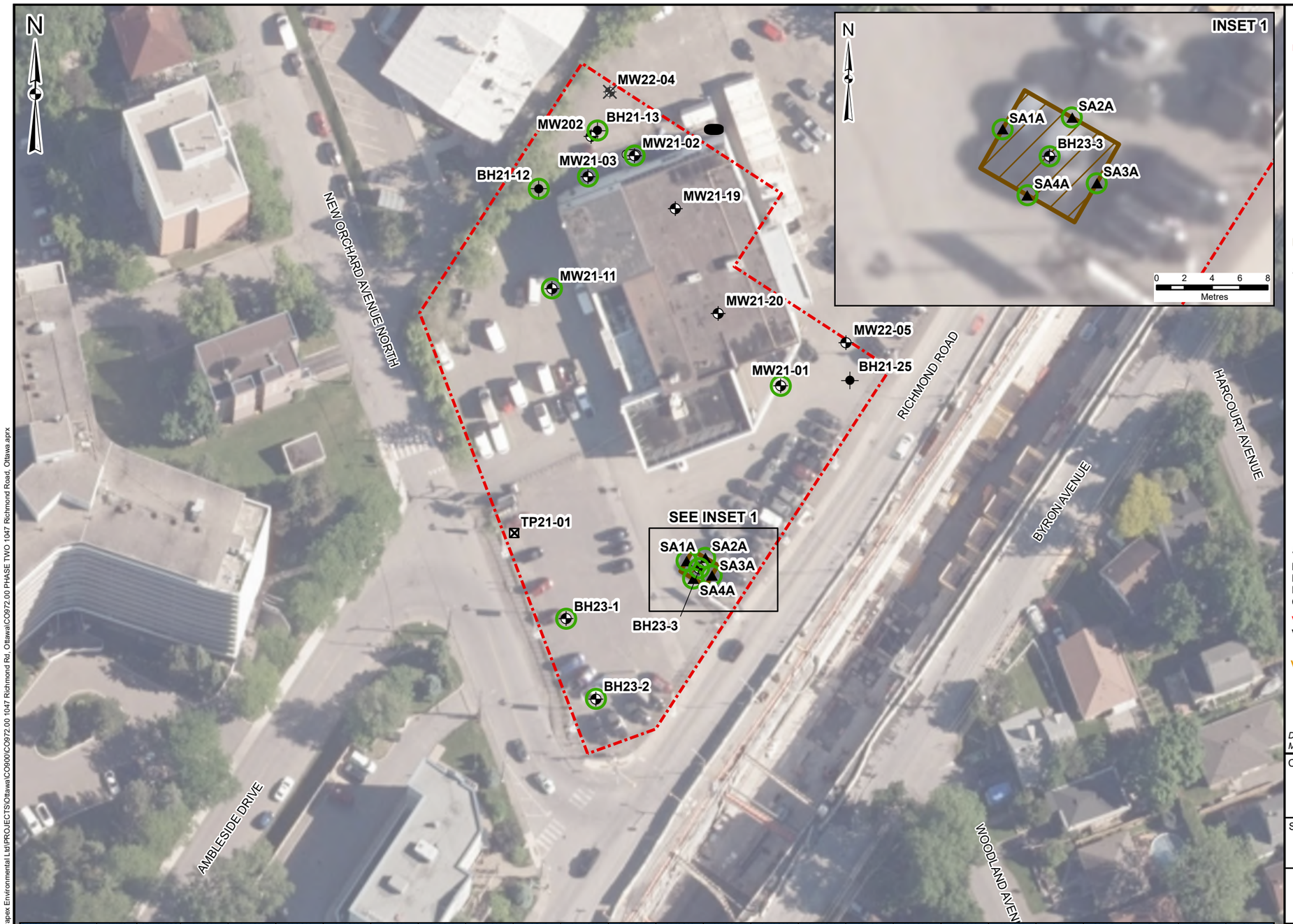

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- TEST PIT
- CONFIRMATORY SAMPLE
- EXTERIOR AST
- FORMER UST
- REMEDIAL EXCAVATION

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS
VALUE DEEMED TO MEET THE SITE CONDITION STANDARD PER SECTION 49.1, O. REG. 153/04 (PLEASE REFER TO CONCEPTUAL SITE MODEL TEXT).

0 10 20 30 40
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

SAMPLE NAME	UNITS	STANDARDS Table 7 R/P/I coarse	21-1 SA1	21-1 SA3	21-2 SA2	21-2 SA5	21-3 SA1	21-3 SA2	21-3 SA3	21-3 DUP-1 Duplicate of 21-3 SA3	21-11 SA2	21-11 SA3	21-12 SA2	21-12 SA3	21-13 SA2	21-13 SA3	23-1 SA1	23-1 SA11 Duplicate of 23-1 SA1	23-2 SA2	23-3 SA2	SA1A	SA1A Dup Duplicate of SA1A	SA2A	SA3A	SA4A
Sample Depth	m bgs	-	0.1 - 0.6	1.2 - 1.8	0.6 - 1.2	2.4 - 2.7	0.1 - 0.6	0.6 - 1.2	1.2 - 1.8	1.2 - 1.8	0.8 - 1.5	1.5 - 1.8	0.6 - 1.2	1.5 - 2.3	0.8 - 1.5	1.5 - 2.1	0.2 - 0.6	0.2 - 0.6	0.5 - 1.2	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9
Sampling Date	dd-mmm-yy	-	24-Sep-21	24-Sep-21	21-Sep-21	21-Sep-21	22-Sep-21	22-Sep-21	22-Sep-21	22-Sep-21	12-Nov-21	12-Nov-21	11-Nov-21	11-Nov-21	11-Nov-21	11-Nov-21	17-May-23	17-May-23	17-May-23	15-May-23	17-Nov-23	17-Nov-23	17-Nov-23	17-Nov-23	17-Nov-23
Certificate of Analysis No.	-	-	C1S1463	C1S1463	C1S1463	C1S1463	C1S1463	C1S1463	C1S1463	C1S1463	C1X6358	C1X6358	C1X6358	C1X6358	C1X6358	C1X6358	23Z026646	23Z026646	23Z026646	23Z026646	23Z094471	23Z094471	23Z094471	23Z094471	23Z094471
OTHER REGULATED PARAMETERS (ORPs)																									
Boron (Hot Water Soluble)	ug/g	1.5	0.38	-	0.15	-	-	-	0.87	0.67	0.6	0.61	0.13	0.51	0.14	0.41	<0.10	<0.10	0.4	0.77	0.34	0.3	0.1	0.34	0.29
Cyanide (CN-)	ug/g	0.051	< 0.01	-	< 0.01	-	-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Chromium VI	ug/g	8.0	< 0.18	-	< 0.18	-	-	-	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mercury	ug/g	0.27	< 0.050	-	< 0.050	-	-	-	0.063	0.077	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
pH	pH Units	NV	7.51	-	6.97	-	-	-	7.54	7.43	7.41	7.61	6.99	7.58	6.88	7.68	7.37	7.34	7.32	7.15	7.42	7.31	7.40	7.20	7.25
Electrical Conductivity	mS/cm	0.70	0.54	-	0.26	-	-	-	0.34	0.41	0.33	0.37	0.13	0.59	0.06	0.38	0.116	0.121	0.154	0.266	0.504	0.327	0.218	0.399	0.361
Sodium Adsorption Ratio	-	5.0	3.6	2.3	0.88	4.1	0.29	5.3	6.1	9.6	6.6	5.9	0.71	0.7	0.54	7.3	0.18	0.827	0.699	0.663	0.543	0.662	0.465	0.536	0.55

CLIENT:
FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SOIL SAMPLE DISTRIBUTION - OTHER REGULATED PARAMETERS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION:	**DATE:**	**FIGURE:**
00	JULY 2025	**8C**

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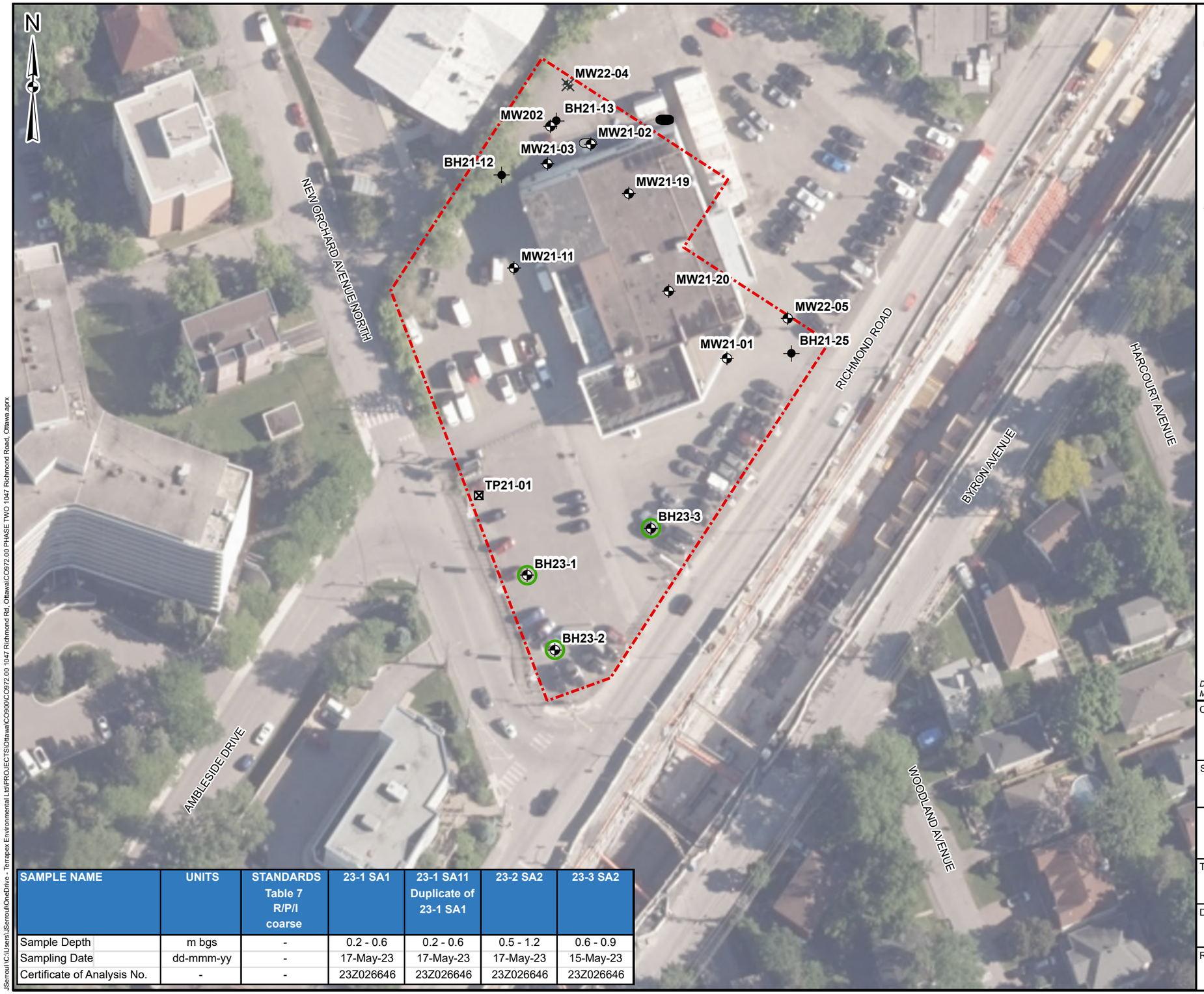

SAMPLE NAME	UNITS	STANDARDS Table 7 R/P/I coarse	23-1 SA1	23-1 SA11 Duplicate of 23-1 SA1	23-2 SA2	23-3 SA2
Sample Depth	m bgs	-	0.2 - 0.6	0.2 - 0.6	0.5 - 1.2	0.6 - 0.9
Sampling Date	dd-mmm-yy	-	17-May-23	17-May-23	17-May-23	15-May-23
Certificate of Analysis No.	-	-	23Z026646	23Z026646	23Z026646	23Z026646

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- TEST PIT
- EXTERIOR AST
- FORMER UST

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

0 10 20 30 40
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SOIL SAMPLE DISTRIBUTION - PAHS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION:	DATE:	FIGURE:
00	JULY 2025	**8D**

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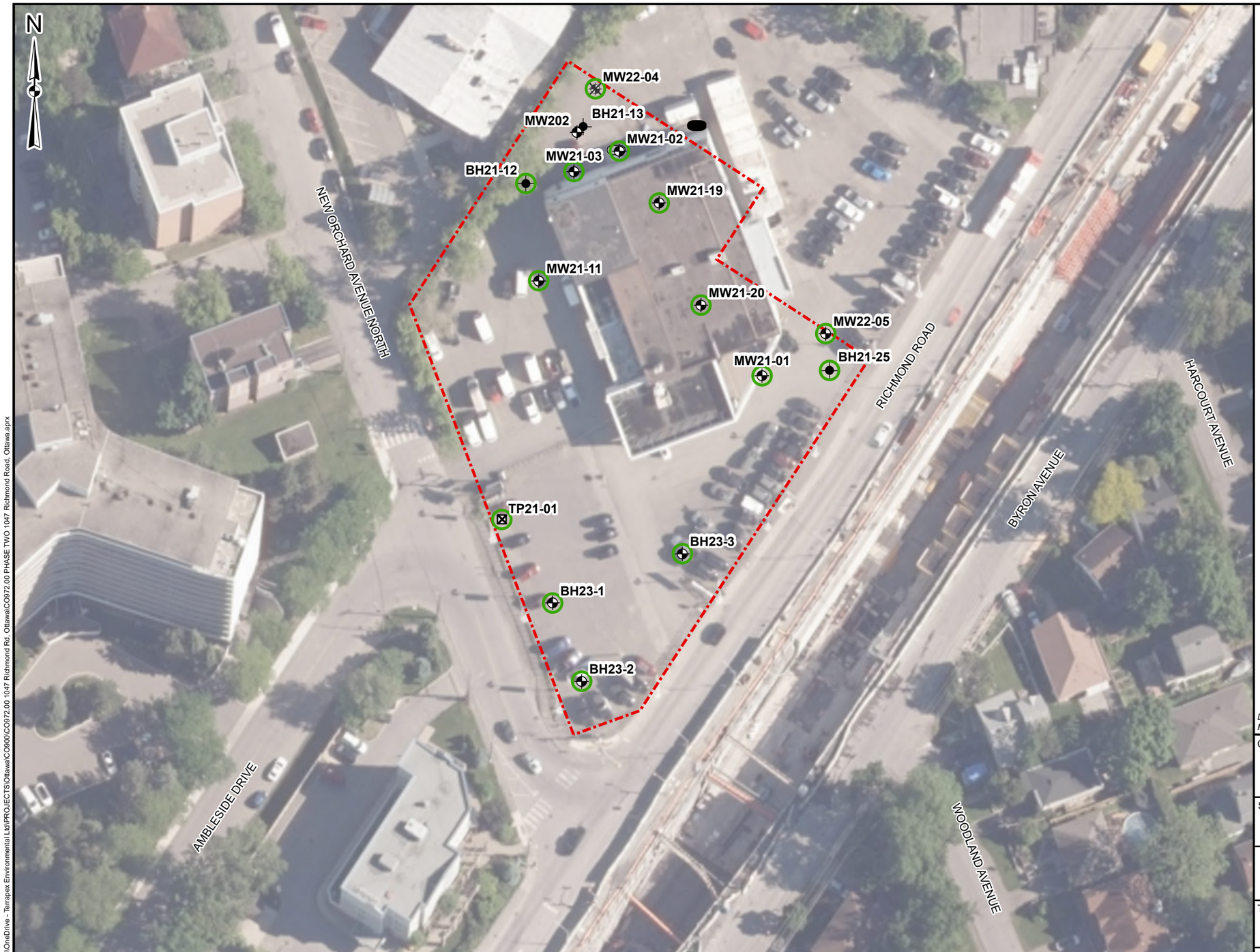

SAMPLE NAME	UNITS	STANDARDS Table 7 R/P/I coarse	21-1 SA3	21-2 SA5	21-3 SA1	21-3 SA2	21-11 SA2	21-12 SA3	BH21-19 SA1	BH21-20 SA2	Dup-1 Duplicate of BH21-20 SA2	BH21-25 SA4	BH22-04 SA1	BH22-05 SA4	23-1 SA1	23-1 SA11 Duplicate of 23-1 SA1	23-2 SA2	23-3 SA2	TP21-01
Sample Depth	m bgs	-	1.2 - 1.8	2.4 - 2.7	0.1 - 0.6	0.6 - 1.2	0.8 - 1.5	1.5 - 2.3	0.2 - 0.6	0.8 - 1.5	0.8 - 1.5	3.1 - 3.4	0.0 - 0.8	2.4 - 3.0	0.2 - 0.6	0.2 - 0.6	0.5 - 1.2	0.6 - 0.9	0.0 - 0.2
Sampling Date	dd-mmm-yy	-	24-Sep-21	21-Sep-21	22-Sep-21	22-Sep-21	12-Nov-21	11-Nov-21	22-Nov-21	24-Nov-21	24-Nov-21	21-Dec-21	9-May-22	11-May-22	17-May-23	17-May-23	17-May-23	15-May-23	22-Nov-21
Certificate of Analysis No.	-	-	C1S1463	C1S1463	C1S1463	C1S1463	C1X6358	C1X6358	21Z837042	21Z837042	21Z837042	21T848962	22Z895974	22Z895974	23Z026646	23Z026646	23Z026646	23Z026646	21Z837042

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- TEST PIT
- EXTERIOR AST
- FORMER UST

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

0 10 20 30 40
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION: PORTION OF 1047 RICHMOND ROAD OTTAWA, ONTARIO

TERRAPEX

TITLE: **SOIL SAMPLE DISTRIBUTION - BTEX**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION:	**DATE:**	**FIGURE:**
00	JULY 2025	**8E**

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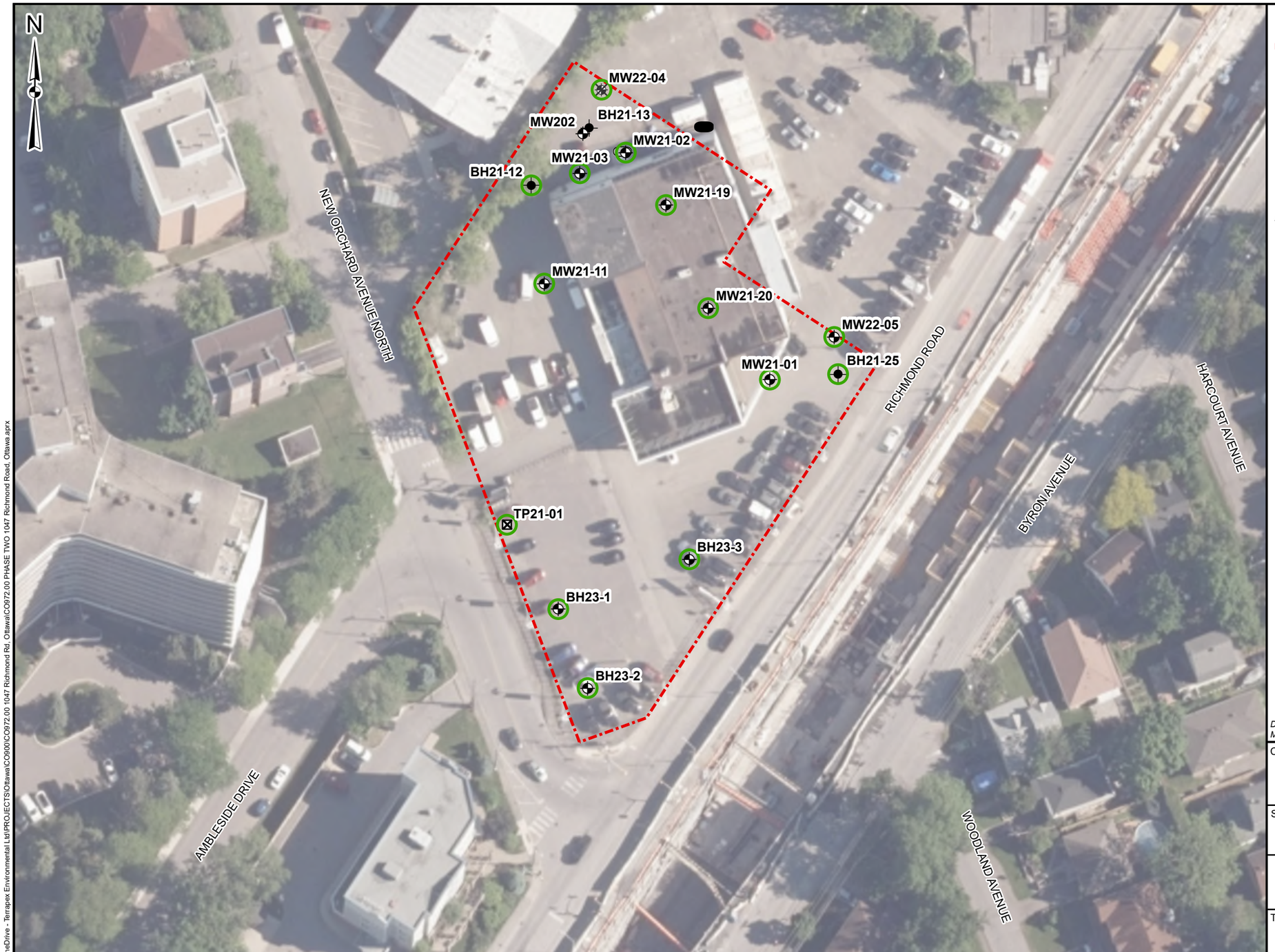

SAMPLE NAME	UNITS	STANDARDS Table 7 R/P/I coarse	21-1 SA3	21-2 SA5	21-3 SA2	21-11 SA2	21-12 SA3	BH21-19 SA1	BH21-20 SA2	Dup-1 Duplicate of BH21-20 SA2	BH21-25 SA4	BH22-04 SA1	BH22-05 SA4	23-1 SA1	23-1 SA11 Duplicate of 23-1 SA1	23-2 SA2	23-3 SA2	TP21-01
Sample Depth	m bgs	-	1.2 - 1.8	2.4 - 2.7	0.6 - 1.2	0.8 - 1.5	1.5 - 2.3	0.2 - 0.6	0.8 - 1.5	0.8 - 1.5	3.1 - 3.4	0.0 - 0.8	2.4 - 3.0	0.2 - 0.6	0.2 - 0.6	0.5 - 1.2	0.6 - 0.9	0.0 - 0.2
Sampling Date	dd-mmm-yy	-	24-Sep-21	21-Sep-21	22-Sep-21	12-Nov-21	11-Nov-21	22-Nov-21	24-Nov-21	24-Nov-21	21-Dec-21	9-May-22	11-May-22	17-May-23	17-May-23	17-May-23	15-May-23	22-Nov-21
Certificate of Analysis No.	-	-	C1S1463	C1S1463	C1S1463	C1X6358	C1X6358	21Z837042	21Z837042	21Z837042	21T848962	22Z895974	22Z895974	23Z026646	23Z026646	23Z026646	23Z026646	21Z837042

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- TEST PIT
- EXTERIOR AST
- FORMER UST

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

0 10 20 30 40
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SOIL SAMPLE DISTRIBUTION - PHCS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION:	**DATE:**	**FIGURE:**
00	JULY 2025	**8F**

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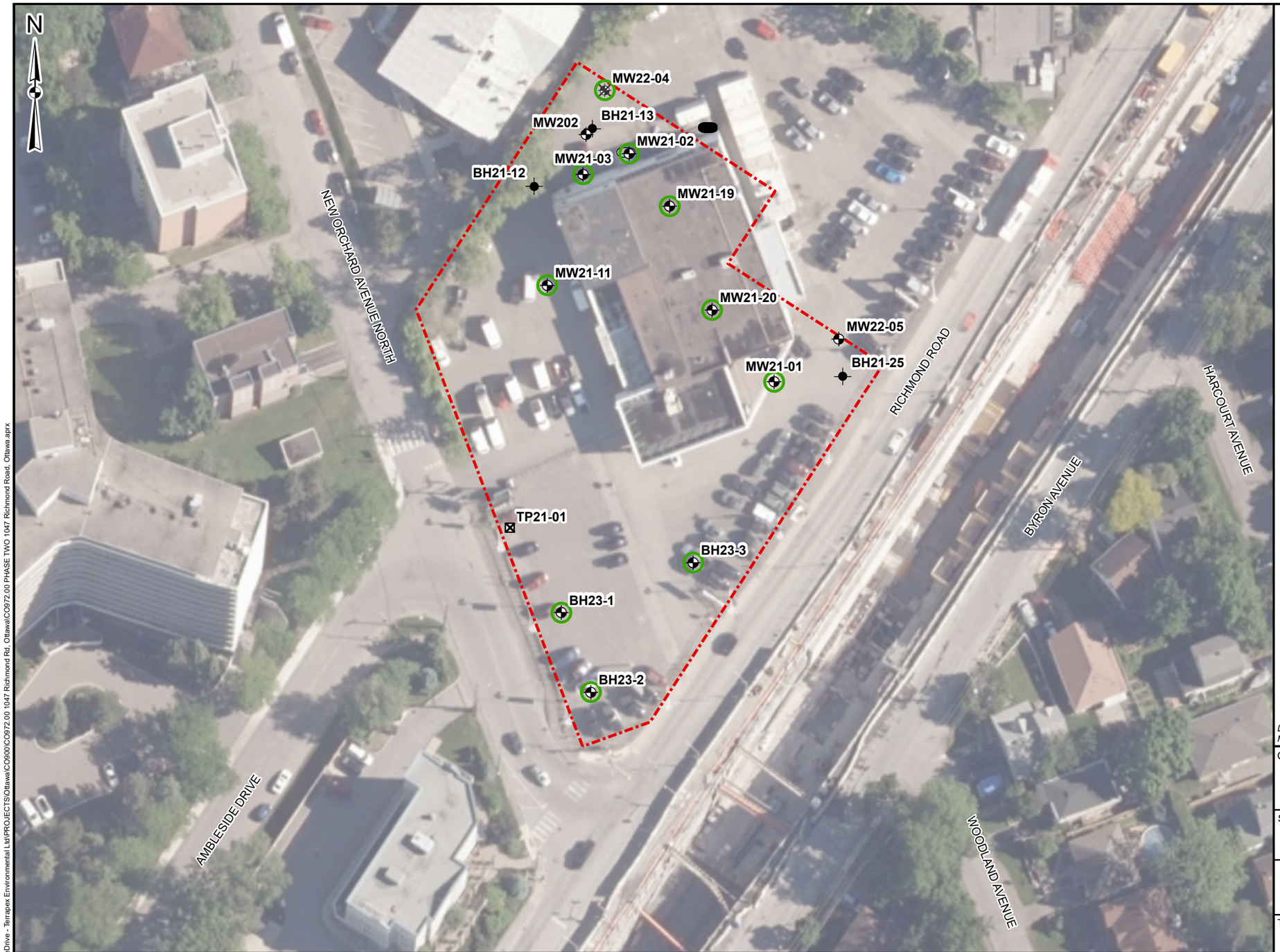

SAMPLE NAME	UNITS	STANDARDS Table 7 R/P/I coarse	21-1 SA3	21-2 SA5	21-3 SA1	21-11 SA2	21-12 SA3	BH21-19 SA1	BH21-20 SA2	DUP-1 Duplicate of BH21-20 SA2	BH22-04 SA1	23-1 SA1	23-1 SA11 Duplicate of 23-1 SA1	23-2 SA2	23-3 SA2
Sample Depth	m bgs	-	1.2 - 1.8	2.4 - 2.7	0.1 - 0.6	0.8 - 1.5	1.5 - 2.3	0.2 - 0.6	0.8 - 1.5	0.8 - 1.5	0.0 - 0.8	0.2 - 0.6	0.2 - 0.6	0.5 - 1.2	0.6 - 0.9
Sampling Date	dd-mmm-yy	-	24-Sep-21	21-Sep-21	22-Sep-21	12-Nov-21	11-Nov-21	22-Nov-21	24-Nov-21	24-Nov-21	9-May-22	17-May-23	17-May-23	17-May-23	15-May-23
Certificate of Analysis No.	-	-	C1S1463	C1S1463	C1S1463	C1X6358	C1X6358	21Z837042	21Z837042	21Z837042	22Z895974	23Z026646	23Z026646	23Z026646	23Z026646

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- TEST PIT
- EXTERIOR AST
- FORMER UST

ANALYSIS INFORMATION

- LESS THAN OE EQUAL TO TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

0 10 20 30 40
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SOIL SAMPLE DISTRIBUTION - VOCS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION:	**DATE:**	**FIGURE:**
00	JULY 2025	**8G**

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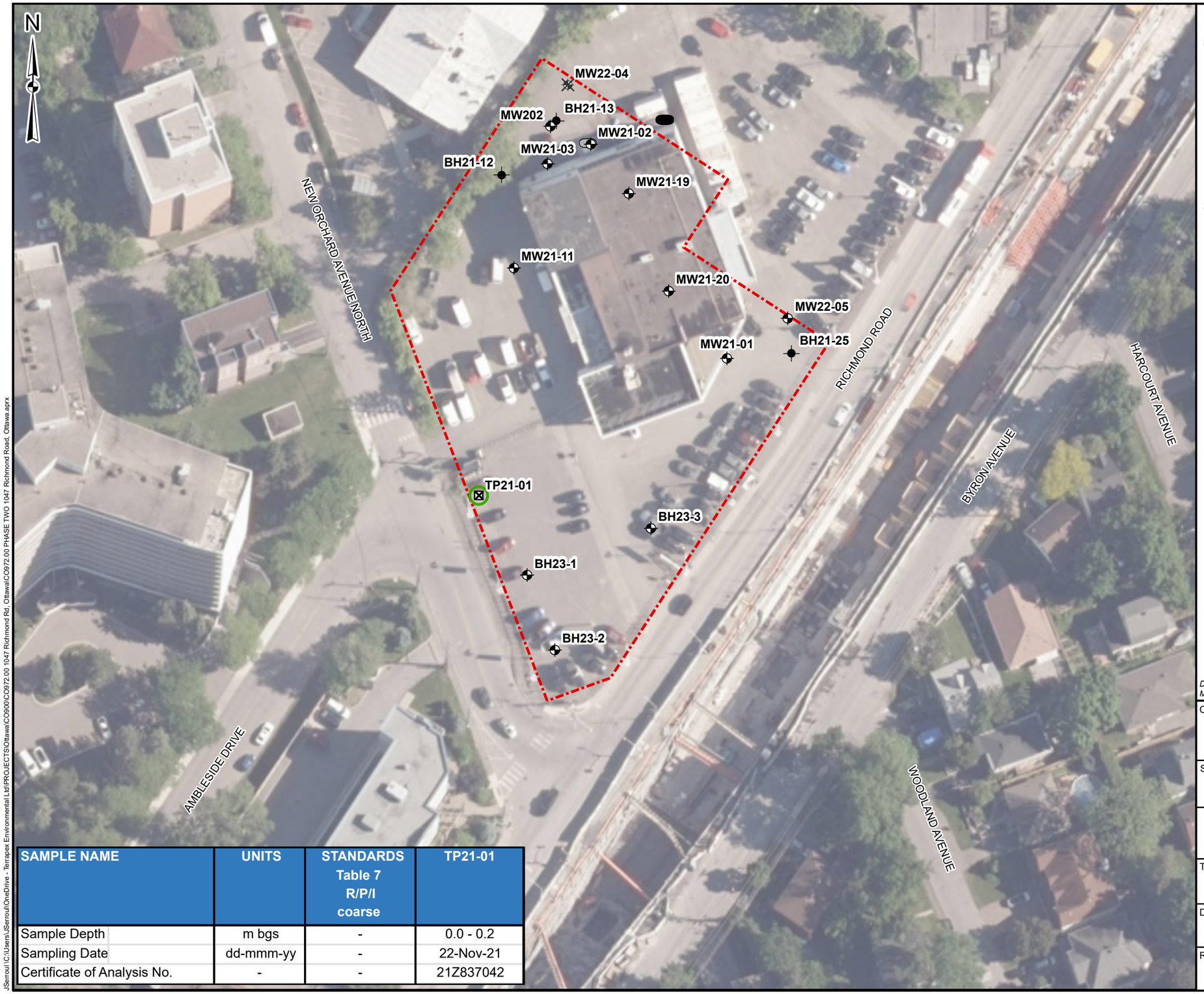

SAMPLE NAME	UNITS	STANDARDS Table 7 R/P/I coarse	TP21-01
Sample Depth	m bgs	-	0.0 - 0.2
Sampling Date	dd-mmm-yy	-	22-Nov-21
Certificate of Analysis No.	-	-	21Z837042

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- TEST PIT
- EXTERIOR AST
- FORMER UST

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

0 10 20 30 40
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SOIL SAMPLE DISTRIBUTION - PCBS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **8H**

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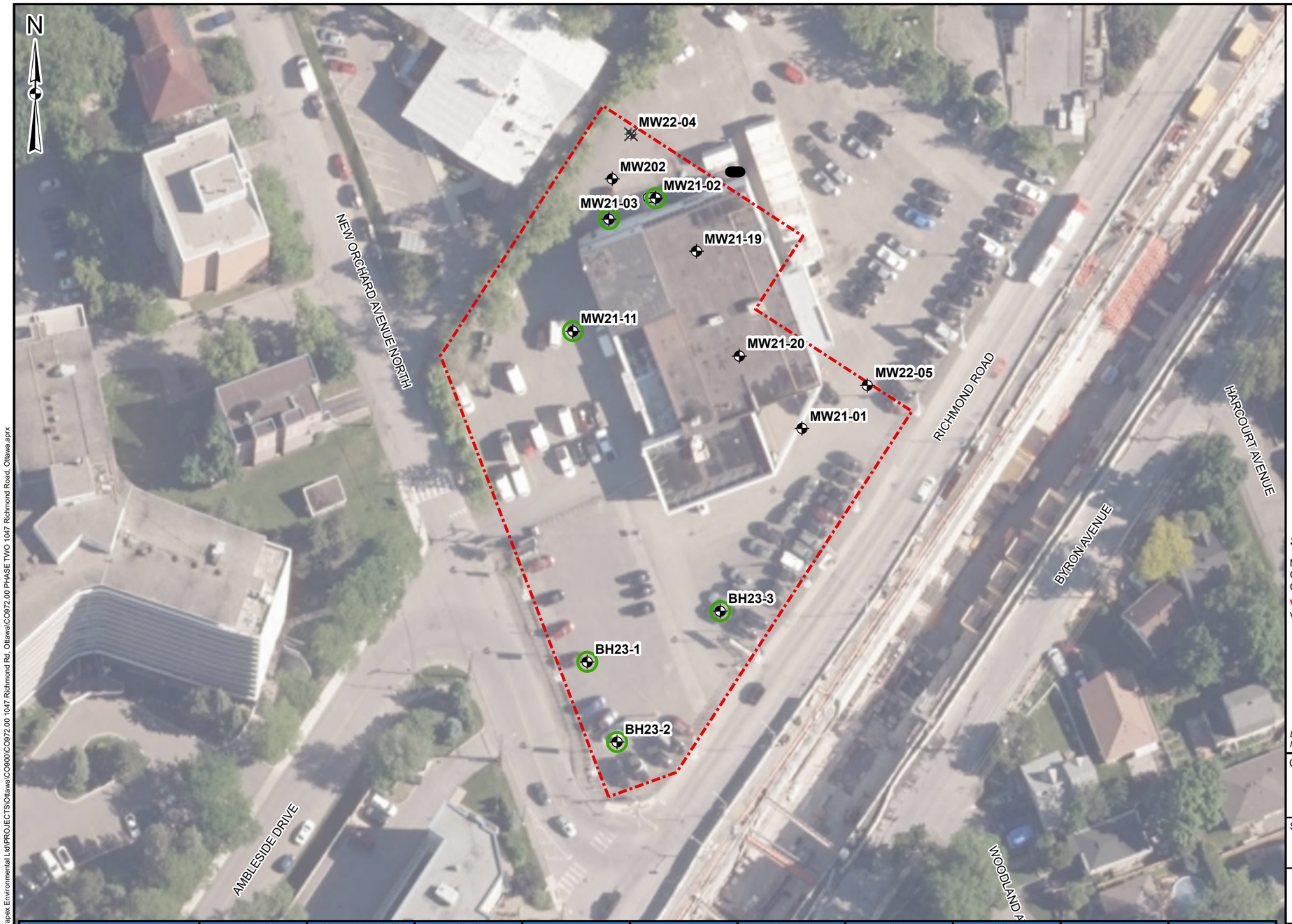

SAMPLE NAME	UNITS	STANDARDS Table 7 coarse	21-2	21-3	21-11	DUP-2 duplicate of 21-11	23-1	23-2	DUP 1 duplicate of 23-2	23-3
Screen Interval	m bgs	-	4.0 - 7.0	4.6 - 7.6	2.5 - 5.5	2.5 - 5.5	10.2 - 13.2	11.9 - 14.9	11.9 - 14.9	11.6 - 14.6
Sampling Date	dd-mmm-yy	-	4-Oct-21	4-Oct-21	30-Nov-21	30-Nov-21	25-May-23	26-May-23	26-May-23	26-May-23
Certificate of Analysis No.	-	-	C1S7480	C1S7480	21Z837880	21Z837880	23Z029406	23Z029406	23Z029406	23Z029406

LEGEND

- SITE BOUNDARY
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- EXTERIOR AST
- FORMER UST

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

0 10 20 30 40
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER SAMPLE DISTRIBUTION - METALS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION:	DATE:	FIGURE:
00	JULY 2025	9A

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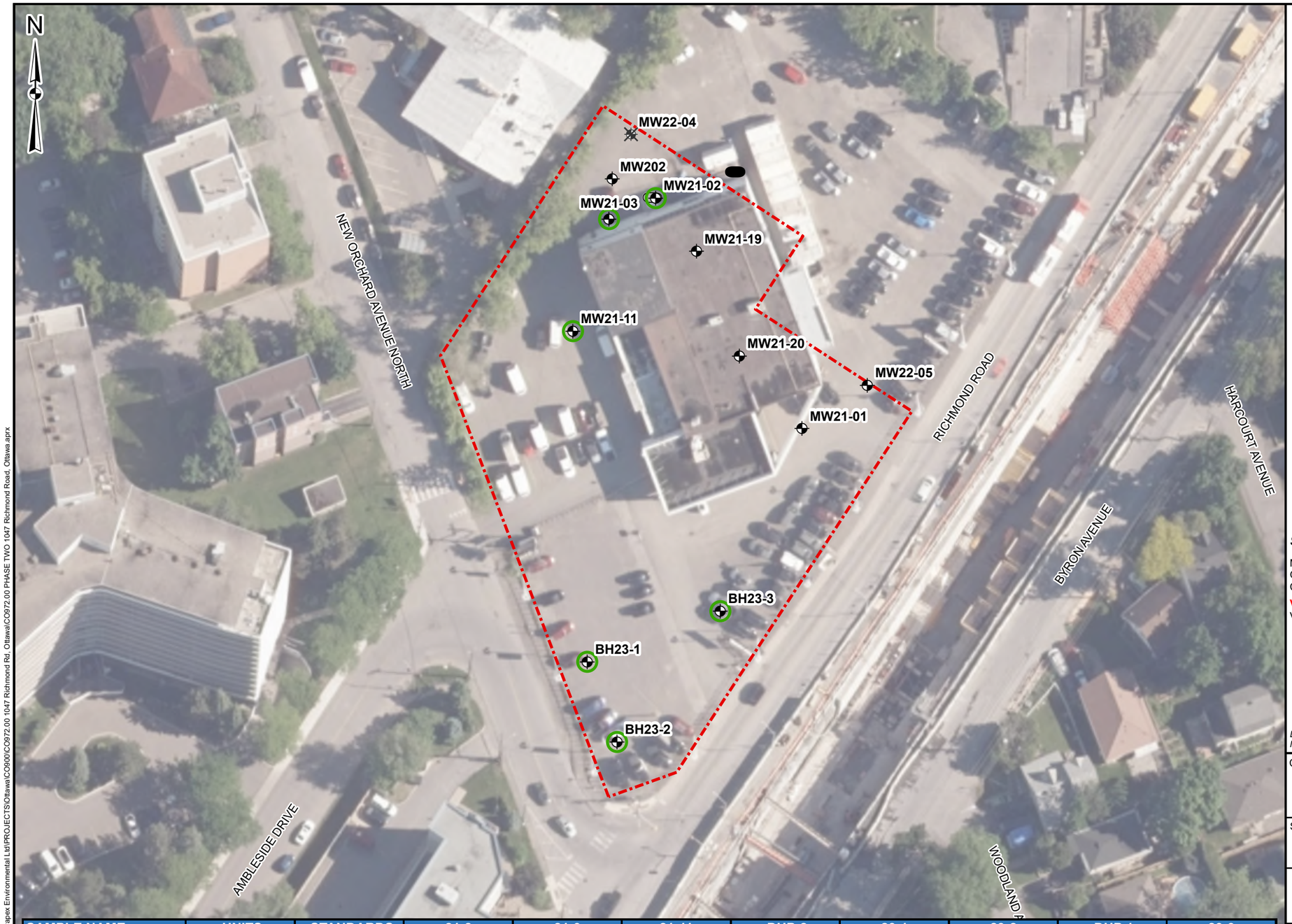

SAMPLE NAME	UNITS	STANDARDS Table 7 coarse	21-2	21-3	21-11	DUP-2 duplicate of 21-11	23-1	23-2	DUP 1 duplicate of 23-2	23-3
Screen Interval	m bgs	-	4.0 - 7.0	4.6 - 7.6	2.5 - 5.5	2.5 - 5.5	10.2 - 13.2	11.9 - 14.9	11.9 - 14.9	11.6 - 14.6
Sampling Date	dd-mmm-yy	-	4-Oct-21	4-Oct-21	30-Nov-21	30-Nov-21	25-May-23	26-May-23	26-May-23	26-May-23
Certificate of Analysis No.	-	-	C1S7480	C1S7480	21Z837880	21Z837880	23Z029406	23Z029406	23Z029406	23Z029406

LEGEND

- SITE BOUNDARY
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- EXTERIOR AST
- FORMER UST

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS

VALUE LESS THAN OR EQUAL TO SCS

0 10 20 30 40

Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION: PORTION OF 1047 RICHMOND ROAD OTTAWA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER SAMPLE DISTRIBUTION - HYDRIDE FORMING METALS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION:	DATE:	FIGURE:
00	JULY 2025	9B

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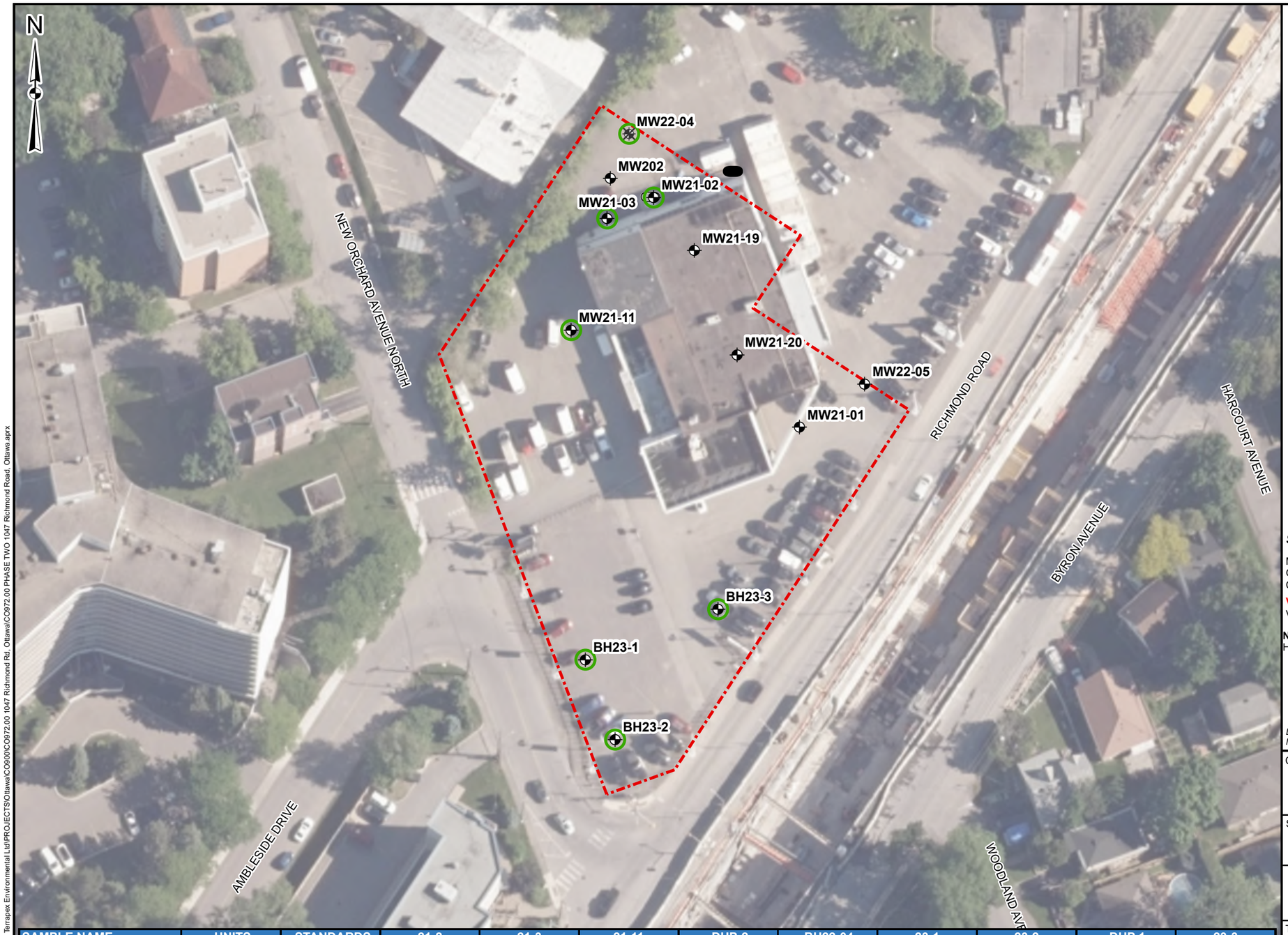


SAMPLE NAME	UNITS	STANDARDS Table 7 coarse	21-2	21-3	21-11	DUP-2 duplicate of 21-11	BH22-04	23-1	23-2	DUP 1 duplicate of 23-2	23-3
Screen Interval	m bgs	-	4.0 - 7.0	4.6 - 7.6	2.5 - 5.5	2.5 - 5.5	4.9 - 7.9	10.2 - 13.2	11.9 - 14.9	11.9 - 14.9	11.6 - 14.6
Sampling Date	dd-mmm-yy	-	4-Oct-21	4-Oct-21	30-Nov-21	30-Nov-21	27-Jun-24	25-May-23	26-May-23	26-May-23	26-May-23
Certificate of Analysis No.	-	-	C1S7480	C1S7480	21Z837880	21Z837880	C4J8739	23Z029406	23Z029406	23Z029406	23Z029406

LEGEND

- SITE BOUNDARY
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- EXTERIOR AST
- FORMER UST

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTE: OTHER REGULATED PARAMETERS INCLUDE CYANIDE, HEXAVALENT CHROMIUM, MERCURY, PH, CHLORIDE, SODIUM.

0 10 20 30 40
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

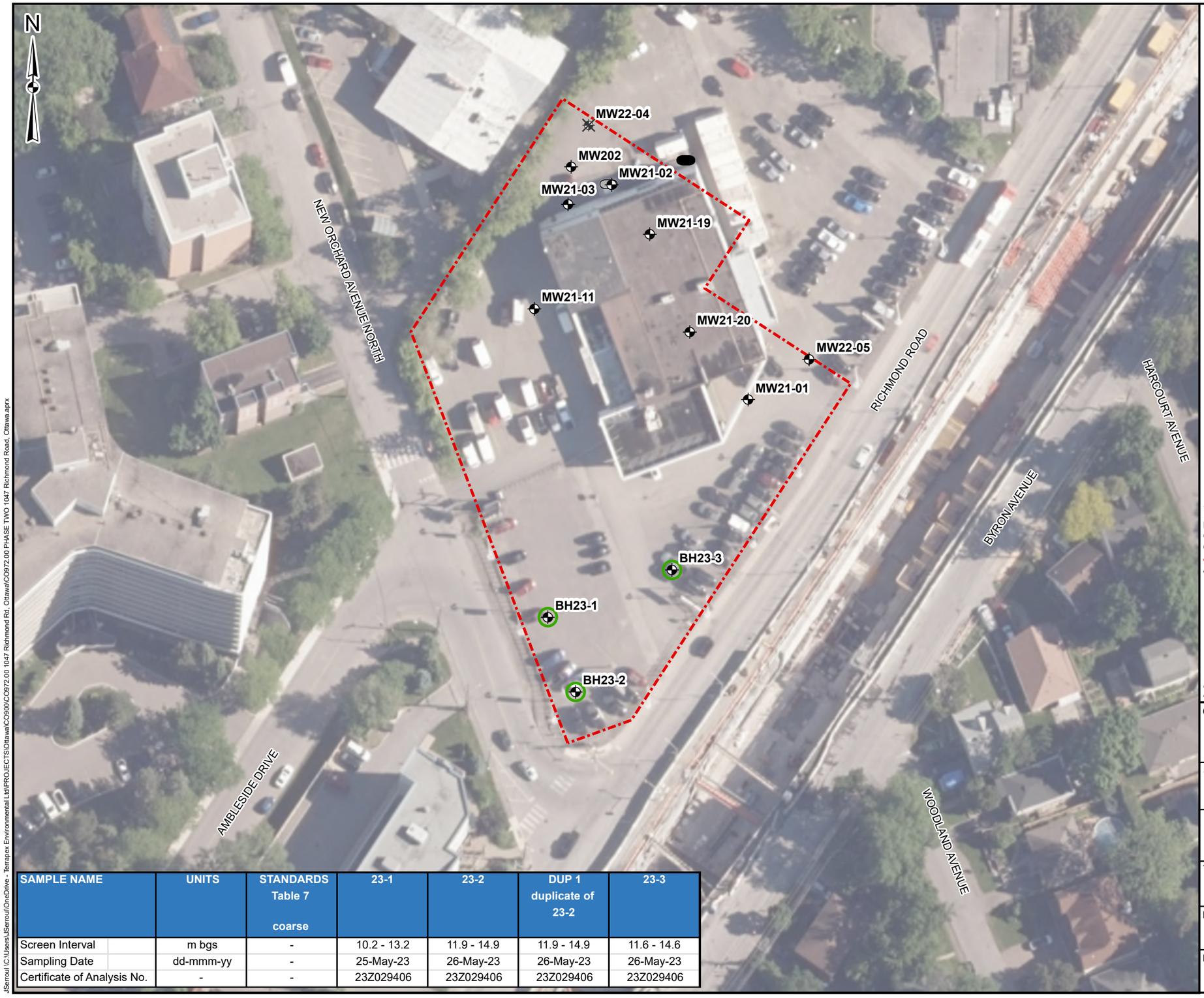
SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER SAMPLE DISTRIBUTION - OTHER REGULATED PARAMETERS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION:	DATE:	FIGURE:
00	JULY 2025	9C

J:\Terroul\C:\Users\JSerroul\OneDrive - Terrapex Environmental Ltd\PROJECTS\Ottawa\CO900\CO972.00 1047 Richmond Rd, Ottawa\CO972.00 PHASE TWO 1047 Richmond Road, Ottawa.aprx



SAMPLE NAME	UNITS	STANDARDS Table 7 coarse	23-1	23-2	DUP 1 duplicate of 23-2	23-3
Screen Interval	m bgs	-	10.2 - 13.2	11.9 - 14.9	11.9 - 14.9	11.6 - 14.6
Sampling Date	dd-mmm-yy	-	25-May-23	26-May-23	26-May-23	26-May-23
Certificate of Analysis No.	-	-	23Z029406	23Z029406	23Z029406	23Z029406

LEGEND

- SITE BOUNDARY
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- EXTERIOR AST
- FORMER UST

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

0 10 20 30 40
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER SAMPLE DISTRIBUTION - PAHS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION:	DATE:	FIGURE:
00	JULY 2025	**9D**

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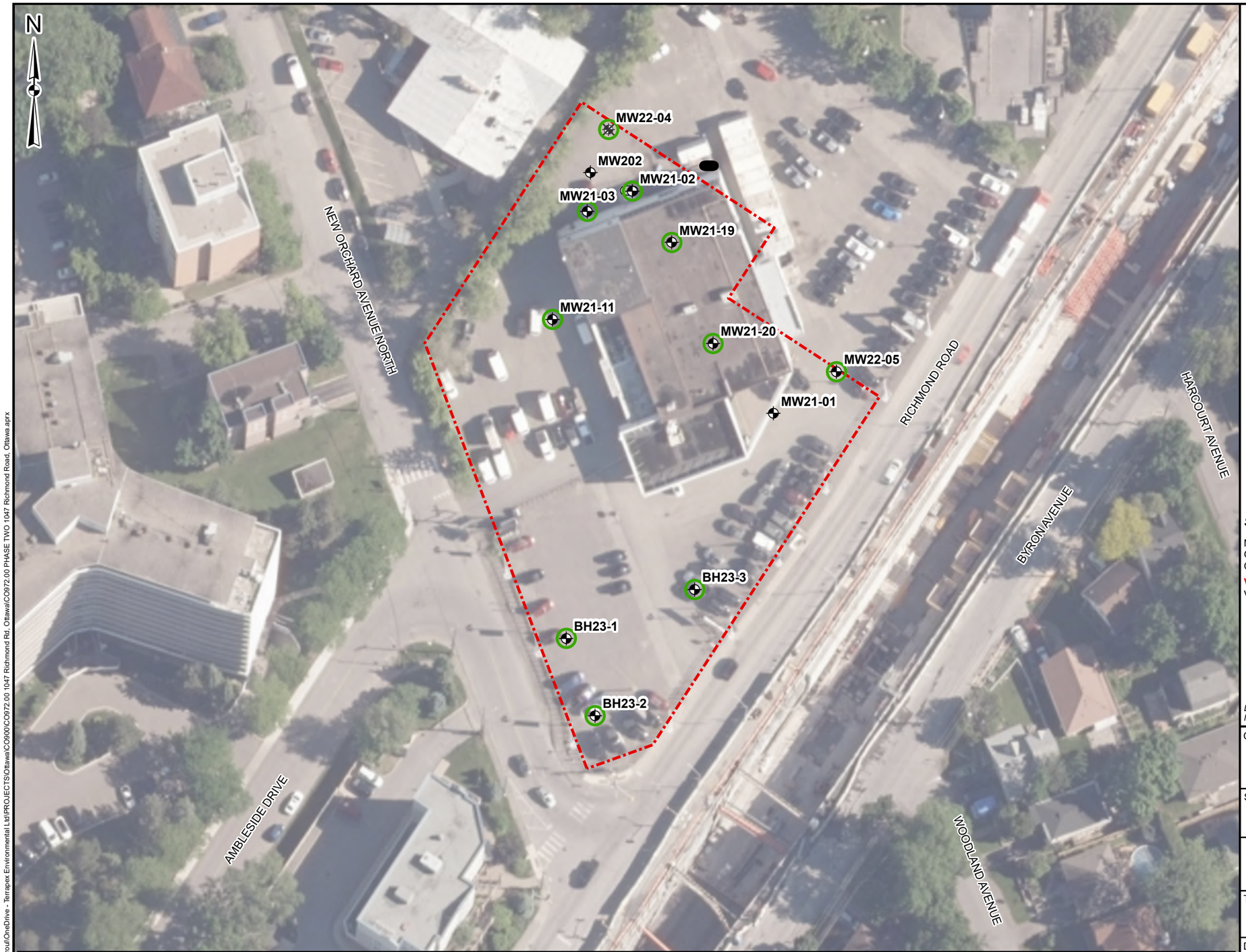

SAMPLE NAME	UNITS	STANDARDS Table 7 coarse	21-2	21-3	21-11	21-19	21-20	MW 22-04	22-4	MW22-04	DUP-2 duplicate of MW22-04	22-04	MW22-04	BH22-04	BH22-114 duplicate of BH22-04	MW 22-05	23-1	23-2	DUP 1 duplicate of 23-2	23-3
Screen Interval	m bgs	-	4.0 - 7.0	4.6 - 7.6	2.5 - 5.5	2.7 - 5.1	3.3 - 5.2	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	7.6 - 10.7	10.2 - 13.2	11.9 - 14.9	11.9 - 14.9	11.6 - 14.6
Sampling Date	dd-mmm-yy	-	4-Oct-21	4-Oct-21	30-Nov-21	30-Nov-21	30-Nov-21	26-May-22	16-Nov-22	7-Jul-23	7-Jul-23	15-Aug-23	21-Nov-23	27-Jun-24	27-Jun-24	26-May-22	25-May-23	26-May-23	26-May-23	26-May-23
Certificate of Analysis No.	-	-	C1S7480	C1S7480	21Z837880	21Z837880	21Z837880	22T901122	22Z970560	23Z045388	23Z045388	23Z058034	23Z095888	C4J8739	C4J8739	22T901122	23Z029406	23Z029406	23Z029406	23Z029406

LEGEND

- SITE BOUNDARY
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- EXTERIOR AST
- FORMER UST

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS

VALUE LESS THAN OR EQUAL TO SCS

0 10 20 30 40

Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION: PORTION OF 1047 RICHMOND ROAD OTTAWA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER SAMPLE DISTRIBUTION - BTEX**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **9E**

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LEGEND

- SITE BOUNDARY
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- EXTERIOR AST
- FORMER UST
- REMEDIAL EXCAVATION

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS
- GREATER THAN TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

0 10 20 30 40
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

SAMPLE NAME	UNITS	STANDARDS Table 7 coarse	21-2	21-3	21-11	21-19	21-20	MW 22-04	MW22-04	DUP-2 duplicate of MW22-04	22-04	MW22-04	BH22-04	BH22-114 duplicate of BH22-04	MW 22-05	23-1	23-2	DUP 1 duplicate of 23-2	23-3
Screen Interval	m bgs	-	4.0 - 7.0	4.6 - 7.6	2.5 - 5.5	2.7 - 5.1	3.3 - 5.2	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	7.6 - 10.7	10.2 - 13.2	11.9 - 14.9	11.9 - 14.9	11.6 - 14.6
Sampling Date	dd-mmm-yy	-	4-Oct-21	4-Oct-21	30-Nov-21	30-Nov-21	30-Nov-21	26-May-22	7-Jul-23	7-Jul-23	15-Aug-23	21-Nov-23	27-Jun-24	27-Jun-24	26-May-22	25-May-23	26-May-23	26-May-23	26-May-23
Certificate of Analysis No.	-	-	C1S7480	C1S7480	21Z837880	21Z837880	21Z837880	22T901122	23Z045388	23Z045388	23Z058034	23Z095888	C4J8739	C4J8739	22T901122	23Z029406	23Z029406	23Z029406	23Z029406
PETROLEUM HYDROCARBONS (PHCs)																			
Petroleum Hydrocarbons F1	ug/L	420	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	59	110	< 25	< 25	< 25	< 25	< 25
Petroleum Hydrocarbons F2	ug/L	150	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	**214**	**8100**	-	< 100	< 100	< 100	< 100	< 100
Petroleum Hydrocarbons F3	ug/L	500	< 200	< 200	< 100	< 100	< 100	< 100	**542**	**569**	< 100	**2,840**	**100000**	-	< 100	< 100	< 100	< 100	< 100
Petroleum Hydrocarbons F4	ug/L	500	< 200	< 200	< 100	< 100	< 100	< 100	< 100	< 100	< 100	<100	**18000**	-	< 100	< 100	< 100	< 100	< 100

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER CONTAMINANT DELINEATION - PHCS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION:	**DATE:**	**FIGURE:**
00	JULY 2025	**9F**

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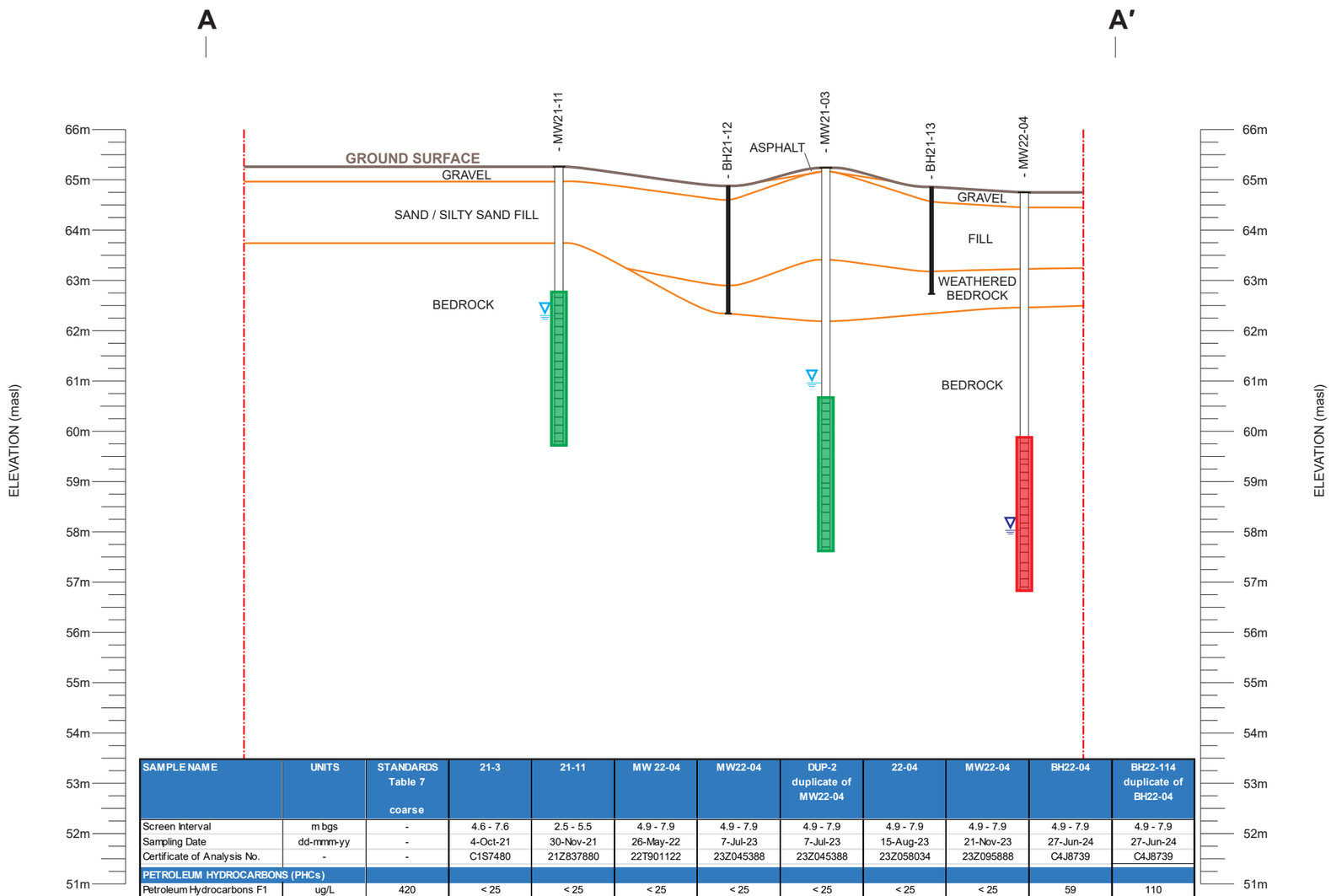
LOOKING NORTH WEST



SAMPLE NAME	UNITS	STANDARDS Table 7 coarse	21-3	21-11	MW 22-04	MW22-04	DUP-2 duplicate of MW22-04	22-04	MW22-04	BH22-04	BH22-114 duplicate of BH22-04
Screen Interval	m bgs	-	4.6 - 7.6	2.5 - 5.5	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9
Sampling Date	dd-mmm-yy	-	4-Oct-21	30-Nov-21	26-May-22	7-Jul-23	7-Jul-23	15-Aug-23	21-Nov-23	27-Jun-24	27-Jun-24
Certificate of Analysis No.	-	-	C1S7480	21Z837880	22T901122	23Z045388	23Z045388	23Z058034	23Z095888	C4J8739	C4J8739
PETROLEUM HYDROCARBONS (PHCs)											
Petroleum Hydrocarbons F1	ug/L	420	< 25	< 25	< 25	< 25	< 25	< 25	< 25	59	110
Petroleum Hydrocarbons F2	ug/L	150	< 100	< 100	< 100	< 100	< 100	< 100	214	8100	-
Petroleum Hydrocarbons F3	ug/L	500	< 200	< 100	< 100	542	569	< 100	2,840	100000	-
Petroleum Hydrocarbons F4	ug/L	500	< 200	< 100	< 100	< 100	< 100	< 100	<100	18000	-

LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- GROUNDWATER LEVEL (AS OF JUNE 27, 2024)
- GROUNDWATER LEVEL (AS OF OCT/NOV 2021)
- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS
- GREATER THAN TABLE 7 SCS

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH COARSE TEXTURED SOIL.

HORIZONTAL SCALE

0 10m 20m

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.

CLIENT: FENGATE

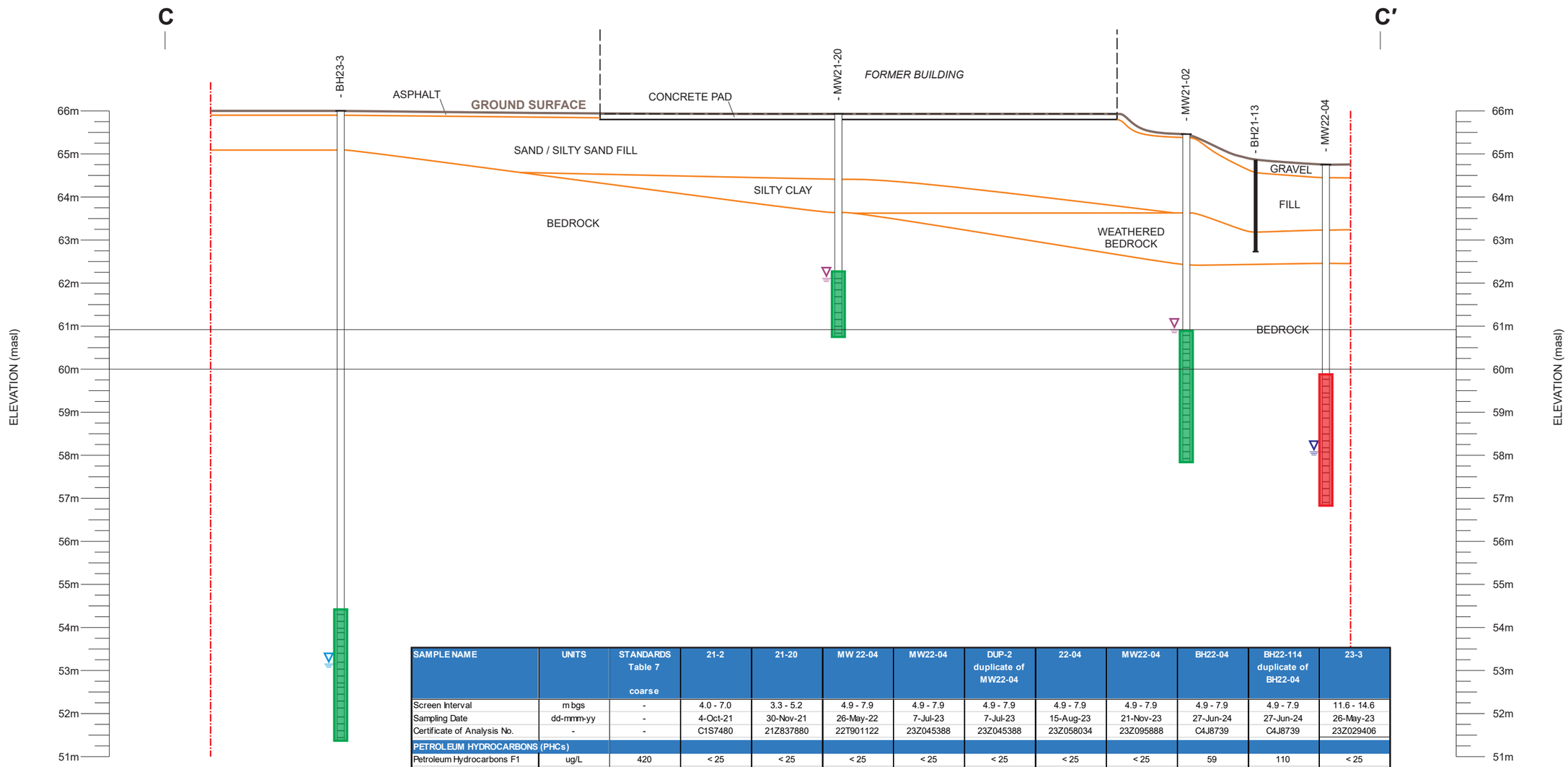
SITE LOCATION: PORTION OF 1047 RICHMOND ROAD OTTAWA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER CONTAMINANT DELINEATION - CROSS SECTION A-A' - PHCs**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SF	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **9F-I**

LOOKING WEST



SAMPLE NAME	UNITS	STANDARDS Table 7 coarse	21-2	21-20	MW 22-04	MW22-04	DUP-2 duplicate of MW22-04	22-04	MW22-04	BH22-04	BH22-114 duplicate of BH22-04	23-3
Screen Interval	m bgs	-	4.0 - 7.0	3.3 - 5.2	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	11.6 - 14.6
Sampling Date	dd-mmm-yy	-	4-Oct-21	30-Nov-21	26-May-22	7-Jul-23	7-Jul-23	15-Aug-23	21-Nov-23	27-Jun-24	27-Jun-24	26-May-23
Certificate of Analysis No.	-	-	C1S7480	21Z837880	22T901122	23Z045388	23Z045388	23Z058034	23Z095888	C4J8739	C4J8739	23Z029406
PETROLEUM HYDROCARBONS (PHCs)												
Petroleum Hydrocarbons F1	ug/L	420	< 25	< 25	< 25	< 25	< 25	< 25	< 25	59	110	< 25
Petroleum Hydrocarbons F2	ug/L	150	< 100	< 100	< 100	< 100	< 100	< 100	214	8100	-	< 100
Petroleum Hydrocarbons F3	ug/L	500	< 200	< 100	< 100	542	569	< 100	2,840	100000	-	< 100
Petroleum Hydrocarbons F4	ug/L	500	< 200	< 100	< 100	< 100	< 100	< 100	<100	18000	-	< 100

LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- GROUNDWATER LEVEL (AS OF JUNE 27, 2024)
- GROUNDWATER LEVEL MEASURED BY WSP (AS OF MAY 23, 2023)
- GROUNDWATER LEVEL (AS OF OCT/NOV, 2021)
- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS
- GREATER THAN TABLE 7 SCS

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH COARSE TEXTURED SOIL.

HORIZONTAL SCALE

0 10m 20m

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.

CLIENT: FENGATE

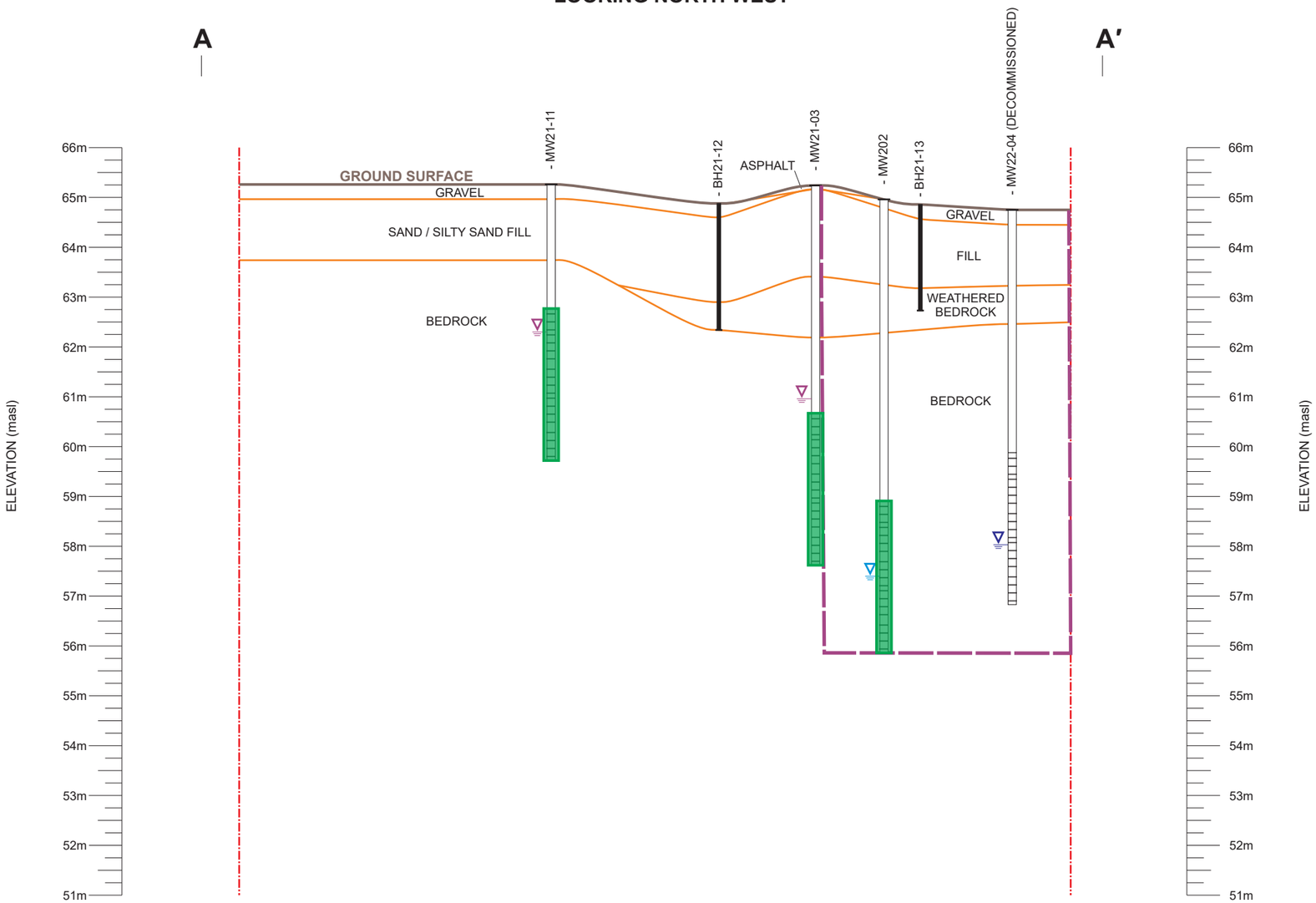
SITE LOCATION: PORTION OF 1047 RICHMOND ROAD OTTAWA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER CONTAMINANT DELINEATION - CROSS SECTION C-C' - PHCs**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SF	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **9F-II**

LOOKING NORTH WEST



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- GROUNDWATER LEVEL (AS OF DECEMBER 19, 2024)
- GROUNDWATER LEVEL (AS OF JUNE 27, 2024)
- GROUNDWATER LEVEL (AS OF OCT/NOV 2021)
- REMEDIAL EXCAVATION
- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS
- GREATER THAN TABLE 7 SCS

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH COARSE TEXTURED SOIL.

HORIZONTAL SCALE

0 10m 20m

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.

CLIENT: FENGATE

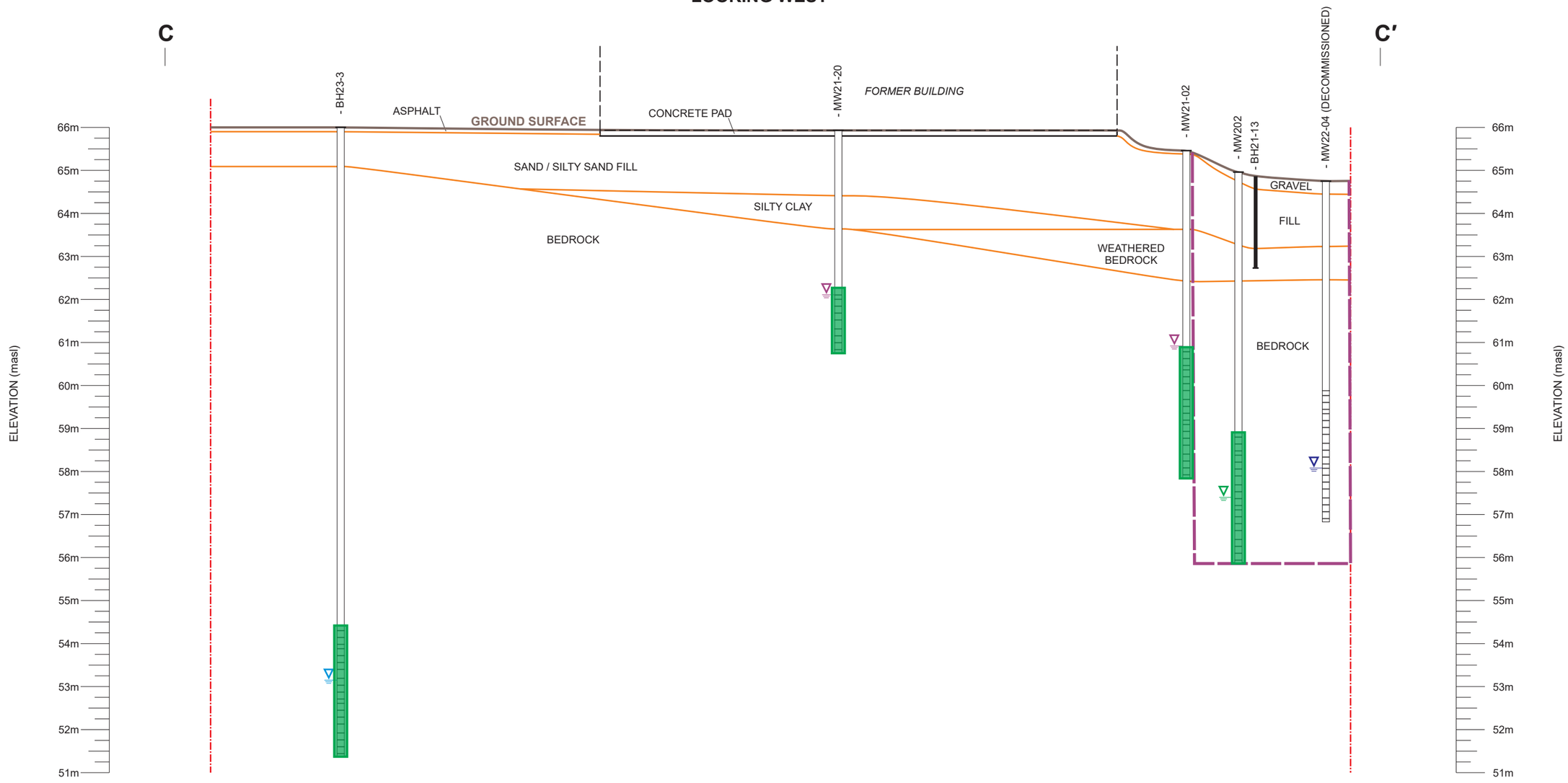
SITE LOCATION: PORTION OF 1047 RICHMOND ROAD OTTAWA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER SAMPLE DISTRIBUTION - CROSS SECTION A-A' - PHCs (POST REMEDIATION)**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SF	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **9F-III**

LOOKING WEST



LEGEND

- PROPERTY BOUNDARY
- REMEDIAL EXCAVATION
- STRATIGRAPHIC UNIT
- GROUNDWATER LEVEL (AS OF DECEMBER 19, 2024)
- GROUNDWATER LEVEL (AS OF JUNE 27, 2024)
- GROUNDWATER LEVEL MEASURED BY WSP (AS OF MAY 23, 2023)
- GROUNDWATER LEVEL (AS OF OCT/NOV, 2021)
- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS
- GREATER THAN TABLE 7 SCS

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH COARSE TEXTURED SOIL.

HORIZONTAL SCALE

0 10m 20m

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.

CLIENT: FENGATE

SITE LOCATION: PORTION OF 1047 RICHMOND ROAD OTTAWA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER SAMPLE DISTRIBUTION - CROSS SECTION C-C' - PHCs (POST REMEDIATION)**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SF	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **9F-IV**

SAMPLE NAME	UNITS	STANDARDS Table 7 coarse	21-2	21-3	21-11	21-19	21-20	MW 22-04	22-4	MW22-04	DUP-2 duplicate of MW22-04	22-04	MW22-04	BH22-04	BH22-114 duplicate of BH22-04	MW 22-05	23-1	23-2	DUP 1 duplicate of 23-2	23-3
Screen Interval	m bgs	-	4.0 - 7.0	4.6 - 7.6	2.5 - 5.5	2.7 - 5.1	3.3 - 5.2	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	7.6 - 10.7	10.2 - 13.2	11.9 - 14.9	11.9 - 14.9	11.6 - 14.6
Sampling Date	dd-mmm-yy	-	4-Oct-21	4-Oct-21	30-Nov-21	30-Nov-21	30-Nov-21	26-May-22	16-Nov-22	7-Jul-23	7-Jul-23	15-Aug-23	21-Nov-23	27-Jun-24	27-Jun-24	26-May-22	25-May-23	26-May-23	26-May-23	26-May-23
Certificate of Analysis No.	-	-	C1S7480	C1S7480	21Z837880	21Z837880	21Z837880	22T901122	22Z970560	23Z045388	23Z045388	23Z058034	23Z095888	C4J8739	C4J8739	22T901122	23Z029406	23Z029406	23Z029406	23Z029406

LEGEND

- SITE BOUNDARY
- MONITORING WELL
- DECOMMISIONED MONITORING WELL
- EXTERIOR AST
- FORMER UST

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

0 10 20 30 40
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER SAMPLE DISTRIBUTION - VOCS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: 9G

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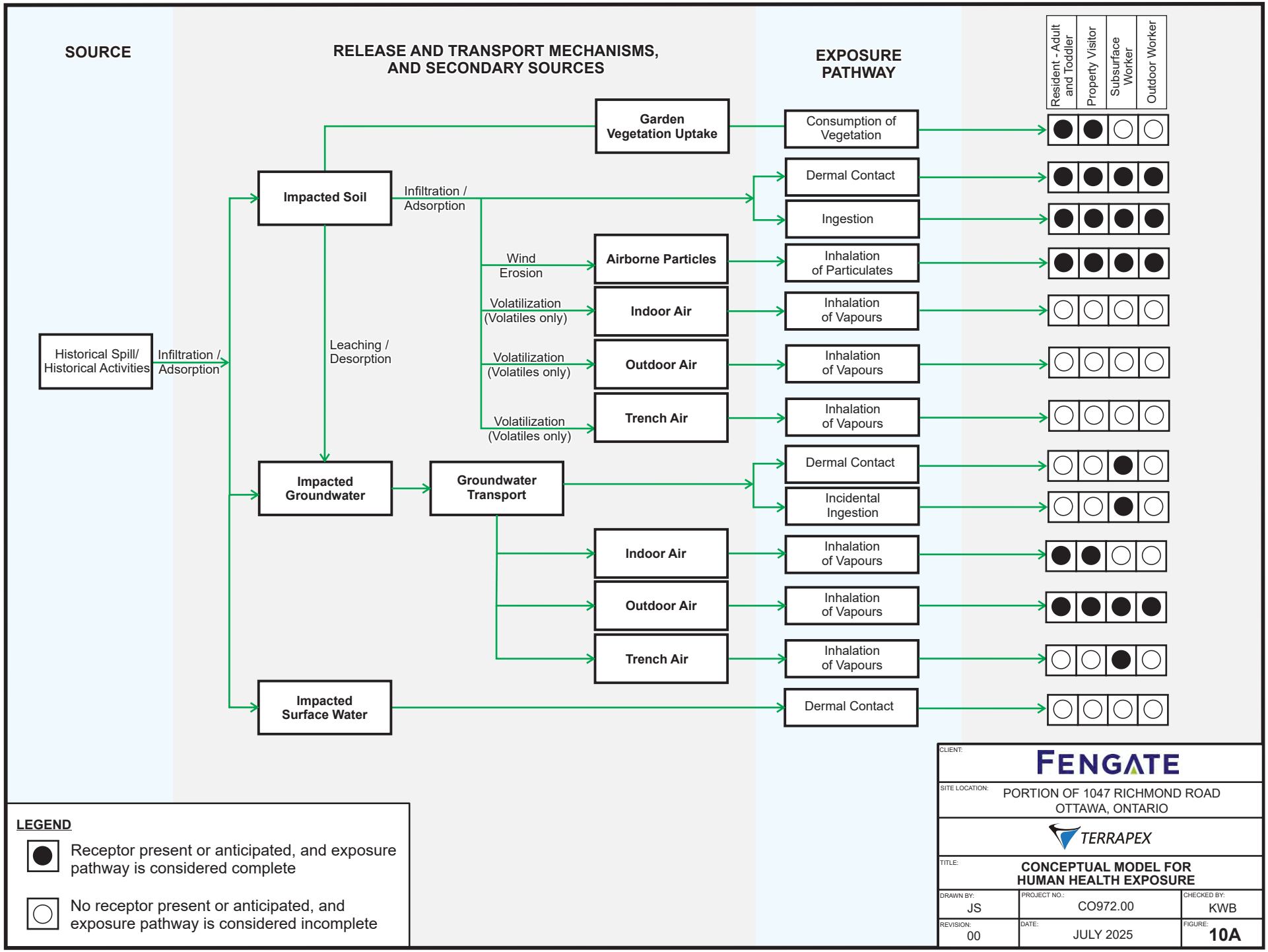
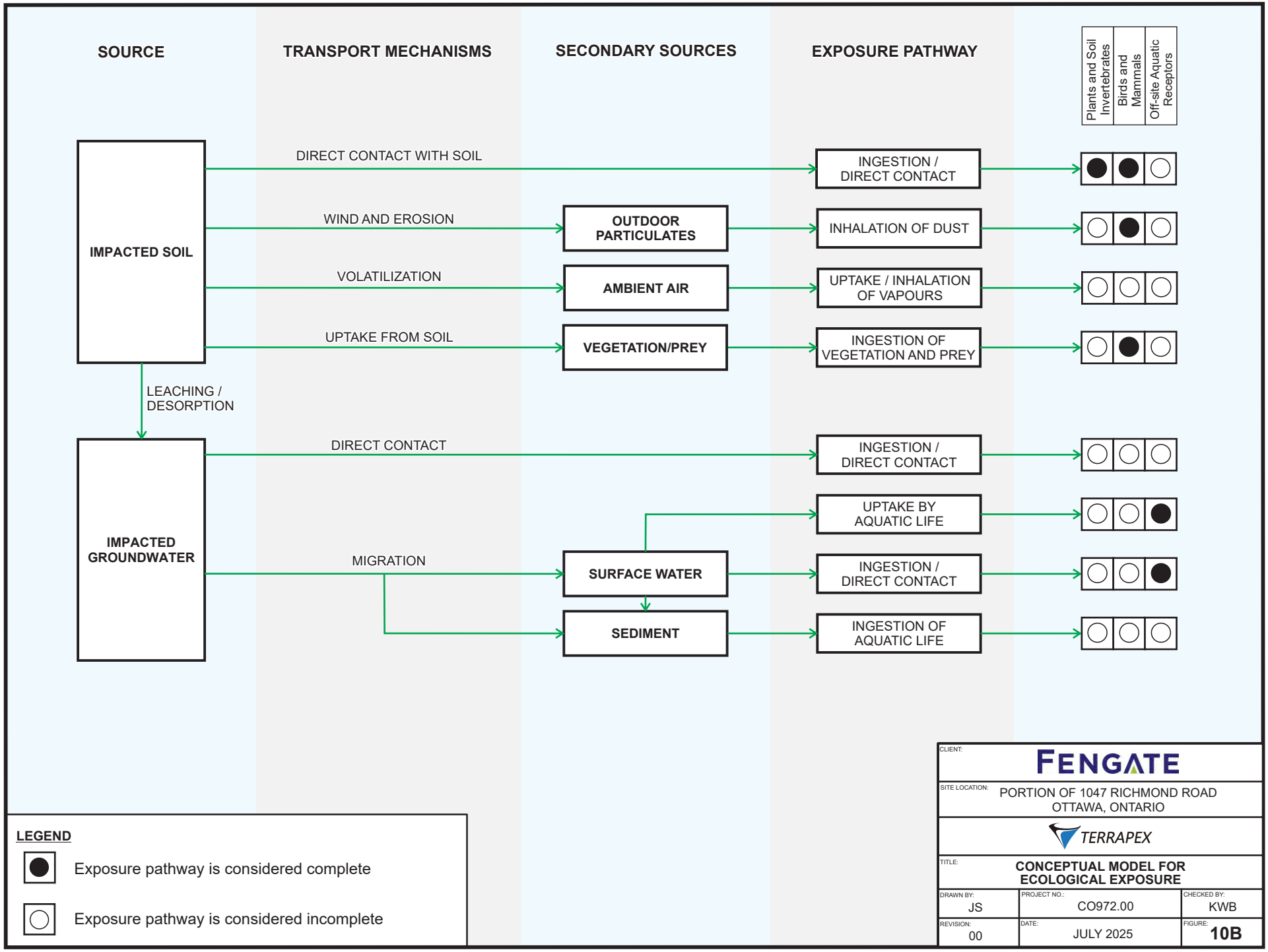

SOURCE
RELEASE AND TRANSPORT MECHANISMS, AND SECONDARY SOURCES
EXPOSURE PATHWAY
Resident - Adult and Toddler
Property Visitor
Subsurface Worker
Outdoor Worker
Historical Spill/ Historical Activities
Infiltration / Adsorption
Impacted Soil
Garden Vegetation Uptake
Consumption of Vegetation
Infiltration / Adsorption
Dermal Contact
Ingestion
Wind Erosion
Airborne Particles
Inhalation of Particulates
Volatilization (Volatiles only)
Indoor Air
Inhalation of Vapours
Leaching / Desorption
Volatilization (Volatiles only)
Outdoor Air
Inhalation of Vapours
Volatilization (Volatiles only)
Trench Air
Inhalation of Vapours
Impacted Groundwater
Groundwater Transport
Dermal Contact
Incidental Ingestion
Indoor Air
Inhalation of Vapours
Outdoor Air
Inhalation of Vapours
Trench Air
Inhalation of Vapours
Impacted Surface Water
Dermal Contact
LEGEND
Receptor present or anticipated, and exposure pathway is considered complete
No receptor present or anticipated, and exposure pathway is considered incomplete
CLIENT: FENGATE
SITE LOCATION: PORTION OF 1047 RICHMOND ROAD OTTAWA, ONTARIO
TERRAPEX
TITLE: CONCEPTUAL MODEL FOR HUMAN HEALTH EXPOSURE
DRAWN BY: JS
PROJECT NO.: CO972.00
CHECKED BY: KWB
REVISION: 00
DATE: JULY 2025
FIGURE: 10A


SOURCE
TRANSPORT MECHANISMS
SECONDARY SOURCES
EXPOSURE PATHWAY
Plants and Soil Invertebrates
Birds and Mammals
Off-site Aquatic Receptors
IMPACTED SOIL
DIRECT CONTACT WITH SOIL
INGESTION / DIRECT CONTACT
WIND AND EROSION
OUTDOOR PARTICULATES
INHALATION OF DUST
VOLATILIZATION
AMBIENT AIR
UPTAKE / INHALATION OF VAPOURS
UPTAKE FROM SOIL
VEGETATION/PREY
INGESTION OF VEGETATION AND PREY
LEACHING / DESORPTION
IMPACTED GROUNDWATER
DIRECT CONTACT
INGESTION / DIRECT CONTACT
UPTAKE BY AQUATIC LIFE
MIGRATION
SURFACE WATER
INGESTION / DIRECT CONTACT
SEDIMENT
INGESTION OF AQUATIC LIFE
LEGEND
Exposure pathway is considered complete
Exposure pathway is considered incomplete
CLIENT:
FENGATE
SITE LOCATION:
PORTION OF 1047 RICHMOND ROAD
OTTAWA, ONTARIO
TERRAPEX
TITLE:
CONCEPTUAL MODEL FOR ECOLOGICAL EXPOSURE
DRAWN BY: JS
PROJECT NO.: CO972.00
CHECKED BY: KWB
REVISION: 00
DATE: JULY 2025
FIGURE: 10B

TABLES

TABLE 1: TABLE OF CURRENT AND PAST USES OF THE PHASE ONE PROPERTY
(Refer to clause 16(2)(b), Schedule D, O. Reg. 153/04)

Year	Name of Owner	Description of Property Use	Property Use[1]	Other Observations from Aerial Photographs, Fire Insurance Plans, etc.
Prior to 1804	Crown	Undeveloped	Agricultural or Other Use	• Ownership determined through the title search • No information available for this time period.
1804-1829	Joseph Boisseau	Undeveloped	Agricultural or Other Use	• Ownership determined through the title search • No information available for this time period.
1829-1833	Robert Hallowell	Undeveloped	Agricultural or Other Use	• Ownership determined through the title search • No information available for this time period.
1833-1866	George Baker	Undeveloped	Agricultural or Other Use	• Ownership determined through the title search • No information available for this time period.
1866-1888	Godfrey Baker	Undeveloped	Agricultural or Other Use	• Ownership determined through the title search • No information available for this time period.
1888-1889	George Aiken	Undeveloped	Agricultural or Other Use	• Ownership determined through the title search • No information available for this time period.
1889-1940	John B. Ullett	Undeveloped	Agricultural or Other Use	• Ownership determined through the title search • No information available for this time period.
1940-1952	Robert L. Ullett	Undeveloped	Agricultural or Other Use	• Ownership determined through the title search • The 1946 aerial photograph indicated the property was generally forested at the time
1952-1956	Nick Boosamra	Tourist Cabins	Commercial Use	• Ownership determined through the title search • The 1956 FIP showed 12 tourist cabins on the property
1956-1957	Brownlee & McKeown Limited	Tourist Cabins	Commercial Use	• Ownership determined through the title search • The 1956 FIP showed 12 tourist cabins on the property

Year	Name of Owner	Description of Property Use	Property Use[1]	Other Observations from Aerial Photographs, Fire Insurance Plans, etc.
1957-1958	Charles A. Brownlee & Patrick McKeown	Tourist Cabins	Commercial Use	• Ownership determined through the title search • The 1956 FIP showed 12 tourist cabins on the property • The 1958 aerial photograph indicated there were building on the property
1958 - 1959	Northern Garage and Holding Limited	Tourist Cabins	Commercial Use	• Ownership determined through the title search • The 1956 FIP showed 12 tourist cabins on the property • The 1958 aerial photograph indicated there were buildings on the property
1959-1971	Chrysler Corporation of Canada	Car Dealership and Automotive Garage	Commercial Use	• Ownership determined through the title search • The 1965 aerial photograph indicated the property had been developed as a car dealership
1971-1982	Parkway Chrysler Plymouth Ltd.	Car Dealership and Automotive Garage	Commercial Use	• Ownership determined through the title search • The 1976 aerial photograph indicated the property had been developed as a car dealership
1982-1990	505432 Ontario Limited Marinter (Ontario) Ltd.	Car Dealership and Automotive Garage	Commercial Use	• Ownership determined through the title search • Property Fire Rating Report indicated continued use as a car dealership with autobody shop
1990-2022	Rimosa Investments Ltd.	Car Dealership and Automotive Garage	Commercial Use	• Ownership determined through the title search • The 1991 aerial photograph indicated the property had been developed as a car dealership
2022-present	1047 Richmond Nominee Inc., 1047 Richmond Investment GP Inc.)	Car Dealership and Automotive Garage	Commercial Use	• Ownership determined through the title search • Information provided by the Client indicates that the car dealership remained in operation until 2023 when the building was demolished. • The property has been vacant since November 2023

Notes:

1 - for each owner, specify one of the following types of property use (as defined in O. Reg. 153/04) that applies:
Agriculture or other use | Commercial use | Community use | Industrial use | Institutional use | Parkland use | Residential use

2 - when submitting a record of site condition for filing, a copy of this table must be attached

TABLE 2: POTENTIALLY CONTAMINATING ACTIVITIES ON, IN OR UNDER THE PHASE ONE PROPERTY AND STUDY AREA

PCA[1]	Potentially Contaminating Activity[2]	Address/ Location/ Distance/ Direction	Description	Data Source	Likelihood To Affect the Site / Rationale	Uncertainty	Area(s) of Potential Environmental Concern
1	10. Commercial Autobody Shops	1047 Richmond Road (the Site)	Former Automotive Service Garage	City Directories ERIS Report Previous Report	Possible	- Information on the historical operations is limited	APEC 1 (East-Central Portion of the Site)
2	28. Gasoline and Associated Products Storage in Fixed Tanks	East Portion of 1047 Richmond Road (Off-Site)	Waste Oil Storage from Former Automotive Service Garage	City Directories ERIS Report Previous Report	Possible	- No information on the removal of the former UST is available	APEC 2
3	28. Gasoline and Associated Products Storage in Fixed Tanks	1047 Richmond Road (the Site)	Waste Oil Storage from Former Automotive Service Garage	City Directories ERIS Report Previous Report	Possible	- Low	APEC 3
4	39. Paint Manufacturing, Processing and Bulk Storage	1047 Richmond Road (the Site)	Paint Booth from Former Automotive Service Garage	Previous Report	Possible	- Low	APEC 4
5	30. Importation of Fill Material of Unknown Quality	1047 Richmond Road (the Site)	Inferred Fill Material	Previous Report Site Inspection	Possible	- Type and extent of fill material (if any) is unknown	APEC 5 (Entire Site)
6	55. Transformer Manufacturing, Processing and Use	1047 Richmond Road (the Site)	Former Pole Mounted Transformer and Fuse Box	Previous Report Site Inspection	Possible	- Low	APEC 6 (West-Central Portion of the Site)

PCA[1]	Potentially Contaminating Activity[2]	Address/ Location/ Distance/ Direction	Description	Data Source	Likelihood To Affect the Site / Rationale	Uncertainty	Area(s) of Potential Environmental Concern
7	OT1. Application of De-Icing Salt for Vehicle and Pedestrian Safety	1047 Richmond Road (the Site)	Former Use of Salt to De-Ice the Parkland Lot	N/A	Possible	- Quantity and extent of salt use is unknown	APEC 7 (Entire Site)
8	46. Rail Yards, Tracks and Spurs	85 m north	Former CN Railway Corridor	Aerial Photographs	Unlikely – Down-gradient from the Site	- Low	No
9	28. Gasoline and Associated Products Storage in Fixed Tanks	1075 Richmond Road 70 m southwest	Former Retail Fuel Outlet Automotive Refinishing	FIP (1956) ERIS Report HLUI	Unlikely – Distance from the Site and being cross-gradient	- Information about current and former operations are unknown	No
10	10. Commercial Autobody Shops	1075 Richmond Road 70 m southwest	Booth Collision Centre	HLUI	Unlikely – Distance from the Site and being cross-gradient	- Information about current and former operations are unknown	No
11	18. Electricity Generation, Transformation and Power Stations	108 New Orchard Avenue 30 m northwest	Former Hydro Sub-Station	FIP	Unlikely – Down-gradient from the Site	- Low	No
12	10. Commercial Autobody Shops	955 Richmond Road 230 m northeast	Ottawa Honda	Aerial Photos City Directories Site Inspection	Unlikely – Distance from the Site and being cross-gradient	- Information about current and former operations are unknown	No

PCA[1]	Potentially Contaminating Activity[2]	Address/ Location/ Distance/ Direction	Description	Data Source	Likelihood To Affect the Site / Rationale	Uncertainty	Area(s) of Potential Environmental Concern
13	28. Gasoline and Associated Products Storage in Fixed Tanks	979 Richmond Road 175 m northeast	Tops Car Wash	ERIS Report Aerial Photos City Directories Site Inspection	Unlikely – Distance from the Site and being cross-gradient	- Information about current and former operations are unknown	No
14	10. Commercial Autobody Shops	979 Richmond Road 175 m northeast	Tops Car Wash	HLUI	Unlikely – Distance from the Site and being cross-gradient	- Information about current and former operations are unknown	No
15	37. Operation of Dry Cleaning Equipment (where chemicals are used)	993 Richmond Road 145 m northeast	Palmers Cleaners	City Directories HLUI	Unlikely – Distance from the Site and being cross-gradient	- Unclear if dry cleaning occurred on the property or whether it was a depot	No
16	OT2. Spills	1162 Byron Avenue 70 m east	Spill of 200 L furnace oil to floor drain in 1988	ERIS Report	Unlikely – Assumed localized to residence	- Unclear if environmental assessment and/or remediation was conducted	No
17	OT2. Spills	Richmond Road and New Orchard Ave. (Ottawa LRT) 50 m south	Spills of 50 L diesel fuel and 20 L hydraulic oil in 2020 and 2021, respectively	ERIS Report	Unlikely – Assumed localized to LTR tunnel	- Unclear if environmental assessment and/or remediation conducted	No

PCA[1]	Potentially Contaminating Activity[2]	Address/ Location/ Distance/ Direction	Description	Data Source	Likelihood To Affect the Site / Rationale	Uncertainty	Area(s) of Potential Environmental Concern
18	OT2. Spills	192 Ancaster Avenue 180 m east	Spill of 50 L furnace oil to drain in 2000	ERIS Report	Unlikely – Distance from the Site and assumed localized to residence	- Unclear if environmental assessment and/or remediation conducted	No
19	OT3. Waste Generation	1100 Ambleside Drive 165 m southwest	Generator of oil skimmings and sludges in 2022	ERIS Report	Unlikely - Distance from the Site and assumed localized to residence	- Quantities of waste generated are unknown but assumed to be small quantities for residential property - Waste handling practices are unknown	No
20	OT2. Spills	1068 Richmond Road 190 m southwest	Spill of 30 L hydraulic oil in 2021	ERIS Report	Unlikely - Distance from the Site and assumed localized to residence	- Unclear if environmental assessment and/or remediation conducted	No
21	OT3. Waste Generation	1136 Richmond Road 250 m southwest	Waste Management System	ERIS Report	Unlikely - Distance from the Site and being cross-gradient	- Quantities of waste generated are unknown but assumed to be small quantities for residential property - Waste handling practices are unknown	No

PCA[1]	Potentially Contaminating Activity[2]	Address/ Location/ Distance/ Direction	Description	Data Source	Likelihood To Affect the Site / Rationale	Uncertainty	Area(s) of Potential Environmental Concern
22	55. Transformer Manufacturing, Processing and Use	1071 Ambleside Drive 25 m west	Hydro Vault	Site Inspection	Unlikely – Located down-gradient from the Site	- Low	No
23	28. Gasoline and Associated Products Storage in Fixed Tanks	99 New Orchard Avenue North 65 m northwest	Suspected Backup Generator with Associated Fuel Storage	Site Inspection	Unlikely - Located down-gradient from the Site	-Fuel storage (location or quantity) could not be confirmed	No

[1] *As shown on Figure 4.*
[2] *As set out in Table 2 in Schedule D of O. Reg. 153/04.*

TABLE 3: TABLE OF AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

(Refer to clause 16(2)(a), Schedule D, O. Reg. 153/04)

Area of Potential Environmental Concern[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (On-Site Or Off-Site)	Contaminants Of Potential Concern[3,4]	Media Potentially Impacted (Ground water, Soil, and/or Sediment)
APEC 1	East-central portion of the Site	PCA 1: 10 - Commercial Autobody Shops	On-Site	PHCs BTEX VOCs	Soil & Groundwater
APEC 2	Northern portion of the Site	PCA 2: 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site	PHCs BTEX Metals	Groundwater
APEC 3	Northern portion of the Site	PCA 3: 28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs BTEX Metals	Soil & Groundwater
APEC 4	Northeastern portion of the Site	PCA 4: 39 - Paints Manufacturing, Processing and Bulk Storage	On-Site	VOCs PHCs Metals Hydride-Forming Metals ORPs	Soil & Groundwater
APEC 5	Entire Site	PCA 5: 30 - Importation of Fill Material of Unknown Quality	On-Site	PHCs Metals Hydride-Forming Metals ORPs	Soil
APEC 6	West-central portion of the Site	PCA 6: 55 - Transformer Manufacturing, Processing and Use	On-Site	PHCs PCBs	Soil
APEC 7	Entire Site	PCA 7: Other - De-icing Activities	On-Site	SAR EC Na Cl	Soil & Groundwater

1 - Areas of potential environmental concern means the area on, in or under a Phase One Property where one or more contaminants are potentially present, as determined through the Phase One environmental site assessment, including through,

(a) identification of past or present uses on, in or under the Phase One Property, and

(b) identification of potentially contaminating activity.

2 - Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a Phase One study area.
3 - When completing this column, identify all contaminants of potential concern using the Method Groups as identified in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011 and as of February 19, 2021, as specified below:

List of Method Groups:

ABNs	*Dioxins/Furans, PCDDs/PCDFs*	*PCBs*	*VOCs*	*Metals*	*B- HWS*	*EC*	*Methyl Mercury*
CPs	*OCs*	*PAHs*	*BTEX*	*As, Sb, Se*	*Cl^-*	*Cr (VI)*	*Low or high pH*
1,4-Dioxane	*PHCs*	*THMs*	*Bromomethane*	*Na*	*CN^-*	*Hg*	*SAR*

4 - Where an identified contaminant of potential concern is not listed in the table that sets out the applicable site conditions standards in the Soil, Ground Water and Sediment Standards for which sampling and analysis is performed and is associated with potentially contaminating activity, the qualified person is referred to Subsection 43(3) of the Regulation.
5 - When submitting a record of site condition for filing, a copy of this table must be attached.

TABLE 4: GROUNDWATER MONITORING DATA
1047 RICHMOND ROAD, OTTAWA, ON

WELL ID / CONSULTANT		WELL CONSTRUCTION				WELL MONITORING					
		GROUND ELEVATION[1]	T.O.P. ELEVATION[2]	SCREEN LENGTH	BOTTOM OF SCREEN[3]	DATE	CV[4]	DEPTH TO WATER FROM T.O.P.	DEPTH TO WATER FROM GROUND	GROUNDWATER ELEVATION[5]	LNAPL THICKNESS[6]
		(m)	(m)	(m)	(m)			(m)	(m)	(m)	(m)
BH21-1	Golder/WSP	65.73	65.66	3.05	7.62	4-Oct-21	-	7.62	7.69	58.04	None
BH21-1	Golder/WSP	65.73	65.66	3.05	7.62	30-Nov-21	-	7.56	7.63	58.10	None
BH21-1	Golder/WSP	65.73	65.66	3.05	7.62	8-Aug-23	-	7.47	7.54	58.19	None
BH21-1	Terrapex	65.64	65.59	3.05	7.62	27-Jun-24	<5 ppm	4.18	4.23	61.41	None
BH21-2	Golder/WSP	65.46	64.09	3.05	7.01	4-Oct-21	-	3.17	4.54	60.92	None
BH21-2	Golder/WSP	65.46	64.09	3.05	7.01	30-Nov-21	-	3.21	4.58	60.88	None
BH21-2	Golder/WSP	65.46	64.09	3.05	7.01	8-Aug-23	-	2.95	4.32	61.14	None
BH21-2	Terrapex	65.28	65.31	3.05	7.01	27-Jun-24	<5 ppm	2.89	2.86	62.42	None
BH21-3	Golder/WSP	65.24	64.52	3.05	7.62	4-Oct-21	-	3.56	4.28	60.96	None
BH21-3	Golder/WSP	65.24	64.52	3.05	7.62	30-Nov-21	-	3.08	3.80	61.44	None
BH21-3	Golder/WSP	65.24	64.52	3.05	7.62	8-Aug-23	-	2.80	3.52	61.72	None
BH21-3	Terrapex	64.99	65.04	3.05	7.62	27-Jun-24	<5 ppm	0.85	0.80	64.19	None
BH21-11	Golder/WSP	65.26	65.20	3.05	5.54	30-Nov-21	-	2.90	2.96	62.30	None
BH21-11	Golder/WSP	65.26	65.20	3.05	5.54	8-Aug-23	-	2.22	2.28	62.98	None
BH21-11	Terrapex	65.11	65.02	3.05	5.54	27-Jun-24	<5 ppm	2.10	2.19	62.92	None
BH21-19	Golder/WSP	65.95	65.88	2.43	5.13	30-Nov-21	-	3.37	3.44	62.51	None
BH21-20	Golder/WSP	65.93	65.85	1.88	5.18	30-Nov-21	-	3.74	3.82	62.11	None
BH21-20	Terrapex	65.93	65.85	1.88	5.18	27-Jun-24	<5 ppm	2.14	2.22	63.71	None
BH22-4	Golder/WSP	64.75	64.61	3.05	7.92	26-May-22	-	6.71	6.85	57.90	Sheen on Purge
BH22-4	Golder/WSP	64.75	64.61	3.05	7.92	15-Nov-22	-	6.96	7.10	57.65	Sheen on Purge
BH22-4	Golder/WSP	64.75	64.61	3.05	7.92	23-May-23	-	7.00	7.14	57.61	Sheen on Purge
BH22-4	Golder/WSP	64.75	64.61	3.05	7.92	30-Jun-23	-	6.96	7.10	57.65	Sheen on Purge
BH22-4	Golder/WSP	64.75	64.61	3.05	7.92	19-Jul-23	-	6.69	6.83	57.92	Sheen on Purge
BH22-4	Golder/WSP	64.75	64.61	3.05	7.92	8-Aug-23	-	6.40	6.54	58.21	Sheen on Purge
BH22-4	Terrapex	64.66	64.52	3.05	7.92	27-Jun-24	20 ppm	6.49	6.63	58.03	Sheen
BH22-5	Golder/WSP	65.94	65.85	3.05	10.66	26-May-22	-	7.70	7.79	58.15	None
BH22-5	Golder/WSP	65.94	65.85	3.05	10.66	23-May-23	-	7.86	7.95	57.99	None
BH22-5	Golder/WSP	65.94	65.85	3.05	10.66	30-Jun-23	-	7.77	7.86	58.08	None
BH22-5	Golder/WSP	65.94	65.85	3.05	10.66	8-Aug-23	-	7.75	7.84	58.10	None
BH22-5	Terrapex	65.84	65.81	3.05	10.66	27-Jun-24	<5 ppm	7.49	7.52	58.32	None
BH22-5	Terrapex	65.84	65.81	3.05	10.66	4-Apr-25	<5 ppm	7.48	7.52	58.33	None
23-01	WSP	65.64	65.49	3.05	13.26	23-May-23	-	11.76	11.91	53.73	None
23-02	WSP	65.98	65.86	3.05	14.94	23-May-23	-	12.43	12.55	53.43	None
23-03	WSP	66.00	65.90	3.05	14.63	23-May-23	-	12.75	12.85	53.15	None

[1] Elevation of ground surface at well location, relative to site benchmark

[2] Elevation of highest point of well pipe ("top of pipe"), relative to site benchmark

[3] Elevation relative to site benchmark

[4] Combustible vapour concentration in well headspace in parts per million by volume (ppm) or percent of lower explosive limit (%LEL)

[5] Static water level elevation, relatve to site benchmark

[6] Measured thickness of light, non-aqueous phase liquid, if any

TABLE 5A: SUMMARY OF SOIL ANALYTICAL RESULTS - METALS, HFMs AND OTHER REGULATED PARAMETERS
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (Terrapex)	UNITS	STANDARDS Table 7 R/P/I coarse	21-1 SA1 MW21-01 SA1	21-1 SA3 MW21-01 SA3	21-2 SA2 MW21-02 SA2	21-2 SA5 MW21-02 SA5	21-3 SA1 MW21-03 SA1	21-3 SA2 MW21-03 SA2
Sample Depth	m bgs	-	0.1 - 0.6	1.2 - 1.8	0.6 - 1.2	2.4 - 2.7	0.1 - 0.6	0.6 - 1.2
Sampling Date	dd-mmm-yy	-	24-Sep-21	24-Sep-21	21-Sep-21	21-Sep-21	22-Sep-21	22-Sep-21
Analysis Date (on or before)	dd-mmm-yy	-	1-Oct-21	1-Oct-21	1-Oct-21	1-Oct-21	1-Oct-21	1-Oct-21
Certificate of Analysis No.	-	-	C1S1463	C1S1463	C1S1463	C1S1463	C1S1463	C1S1463
METALS								
Barium	ug/g	390	72	-	21	-	-	-
Beryllium	ug/g	4.0	0.49	-	< 0.20	-	-	-
Boron (Total)	ug/g	120	9.8	-	< 5.0	-	-	-
Cadmium	ug/g	1.2	< 0.10	-	< 0.10	-	-	-
Chromium Total	ug/g	160	25	-	8.3	-	-	-
Cobalt	ug/g	22	7.6	-	3.1	-	-	-
Copper	ug/g	140	12	-	4.6	-	-	-
Lead	ug/g	120	5.6	-	2	-	-	-
Molybdenum	ug/g	6.9	< 0.50	-	< 0.50	-	-	-
Nickel	ug/g	100	22	-	5.5	-	-	-
Silver	ug/g	20	< 0.20	-	< 0.20	-	-	-
Thallium	ug/g	1.0	0.1	-	< 0.050	-	-	-
Uranium	ug/g	23	0.5	-	0.45	-	-	-
Vanadium	ug/g	86	30	-	20	-	-	-
Zinc	ug/g	340	33	-	16	-	-	-
HYDRIDE-FORMING METALS								
Antimony	ug/g	7.5	< 0.20	-	< 0.20	-	-	-
Arsenic	ug/g	18	< 1.0	-	< 1.0	-	-	-
Selenium	ug/g	2.4	< 0.50	-	< 0.50	-	-	-
OTHER REGULATED PARAMETERS (ORPs)								
Boron (Hot Water Soluble)[1]	ug/g	1.5	0.38	-	0.15	-	-	-
Cyanide (CN-)	ug/g	0.051	< 0.01	-	< 0.01	-	-	-
Chromium VI	ug/g	8.0	< 0.18	-	< 0.18	-	-	-
Mercury	ug/g	0.27	< 0.050	-	< 0.050	-	-	-
Methyl Mercury[2]	ug/g	0.0084	-	-	-	-	-	-
pH	pH Units	NV	7.51	-	6.97	-	-	-
Electrical Conductivity	mS/cm	0.70	0.54	-	0.26	-	-	-
Sodium Adsorption Ratio	-	5.0	3.6	2.3	0.88	4.1	0.29	**5.3**

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard
[1]	Hot water soluble boron applies to surface soils (<1.5 m bg).
[2]	Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 5A: SUMMARY OF SOIL ANALYTICAL RESULTS - METALS, HFMs AND OTHER REGULATED PARAMETERS
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (Terrapex)	UNITS	STANDARDS Table 7 R/P/I coarse	21-3 SA3 MW21-03 SA3	21-3 DUP-1 duplicate of 21-3 SA3	RPD	21-11 SA2 MW21-11 SA2	21-11 SA3 MW21-11 SA3	21-12 SA2 BH21-12 SA2	21-12 SA3 BH21-12 SA3	21-13 SA2 BH21-13 SA2
Sample Depth	m bgs	-	1.2 - 1.8	1.2 - 1.8	-	0.8 - 1.5	1.5 - 1.8	0.6 - 1.2	1.5 - 2.3	0.8 - 1.5
Sampling Date	dd-mmm-yy	-	22-Sep-21	22-Sep-21	-	12-Nov-21	12-Nov-21	11-Nov-21	11-Nov-21	11-Nov-21
Analysis Date (on or before)	dd-mmm-yy	-	1-Oct-21	1-Oct-21	-	17-Nov-21	17-Nov-21	17-Nov-21	17-Nov-21	17-Nov-21
Certificate of Analysis No.	-	-	C1S1463	C1S1463	-	C1X6358	C1X6358	C1X6358	C1X6358	C1X6358
METALS										
Barium	ug/g	390	99	110	11%	110	76	49	77	24
Beryllium	ug/g	4.0	0.52	0.72	32%	0.61	0.46	0.31	0.54	< 0.20
Boron (Total)	ug/g	120	7.8	12	42%	8.1	6.9	< 5.0	9.2	< 5.0
Cadmium	ug/g	1.2	0.45	0.37	20%	0.29	0.2	< 0.10	< 0.10	< 0.10
Chromium Total	ug/g	160	27	33	20%	26	24	15	39	7
Cobalt	ug/g	22	13	14	7%	11	7.2	4.3	8.5	2.8
Copper	ug/g	140	18	60	108%	22	15	8.6	17	5.3
Lead	ug/g	120	23	48	70%	54	20	2.7	6.7	1.9
Molybdenum	ug/g	6.9	< 0.50	0.52	-	< 0.50	0.73	< 0.50	4.6	< 0.50
Nickel	ug/g	100	25	34	31%	26	22	8.6	18	4.9
Silver	ug/g	20	< 0.20	< 0.20	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	ug/g	1.0	0.14	0.21	40%	0.15	0.11	0.06	0.11	0.11
Uranium	ug/g	23	0.49	0.64	27%	0.42	0.39	0.55	0.54	0.54
Vanadium	ug/g	86	26	29	11%	27	28	27	27	27
Zinc	ug/g	340	54	89	49%	80	60	21	32	32
HYDRIDE-FORMING METALS										
Antimony	ug/g	7.5	0.33	0.46	33%	0.53	< 0.20	< 0.20	< 0.20	< 0.20
Arsenic	ug/g	18	1.7	2.8	49%	1.1	< 1.0	< 1.0	< 1.0	< 1.0
Selenium	ug/g	2.4	< 0.50	< 0.50	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
OTHER REGULATED PARAMETERS (ORPs)										
Boron (Hot Water Soluble)[1]	ug/g	1.5	0.87	0.67	26%	0.6	0.61	0.13	0.51	0.14
Cyanide (CN-)	ug/g	0.051	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chromium VI	ug/g	8.0	< 0.18	< 0.18	-	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
Mercury	ug/g	0.27	0.063	0.077	20%	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Methyl Mercury[2]	ug/g	0.0084	-	-	-	-	-	-	-	-
pH	pH Units	NV	7.54	7.43	1%	7.41	7.61	6.99	7.58	6.88
Electrical Conductivity	mS/cm	0.70	0.34	0.41	19%	0.33	0.37	0.13	0.59	0.06
Sodium Adsorption Ratio	-	5.0	**6.1**	**9.6**	45%	**6.6**	**5.9**	0.71	0.7	0.54

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard
[1]	Hot water soluble boron applies to surface soils (<1.5 m bg).
[2]	Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 5A: SUMMARY OF SOIL ANALYTICAL RESULTS - METALS, HFMs AND OTHER REGULATED PARAMETERS
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (Terrapex)	UNITS	STANDARDS Table 7 R/P/I coarse	21-13 SA3 BH21-23 SA3	23-1 SA1 MW23-1 SA1	23-1 SA11 duplicate of 23-1 SA1	RPD	23-2 SA2 MW23-2 SA2	23-3 SA2 MW23-3 SA2
Sample Depth	m bgs	-	1.5 - 2.1	0.2 - 0.6	0.2 - 0.6	-	0.5 - 1.2	0.6 - 0.9
Sampling Date	dd-mmm-yy	-	11-Nov-21	17-May-23	17-May-23	-	17-May-23	15-May-23
Analysis Date (on or before)	dd-mmm-yy	-	17-Nov-21	-	-	-	-	-
Certificate of Analysis No.	-	-	C1X6358	23Z026646	23Z026646	-	23Z026646	23Z026646
METALS								
Barium	ug/g	390	81	25.6	27.8	8%	288	153
Beryllium	ug/g	4.0	1.1	<0.5	<0.5	-	0.5	0.7
Boron (Total)	ug/g	120	16	<5	<5	-	17	20
Cadmium	ug/g	1.2	< 0.10	<0.5	<0.5	-	<0.5	<0.5
Chromium Total	ug/g	160	41	10	10	0%	36	42
Cobalt	ug/g	22	20	3.2	3.4	6%	18.8	**25.5**
Copper	ug/g	140	7.8	8.2	9	9%	15.8	27.4
Lead	ug/g	120	5.2	3	3	0%	10	34
Molybdenum	ug/g	6.9	0.76	<0.5	<0.5	-	<0.5	<0.5
Nickel	ug/g	100	47	5	6	18%	35	32
Silver	ug/g	20	< 0.20	<0.5	<0.5	-	<0.5	3.3
Thallium	ug/g	1.0	0.21	<0.5	<0.5	-	<0.5	<0.5
Uranium	ug/g	23	0.31	0.51	0.56	9%	<0.50	<0.50
Vanadium	ug/g	86	27	20.9	19.8	5%	34.7	33.7
Zinc	ug/g	340	35	16	17	6%	54	60
HYDRIDE-FORMING METALS								
Antimony	ug/g	7.5	< 0.20	<0.8	<0.8	-	<0.8	<0.8
Arsenic	ug/g	18	2	<1	<1	-	2	<1
Selenium	ug/g	2.4	< 0.50	<0.8	<0.8	-	<0.8	<0.8
OTHER REGULATED PARAMETERS (ORPs)								
Boron (Hot Water Soluble)[1]	ug/g	1.5	0.41	<0.10	<0.10	-	0.4	0.77
Cyanide (CN-)	ug/g	0.051	< 0.01	<0.040	<0.040	-	<0.040	<0.040
Chromium VI	ug/g	8.0	< 0.18	<0.2	<0.2	-	<0.2	<0.2
Mercury	ug/g	0.27	< 0.050	<0.10	<0.10	-	<0.10	<0.10
Methyl Mercury[2]	ug/g	0.0084	-	-	-	-	-	-
pH	pH Units	NV	7.68	7.37	7.34	0%	7.32	7.15
Electrical Conductivity	mS/cm	0.70	0.38	0.116	0.121	4%	0.154	0.266
Sodium Adsorption Ratio	-	5.0	**7.3**	0.180	0.827	-	0.699	0.663

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard
[1]	Hot water soluble boron applies to surface soils (<1.5 m bg).
[2]	Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 5A: SUMMARY OF SOIL ANALYTICAL RESULTS - METALS, HFMs AND OTHER REGULATED PARAMETERS
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (Terrapex)	UNITS	STANDARDS Table 7 R/P/I coarse	SA1A	SA1A Dup duplicate of SA1A	RPD	SA2A	SA3A	SA4A
Sample Depth	m bgs	-	0.6 - 0.9	0.6 - 0.9	-	0.6 - 0.9	0.6 - 0.9	0.6 - 0.9
Sampling Date	dd-mmm-yy	-	17-Nov-23	17-Nov-23	-	17-Nov-23	17-Nov-23	17-Nov-23
Analysis Date (on or before)	dd-mmm-yy	-	-	-	-	-	-	-
Certificate of Analysis No.	-	-	23Z094471	23Z094471	-	23Z094471	23Z094471	23Z094471
METALS								
Barium	ug/g	390	143	102	33%	25.4	148	119
Beryllium	ug/g	4.0	0.7	<0.5	-	<0.5	0.8	0.6
Boron (Total)	ug/g	120	15	10	40%	<5	14	9
Cadmium	ug/g	1.2	<0.5	<0.5	-	<0.5	<0.5	<0.5
Chromium Total	ug/g	160	30	21	35%	10	32	26
Cobalt	ug/g	22	21.2	12.4	52%	4.2	21.2	17.3
Copper	ug/g	140	24.9	21.2	16%	5.6	25.1	27.8
Lead	ug/g	120	28	30	7%	4	22	34
Molybdenum	ug/g	6.9	<0.5	<0.5	-	<0.5	<0.5	0.5
Nickel	ug/g	100	27	18	40%	7	31	25
Silver	ug/g	20	<0.5	<0.5	-	<0.5	<0.5	<0.5
Thallium	ug/g	1.0	<0.5	<0.5	-	<0.5	<0.5	<0.5
Uranium	ug/g	23	<0.50	0.51	-	<0.50	<0.50	<0.50
Vanadium	ug/g	86	28.9	24.2	18%	18.6	26.7	25.4
Zinc	ug/g	340	74	58	24%	24	68	73
HYDRIDE-FORMING METALS								
Antimony	ug/g	7.5	<0.8	<0.8	-	<0.8	<0.8	<0.8
Arsenic	ug/g	18	2	1	67%	<1	1	2
Selenium	ug/g	2.4	<0.8	<0.8	-	<0.8	<0.8	<0.8
OTHER REGULATED PARAMETERS (ORPs)								
Boron (Hot Water Soluble)[1]	ug/g	1.5	0.34	0.3	13%	0.1	0.34	0.29
Cyanide (CN-)	ug/g	0.051	<0.040	<0.040	-	<0.040	<0.040	<0.040
Chromium VI	ug/g	8.0	<0.2	<0.2	-	<0.2	<0.2	<0.2
Mercury	ug/g	0.27	<0.10	<0.10	-	<0.10	<0.10	<0.10
Methyl Mercury[2]	ug/g	0.0084	-	-	-	-	-	-
pH	pH Units	NV	7.42	7.31	1%	7.4	7.2	7.25
Electrical Conductivity	mS/cm	0.70	0.504	0.327	43%	0.218	0.399	0.361
Sodium Adsorption Ratio	-	5.0	0.543	0.662	-	0.465	0.536	0.55

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard
[1]	Hot water soluble boron applies to surface soils (<1.5 m bg).
[2]	Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 5B: SUMMARY OF SOIL ANALYTICAL RESULTS - PAHs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (Terrapex)	UNITS	STANDARDS Table 7 R/P/I coarse	23-1 SA1 MW23-01 SA1	23-1 SA11 duplicate of 23-1 SA1	RPD	23-2 SA2 MW23-03 SA2	23-3 SA2 MW23-03 SA2
Sample Depth	m bgs	-	0.2 - 0.6	0.2 - 0.6	-	0.5 - 1.2	0.6 - 0.9
Sampling Date	dd-mmm-yy	-	17-May-23	17-May-23	-	17-May-23	15-May-23
Analysis Date (on or before)	dd-mmm-yy	-	-	-	-	-	-
Certificate of Analysis No.	-	-	23Z026646	23Z026646	-	23Z026646	23Z026646
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)							
Acenaphthene	ug/g	7.9	<0.05	<0.05	-	<0.05	<0.05
Acenaphthylene	ug/g	0.15	<0.05	<0.05	-	<0.05	<0.05
Anthracene	ug/g	0.67	<0.05	<0.05	-	<0.05	<0.05
Benz[a]anthracene	ug/g	0.50	<0.05	<0.05	-	<0.05	<0.05
Benzo[a]pyrene	ug/g	0.30	<0.05	<0.05	-	<0.05	<0.05
Benzo[b]fluoranthene	ug/g	0.78	<0.05	<0.05	-	<0.05	<0.05
Benzo[ghi]perylene	ug/g	6.6	<0.05	<0.05	-	<0.05	<0.05
Benzo[k]fluoranthene	ug/g	0.78	<0.05	<0.05	-	<0.05	<0.05
Chrysene	ug/g	7.0	<0.05	<0.05	-	<0.05	<0.05
Dibenz[a h]anthracene	ug/g	0.10	<0.05	<0.05	-	<0.05	<0.05
Fluoranthene	ug/g	0.69	<0.05	<0.05	-	<0.05	0.1
Fluorene	ug/g	62	<0.05	<0.05	-	<0.05	<0.05
Indeno[1 2 3-cd]pyrene	ug/g	0.38	<0.05	<0.05	-	<0.05	<0.05
Methlynaphthalene, 2-(1-)[1]	ug/g	0.99	<0.05	<0.05	-	<0.05	<0.05
Naphthalene	ug/g	0.60	<0.05	<0.05	-	<0.05	<0.05
Phenanthrene	ug/g	6.2	<0.05	<0.05	-	<0.05	<0.05
Pyrene	ug/g	78	<0.05	<0.05	-	<0.05	0.09

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).
Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard
[1]	the sum of 1-methylnaphthalene and 2- methylnaphthalene.

TABLE 5C: SUMMARY OF SOIL ANALYTICAL RESULTS - BTEX AND PHCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (Terrapex)	UNITS	STANDARDS Table 7 R/P/I coarse	21-1 SA3 MW21-01 SAA3	21-2 SA5 MW21-02 SA5	21-3 SA1 MW21-03 SA1	21-3 SA2 MW21-03 SA2	21-11 SA2 MW21-11 SA2	21-12 SA3 BH21-12 SA3	TP21-01
Sample Depth	m bgs	-	1.2 - 1.8	2.4 - 2.7	0.1 - 0.6	0.6 - 1.2	0.8 - 1.5	1.5 - 2.3	0.0 - 0.2
Sampling Date	dd-mmm-yy	-	24-Sep-21	21-Sep-21	22-Sep-21	22-Sep-21	12-Nov-21	11-Nov-21	22-Nov-21
Analysis Date (on or before)	dd-mmm-yy	-	1-Oct-21	1-Oct-21	1-Oct-21	1-Oct-21	17-Nov-21	17-Nov-21	-
Certificate of Analysis No.	-	-	C1S1463	C1S1463	C1S1463	C1S1463	C1X6358	C1X6358	21Z837042
BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (BTEX)									
Benzene	ug/g	0.21	< 0.0060	< 0.0060	< 0.0060	< 0.020	< 0.0060	< 0.0060	<0.02
Toluene	ug/g	2.3	< 0.020	< 0.020	0.039	< 0.020	< 0.020	< 0.020	< 0.05
Ethylbenzene	ug/g	2.0	< 0.010	< 0.010	< 0.010	< 0.020	< 0.010	< 0.010	< 0.05
Xylenes (Total)	ug/g	3.1	< 0.020	< 0.020	0.045	< 0.040	< 0.020	< 0.020	< 0.05
PETROLEUM HYDROCARBONS (PHCs)									
Petroleum Hydrocarbons F1	ug/g	55	< 10	< 10	-	< 10	< 10	< 10	< 5
Petroleum Hydrocarbons F2	ug/g	98	< 10	< 10	-	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons F3	ug/g	300	< 50	< 50	-	< 50	< 50	140	< 50
Petroleum Hydrocarbons F4	ug/g	2,800	< 50	< 50	-	< 50	< 50	1,400	< 50

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 5C: SUMMARY OF SOIL ANALYTICAL RESULTS - BTEX AND PHCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (Terrapex)	UNITS	STANDARDS Table 7 R/P/I coarse	BH21-19 SA1 MW21-19 SA1	BH21-20 SA2 MW21-20 SA2	Dup-1 duplicate of BH21-20 SA2	RPD	BH21-25 SA4	BH22-04 SA1 MW22-04 SA1	BH22-05 SA4 MW22-05 SA4
Sample Depth	m bgs	-	0.2 - 0.6	0.8 - 1.5	0.8 - 1.5	-	3.1 - 3.4	0.0 - 0.8	2.4 - 3.0
Sampling Date	dd-mmm-yy	-	22-Nov-21	24-Nov-21	24-Nov-21	-	21-Dec-21	9-May-22	11-May-22
Analysis Date (on or before)	dd-mmm-yy	-	-	-	-	-	-	-	-
Certificate of Analysis No.	-	-	21Z837042	21Z837042	21Z837042	-	21T848962	22Z895974	22Z895974
BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (BTEX)									
Benzene	ug/g	0.21	< 0.02	< 0.02	< 0.02	-	< 0.02	< 0.02	< 0.02
Toluene	ug/g	2.3	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05
Ethylbenzene	ug/g	2.0	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05
Xylenes (Total)	ug/g	3.1	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05
PETROLEUM HYDROCARBONS (PHCs)									
Petroleum Hydrocarbons F1	ug/g	55	< 5	< 5	< 5	-	< 5	< 5	< 5
Petroleum Hydrocarbons F2	ug/g	98	< 10	< 10	< 10	-	< 10	< 10	< 10
Petroleum Hydrocarbons F3	ug/g	300	< 50	< 50	< 50	-	< 50	< 50	< 50
Petroleum Hydrocarbons F4	ug/g	2,800	< 50	< 50	< 50	-	< 50	< 50	< 50

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 5C: SUMMARY OF SOIL ANALYTICAL RESULTS - BTEX AND PHCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (Terrapex)	UNITS	STANDARDS Table 7 R/P/I coarse	23-1 SA1 MW23-1 SA1	23-1 SA11 duplicate of 23-1 SA1	RPD	23-2 SA2 MW23-2 SA2	23-3 SA2 MW23-3 SA2
Sample Depth	m bgs	-	0.2 - 0.6	0.2 - 0.6	-	0.5 - 1.2	0.6 - 0.9
Sampling Date	dd-mmm-yy	-	17-May-23	17-May-23	-	17-May-23	15-May-23
Analysis Date (on or before)	dd-mmm-yy	-	-	-	-	-	-
Certificate of Analysis No.	-	-	23Z026646	23Z026646	-	23Z026646	23Z026646
BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (BTEX)							
Benzene	ug/g	0.21	<0.02	<0.02	-	<0.02	<0.02
Toluene	ug/g	2.3	<0.05	<0.05	-	<0.05	<0.05
Ethylbenzene	ug/g	2.0	<0.05	<0.05	-	<0.05	<0.05
Xylenes (Total)	ug/g	3.1	<0.05	<0.05	-	<0.05	<0.05
PETROLEUM HYDROCARBONS (PHCs)							
Petroleum Hydrocarbons F1	ug/g	55	<5	<5	-	<5	<5
Petroleum Hydrocarbons F2	ug/g	98	<10	<10	-	<10	<10
Petroleum Hydrocarbons F3	ug/g	300	<50	<50	-	<50	<50
Petroleum Hydrocarbons F4	ug/g	2,800	<50	<50	-	<50	<50

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 5D: SUMMARY OF SOIL ANALYTICAL RESULTS - VOCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (Terrapex)	UNITS	STANDARDS Table 7 R/P/I coarse	21-1 SA3 MW21-01 SA3	21-2 SA5 MW21-02 SA5	21-3 SA1 MW21-03 SA1	21-11 SA2 MW21-11 SA2	21-12 SA3 BH21-12 SA3	BH21-19 SA1 MW21-19 SA1
Sample Depth	m bgs	-	1.2 - 1.8	2.4 - 2.7	0.1 - 0.6	0.8 - 1.5	1.5 - 2.3	0.2 - 0.6
Sampling Date	dd-mmm-yy	-	24-Sep-21	21-Sep-21	22-Sep-21	12-Nov-21	11-Nov-21	22-Nov-21
Analysis Date (on or before)	dd-mmm-yy	-	1-Oct-21	1-Oct-21	1-Oct-21	17-Nov-21	17-Nov-21	-
Certificate of Analysis No.	-	-	C1S1463	C1S1463	C1S1463	C1X6358	C1X6358	21Z837042
VOLATILE ORGANIC COMPOUNDS (VOCs)								
Acetone	ug/g	16	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.50
Bromodichloromethane	ug/g	13	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Bromoform	ug/g	0.27	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Bromomethane	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Carbon Tetrachloride	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Chlorobenzene	ug/g	2.4	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Chloroform	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.04
Dibromochloromethane	ug/g	9.4	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Dichlorobenzene, 1,2-	ug/g	3.4	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Dichlorobenzene, 1,3-	ug/g	4.8	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Dichlorobenzene, 1,4-	ug/g	0.083	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Dichlorodifluoromethane	ug/g	16	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Dichloroethane, 1,1-	ug/g	3.5	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.02
Dichloroethane, 1,2-	ug/g	0.050	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.03
Dichloroethylene, 1,1-	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Dichloroethylene, 1,2-cis-	ug/g	3.4	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.02
Dichloroethylene, 1,2-trans-	ug/g	0.084	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Dichloropropane, 1,2-	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.03
Dichloropropene,1,3-	ug/g	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.04
Ethylene dibromide	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.04
Hexane (n)	ug/g	2.8	< 0.040	< 0.040	0.19	< 0.040	< 0.040	< 0.05
Methyl Ethyl Ketone	ug/g	16	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.50
Methyl Isobutyl Ketone	ug/g	1.7	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.50
Methyl tert-Butyl Ether (MTBE)	ug/g	0.75	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Methylene Chloride	ug/g	0.10	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.05
Styrene	ug/g	0.70	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Tetrachloroethane, 1,1,1,2-	ug/g	0.058	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.04
Tetrachloroethane, 1,1,2,2-	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Tetrachloroethylene	ug/g	0.28	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Trichloroethane, 1,1,1-	ug/g	0.38	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Trichloroethane, 1,1,2-	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.04
Trichloroethylene	ug/g	0.061	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.03
Trichlorofluoromethane	ug/g	4.0	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.05
Vinyl Chloride	ug/g	0.020	< 0.019	< 0.019	< 0.019	< 0.019	< 0.019	< 0.02

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 5D: SUMMARY OF SOIL ANALYTICAL RESULTS - VOCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (Terrapex)	UNITS	STANDARDS Table 7 R/P/I coarse	BH21-20 SA2 MW21-20 SA2	Dup-1 duplicate of BH21-20 SA2	RPD	BH22-04 SA1 MW22-04 SA1	23-1 SA1 MW23-1 SA1	23-1 SA11 duplicate of 23-1 SA1	RPD	23-2 SA2 MW23-2 SA2
Sample Depth	m bgs	-	0.8 - 1.5	0.8 - 1.5	-	0.0 - 0.8	0.2 - 0.6	0.2 - 0.6	-	0.5 - 1.2
Sampling Date	dd-mmm-yy	-	24-Nov-21	24-Nov-21	-	9-May-22	17-May-23	17-May-23	-	17-May-23
Analysis Date (on or before)	dd-mmm-yy	-	-	-	-	-	-	-	-	-
Certificate of Analysis No.	-	-	21Z837042	21Z837042	-	22Z895974	23Z026646	23Z026646	-	23Z026646
VOLATILE ORGANIC COMPOUNDS (VOCs)										
Acetone	ug/g	16	< 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
Bromoform	ug/g	0.27	< 0.05	< 0.05	-	< 0.05	<0.05	<0.05	-	<0.05
Bromomethane	ug/g	0.050	< 0.05	< 0.05	-	< 0.05	<0.05	<0.05	-	<0.05
Carbon Tetrachloride	ug/g	0.050	< 0.05	< 0.05	-	< 0.05	<0.05	<0.05	-	<0.05
Chlorobenzene	ug/g	2.4	< 0.05	< 0.05	-	< 0.05	<0.05	<0.05	-	<0.05
Chloroform	ug/g	0.050	< 0.04	< 0.04	-	< 0.04	<0.04	<0.04	-	<0.04
Dibromochloromethane	ug/g	9.4	< 0.05	< 0.05	-	< 0.05	<0.05	<0.05	-	<0.05
Dichlorobenzene, 1,2-	ug/g	3.4	< 0.05	< 0.05	-	< 0.05	<0.05	<0.05	-	<0.05
Dichlorobenzene, 1,3-	ug/g	4.8	< 0.05	< 0.05	-	< 0.05	<0.05	<0.05	-	<0.05
Dichlorobenzene, 1,4-	ug/g	0.083	< 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
Dichloroethane, 1,1-	ug/g	3.5	< 0.02	< 0.02	-	< 0.02	<0.02	<0.02	-	<0.02
Dichloroethane, 1,2-	ug/g	0.050	< 0.03	< 0.03	-	< 0.03	<0.03	<0.03	-	<0.03
Dichloroethylene, 1,1-	ug/g	0.050	< 0.05	< 0.05	-	< 0.05	<0.05	<0.05	-	<0.05
Dichloroethylene, 1,2-cis-	ug/g	3.4	< 0.02	< 0.02	-	< 0.02	<0.02	<0.02	-	<0.02
Dichloroethylene, 1,2-trans-	ug/g	0.084	< 0.05	< 0.05	-	< 0.05	<0.05	<0.05	-	<0.05
Dichloropropane, 1,2-	ug/g	0.050	< 0.03	< 0.03	-	< 0.03	<0.03	<0.03	-	<0.03
Dichloropropene,1,3-	ug/g	0.050	< 0.04	< 0.04	-	< 0.05	<0.05	<0.05	-	<0.05
Ethylene dibromide	ug/g	0.050	< 0.04	< 0.04	-	< 0.04	<0.04	<0.04	-	<0.04
Hexane (n)	ug/g	2.8	< 0.05	< 0.05	-	< 0.05	<0.05	<0.05	-	<0.05
Methyl Ethyl Ketone	ug/g	16	< 0.50	< 0.50	-	< 0.50	<0.50	<0.50	-	<0.50
Methyl Isobutyl Ketone	ug/g	1.7	< 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
Methylene Chloride	ug/g	0.10	< 0.05	< 0.05	-	< 0.05	<0.05	<0.05	-	<0.05
Styrene	ug/g	0.70	< 0.05	< 0.05	-	< 0.05	<0.05	<0.05	-	<0.05
Tetrachloroethane, 1,1,1,2-	ug/g	0.058	< 0.04	< 0.04	-	< 0.04	<0.04	<0.04	-	<0.04
Tetrachloroethane, 1,1,2,2-	ug/g	0.050	< 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
Trichloroethane, 1,1,1-	ug/g	0.38	< 0.05	< 0.05	-	< 0.05	<0.05	<0.05	-	<0.05
Trichloroethane, 1,1,2-	ug/g	0.050	< 0.04	< 0.04	-	< 0.04	<0.04	<0.04	-	<0.04
Trichloroethylene	ug/g	0.061	< 0.03	< 0.03	-	< 0.03	<0.03	<0.03	-	<0.03
Trichlorofluoromethane	ug/g	4.0	< 0.05	< 0.05	-	< 0.05	<0.05	<0.05	-	<0.05
Vinyl Chloride	ug/g	0.020	< 0.02	< 0.02	-	< 0.02	<0.02	<0.02	-	<0.02

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 5D: SUMMARY OF SOIL ANALYTICAL RESULTS - VOCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (Terrapex)	UNITS	STANDARDS Table 7 R/P/I coarse	23-3 SA2 MW23-3 SA2
Sample Depth	m bgs	-	0.6 - 0.9
Sampling Date	dd-mmm-yy	-	15-May-23
Analysis Date (on or before)	dd-mmm-yy	-	-
Certificate of Analysis No.	-	-	23Z026646
VOLATILE ORGANIC COMPOUNDS (VOCs)			
Acetone	ug/g	16	<0.50
Bromodichloromethane	ug/g	13	<0.05
Bromoform	ug/g	0.27	<0.05
Bromomethane	ug/g	0.050	<0.05
Carbon Tetrachloride	ug/g	0.050	<0.05
Chlorobenzene	ug/g	2.4	<0.05
Chloroform	ug/g	0.050	<0.04
Dibromochloromethane	ug/g	9.4	<0.05
Dichlorobenzene, 1,2-	ug/g	3.4	<0.05
Dichlorobenzene, 1,3-	ug/g	4.8	<0.05
Dichlorobenzene, 1,4-	ug/g	0.083	<0.05
Dichlorodifluoromethane	ug/g	16	<0.05
Dichloroethane, 1,1-	ug/g	3.5	<0.02
Dichloroethane, 1,2-	ug/g	0.050	<0.03
Dichloroethylene, 1,1-	ug/g	0.050	<0.05
Dichloroethylene, 1,2-cis-	ug/g	3.4	<0.02
Dichloroethylene, 1,2-trans-	ug/g	0.084	<0.05
Dichloropropane, 1,2-	ug/g	0.050	<0.03
Dichloropropene,1,3-	ug/g	0.050	<0.05
Ethylene dibromide	ug/g	0.050	<0.04
Hexane (n)	ug/g	2.8	<0.05
Methyl Ethyl Ketone	ug/g	16	<0.50
Methyl Isobutyl Ketone	ug/g	1.7	<0.50
Methyl tert-Butyl Ether (MTBE)	ug/g	0.75	<0.05
Methylene Chloride	ug/g	0.10	<0.05
Styrene	ug/g	0.70	<0.05
Tetrachloroethane, 1,1,1,2-	ug/g	0.058	<0.04
Tetrachloroethane, 1,1,2,2-	ug/g	0.050	<0.05
Tetrachloroethylene	ug/g	0.28	<0.05
Trichloroethane, 1,1,1-	ug/g	0.38	<0.05
Trichloroethane, 1,1,2-	ug/g	0.050	<0.04
Trichloroethylene	ug/g	0.061	<0.03
Trichlorofluoromethane	ug/g	4.0	<0.05
Vinyl Chloride	ug/g	0.020	<0.02

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 5E: SUMMARY OF SOIL ANALYTICAL RESULTS - PCBs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (Terrapex)	UNITS	STANDARDS Table 7 R/P/I coarse	TP21-01
Sample Depth	m bgs	-	0.0 - 0.2
Sampling Date	dd-mmm-yy	-	22-Nov-21
Analysis Date (on or before)	dd-mmm-yy	-	-
Certificate of Analysis No.	-	-	21Z837042
POLYCHLORINATED BIPHENYLS (PCBs)			
Polychlorinated Biphenyls	ug/g	0.35	<0.1

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).
Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 6A: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - METALS, HFMs AND OTHER REGULATED PARAMETERS
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (TERRAPEX)	UNITS	STANDARDS Table 7 coarse	21-2 MW21-02	21-3 MW21-03	21-11 MW21-11	DUP-2 duplicate of 21-11	RPD	23-1 MW23-1
Screen Interval	m bgs	-	4.0 - 7.0	4.6 - 7.6	2.5 - 5.5	2.5 - 5.5	-	10.2 - 13.2
Sampling Date	dd-mmm-yy	-	4-Oct-21	4-Oct-21	30-Nov-21	30-Nov-21	-	25-May-23
Analysis Date (on or before)	dd-mmm-yy	-	5-Oct-21	5-Oct-21	-	-	-	-
Certificate of Analysis No.	-	-	C1S7480	C1S7480	21Z837880	21Z837880	-	23Z029406
METALS								
Barium	ug/L	23,000	55	36	47.7	59.7	22%	162
Beryllium	ug/L	53	< 0.40	< 0.40	< 0.50	< 0.50	-	< 0.50
Boron (Total)	ug/L	36,000	82	86	85	89	5%	337
Cadmium	ug/L	2.1	< 0.090	< 0.090	< 0.20	< 0.20	-	< 0.20
Chromium Total	ug/L	640	< 5.0	< 5.0	< 2.0	< 2.0	-	< 2.0
Cobalt	ug/L	52	< 0.50	< 0.50	0.65	1.24	-	1.8
Copper	ug/L	69	1.6	< 0.90	1.2	< 1.0	-	1.0
Lead	ug/L	20	< 0.50	< 0.50	< 0.50	< 0.50	-	< 0.50
Molybdenum	ug/L	7,300	< 0.50	0.57	0.63	0.83	-	< 0.50
Nickel	ug/L	390	1.6	1.1	2.5	2.9	15%	3.6
Silver	ug/L	1.2	< 0.090	< 0.090	< 0.20	< 0.20	-	< 0.20
Thallium	ug/L	400	< 0.050	< 0.050	< 0.30	< 0.30	-	< 0.30
Uranium	ug/L	330	0.69	0.64	0.75	0.84	11%	1.07
Vanadium	ug/L	200	< 0.50	< 0.50	0.56	< 0.40	-	< 0.40
Zinc	ug/L	890	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0
HYDRIDE-FORMING METALS								
Antimony	ug/L	16,000	< 0.50	< 0.50	< 1.0	< 1.0	-	< 1.0
Arsenic	ug/L	1,500	< 1.0	< 1.0	6.0	4.1	-	< 1.0
Selenium	ug/L	50	< 2.0	< 2.0	< 1.0	< 1.0	-	< 1.0
OTHER REGULATED PARAMETERS (ORPs)								
Cyanide (CN-)	ug/L	52	< 1	< 1	3	< 2	-	< 2
Chromium VI	ug/L	110	< 0.50	< 0.50	< 2	< 2	-	< 2.000
Mercury	ug/L	0.10	< 0.10	< 0.10	< 0.02	< 0.02	-	< 0.02
Methyl Mercury[2]	ug/L	0.12	-	-	-	-	-	-
pH	pH Units	NV	-	-	7.5	7.64	2%	7.65
Chloride	ug/L	1,800,000	150,000	47,000	121,000	124,000	2%	972,000
Sodium	ug/L	1,800,000	170,000	87,000	65,500	63,100	4%	444,000

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard
[2]	Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 6A: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - METALS, HFMs AND OTHER REGULATED PARAMETERS
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (TERRAPEX)	UNITS	STANDARDS Table 7 coarse	23-2 MW23-2	DUP 1 duplicate of 23-2	RPD	23-3 MW23-3
Screen Interval	m bgs	-	11.9 - 14.9	11.9 - 14.9	-	11.6 - 14.6
Sampling Date	dd-mmm-yy	-	26-May-23	26-May-23	-	26-May-23
Analysis Date (on or before)	dd-mmm-yy	-	-	-	-	-
Certificate of Analysis No.	-	-	23Z029406	23Z029406	-	23Z029406
METALS						
Barium	ug/L	23,000	168	165	2%	152
Beryllium	ug/L	53	< 0.50	< 0.50	-	< 0.50
Boron (Total)	ug/L	36,000	582	558	4%	308
Cadmium	ug/L	2.1	< 0.20	< 0.20	-	< 0.20
Chromium Total	ug/L	640	< 2.0	< 2.0	-	3.4
Cobalt	ug/L	52	2.19	2.22	1%	2.68
Copper	ug/L	69	< 1.0	1.1	-	1.1
Lead	ug/L	20	< 0.50	< 0.50	-	< 0.50
Molybdenum	ug/L	7,300	0.75	0.57	-	< 0.50
Nickel	ug/L	390	4.1	4.6	11%	3.1
Silver	ug/L	1.2	< 0.20	< 0.20	-	< 0.20
Thallium	ug/L	400	< 0.30	< 0.30	-	< 0.30
Uranium	ug/L	330	1.52	1.53	1%	0.76
Vanadium	ug/L	200	< 0.40	< 0.40	-	< 0.40
Zinc	ug/L	890	< 5.0	< 5.0	-	< 5.0
HYDRIDE-FORMING METALS						
Antimony	ug/L	16,000	< 1.0	< 1.0	-	< 1.0
Arsenic	ug/L	1,500	< 1.0	< 1.0	-	< 1.0
Selenium	ug/L	50	< 1.0	< 1.0	-	< 1.0
OTHER REGULATED PARAMETERS (ORPs)						
Cyanide (CN-)	ug/L	52	< 2	< 2	-	< 2
Chromium VI	ug/L	110	< 2.000	< 2.000	-	< 2.000
Mercury	ug/L	0.10	< 0.02	< 0.02	-	< 0.02
Methyl Mercury[2]	ug/L	0.12	-	-	-	-
pH	pH Units	NV	7.59	7.62	0%	7.68
Chloride	ug/L	1,800,000	1,110,000	1,110,000	0%	832,000
Sodium	ug/L	1,800,000	488,000	477,000	2%	381,000

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard
[2]	Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 6B: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - PAHs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (TERRAPEX)	UNITS	STANDARDS Table 7 coarse	23-1 MW23-1	23-2 MW23-2	DUP 1 duplicate of 23-2	RPD	23-3 MW23-3
Screen Interval	m bgs	-	10.2 - 13.2	11.9 - 14.9	11.9 - 14.9	-	11.6 - 14.6
Sampling Date	dd-mmm-yy	-	25-May-23	26-May-23	26-May-23	-	26-May-23
Analysis Date (on or before)	dd-mmm-yy	-	-	-	-	-	-
Certificate of Analysis No.	-	-	23Z029406	23Z029406	23Z029406	-	23Z029406
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)							
Acenaphthene	ug/L	17	< 0.20	< 0.20	< 0.20	-	< 0.20
Acenaphthylene	ug/L	1.0	< 0.20	< 0.20	< 0.20	-	< 0.20
Anthracene	ug/L	1.0	< 0.10	< 0.10	< 0.10	-	< 0.10
Benz[a]anthracene	ug/L	1.8	< 0.20	< 0.20	< 0.20	-	< 0.20
Benzo[a]pyrene	ug/L	0.81	< 0.01	< 0.01	< 0.01	-	< 0.01
Benzo[b]fluoranthene	ug/L	0.75	< 0.10	< 0.10	< 0.10	-	< 0.10
Benzo[ghi]perylene	ug/L	0.20	< 0.20	< 0.20	< 0.20	-	< 0.20
Benzo[k]fluoranthene	ug/L	0.40	< 0.10	< 0.10	< 0.10	-	< 0.10
Chrysene	ug/L	0.70	< 0.10	< 0.10	< 0.10	-	< 0.10
Dibenz[a h]anthracene	ug/L	0.40	< 0.20	< 0.20	< 0.20	-	< 0.20
Fluoranthene	ug/L	44	< 0.20	< 0.20	< 0.20	-	< 0.20
Fluorene	ug/L	290	< 0.20	< 0.20	< 0.20	-	< 0.20
Indeno[1 2 3-cd]pyrene	ug/L	0.20	< 0.20	< 0.20	< 0.20	-	< 0.20
Methlynaphthalene, 2-(1-)[1]	ug/L	1,500	< 0.20	< 0.20	< 0.20	-	< 0.20
Naphthalene	ug/L	7.0	< 0.20	< 0.20	< 0.20	-	< 0.20
Phenanthrene	ug/L	380	< 0.10	< 0.10	< 0.10	-	< 0.10
Pyrene	ug/L	5.7	< 0.20	< 0.20	< 0.20	-	< 0.20

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).
Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard
[1]	the sum of 1-methylnaphthalene and 2- methylnaphthalene.

TABLE 6C: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - BTEX AND PHCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (TERRAPEX)	UNITS	STANDARDS Table 7 coarse	21-2 MW21-02	21-3 MW21-03	21-11 MW21-11	21-19 MW21-19	21-20 MW21-20	MW 22-04	22-4 MW22-04
Screen Interval	m bgs	-	4.0 - 7.0	4.6 - 7.6	2.5 - 5.5	2.7 - 5.1	3.3 - 5.2	4.9 - 7.9	4.9 - 7.9
Sampling Date	dd-mmm-yy	-	4-Oct-21	4-Oct-21	30-Nov-21	30-Nov-21	30-Nov-21	26-May-22	16-Nov-22
Analysis Date (on or before)	dd-mmm-yy	-	5-Oct-21	5-Oct-21	3-Dec-21	3-Dec-21	3-Dec-21	7-Jun-22	24-Nov-22
Certificate of Analysis No.	-	-	C1S7480	C1S7480	21Z837880	21Z837880	21Z837880	22T901122	22Z970560
BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (BTEX)									
Benzene	ug/L	0.50	< 0.17	< 0.17	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Toluene	ug/L	320	< 0.20	< 0.20	< 0.20	0.63	0.31	< 0.20	< 0.20
Ethylbenzene	ug/L	54	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Xylenes (Total)	ug/L	72	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
PETROLEUM HYDROCARBONS (PHCs)									
Petroleum Hydrocarbons F1	ug/L	420	< 25	< 25	< 25	< 25	< 25	< 25	-
Petroleum Hydrocarbons F2	ug/L	150	< 100	< 100	< 100	< 100	< 100	< 100	-
Petroleum Hydrocarbons F3	ug/L	500	< 200	< 200	< 100	< 100	< 100	< 100	-
Petroleum Hydrocarbons F4	ug/L	500	< 200	< 200	< 100	< 100	< 100	< 100	-

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 6C: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - BTEX AND PHCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (TERRAPEX)	UNITS	STANDARDS Table 7 coarse	MW22-04	DUP-2 duplicate of MW22-04	RPD	22-04 MW22-04	MW22-04	BH22-04 MW22-04	BH22-114 duplicate of BH22-04	RPD
Screen Interval	m bgs	-	4.9 - 7.9	4.9 - 7.9	-	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	-
Sampling Date	dd-mmm-yy	-	7-Jul-23	7-Jul-23	-	15-Aug-23	21-Nov-23	27-Jun-24	27-Jun-24	-
Analysis Date (on or before)	dd-mmm-yy	-	13-Jul-23	13-Jul-23	-	17-Aug-23	13-Jul-23	3-Jul-24	3-Jul-24	-
Certificate of Analysis No.	-	-	23Z045388	23Z045388	-	23Z058034	23Z095888	C4J8739	C4J8739	-
BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (BTEX)										
Benzene	ug/L	0.50	< 0.20	< 0.20	-	< 0.20	< 0.20	<0.17	<0.17	-
Toluene	ug/L	320	< 0.20	< 0.20	-	< 0.20	< 0.20	<0.20	<0.20	-
Ethylbenzene	ug/L	54	< 0.10	< 0.10	-	< 0.10	< 0.10	<0.20	<0.20	-
Xylenes (Total)	ug/L	72	< 0.20	< 0.20	-	< 0.20	< 0.20	<0.20	<0.20	-
PETROLEUM HYDROCARBONS (PHCs)										
Petroleum Hydrocarbons F1	ug/L	420	< 25	< 25	-	< 25	< 25	59	110	-
Petroleum Hydrocarbons F2	ug/L	150	< 100	< 100	-	< 100	**214**	**8100**	-	-
Petroleum Hydrocarbons F3	ug/L	500	**542**	**569**	5%	< 100	**2,840**	**100000**	-	-
Petroleum Hydrocarbons F4	ug/L	500	< 100	< 100	-	< 100	<100	**18000**	-	-

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition

All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 6C: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - BTEX AND PHCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (TERRAPEX)	UNITS	STANDARDS Table 7 coarse	MW 22-05	23-1 MW23-1	23-2 MW23-2	DUP 1 duplicate of 23-2	RPD	23-3 MW23-3	MW202	MW202
Screen Interval	m bgs	-	7.6 - 10.7	10.2 - 13.2	11.9 - 14.9	11.9 - 14.9	-	11.6 - 14.6	6.1 - 9.1	6.1 - 9.1
Sampling Date	dd-mmm-yy	-	26-May-22	25-May-23	26-May-23	26-May-23	-	26-May-23	19-Dec-24	18-Mar-25
Analysis Date (on or before)	dd-mmm-yy	-	7-Jun-22	6-Jun-23	6-Jun-23	6-Jun-23	-	6-Jun-23	29-Dec-24	24-Mar-25
Certificate of Analysis No.	-	-	22T901122	23Z029406	23Z029406	23Z029406	-	23Z029406	C4BO251	C529307
BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (BTEX)										
Benzene	ug/L	0.50	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	<0.17	<0.17
Toluene	ug/L	320	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	<0.20	<0.20
Ethylbenzene	ug/L	54	< 0.10	< 0.10	< 0.10	< 0.10	-	< 0.10	<0.20	<0.20
Xylenes (Total)	ug/L	72	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	<0.20	<0.20
PETROLEUM HYDROCARBONS (PHCs)										
Petroleum Hydrocarbons F1	ug/L	420	< 25	< 25	< 25	< 25	-	< 25	<25	<25
Petroleum Hydrocarbons F2	ug/L	150	< 100	< 100	< 100	< 100	-	< 100	<90	<90
Petroleum Hydrocarbons F3	ug/L	500	< 100	< 100	< 100	< 100	-	< 100	<200	<200
Petroleum Hydrocarbons F4	ug/L	500	< 100	< 100	< 100	< 100	-	< 100	<200	<200

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 6C: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - BTEX AND PHCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (TERRAPEX)	UNITS	STANDARDS Table 7 coarse	F- BLANK	TRIP BLANK	Field Blank	Trip Blank	trip blank	TRIP SPIKE % Recovery	TRIP BLANK
Screen Interval	m bgs	-	-	-	-	-	-	-	-
Sampling Date	dd-mmm-yy	-	4-Oct-21	4-Oct-21	26-May-22	26-May-22	15-Nov-22	17-Jun-24	27-Jun-24
Analysis Date (on or before)	dd-mmm-yy	-	5-Oct-21	5-Oct-21	7-Jun-22	7-Jun-22	24-Nov-22	3-Jul-24	3-Jul-24
Certificate of Analysis No.	-	-	C1S7480	C1S7480	22T901122	22T901122	22Z970560	C4J8739	C4J8739
BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (BTEX)									
Benzene	ug/L	0.50	< 0.17	< 0.17	< 0.20	< 0.20	< 0.20	94	<0.17
Toluene	ug/L	320	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	90	<0.20
Ethylbenzene	ug/L	54	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	88	<0.20
Xylenes (Total)	ug/L	72	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	89.5	<0.20
PETROLEUM HYDROCARBONS (PHCs)									
Petroleum Hydrocarbons F1	ug/L	420	< 25	-	-	-	-	-	<25
Petroleum Hydrocarbons F2	ug/L	150	-	-	-	-	-	-	-
Petroleum Hydrocarbons F3	ug/L	500	-	-	-	-	-	-	-
Petroleum Hydrocarbons F4	ug/L	500	-	-	-	-	-	-	-

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 6C: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - BTEX AND PHCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (TERRAPEX)	UNITS	STANDARDS Table 7 coarse	TRIP BLANK	TRIP BLANK	TRIP SPIKE % Recovery
Screen Interval	m bgs	-	-	-	-
Sampling Date	dd-mmm-yy	-	19-Dec-24	18-Mar-25	19-Dec-24
Analysis Date (on or before)	dd-mmm-yy	-	29-Dec-24	24-Mar-25	29-Dec-24
Certificate of Analysis No.	-	-	C4BO251	C529307	C4BO251
BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (BTEX)					
Benzene	ug/L	0.50	<0.17	<0.20	100
Toluene	ug/L	320	<0.20	<0.20	96
Ethylbenzene	ug/L	54	<0.20	<0.20	90
Xylenes (Total)	ug/L	72	<0.20	<0.40	90
PETROLEUM HYDROCARBONS (PHCs)					
Petroleum Hydrocarbons F1	ug/L	420	<25	<25	-
Petroleum Hydrocarbons F2	ug/L	150	-	-	-
Petroleum Hydrocarbons F3	ug/L	500	-	-	-
Petroleum Hydrocarbons F4	ug/L	500	-	-	-

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 6D: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - VOCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (TERRAPEX)	UNITS	STANDARDS Table 7 coarse	21-2 MW21-02	21-3 MW21-03	21-11 MW21-11	21-19 MW21-19	21-20 MW21-20	MW 22-04	22-4 MW22-04
Screen Interval	m bgs	-	4.0 - 7.0	4.6 - 7.6	2.5 - 5.5	2.7 - 5.1	3.3 - 5.2	4.9 - 7.9	4.9 - 7.9
Sampling Date	dd-mmm-yy	-	4-Oct-21	4-Oct-21	30-Nov-21	30-Nov-21	30-Nov-21	26-May-22	16-Nov-22
Analysis Date (on or before)	dd-mmm-yy	-	5-Oct-21	5-Oct-21	-	-	-	-	-
Certificate of Analysis No.	-	-	C1S7480	C1S7480	21Z837880	21Z837880	21Z837880	22T901122	22Z970560
VOLATILE ORGANIC COMPOUNDS (VOCs)									
Acetone	ug/L	100,000	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	ug/L	67,000	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Bromoform	ug/L	5.0	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Bromomethane	ug/L	0.89	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Carbon Tetrachloride	ug/L	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Chlorobenzene	ug/L	140	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chloroform	ug/L	2.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Dibromochloromethane	ug/L	65,000	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dichlorobenzene, 1,2-	ug/L	150	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dichlorobenzene, 1,3-	ug/L	7,600	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dichlorobenzene, 1,4-	ug/L	0.50	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dichlorodifluoromethane	ug/L	3,500	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.40	< 0.40
Dichloroethane, 1,1-	ug/L	11	< 0.20	< 0.20	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Dichloroethane, 1,2-	ug/L	0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Dichloroethylene, 1,1-	ug/L	0.50	< 0.20	< 0.20	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Dichloroethylene, 1,2-cis-	ug/L	1.6	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Dichloroethylene, 1,2-trans-	ug/L	1.6	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Dichloropropane, 1,2-	ug/L	0.58	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Dichloropropene,1,3-	ug/L	0.50	< 0.50	< 0.50	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Ethylene dibromide	ug/L	0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Hexane (n)	ug/L	5.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Methyl Ethyl Ketone	ug/L	21,000	< 10	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Isobutyl Ketone	ug/L	5,200	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl tert-Butyl Ether (MTBE)	ug/L	15	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Methylene Chloride	ug/L	26	< 2.0	< 2.0	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Styrene	ug/L	43	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tetrachloroethane, 1,1,1,2-	ug/L	1.1	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tetrachloroethane, 1,1,2,2-	ug/L	0.50	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tetrachloroethylene	ug/L	0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Trichloroethane, 1,1,1-	ug/L	23	< 0.20	< 0.20	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Trichloroethane, 1,1,2-	ug/L	0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Trichloroethylene	ug/L	0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Trichlorofluoromethane	ug/L	2,000	< 0.50	< 0.50	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Vinyl Chloride	ug/L	0.50	< 0.20	< 0.20	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition

All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 6D: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - VOCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (TERRAPEX)	UNITS	STANDARDS Table 7 coarse	MW22-04	DUP-2 duplicate of MW22-04	RPD	22-04 MW22-04	MW22-04	BH22-04 MW22-04	BH22-114 duplicate of BH22-04	RPD
Screen Interval	m bgs	-	4.9 - 7.9	4.9 - 7.9	-	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	4.9 - 7.9	-
Sampling Date	dd-mmm-yy	-	7-Jul-23	7-Jul-23	-	15-Aug-23	21-Nov-23	27-Jun-24	27-Jun-24	-
Analysis Date (on or before)	dd-mmm-yy	-	-	-	-	-	-	-	-	-
Certificate of Analysis No.	-	-	23Z045388	23Z045388	-	23Z058034	23Z095888	C4J8739	C4J8739	-
VOLATILE ORGANIC COMPOUNDS (VOCs)										
Acetone	ug/L	100,000	< 1.0	< 1.0	-	< 1.0	< 1.0	13	11	-
Bromodichloromethane	ug/L	67,000	< 0.20	< 0.20	-	< 0.20	< 0.20	<0.50	<0.50	-
Bromoform	ug/L	5.0	< 0.10	< 0.10	-	< 0.10	< 0.10	<1.0	<1.0	-
Bromomethane	ug/L	0.89	< 0.20	< 0.20	-	< 0.20	< 0.20	<0.50	<0.50	-
Carbon Tetrachloride	ug/L	0.20	< 0.20	< 0.20	-	< 0.20	< 0.20	<0.20	<0.20	-
Chlorobenzene	ug/L	140	< 0.10	< 0.10	-	< 0.10	< 0.10	0.22	0.22	-
Chloroform	ug/L	2.0	< 0.20	< 0.20	-	< 0.20	< 0.20	<0.20	<0.20	-
Dibromochloromethane	ug/L	65,000	< 0.10	< 0.10	-	< 0.10	< 0.10	<0.50	<0.50	-
Dichlorobenzene, 1,2-	ug/L	150	< 0.10	< 0.10	-	< 0.10	< 0.10	0.61	0.64	-
Dichlorobenzene, 1,3-	ug/L	7,600	< 0.10	< 0.10	-	< 0.10	< 0.10	<0.50	<0.50	-
Dichlorobenzene, 1,4-	ug/L	0.50	< 0.10	< 0.10	-	< 0.10	< 0.10	<0.50	<0.50	-
Dichlorodifluoromethane	ug/L	3,500	< 0.40	< 0.40	-	< 0.40	< 0.40	<1.0	<1.0	-
Dichloroethane, 1,1-	ug/L	11	< 0.30	< 0.30	-	< 0.30	< 0.30	<0.20	<0.20	-
Dichloroethane, 1,2-	ug/L	0.50	< 0.20	< 0.20	-	< 0.20	< 0.20	<0.50	<0.50	-
Dichloroethylene, 1,1-	ug/L	0.50	< 0.30	< 0.30	-	< 0.30	< 0.30	<0.20	<0.20	-
Dichloroethylene, 1,2-cis-	ug/L	1.6	< 0.20	< 0.20	-	< 0.20	< 0.20	<0.50	<0.50	-
Dichloroethylene, 1,2-trans-	ug/L	1.6	< 0.20	< 0.20	-	< 0.20	< 0.20	<0.50	<0.50	-
Dichloropropane, 1,2-	ug/L	0.58	< 0.20	< 0.20	-	< 0.20	< 0.20	<0.20	<0.20	-
Dichloropropene,1,3-	ug/L	0.50	< 0.30	< 0.30	-	< 0.30	< 0.30	<0.50	<0.50	-
Ethylene dibromide	ug/L	0.20	< 0.10	< 0.10	-	< 0.10	< 0.10	<0.20	<0.20	-
Hexane (n)	ug/L	5.0	< 0.20	< 0.20	-	< 0.20	< 0.20	<1.0	<1.0	-
Methyl Ethyl Ketone	ug/L	21,000	< 1.0	< 1.0	-	< 1.0	< 1.0	<10	<10	-
Methyl Isobutyl Ketone	ug/L	5,200	< 1.0	< 1.0	-	< 1.0	< 1.0	<5.0	<5.0	-
Methyl tert-Butyl Ether (MTBE)	ug/L	15	< 0.20	< 0.20	-	< 0.20	< 0.20	<0.50	<0.50	-
Methylene Chloride	ug/L	26	< 0.30	< 0.30	-	< 0.30	< 0.30	<2.0	<2.0	-
Styrene	ug/L	43	< 0.10	< 0.10	-	< 0.10	< 0.10	<0.50	<0.50	-
Tetrachloroethane, 1,1,1,2-	ug/L	1.1	< 0.10	< 0.10	-	< 0.10	< 0.10	<0.50	<0.50	-
Tetrachloroethane, 1,1,2,2-	ug/L	0.50	< 0.10	< 0.10	-	< 0.10	< 0.10	<0.50	<0.50	-
Tetrachloroethylene	ug/L	0.50	< 0.20	< 0.20	-	< 0.20	< 0.20	0.22	0.23	-
Trichloroethane, 1,1,1-	ug/L	23	< 0.30	< 0.30	-	< 0.30	< 0.30	<0.20	<0.20	-
Trichloroethane, 1,1,2-	ug/L	0.50	< 0.20	< 0.20	-	< 0.20	< 0.20	<0.50	<0.50	-
Trichloroethylene	ug/L	0.50	< 0.20	< 0.20	-	< 0.20	< 0.20	<0.20	<0.20	-
Trichlorofluoromethane	ug/L	2,000	< 0.40	< 0.40	-	< 0.40	< 0.40	<0.50	<0.50	-
Vinyl Chloride	ug/L	0.50	< 0.17	< 0.17	-	< 0.17	< 0.17	<0.20	<0.20	-

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition

All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 6D: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - VOCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (TERRAPEX)	UNITS	STANDARDS Table 7 coarse	MW 22-05	23-1 MW23-1	23-2 MW23-2	DUP 1 duplicate of 23-2	RPD	23-3 MW23-3	MW202	MW202
Screen Interval	m bgs	-	7.6 - 10.7	10.2 - 13.2	11.9 - 14.9	11.9 - 14.9	-	11.6 - 14.6	6.1 - 9.1	6.1 - 9.1
Sampling Date	dd-mmm-yy	-	26-May-22	25-May-23	26-May-23	26-May-23	-	26-May-23	19-Dec-24	18-Mar-25
Analysis Date (on or before)	dd-mmm-yy	-	-	-	-	-	-	-	29-Dec-24	24-Mar-25
Certificate of Analysis No.	-	-	22T901122	23Z029406	23Z029406	23Z029406	-	23Z029406	C4BO251	C529307
VOLATILE ORGANIC COMPOUNDS (VOCs)										
Acetone	ug/L	100,000	< 1.0	< 1.0	< 1.0	< 1.0	-	< 1.0	<10	<10
Bromodichloromethane	ug/L	67,000	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	<0.50	<0.50
Bromoform	ug/L	5.0	< 0.10	< 0.10	< 0.10	< 0.10	-	< 0.10	<1.0	<1.0
Bromomethane	ug/L	0.89	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	<0.50	<0.50
Carbon Tetrachloride	ug/L	0.20	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	<0.20	<0.20
Chlorobenzene	ug/L	140	< 0.10	< 0.10	< 0.10	< 0.10	-	< 0.10	<0.20	<0.20
Chloroform	ug/L	2.0	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	<0.20	<0.20
Dibromochloromethane	ug/L	65,000	< 0.10	< 0.10	< 0.10	< 0.10	-	< 0.10	<0.50	<0.50
Dichlorobenzene, 1,2-	ug/L	150	< 0.10	< 0.10	< 0.10	< 0.10	-	< 0.10	<0.50	<0.50
Dichlorobenzene, 1,3-	ug/L	7,600	< 0.10	< 0.10	< 0.10	< 0.10	-	< 0.10	<0.50	<0.50
Dichlorobenzene, 1,4-	ug/L	0.50	< 0.10	< 0.10	< 0.10	< 0.10	-	< 0.10	<0.50	<0.50
Dichlorodifluoromethane	ug/L	3,500	< 0.40	< 0.40	< 0.40	< 0.40	-	< 0.40	<1.0	<1.0
Dichloroethane, 1,1-	ug/L	11	< 0.30	< 0.30	< 0.30	< 0.30	-	< 0.30	<0.20	<0.20
Dichloroethane, 1,2-	ug/L	0.50	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	<0.50	<0.50
Dichloroethylene, 1,1-	ug/L	0.50	< 0.30	< 0.30	< 0.30	< 0.30	-	< 0.30	<0.20	<0.20
Dichloroethylene, 1,2-cis-	ug/L	1.6	0.42	< 0.20	< 0.20	< 0.20	-	< 0.20	<0.50	<0.50
Dichloroethylene, 1,2-trans-	ug/L	1.6	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	<0.50	<0.50
Dichloropropane, 1,2-	ug/L	0.58	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	<0.20	<0.20
Dichloropropene,1,3-	ug/L	0.50	< 0.30	< 0.30	< 0.30	< 0.30	-	< 0.30	<0.50	<0.50
Ethylene dibromide	ug/L	0.20	< 0.10	< 0.10	< 0.10	< 0.10	-	< 0.10	<0.20	<0.20
Hexane (n)	ug/L	5.0	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	<1.0	<1.0
Methyl Ethyl Ketone	ug/L	21,000	< 1.0	< 1.0	< 1.0	< 1.0	-	< 1.0	<10	<10
Methyl Isobutyl Ketone	ug/L	5,200	< 1.0	< 1.0	< 1.0	< 1.0	-	< 1.0	<5.0	<5.0
Methyl tert-Butyl Ether (MTBE)	ug/L	15	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	<0.50	<0.50
Methylene Chloride	ug/L	26	< 0.30	< 0.30	< 0.30	< 0.30	-	< 0.30	<2.0	<2.0
Styrene	ug/L	43	< 0.10	< 0.10	< 0.10	< 0.10	-	< 0.10	<0.50	<0.50
Tetrachloroethane, 1,1,1,2-	ug/L	1.1	< 0.10	< 0.10	< 0.10	< 0.10	-	< 0.10	<0.50	<0.50
Tetrachloroethane, 1,1,2,2-	ug/L	0.50	< 0.10	< 0.10	< 0.10	< 0.10	-	< 0.10	<0.50	<0.50
Tetrachloroethylene	ug/L	0.50	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	ug/L	23	< 0.30	< 0.30	< 0.30	< 0.30	-	< 0.30	<0.20	<0.20
Trichloroethane, 1,1,2-	ug/L	0.50	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	<0.50	<0.50
Trichloroethylene	ug/L	0.50	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	<0.20	<0.20
Trichlorofluoromethane	ug/L	2,000	< 0.40	< 0.40	< 0.40	< 0.40	-	< 0.40	<0.50	<0.50
Vinyl Chloride	ug/L	0.50	< 0.17	< 0.17	< 0.17	< 0.17	-	< 0.17	<0.20	<0.20

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition

All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 6D: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - VOCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (TERRAPEX)	UNITS	STANDARDS Table 7 coarse	F- BLANK	TRIP BLANK	Field Blank	Trip Blank	trip blank	TRIP BLANK	TRIP BLANK
Screen Interval	m bgs	-	-	-	-	-	-	-	-
Sampling Date	dd-mmm-yy	-	4-Oct-21	4-Oct-21	26-May-22	26-May-22	15-Nov-22	27-Jun-24	19-Dec-24
Analysis Date (on or before)	dd-mmm-yy	-	5-Oct-21	5-Oct-21	-	-	-	3-Jul-24	29-Dec-24
Certificate of Analysis No.	-	-	C1S7480	C1S7480	22T901122	22T901122	22Z970560	C4J8739	C4BO251
VOLATILE ORGANIC COMPOUNDS (VOCs)									
Acetone	ug/L	100,000	< 10	< 10	< 1.0	< 1.0	< 1.0	<10	<10
Bromodichloromethane	ug/L	67,000	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	<0.50	<0.50
Bromoform	ug/L	5.0	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10	<1.0	<1.0
Bromomethane	ug/L	0.89	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	<0.50	<0.50
Carbon Tetrachloride	ug/L	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.20
Chlorobenzene	ug/L	140	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	<0.20	<0.20
Chloroform	ug/L	2.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.20
Dibromochloromethane	ug/L	65,000	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	<0.50	<0.50
Dichlorobenzene, 1,2-	ug/L	150	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	<0.50	<0.50
Dichlorobenzene, 1,3-	ug/L	7,600	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	<0.50	<0.50
Dichlorobenzene, 1,4-	ug/L	0.50	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	<0.50	<0.50
Dichlorodifluoromethane	ug/L	3,500	< 1.0	< 1.0	< 0.40	< 0.40	< 0.40	<1.0	<1.0
Dichloroethane, 1,1-	ug/L	11	< 0.20	< 0.20	< 0.30	< 0.30	< 0.30	<0.20	<0.20
Dichloroethane, 1,2-	ug/L	0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	<0.50	<0.50
Dichloroethylene, 1,1-	ug/L	0.50	< 0.20	< 0.20	< 0.30	< 0.30	< 0.30	<0.20	<0.20
Dichloroethylene, 1,2-cis-	ug/L	1.6	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	<0.50	<0.50
Dichloroethylene, 1,2-trans-	ug/L	1.6	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	<0.50	<0.50
Dichloropropane, 1,2-	ug/L	0.58	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.20
Dichloropropene,1,3-	ug/L	0.50	-	-	< 0.30	< 0.30	< 0.30	<0.50	-
Ethylene dibromide	ug/L	0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	<0.20	<0.20
Hexane (n)	ug/L	5.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	<1.0	<1.0
Methyl Ethyl Ketone	ug/L	21,000	< 10	< 10	< 1.0	< 1.0	< 1.0	<10	<10
Methyl Isobutyl Ketone	ug/L	5,200	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	<5.0	<5.0
Methyl tert-Butyl Ether (MTBE)	ug/L	15	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	<0.50	<0.50
Methylene Chloride	ug/L	26	< 2.0	< 2.0	< 0.30	< 0.30	< 0.30	<2.0	<2.0
Styrene	ug/L	43	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	<0.50	<0.50
Tetrachloroethane, 1,1,1,2-	ug/L	1.1	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	<0.50	<0.50
Tetrachloroethane, 1,1,2,2-	ug/L	0.50	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	<0.50	<0.50
Tetrachloroethylene	ug/L	0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	ug/L	23	< 0.20	< 0.20	< 0.30	< 0.30	< 0.30	<0.20	<0.20
Trichloroethane, 1,1,2-	ug/L	0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	<0.50	<0.50
Trichloroethylene	ug/L	0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.20
Trichlorofluoromethane	ug/L	2,000	< 0.50	< 0.50	< 0.40	< 0.40	< 0.40	<0.50	<0.50
Vinyl Chloride	ug/L	0.50	< 0.20	< 0.20	< 0.17	< 0.17	< 0.17	<0.20	<0.20

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition

All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 6D: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - VOCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME (WSP) SAMPLE NAME (TERRAPEX)	UNITS	STANDARDS Table 7 coarse	TRIP SPIKE % Recovery
Screen Interval	m bgs	-	-
Sampling Date	dd-mmm-yy	-	19-Dec-24
Analysis Date (on or before)	dd-mmm-yy	-	29-Dec-24
Certificate of Analysis No.	-	-	C4BO251
VOLATILE ORGANIC COMPOUNDS (VOCs)			
Acetone	ug/L	100,000	98
Bromodichloromethane	ug/L	67,000	110
Bromoform	ug/L	5.0	130
Bromomethane	ug/L	0.89	87
Carbon Tetrachloride	ug/L	0.20	120
Chlorobenzene	ug/L	140	95
Chloroform	ug/L	2.0	110
Dibromochloromethane	ug/L	65,000	120
Dichlorobenzene, 1,2-	ug/L	150	100
Dichlorobenzene, 1,3-	ug/L	7,600	98
Dichlorobenzene, 1,4-	ug/L	0.50	98
Dichlorodifluoromethane	ug/L	3,500	84
Dichloroethane, 1,1-	ug/L	11	97
Dichloroethane, 1,2-	ug/L	0.50	100
Dichloroethylene, 1,1-	ug/L	0.50	95
Dichloroethylene, 1,2-cis-	ug/L	1.6	110
Dichloroethylene, 1,2-trans-	ug/L	1.6	110
Dichloropropane, 1,2-	ug/L	0.58	100
Dichloropropene,1,3-	ug/L	0.50	-
Ethylene dibromide	ug/L	0.20	110
Hexane (n)	ug/L	5.0	61
Methyl Ethyl Ketone	ug/L	21,000	98
Methyl Isobutyl Ketone	ug/L	5,200	93
Methyl tert-Butyl Ether (MTBE)	ug/L	15	100
Methylene Chloride	ug/L	26	120
Styrene	ug/L	43	88
Tetrachloroethane, 1,1,1,2-	ug/L	1.1	120
Tetrachloroethane, 1,1,2,2-	ug/L	0.50	110
Tetrachloroethylene	ug/L	0.50	95
Trichloroethane, 1,1,1-	ug/L	23	100
Trichloroethane, 1,1,2-	ug/L	0.50	110
Trichloroethylene	ug/L	0.50	110
Trichlorofluoromethane	ug/L	2,000	100
Vinyl Chloride	ug/L	0.50	93

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition

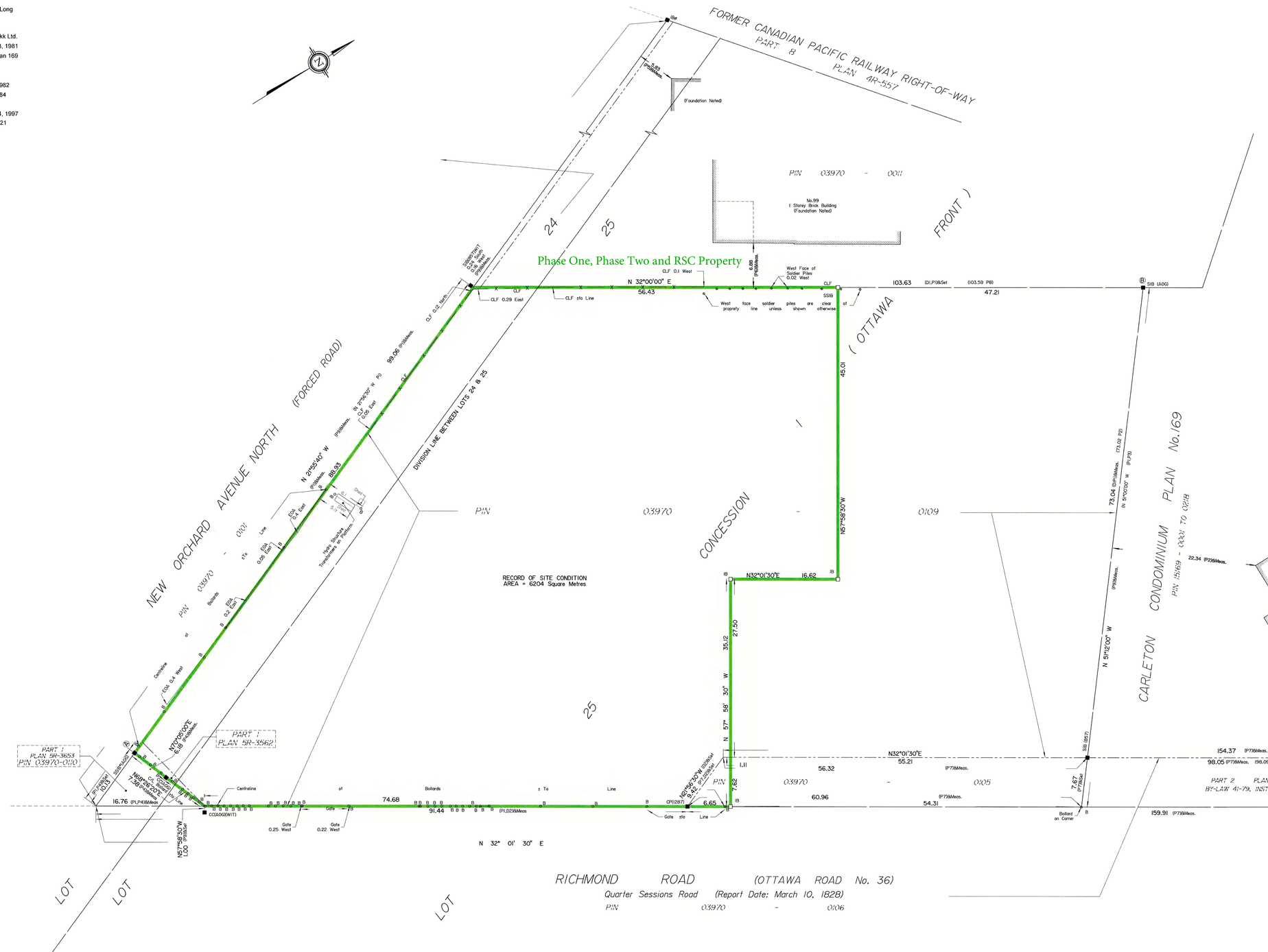
All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
NV	No Value; no standard established
RPD	Relative percent difference
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

APPENDIX I
PLAN OF SURVEY

Notes & Legend

Denotes		
—□—	"	Survey Monument Planted
—■—	"	Survey Monument Found
SIB	"	Standard Iron Bar
SSIB	"	Short Standard Iron Bar
IB	"	Iron Bar
IBø	"	Round Iron Bar
CC	"	Cut Cross
CP	"	Concrete Pin
*	"	Survey Monument 0.30m Long
(WIT)	"	Witness
Meas.	"	Measured
(AOG)	"	Annis, O'Sullivan, Vollebekk Ltd.
(P1)	"	(AOG) Plan September 23, 1981
(P2)	"	Carleton Condominium Plan 169
(P3)	"	Plan 4R-31800
(P4)	"	Plan 5R-3653
(P5)	"	(647) Plan February 25, 1982
(P6)	"	(857) Plan February 7, 1984
(P7)	"	Plan 4R-1218
(P8)	"	(1287) Plan September 24, 1997
(P9)	"	(AOG) Plan October 1, 2021
(D1)	"	Inst. N545545
(D2)	"	Inst. N705245
○ B	"	Bollard
EOA	"	Edge of Asphalt
CLF	"	Chain Link Fence
C/L	"	Centreline



PLAN OF SURVEY OF PART OF PINS 03970-0109 AND 03970-0105

PART OF LOTS 24 AND 25 CONCESSION 1 (OTTAWA FRONT) GEOGRAPHIC TOWNSHIP OF NEPEAN CITY OF OTTAWA

Surveyed by Annis, O'Sullivan, Vollebekk Ltd.

Scale 1 : 300

12 9 6 3 0 6 12 Metres

Metric

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

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 31th day of July, 2025.

August 6, 2025 — Date

E. H. Herweyer — Ontario Land Surveyor

Distances shown on this plan are ground distances and can be converted to grid distances by multiplying by the combined scale factor of 0.999982.

Bearings are grid, derived from Can-Net 2016 Real Time Network GPS observations on reference points A and B, shown hereon, and are referenced to Specified Control Points 01919680005 and 01919750705, MTM Zone 9 (76°30' West Longitude) NAD-83 (original).

For bearing comparisons, a rotation of 0°01'00" counter-clockwise was applied to bearings on P1,P4 & P5.
For bearing comparisons, a rotation of 0°19'10" counter-clockwise was applied to bearings on P6
For bearing comparisons, a rotation of 0°17'30" counter-clockwise was applied to bearings on D2.
For bearing comparisons, a rotation of 0°01'30" counter-clockwise was applied to bearings on P2 & P7.
Coordinates are derived from Can-Net 2016 Real Time Network GPS observations referenced to Specified Control Points 01919680005 and 01919750705, MTM Zone 9 (76°30' West Longitude) NAD-83 (original).

Coordinate values are to urban accuracy in accordance with O. Reg. 216/10.

. 01919680005	Northing	5027191.26	Easting	361496.76
. 01919750705	Northing	5016816.93	Easting	360806.84
. Point A	Northing	5026244.63	Easting	361291.21
. Point B	Northing	5026415.03	Easting	361312.91

Caution: Coordinates cannot, in themselves, be used to re-establish corners or boundaries shown on this plan.

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
V-110891

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

NOTE:

The illustrated surveyed limits are defined in the P1ESA (Phase one environmental site assessment), P2ESA (Phase two environmental site assessment) and RSC (Record of site condition); Part of PINS 03970-0109 and 03970-0105 are not included in this plan.

= Limit of the survey

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ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850 / Fax: (613) 727-1079
Email: Nepean@annisott.com

Ontario Land Surveyors

Job No. 21985-21 FengateDvlpmnt PrtLts24_25_Conl OF 0 (RSC) F.DG

Y:\2021\21985-21_Fengate Developments_Ltd\7 Richmond Rd_T.DPO_EXPTAN\21985-21 FengateDvlpmnt PrtLts24 25 Conl OF 0 (RSC) F.dwg

APPENDIX II
CORRESPONDENCE REGARDING NON-POTABLE STANDARDS

June 19, 2025
CO972.00

City of Ottawa
Planning, Infrastructure and Economic Development
110 Laurier Avenue West
Ottawa, Ontario
K1P 1J1

Attention: Michel Kearney, P. Geo.
Senior Hydrogeologist

Via email: michel.kearney@ottawa.ca

Re: Notification of Environmental Standards
1047 Richmond Road, Ottawa, ON

Dear Mr. Kearney:

Terrapex Environmental Ltd. (Terrapex) has been retained by the property owner to conduct a Phase Two Environmental Site Assessment at 1047 Richmond Road, Ottawa, Ontario (the site).

After reviewing Ontario Regulation (O. Reg.) 153/04 *Records of Site Condition - Part XV.1 of the Act,* Terrapex has determined that the site meets the requirements outlined in Section 35 of the regulation. As such, applicable generic site condition standards for shallow soils in a non-potable groundwater condition (Table 7 Site Condition Standards) will be applied to the analytical data obtained from the site.

On behalf of the owner, and in accordance with the requirements of Section 35 of O. Reg. 153/04, Terrapex is hereby providing written notice to the City of Ottawa of the intention to apply non-potable groundwater site condition standards in preparing a Record of Site Condition for the property at the 1047 Richmond Road, Ottawa, Ontario.

If you have any questions or concerns regarding this matter, please do not hesitate to contact the undersigned.

Sincerely,
TERRAPEX ENVIRONMENTAL LTD.

Keith Brown, P.Eng.
Senior Project Manager

22 July 2025

Mr. Keith Brown P.Eng.
Terrapex Environmental Ltd.
90 Scarsdale Road
Toronto, Ontario
M3B 2R7

Dear Mr. Brown,

Re: Record of Site Condition – 1047 Richmond Road

In response to your letter of June 19, 2025 (attached), requesting to use non-potable standards, this is to advise that the City of Ottawa consents to the use of non-potable groundwater standards for the property identified as 1047 Richmond Road, Ottawa, ON, as part of the filing of a Record of Site Condition.

Best Regards,

Michel Kearney, P.Geo.

Senior Hydrogeologist
Geoscience & Source Water Protection
Asset Management
Infrastructure and Water Services Department

Hydrogéologue principal
Géosciences & protection des sources d'eau
Gestion des actifs
Direction générale des services d'infrastructure et d'eau

City of Ottawa | Ville d'Ottawa
- Cell: 613-606-5862

ottawa.ca/planning / ottawa.ca/urbanisme

APPENDIX III
PERTINENT PREVIOUS ENVIRONMENTAL REPORTS

REPORT

Phase Two Environmental Site Assessment

104 Richmond Rd, Ottawa, Ontario

Submitted to:

1047 Richmond Nominee Inc.

2275 Upper Middle Road East
Suite 700
Oakville, ON
L6H 0C3

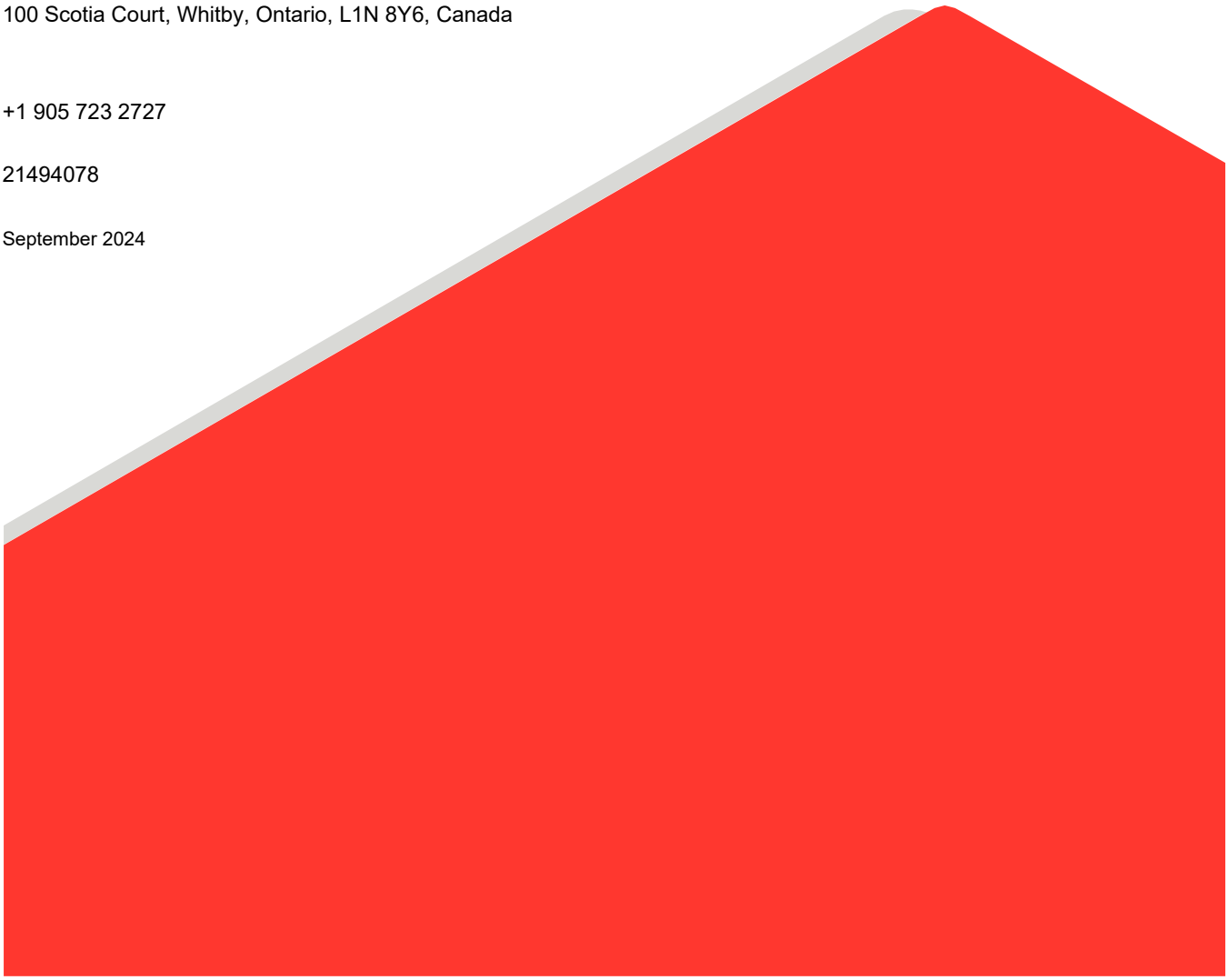
Submitted by:

WSP Canada Inc.
100 Scotia Court, Whitby, Ontario, L1N 8Y6, Canada

+1 905 723 2727

21494078

September 2024



Distribution List

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Record of Issue

Version	Date Issued	Notes
Rev. A	October 6, 2023	Draft report for client review
Rev. B	October 16, 2023	Final Draft report for client review
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1.0 EXECUTIVE SUMMARY

IMPORTANT: *This report is based on data collected during investigations completed between September 2021 and November 21, 2023. Any data collected after November 21, 2023 has not been included in this report or considered in the conclusions and recommendations provided herein.*

WSP Canada Inc. ("WSP") was retained by 1047 Richmond Nominee Inc. ("the Client") to conduct a Phase Two Environmental Site Assessment (Phase Two ESA) of the property located at 1047 Richmond Road, Ottawa, Ontario (the Site). The Site location and plan are provided on Figures 1 and 2, respectively.

WSP previously completed a Phase One ESA for the Site, the results of which were documented in the report titled "*Phase One Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario"* (November 2021, updated May 2024). WSP completed this Phase Two ESA investigation based on the findings of the Phase One ESA findings.

The analytical results from the sampling and analysis program indicated that all parameters tested in soil at the Site meet the applicable MECP Table 7 RPI SCS, except for PHC F1-F4 at BH21-05 and BH21-24, 1,4-dichlorobenzene at BH21-05 and SAR at BH21-03, BH21-11 and BH21-13. In July 2023, a soil excavation program was conducted at the Site and all PHC and 1,4-dichlorobenzene exceedances were removed, with confirmation samples meeting Table 7 RPI SCS. The presence of SAR is the result of the local application of de-icing salt for safety purposes and is therefore not considered to represent an exceedance of the site condition standard under Ontario Regulation 153/04. Thus, the presence of the PHC F1-F4 and 1,4-dichlorobenzene is the result of the operation of the Site as automotive garage.

Based upon the comparison of the groundwater analytical results from the 2021, 2022, and 2023 sampling programs to the MECP Table 7 SCS, no exceedances are present in groundwater with the exception of 1,2-dichloroethane (1,2-DCA) at BH22-02 and BH22-03; PHC F2 and F3 at BH22-04, and 1,2-DCA and benzene at BH21-04.

Considering the above, and in support of the filing of a Record of Site Condition (RSC), additional work is required at the Site in the form of a risk assessment to obtain an RSC with Certificate of Property Use prior to redevelopment, or removal of all impacted soil and groundwater and completion of confirmatory soil and groundwater sampling to obtain an RSC based on generic site condition standards. In a removal scenario, confirmatory groundwater sampling will be required over two quarterly events conducted three- and six-months post-excavation to confirm the groundwater quality meets applicable site condition standards.

2.0 INTRODUCTION

2.1 Site Description

WSP (formerly Golder Associates) was retained by the Client to conduct a Phase Two ESA of the following property:

Municipal Address	1047 Richmond Rd, Ottawa, Ontario
Property Identification Number	03970-0109 (LT)
Legal Description	Part Lots 24 & 25, Concession 1 (OF) Nepean as in N545545, Except Part 1 5R-3653
Size of the Phase Two Property	0.97 hectare (2.39 acre)

The location of the Phase Two Property is provided in Figure 1. The above referenced Plan of Survey is provided in Appendix A. The boundaries of the Phase Two Property as provided by the Client, which are the same as the RSC property boundaries, is shown in Figure 2.

2.2 Property Ownership

Authorization to proceed with this investigation was received from the Client on December 3, 2020. The contact information for the Client and the Phase One Property owner is:

Site Owner / Client	Address	Contact Name
Client: 1047 Richmond Nominee Inc.	2275 Upper Middle Road East Suite 700, Oakville, Ontario L6H 0C3	Mr. Andrew Konev Office: (905) 491-691-6596 Email: andrew.konev@fengate.com

2.3 Current and Proposed Future Uses

The Site (shown in Figure 2) consists of a 0.97-hectare parcel of commercial land with a former Chrysler dealership situated in the middle of the lot. Exterior areas of the Site included asphalt-paved parking (whole site) and driveway areas. The future use of the Site will be residential, with the development of three condo towers with three parking level garage and commerce and services at ground level.

2.4 Applicable Site Condition Standards

The analytical results of soil and groundwater samples collected for this Phase Two ESA were compared to the Table 7 generic site conditions standards for shallow soils in a non-potable ground water condition (residential/parkland/ institutional property use, coarse soil texture) presented in the Ontario Ministry of the Environment (MOE[1]) document titled "*Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, April 15, 2011*". The applicable site condition standards were selected based on the following rationale:

- The Phase Two Property is not located in an area designated in a municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of ground water.
- No water bodies were identified on the Phase Two Property.

[1] MOE was renamed the MECP – Ministry of Environment, Conservation and Parks; however, the generic site condition standards and associate guidance documents were released by the MOE and the standards are still legally referred to as the MOE standards.

- Based on field observations and grain size analysis results (refer to Appendix B) from soil samples collected from boreholes, the soil present at the Site is estimated to consist of soil having a grain size distribution with 50 percent or more by mass of particles that are greater than 75 µm mesh. Under the definition presented in O. Reg. 153/04, the soil at the Site is therefore considered to be coarse textured.
- The Site and surrounding properties located in whole or in part within 250 metres of the Site are within an area that is municipally serviced by a water supply that does not rely on potable groundwater as its source. No wells were identified that are used or intended for use as a source of potable water.
- The closest water body is Ottawa River located approximately 225 m northwest of the Site.
- There are no features on the Phase Two Property that would meet the conditions of an environmentally sensitive Site, as described in Section 41.
- In general, the pH range of surface soil is greater than 5 and less than 9 and the pH range of sub-surface soil is greater than 5 and less than 11. For the purposes of this Phase Two ESA investigation, the pH of surface and sub-surface soil is considered not environmentally sensitive.
- The former use of the Site was industrial/commercial, and the proposed future use of the Site is residential/parkland.
- The overburden thickness is less than 2 metres over more than one-third of the Phase Two Property.
- The average depth to shallow groundwater at the Site is 3.00 metres below ground surface (m bgs) or deeper across all monitoring events conducted from December 2021 through January 2024.

Based on the above, the 2011 Table 7 RPI Standards, which includes quality standards for soil and groundwater, were used to assess the environmental conditions at the Site. The use of Table 7 RPI SCS was approved by the City of Ottawa in correspondence sent on February 28, 2023, with the city's response approving the use of non-potable standards.

3.0 BACKGROUND INFORMATION

This section presents the background conditions of the Phase Two Property including a description of the physical setting and a summary of past investigations conducted.

The objectives of the Phase Two ESA were to obtain information about environmental conditions in the soil and groundwater on, in or under the Site, and to develop the information necessary to complete a Record of Site Condition (RSC) for the property. The objectives of this Phase Two ESA were achieved by:

- Developing an understanding of the geological and hydrogeological conditions at the Site; and
- Conducting field sampling for all contaminants of concern (COCs) associated with each area of potential environmental concern (APEC) identified in the Phase One ESA.

3.1 Physical Setting

The Site consists of an irregular polygon shaped parcel of land located on the north side of Richmond Road in Ottawa, Ontario. The nearest water body is the Ottawa River which is located approximately 225 m northwest of the Site, which flows northeast to the Atlantic Ocean (600 km northeast). Land uses surrounding the Site are commercial and residential.

The topography of the Site and surrounding areas is generally flat with a marginal downward slope to the east/north towards Ottawa River. There are no surface water drainage features on the Site.

3.2 Past Investigations

3.2.1 Phase One ESA

WSP conducted a Phase One ESA entitled "*Phase One Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario*", dated November 2021 and updated in May 2024, to assess the likelihood of soil and/or groundwater contamination resulting from historic or present activities at the Site and surrounding area. This included a review of available historical information on the Site and surrounding area, interviews with persons familiar with the Site and a Site reconnaissance. The location of Potentially Contaminating Activities identified via the Phase One ESA are shown on Figure 3. The location of APECs identified based on the Phase One ESA are shown on Figure 4 and summarized below:

Area of Potential Environmental Concern[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Groundwater, soil and/or Sediment)
APEC 1 – On-site automotive garage	Centre of the Site	#10. Commercial Autobody Shops	On-Site	PHCs F1-F4, BTEX and VOCs	Soil and groundwater
APEC 2A – Former UST location	Northeast portion of the Site building	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs F1-F4 and BTEX	Soil and groundwater
APEC 2B – Former UST location	Southeast portion of the Site building				
APEC 3 – Presence of an AST, used for waste lubricant oil and oil-stain spots on the asphalt close to the AST	Northeast portion of the Site building	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs F1-F4 and BTEX	Soil and groundwater
APEC 4 – Presence of painting operations (paint booth)	Northeast of the Site building	#39. Paints Manufacturing, Processing and Bulk Storage	On-Site	Metals, Hydride-Forming Metals, ORP, VOCs and PHCs	Soil and groundwater
APEC 5 – Inferred fill materials to be present site-wide	Entire Site	# 30. Importation of Fill Material of Unknown Quality	On-Site	Metals, Hydride-Forming Metals, ORP and PHCs	Soil
APEC 6 – Pole mounted transformer and fuse box	Four pole-mounted transformers were observed on the driveway of New Orchard Ave.	#55. Transformer Manufacturing, Processing and Use	On-Site	PCBs, PHCs	Soil

Area of Potential Environmental Concern[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Groundwater, soil and/or Sediment)
APEC 7 – The application of de-icing salt for the purposes of vehicular and pedestrian safety has occurred at the Phase One Property. As per section 49.1 in O. Reg. 153/04, no testing is required.	Entire Site	#Other	On-Site	SAR, EC, sodium, chloride	Soil and groundwater

Notes:

1 Area of potential environmental concern means the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental Site assessment, including through, •(a) identification of past or present uses on, in or under the phase one property, and •(b) identification of potentially contaminating activity

2 Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area

3 Contaminants of potential concern specified using the method groups as identified in the "Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011

4 Metals – Ba (Barium), Beryllium (Be), Boron (B), Cadmium (Cd), Chromium (Cr), Cobalt (Co), Copper (Cu), Lead (Pb), Molybdenum (Mo), Nickel (Ni), Silver (Ag), Thallium (Th), Uranium (U), Vanadium (V), Zinc (Zn); Hydride-Forming Metals – Arsenic (As), Selenium (Se), Antimony (Sb); ORP – Hexavalent Chromium (Cr-VI), Sodium (Na), Mercury (Hg), Hot Water Soluble Boron (B-HWS), Chloride (Cl-), Cyanide (CN-), Sodium Adsorption Ratio (SAR), Electrical Conductivity (EC); PHC – Petroleum Hydrocarbons; BTEX – Benzene, Toluene, Ethylbenzene and Xylenes; VOC – Volatile Organic Compounds.

3.2.2 Previous Environmental Investigations

No previous environmental investigations have been carried out at the Site. The 2021 Phase One ESA followed by the 2023 Phase One update were the first environmental study carried out at the property and its findings were considered as part of the Phase Two ESA (used in conjunction for the identification of PCAs and APECs).

4.0 SCOPE OF THE PHASE TWO ESA INVESTIGATION

The objective of this Phase Two ESA was to assess the presence or absence of impact associated with the APECs as identified in the Phase One ESA, to assess the vertical extent of soil and groundwater contaminants identified at the Site, and to support the filing of an RSC for the Site.

4.1 Overview of Site Investigation

The Phase Two ESA was carried out between September and December 2021, and between May 2022 and August 2023 and included the following tasks:

- **Health and Safety Plan:** A Health and Safety Plan for internal and subcontractor use was prepared prior to initiating fieldwork at the Site.
- **Subsurface utilities in the areas of investigation:** Prior to drilling, WSP contacted local public utilities and retained the services of a private contractor to locate and identify potential buried services within the general areas of the proposed test locations before commencing intrusive investigations at the Site.

- **Sampling and analysis plan:** WSP prepared a sampling and analysis plan prior to conducting the field investigation (refer to Appendix D).
- **Borehole drilling and monitoring well installation:** The borehole drilling program was conducted between September 21 to 24, 2021; November 11 to 25, 2021, December 21, 2021, May 5 to 11, 2022, October 3, to November 4, 2022, and on May 15, 2023. The program included the drilling of thirty-three boreholes, of which twenty-five were completed as groundwater monitoring wells. The location of the boreholes and monitoring wells are provided on Figure 5. The monitoring well construction details and water level information are presented in Tables 1 and 2.
- **Soil sampling:** Selected soil samples were collected during drilling. Soil samples were submitted for chemical analysis of one or more of the following: petroleum hydrocarbons (PHCs) plus benzene, toluene, ethylbenzene and xylenes (BTEX), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), metals, hydride-forming metals, and other regulated parameters (ORP). A summary of the soil samples submitted for analysis is presented in Table 3.
- **Well development, groundwater monitoring and sampling:** WSP developed the newly installed monitoring wells on September 22, 2021, November 16 and 26, 2021, December 21, 2021, May 20, 2022, and May 18, 2023. WSP collected groundwater samples on October 4,2021, November 22, 2021, December 22, 2021, May 26, 2022, November 15, 2022, February 9, 2023, March 16, 2023, May 29, 2023, July 7, 2023, July 18, 2023, July 19, 2023, August 8, 2023, and November 21, 2023, from one or more of the twelve groundwater monitoring wells (BH21-02 to BH21-05, BH21-11, BH21-14, BH21-15A/B, BH21-19 to BH21-22, BH22-01 to BH22-05, BH22-08, BH22-09 (S), BH22-09 (D), BH22-10 (S) and BH22-10 (D)). The groundwater samples were submitted for analysis of one or more of VOCs, PHCs, BTEX, hydride-forming metals, and/or ORP. A summary of the groundwater samples submitted for analysis is presented in Table 4.
- **Surveying**: An elevation survey for the boreholes and monitoring wells installed as part of this Phase Two ESA was completed by WSP on September 16, 2021, December 1, 2021, January 10, 2022, and May 23, 2023.
- **Test Pit program and Soil Sampling:** Soil samples were collected following the removal soil exceedances from the area at and around BH21-05 and BH21-24, on the northeast area of the Site on July 25 and 26, 2023.
- **Reporting**: WSP complied and assessed the field and laboratory results from the above noted activities into this report.

The rationale for the investigations is provided in the Sampling and Analysis Plans provided in Appendix D. The sampling locations are provided in Figure 5. The monitoring well construction details are presented in Table 1. A summary of the soil samples collected is presented in Table 3. A summary of the groundwater samples collected is presented in Table 4.

The Phase Two ESA investigation was carried out in general accordance with WSP's standard operating procedures which conform to the requirements of O. Reg. 153/04.

The data from this Phase Two ESA investigation completed by WSP at the Site were incorporated into a single Phase Two ESA report following the Phase Two ESA report format and content required by O. Reg. 153/04. There were no impediments or access limitations that would affect the conclusions of the Phase Two ESA report.

4.2 Media Investigated

To address the potential environmental issues identified in the Phase One ESA, the Phase Two ESA field program included sampling of soil from boreholes and test pits, and groundwater from monitoring wells screened within overburden soil, upper and deep bedrock at the Site. No sediment was present at the Site and therefore no sediment sampling was completed.

Details of the parameters analysed in soil and groundwater samples are presented in Tables 3 and 4. The sampling and analysis plan (refer to Appendix D) outlines the rationale for the field investigation activities carried out at the Site and the associated methodologies used to meet the objectives of this Phase Two ESA.

4.3 Phase One Conceptual Site Model (CSM)

The following key Site features (as required by O.Reg. 153/04) are presented on Figures 3, and 4 where applicable:

- Existing buildings and structures;
- Water bodies and areas of natural significance located in the Phase One Study Area;
- Drinking water wells on the Phase One Property;
- Roads (including names) within the Phase One Study Area;
- Uses of properties adjacent to the Phase One Property; and,
- Location of identified PCAs in the Phase One Study Area (including any storage tanks).

The following describes the Phase One ESA CSM based on the information obtained and reviewed as part of the Phase One ESA:

- The Phase One property consisted of a 0.97-hectare parcel of land developed with a commercial building.
- No water bodies or areas of natural significance were identified on or within 30 m of the Phase One Property. Ottawa River is located approximately 225 m northwest of the Phase One Property.
- Potable water in the vicinity of the Phase One Property is provided by the City of Ottawa and is obtained from Ottawa River. No potable water wells were identified on the Phase One Property.
- The Phase One Property and Phase One Study Area are not considered part of a well-head protection area.
- The Phase One Property was originally transferred from the Crown to a private individual in 1804. Between 1804 to present various private owners or entities have owned the Phase One Property. The site use was residential until 1959, at which point a car dealership was developed. Since 1959, the operations at the Site have included a commercial auto body shop, and storage, maintenance, fuelling and repair of vehicles; which included one former UST tank nest located adjacent to the northeast corner of the Site building and a possible UST tank nest and service island located adjacent to the southeast corner of the Site building along Richmond Road.
- At the time of the Phase One ESA, the Phase One Property was occupied by Metro Chrysler dealership which operated as a new car dealership, used car dealership, auto body shop and maintenance garage shop.

- At the time of the Phase One ESA, the neighbouring properties within the Phase One Study Area consisted of commercial and residential uses (see Figure 2).
- The following PCAs were identified on the Phase One Property which result in APECs to the Site:
  - *#10 Commercial Autobody Shops* – The Site is currently used as a car dealership and has an automotive garage and associated equipment present.
  - *#28 Gasoline and Associated Products Storage in Fixed Tanks* – Former UST areas identified on the Site.
  - *#30 Importation of Fill Material of Unknown Quality* – Due to the age and development history of the Site, fill materials are inferred to be present site-wide.
  - *#39 Paints Manufacturing, Processing and Bulk Storage* – Presence of painting operations (paint booth).
  - *#55 Transformer Manufacturing, Processing and Use* – Pole mounted transformer and fuse box.
  - #Other Application of de-icing salt for pedestrian and vehicular safety.
- Underground utilities are present at the Site, which include natural gas, hydro, and sewer/sanitary mains.
- The surficial geology of the site is described in published maps as being comprised of sandy silt to silty sand textured till on Paleozoic terrain. Based on the results of the Phase Two investigation, the stratigraphy at the Site is comprised of silt till with pockets of sand and gravel. Inferred fill materials were present at various sampling locations, consisting of loose brown to grey sand / silty sand and trace gravel under asphalt surface. Fill materials were identified to depths ranging from approximately 0.08 to 2.74 mbgs.
- Bedrock at the Site consists of Rockcliffe Formation (Sandstone, Shale, Limestone and Dolostone). During borehole drilling, bedrock was encountered at depths ranging from 1.52 to 4.11 mbgs.
- Regional groundwater flow in the underlying aquifers is likely to the north toward the Ottawa River that is located approximately 225 m northwest of the Site at its closest point. Shallow groundwater flow is likely influenced by the presence of subsurface utilities and other subsurface infrastructure.

4.4 Deviations from Sampling and Analysis Plan

The soil and groundwater sampling were carried out in general accordance with the Phase Two ESA work program documented in the sampling and analysis plans (Appendix D).

The sampling and analysis plan outlines the rationale for the field investigation activities carried out at the Site and the associated methodologies used to meet the objectives of this Phase Two ESA. The procedures described in the Sampling and Analysis Plan were followed without modifications. The following deviations from the sampling and analysis plan were noted:

- Monitoring well BH21-01 and BH22-07 were dry upon drilling completion and groundwater samples could not be collected from these locations. These wells were monitored again during subsequent monitoring events; however, they never presented measurable water levels. Low water levels at these locations are likely related to dewatering operations at the light-rail transit (LRT) construction site located adjacent to the Phase Two Property to the south-southeast along Richmond Road.

4.5 Impediments

No physical impediments to the Phase Two ESA investigation were encountered. Access to the Phase Two Property was not denied or restricted.

5.0 INVESTIGATION METHOD

5.1 General

The following sections describe the field investigation methods employed during the Phase Two ESA. The fieldwork was carried out in September, November and December 2021, May 2022, October-November 2022, and May-November 2023.

Prior to the commencement of field activities, WSP developed a Site-specific health and safety plan. The plan identified potential health and safety concerns anticipated for the work to be done at the Site, prescribed work procedures to mitigate these concerns, specified personal protective equipment requirements for Site work and established procedures to be followed by WSP staff in the event of an emergency. The document was reviewed and signed on-Site by field personnel prior to commencing work.

Additionally, prior to the commencement of intrusive investigations, WSP contacted public underground utilities locators to co-ordinate clearances of potential underground services (e.g., telephone, sewers, water lines, and gas lines). WSP also retained the services of a private local underground utilities' locator, to scan the general investigation areas.

5.2 Drilling

Various MECP licenced drilling contractors were engaged by WSP over the course of the Phase Two ESA investigation:

- Five boreholes were drilled by CCC Group (CCC) of Ottawa, Ontario,
- Ten boreholes were drilled by Marathon Drilling Inc. (Marathon); and,
- 17 boreholes were drilled by Strata Drilling Group (Strata).

The boreholes were drilled to document soil and bedrock information in addition to facilitate soil sampling. Twenty-five of the thirty-two boreholes were equipped as monitoring wells. The borehole and monitoring well locations are shown on Figure 5. The Record of Borehole Logs are provided in Appendix E.

All field activities were carried out by or under a supervision of a WSP field technician who was directed by a Qualified Person (QP).

Borehole drilling and monitoring well installations were completed from September 21 to 24, 2021 by CCC using a Power Hollow Stem Auger truck mounted drilling equipment for the overburden material and a size H air hammer for the bedrock drilling. From November 11 to 12, November 22 to 24 and November 25, 2021, drilling was performed by Marathon using a Geoprobe Direct Push and Hollow Stem Auger for the overburden and rotary diamond drilling techniques while retrieving HQ sized core for the bed rock drilling. On December 21, 2021, May 5, 2022, to May 11, 2022, October 3, 2022 to November 4, 2022, and on May 15, 2023, drilling was performed by Strata using a Power Hollow Stem Augers.

During drilling, all non-dedicated sampling equipment were cleaned and decontaminated between each soil sampling interval by washing with an Alconox detergent solution and rinsing with potable water to reduce the potential for cross contamination between soil sampling intervals.

5.3 Soil: Sampling

All boreholes were advanced to bedrock, overburden was noted from depths of 1.52 m below ground surface (mbgs) at BH21-11 to a depth of 4.11 mbgs at BH22-09(S/D). Upon encountering auger refusal at boreholes 21-01 to 21-05, the boreholes were further advanced to a depth of about 7.6 mbgs into the bedrock using pneumatic hammer rock drilling methods in September 2021 (no rock cores were recovered from these five boreholes). Rotary diamond drilling techniques were used while retrieving HQ sized bedrock cores at BH21-15 in November 2021. The borehole locations are presented on Figure 5.

Soil samples were retrieved from the boreholes using a continuous 1.52 m macrocore soil sampler for field screening (including visual inspection and field measurement of headspace concentration), soil sample collection and stratigraphic logging at regular intervals was completed by a WSP field technician up to the final borehole depth. A portion of each soil sample was placed in a sealed plastic bag, and a portion was placed in clean laboratory-supplied sample containers for potential laboratory analysis. Soil headspace concentrations were measured from the bagged samples using a photoionization detector (PID) and a combustible gas detector, calibrated using isobutylene gas and hexane gas, respectively, to determine total organic vapour and combustible gas concentrations. Headspace readings were taken after sample collection.

Soil samples in laboratory containers were stored on ice in a cooler until delivered to the laboratory for analysis under chain of custody. Selection of soil samples for laboratory analysis was based on the APEC being investigated, results of the headspace screening and conditions encountered at each test location including visual (e.g., staining, discolouration) and olfactory observations (if any). A summary of the soil samples submitted for analysis is provided in Table 3.

Geologic descriptions, visual and olfactory observations and results of the field headspace screening are presented on the Record of Borehole Sheets in Appendix E.

5.4 Soil: Field Screening Measurements

Soil headspace vapour measurements were taken using the equipment described in the following table.

Equipment	Make and Model	Parameters Detected	Detection Limits	Precision	Accuracy	Calibration Standard	Calibration Procedure
Photo-ionization Detector	RKI Eagle 2	Organic vapour	0 – 2,000 parts per million (ppm)	± 1 ppm	Varies by specific VOC.	Isobutylene	In the warehouse prior to fieldwork
Combustible gas meter	RKI Eagle 2	Combustible gas	0 – 11,000 parts per million (ppm)	0-200: ±5 ppm 200-1,000: ± 10 ppm 1000-11000: ± 50 ppm	± 50 ppm or ± 10% of reading	Hexane	In the warehouse prior to fieldwork

The results of soil headspace measurements are presented on the Record of Borehole Sheets included in Appendix E.

5.5 Groundwater: Monitoring Well Installation

WSP personnel supervised drilling of a total of thirty-three borehole locations, twenty-five of which were equipped with monitoring wells (BH21-01 to BH21-05, BH21-11, BH21-14, BH21-15A/B, BH21-19 to BH21-22, BH22-01 to BH22-08, BH22-09 (S), BH22-09 (D), BH22-10 (S), and BH22-10 (D).

Monitoring wells were installed in selected drilled boreholes and were constructed of 38 mm [1.5 inch] and 50 mm [2 inch] inside diameter (ID) Schedule 40 polyvinyl chloride (PVC) casing and 38 and 50 mm ID Schedule 40 PVC well screens (from 1.5 to 3.0 metres in length [5-10 ft], #10 slot size). At BH21-15, a nested multilevel well system was installed with 38 mm [1.5 inch] ID Schedule 40 PVC casing and screen. The shallow screen (BH21-15B) installed in the overburden from 1.5 m to 3.0 m bgs and deeper bedrock screen (BH21-15A) was installed from 4.0 m to 7.0 m bgs. The annulus surrounding the screened portion of each monitoring well and an approximate 0.3 m portion of riser pipe above the screened section was filled with silica filter sand grade #2.

A seal consisting of bentonite solids (e.g., Holeplug™) was placed above the filter pack with a minimum thickness of 0.6 m. The remainder of the annulus was sealed with hole-plug and bentonite grout to a depth of approximately 0.3 m bgs to minimize the potential for infiltration of surface water or shallower groundwater into the screened interval.

Each monitoring well was completed with a flushmount protective casing set in concrete and sealed with a PVC J-plug. Monitoring well construction details are provided on the respective Record of Borehole sheets provided in Appendix E. The monitoring well locations are shown on Figure 5.

5.6 Groundwater: Field Measurements for Water Quality Parameters

Groundwater indicator parameters, including temperature, pH, electrical conductivity (EC), dissolved oxygen (DO) and redox potential were measured prior to sampling to ensure adequate well development and purging. A multi-parameter meter was used to measure groundwater quality during monitoring well development and groundwater sampling.

The instruments were calibrated by the supplier and/or using factory supplied solutions for electrical conductivity (1413 micro Siemens per centimetre (µS/cm)) and pH (4.01 pH and 7.01 pH) parameters. Specifications for the water quality metre are summarized in the following table:

Parameter	Measurement Range	Precision	Accuracy
pH	0.00 to 14.00 pH	0.01 pH	±0.2 pH
Electrical Conductivity	0.00 to 3999 µS/cm	0.01 mS/cm	± 0.5%
Temperature	-5 to 45 ºC	0.1 ºC	± 0.15 ºC
Dissolved Oxygen	0 to 50 mg/L	0.021 mg/L	± 2.0%
Redox Potential	± 1999 mV	1 mV	± 15 mV

5.7 Groundwater: Development, Purging and Sampling

WSP measured groundwater levels and collected groundwater samples from the onsite monitoring wells in 2021 and 2022; however, the groundwater elevation dataset used in this Phase Two ESA was obtained in 2023 (June 30, 2023, July 19, 2023, August 8, 2023, and November 21, 2023). Groundwater monitoring details are summarized in Table 2.

After monitoring well installation, development of each monitoring well at the Site was conducted by WSP personnel to remove fine-grained material and stabilize the sand filter pack. Development was completed by removing 3 to 10 wells volumes from the well, using dedicated Waterra® tubing equipped with a surge block and a foot valve to pump groundwater. Development water was collected into plastic totes and left on-Site for later disposal pending analysis. Development was completed at least 24 hours prior to sampling.

Depth to water was measured in each monitoring well using an oil-water interface probe capable of detecting the presence of light non-aqueous phase liquids (LNAPL) on the groundwater surface. Prior to groundwater sampling, each monitoring well was purged using dedicated low-flow peristaltic pump and field measurements of water quality parameters including temperature, pH, EC, DO and redox potential were recorded from the purged groundwater using calibrated multi-parameter probe connected to a flow-through cell.

Groundwater samples were collected from BH21-02 to BH21-05, BH21-11, BH21-14, BH21-15A/B, BH21-19 to BH21-22, BH22-01 to BH22-05, BH22-06, BH22-08, BH22-09 (S), BH22-09 (D), BH22-10 (S) and BH22-10 (D).

The portions of the samples to be analyzed for dissolved metals were field filtered at the time of collection using a dedicated 0.45 µm high-capacity inline filter. Groundwater samples were collected directly into clean, laboratory-supplied sample containers and stored on ice in a cooler until delivered to the analytical laboratory under chain of custody. A summary of the groundwater samples submitted for analysis is provided in Table 4.

5.8 Sediment: Sampling

Sediment was not present at the Site; therefore, no sediment samples were collected as part of this investigation.

5.9 Analytical Testing

The contact information for the analytical laboratories is included below.

Bureau Veritas Laboratories	**AGAT Laboratories**
6740 Campobello Rd	5835 Coopers Ave.,
Mississauga, ON, L5N 2L8	Mississauga, ON, L4Z1Y2
Laboratory Contact: Ankita Bhalla	Laboratory Contact: Hina Siddiqui
ankita.bhalla@bureauveritas.com	siddiqui@agatlabs.com
416.708.9967	905.712.5126

AGAT was chosen to be the secondary environmental analysis provider due to a security breach at Bureau Veritas Laboratory (BV Lab) partway through the Phase Two ESA.

Both analytical laboratories are accredited in accordance with the International Standard ISO/IEC 17025 (CALA) (General Requirement for the Competence of Testing and Calibration Laboratories, May 5, 2005, as amended) and the standards for proficiency testing developed by the Standards Council of Canada, the Canadian Association for Laboratory Accreditation or another accreditation body accepted by the MECP.

5.10 Residue Management Procedures

Investigation derived waste generated during the fieldwork efforts (e.g., soil cuttings from drilling, groundwater from well development and sampling, and wash water from equipment decontamination) were placed in sealed drums/totes and stored at the Phase Two Property for subsequent off-Site disposal.

5.11 Elevation Surveying

A location and elevation survey of the Site was completed using Trimble R10 Model 2 GPS receiver. The monitoring well coordinates are provided UTM (Universal Transverse Mercator), with coordinates measured as northings and eastings meters. The coordinate system used was Canada/NAD 1983, datum NAD (Canada), modified TM Zone 09, geoid East Canada.

Elevation and position data were collected on September 16, 2021, December 1, 2021, January 10, 2022, and May 23, 2023. All elevations are geodetic, referencing Geoid Model HT2_0e.

5.12 Quality Assurance and Quality Control Measures

WSP's quality assurance program for environmental investigations was implemented to ensure that analytical data obtained by the investigation were valid and representative. The quality assurance program included the following measures:

- The use of standard operating procedures for all field investigation activities.
- All monitoring wells were developed following installation to remove fine particles from the filter pack and any water introduced during drilling.
- Monitoring wells were appropriately purged prior to groundwater sample collection to remove stagnant water from the well bore and improve sample representativeness, minimizing sample agitation and aeration to the extent practicable.
- The collection of field duplicate samples at a minimum frequency of one duplicate for every ten samples.

Five soil duplicate samples were analyzed for the 34 overall soil samples analyzed. Fifteen groundwater duplicates were submitted for the 41 overall groundwater samples analyzed. Overall, 75 samples (soil and groundwater) were analyzed plus twenty duplicates:

- The analysis of a field and trip blank associated with groundwater sampling events.
- Initial calibration of field equipment was performed at the start of each field day, with daily checks of calibration, as needed, using a standard of known concentration.
- Soil and groundwater samples were handled and stored in accordance with the sample collection and preservation requirement of the Ministry of the Environment (MOE) *Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.I of the Environmental Protection Act*, July 1, 2011. Samples were collected directly into pre-cleaned, laboratory-supplied sample containers with the appropriate preservative for the analyte group. Upon collection, samples were placed in insulated coolers with ice for storage and transport to the analytical laboratory under chain-of-custody.

- Dedicated sampling equipment (tubing and footvalves) and clean disposable Nitrile™ gloves were used at each sampling location to prevent cross-contamination. All non-dedicated sampling equipment (e.g., water level meters, split spoons) was decontaminated between sampling locations. Sampling equipment in contact with soil, groundwater, or sediment was cleaned by mechanical means; washed with a phosphate-free, laboratory-grade detergent (e.g., LiquiNox) and, if necessary, an appropriate desorbing wash solution; and thoroughly rinsed with analyte-free water.
- Detailed field records documenting the methods and circumstances of collection for each field sample were prepared at the time of sample collection. Each sample was assigned a unique sample identification number recorded in the field notes, along with the date and time of sample collection, the sample matrix, and the requested analyses.
- The submission of samples to the analytical laboratory in accordance with standard chain of custody procedures.

Below is a summary of the primary and duplicate samples and QA/QC blank samples collected during the Phase Two ESA investigation:

Media	Date	Borehole ID	Samples ID	Duplicate ID	QA/QC samples
Soil	22-Sep-21	BH21-03	SA3	21-3 DUP-1	Metals, Hydride-Forming Metals and ORP
	22-Sep-21	BH21-05	SA2	21-5 DUP-1	VOCs and PHC F1 to F4
	24-Nov-21	BH21-20	SA2	21-20 DUP-1	VOCs and PHC F1 to F4
	21-Dec-21	BH21-21	SA2	21-21 DUP1	VOCs and PHC F1 to F4
	26-Jul-23	TP-SA11	TP-SA11	DUP_3	VOCs and PHC F1 to F4
Groundwater	30-Nov-21	BH21-4	BH21-4	DUP-1	VOCs and PHC F1 to F4
	04-Oct-21	BH21-5	BH21-5	DUP-1	Metals, Hydride-Forming Metals and ORP, PHCs F1 to F4 and VOCs
	30-Nov-21	BH21-11	BH21-11	DUP-2	Metals, Inorganics
	09-Dec-21	BH21-14	BH21-14	DUP	VOCs and PHC F1 to F4
	26-May-23	BH21-14	BH21-14	MW21-14 dup	VOCs and PHC F1 to F4
	7-Jul-23	BH21-14	BH21-14	Dup 1	VOCs and PHC F1 to F4
	22-Dec-21	BH21-21	BH21-21	DUP	VOCs
	9-Feb-23	BH22-2	MW22-02	DUP-1	VOC, BTEX
	16-Mar-23	BH22-2	MW 22-02	DUP-1	VOC, BTEX
	7-Jul-23	BH22-4	BH22-4	Dup-2	PHC (F1-F4), BTEX
	15-Nov-22	BH22-8	BH22-8	Dup2	VOC
	29-May-23	BH22-9	BH22-9D	DUP2	VOC
	7-Jul-23	BH21-14	BH21-14	Dup 1	VOCs and PHC F1 to F4
	7-Jul-23	BH22-4	MW22-04	DUP-2	VOCs and PHC F1 to F4
	15-Aug-2023	BH22-4	22-04	DUP-1	VOCs and PHC F1 to F4

Media	Date	Borehole ID	Samples ID	Duplicate ID	QA/QC samples
QA/QC Blank Samples	4-Nov-21	-	-	-	Field and Trip Blank - PHC F1 and VOC
	22-Dec-21	-	-	-	Field and Trip Blank - PHC F1 and VOC
	26-Mar-22	-	-	-	Field and Trip Blank - VOC
	15-Nov-22	-	-	-	Trip Blank - VOC
	29-Mar-23	-	-	-	Field and Trip Blank - VOC

6.0 REVIEW AND EVALUATION

This section of the report presents a review and evaluation of the results of the borehole and monitoring well drilling and installation, monitoring, and sampling activities conducted as part of the Phase Two ESA described herein.

6.1 Geology

The soil conditions encountered during the borehole drilling are presented in the Record of Borehole sheets provided in Appendix E as well as in the cross sections presented in Figures 8 and 9. The following presents a summary of the subsurface soil conditions encountered during the investigation.

Boreholes were advanced to a maximum depth of 10.66 mbgs. It should be noted that the logs presented have been inferred from recovered samples and that geologic contacts noted on the logs represent aa transition from one soil type to another rather than an exact plane of geologic change. Subsurface conditions encountered are likely to vary between and beyond the borehole sampling locations as well as between borehole locations. The borehole and monitoring well locations are shown on Figure 5.

In general, the subsurface soil conditions encountered in the boreholes consisted of a layer of fill (present at several test locations) underlain by native soil and bedrock. The fill consisted of sand / silty sand and trace gravel that extend to depths ranging from approximately 0.08 m to 2.74 mbgs. In general, the native soil below the fill consisted of silty sand with trace gravel and extended to a maximum depth of 4.11 mbgs. Bedrock was encountered during drilling from depths ranging from 1.52 to 4.11 mbgs.

No obvious odour, staining, discoloration or free product indicative of environmental contamination were observed at the borehole locations advanced by WSP, except at BH21-05, BH21-14 and BH21-24 where PHC-like odour was noted in soil during drilling. At BH21-14, sheen was observed on the water returned at surface during rock coring. Further, the last set of groundwater results from BH21-14 met the MECP Table 7 Standards and no sheens or odours were observed during well development, purging or sampling (refer to Section 5.7 – Groundwater: Quality). It is noted that as a result of the proposed future development, excavation for the underground parking garage will remove all impacted soil and groundwater.

6.2 Groundwater: Elevations and Flow Direction

All monitoring wells drilled during the 2021, 2022 and 2023 programs were monitored, and water levels (where present) were used in the interpretation of groundwater flow direction. Any temporary fluctuation in water levels on the Phase Two Property is not anticipated to affect the conclusions of the Phase Two ESA.

The location and depth of the screens for the monitoring wells were selected based on the issues being investigated, conditions observed during drilling and were installed to straddle the anticipated water table with the exception of the wells screened in the bedrock. The base of the well screens installed as part of this assessment range from approximately 3.10 to 10.66 mbgs. A summary of the monitoring well construction details are presented in Table 1

The groundwater elevations at each monitoring well are summarized in Table 2. Groundwater elevations in monitoring wells ranged from 61.52 m to 62.51 m on December 22, 2021, from 56.71 m to 62.54 m on May 23, 2023, from 56.38 m to 63.06 m on August 8, 2023, and from 55.90 m to 62.61 m on November 21, 2023. Based on the interpreted groundwater elevation contours presented in Figures 6 and 7, the inferred shallow groundwater flow is interpretated to be towards the north/northeast. At the time of the investigation, there was a sizeable linear excavation where ongoing dewatering related to the construction of the LRT occurred directly south and southeast of the Site. The excavation and dewatering have influenced the shallow groundwater elevations and flow directions on the southern part of the Site. Shallow groundwater flow near the southwest section of the Site (section along Richmond Street) was inferred to be to the east toward the excavation in 2023.

The natural deep groundwater flow direction at the Site is interpreted to be to the northwest toward the Ottawa River (River flows northeast). Seasonal fluctuation in water levels on the Site should be expected. Groundwater water levels in shallow unconfined aquifers in Ontario are typically highest following the spring recharge and decline throughout the summer and fall months into the winter. Any temporary fluctuation in water levels at the Phase Two Property is not anticipated to affect the conclusions of the Phase Two ESA.

6.3 Groundwater: Hydraulic Gradients

The average horizontal hydraulic gradient was estimated for shallow groundwater conditions based on water levels collected on August 8, 2023. The inferred shallow groundwater contours are presented in Figure 6. The average horizontal hydraulic gradient in the shallow groundwater on the north portion of the Site in August 2023 was 0.16 m/m to the northeast. The inferred deep groundwater elevation contours measured on May 23, 2023, are presented in Figure 7. The inferred deep groundwater flow direction is to the north with an approximate gradient of 0.02 m/m.

Vertical hydraulic gradients were estimated based on August 8, 2023, data using the difference in groundwater elevations between nested monitoring wells installed in the upper bedrock (BH22-10S) and deeper bedrock (BH22-10D). The estimated vertical hydraulic gradient was 0.26 m/m, indicating a downward component of groundwater flow.

6.4 Soil: Coarse Soil Texture

Two representative soil samples from the Site (BH21- 01 SA2 [0.61-1.22 mbgs] and BH21-02 SA3 [1.22-1.83]) were collected from native overburden materials and submitted for grain size distribution analysis via a 75 µm sieve mesh. The methodology consists of the following procedures: air-dried sample is reduced to < 2 mm size and mixed with a dispersing agent (Calgon solution); the sample is washed through a 200 mesh (75 µm) sieve; and the retained mass of sample is used to determine % sand fraction.

The grain size information and interpretation for these samples are presented in the laboratory certificate of analysis in Appendix B. The two samples were considered to be sufficient and representative given that native soil encountered during the Phase Two ESA was generally consistent across the Site.

Based on grain size analysis results, the overburden in the subsurface of the Site contains more than 50% particles (by mass) in the soil which were equal or greater than 75 µm in mean diameter. Per the definitions in O. Reg. 153/04, the soil on the Site is therefore considered to be coarse textured.

6.5 Soil: Field Screening

Headspace vapour measurements were conducted on the soil samples collected from the boreholes drilled as part of the Phase Two ESA. Combustible gas vapour ranged from non-detect to 440 ppm (highest reading measured at BH21-15 SA3 from 0.76 to 1.52 mbgs) and organic vapour measurements ranged from non-detect to 98 ppm (highest reading measured at BH21-05 SA 4 from 2.28 to 3.04 m bgs).

The results of headspace vapour measurements are presented on the Record of Borehole sheets in Appendix E.

6.6 Soil: Quality

For the purpose of assessing soil quality data, sample locations across the Site were evaluated relative to the applicable site condition standards. Table 3 provides a summary of the soil samples submitted for analysis and the associated test parameters. The analytical results of soil samples are presented in Table 6 and the laboratory certificates of analyses, provided in Appendix B.

A summary of the number of soil samples analysed and the number of soil samples exceeding the MECP Table 7 Standards is provided below:

Parameter	Number of Soil Samples Analysed (including duplicates)	Number Soil Samples Exceeding the Table 7 Standards (including duplicates)
VOCs	23	1,4-Dichlorobenzene - 1 sample
Metals, Hydride-Forming Metals & ORP	11	0
SAR (only)	18	Sodium adsorption ratio (SAR) - 6 samples
PHC (F1-F4) + BTEX	38	F1-F4 - 3 samples

The soil analytical results for the soil samples submitted for laboratory analysis per the Sampling and Analysis Plans were below the Table 7 Standards with the following exceptions:

- BH21-03 sample SA2 (0.6 – 1.22 mbgs) had concentrations above the MECP Table 7 for SAR (5.3 µg/g compared to a standard of 5 µg/g for residential use).
- BH21-03 sample SA3 and its duplicate (0.6 – 1.22 mbgs) had concentrations above the MECP Table 7 for SAR (6.1 µg/g and 9.6 (DUP) compared to a standard of 5 µg/g for residential use).
- BH21-05 sample SA2 (0.6 – 1.22 mbgs) had concentrations above the MECP Table 7 for PHC F3 (1,500 µg/g compared to a standard of 300 µg/g for residential use).
- BH21-05 sample SA2 DUP-1 (0.6 – 1.22 mbgs) had concentrations above the MECP Table 7 for:
  - PHC F2 (250 µg/g compared to a standard of 98 µg/g for residential);
  - PHC F3 (25,000 µg/g compared to a standard of 300 µg/g for residential);
  - PHC F4 (8,100 µg/g compared to a standard of 2,800 µg/g for residential); and,
  - 1,4-Dichlorobenzene (0.093 µg/g compared to a standard of 0.083 µg/g for residential use).

- BH21-11 sample SA2 (0.76 – 1.52 mbgs) had concentrations above the MECP Table 7 for SAR (6.6 µg/g compared to a standard of 5 µg/g for residential use).
- BH21-11 sample SA3 (1.52 – 1.88 mbgs) had concentrations above the MECP Table 7 for SAR (5.9 µg/g compared to a standard of 5 µg/g for residential use).
- BH21-13 sample SA3 (1.52 – 2.13 mbgs) had concentrations above the MECP Table 7 for SAR (7.3 µg/g compared to a standard of 5 µg/g for residential use).
- BH21-24 sample SA4 (2.28 – 3.04 mbgs) had concentrations above the MECP Table 7 for:
  - PHC F1 (154 µg/g compared to a standard of 55 µg/g for residential); and,
  - PHC F3 (1,500 µg/g compared to a standard of 300 µg/g for residential).

6.7 Groundwater: Quality

For the purpose of assessing groundwater chemistry data, sample locations across the Site were evaluated relative to the applicable site condition standards. Monitoring well construction details are summarized in Table 1 and a list of groundwater samples submitted for laboratory analysis is provided in Table 4. The analytical results for groundwater samples are presented in Table 7 and the laboratory certificates of analyses are provided in Appendix B.

A summary of the number of groundwater samples analysed and number of samples exceeding the MECP Table 7 Standards is provided below:

Parameter	Number of Groundwater Samples Analysed (including duplicates)	Number of Groundwater Samples Exceeding the Table 7 Standards (including duplicates)
VOCs	60	1,2-Dichloroethane - 15 Trichloroethylene - 3
Metals, Hydride-Forming Metals & ORP	7	0
PHC F1-F4/BTEX	60	Benzene - 4 PHC F2 - 1 PHC F3 - 3

Based upon the comparison of the groundwater analytical results from the 2021, 2022, and 2023 investigation programs to the Table 7 Standards, the detected concentrations were below the standards with the exception of:

- BH21-04, installed in a downgradient location from the former UST area, had groundwater concentration above MECP Table 7 for:
  - 1,2-Dichloroethane (9.3 µg/L) on October 4, 2021, (40.5 µg/L L) on December 9, 2021, (2.51 µg/L) on December 22, 2021, (3.99 µg/L) on May 29, 2022, (7.87 µg/L) on November 15, 2022, and (4.11 µg/L) on July 7, 2023 when compared to a standard of 0.5 µg/L;
  - Trichloroethene (4.26 µg/L compared to a standard of 0.5 µg/L) on December 9, 2021; and
  - Benzene (1.66 µg/L and 1.86 (DUP-1)) on November 30, 2021, (2.81 µg/L) on December 9, 2021, and (2.39 µg/L) on May 26, 2022, compared to a standard of 0.5 µg/L.

- BH21-14, installed downgradient from BH21-04, had groundwater concentration above MECP Table 7 for:
  - 1,2-Dichloroethane (1.45 µg/L) on November 15, 2022, when compared to a standard of 0.5 µg/L; and,
  - Trichloroethene (2.11 µg/L and 1.99 (DUP)) on December 9, 2021, compared to a standard of 0.5 µg/L.
- BH22-02, installed east of BH21-04 area, had a groundwater concentration above MECP Table 7 for:
  - 1,2-Dichloroethane (7.69 µg/L) on November 16, 2022, (2.48 µg/L and 2.58 (DUP-1)) on February 9, 2023; (5.03 µg/L and 5.17 µg/L (DUP-1)) on March 16, 2023; (4.26 µg/L) on July 7, 2023, when compared to a standard of 0.5 µg/L.
- BH22-03, installed west of BH21-14 area had groundwater concentration above MECP Table 7 for 1,2-Dichloroethane (3.14 µg/L compared to a standard of 0.5 µg/L) on March 26, 2022.
- BH22-04, installed west of BH21-14 area had groundwater concentration above MECP Table 7 for:
  - PHC F2 (214 µg/L compared to a standard of 150 µg/L) on November 21, 2023; and,
  - PHC F3 (569 µg/L compared to a standard of 500 µg/L) on July 7, 2023. Subsequent sample collected on August 15, 2023, had non-detect concentrations of PHC F3, and on November 21, 2023, had concentration of 2,840 µg/L compared to a standard of 500 µg/L.
- BH22-08, deep well installed at BH21-14 area had groundwater concentration above MECP Table 7 for 1,2-Dichloroethane (7.39 µg/L compared to a standard of 0.5 µg/L) on November 15, 2022, and meet Table 7 RPI SCS on July 19, 2023 and November 21, 2023.

Carbon tetrachloride and 1,1-Dichloroethene had their detection limits raised above the Table 7 RPI SCS for BH21-04 and BH22-02 however it is the opinion of the QP that no exceedances were present in these samples.

6.8 Sediment Quality

Sediment was not present at the Site, therefore, no sediment samples were collected as part of this investigation.

6.9 Quality Assurance and Quality Control Results

A certificate of analysis was received for each sample submitted for analysis. The results for QA/QC samples are presented in full in the laboratory certificates of analysis (Appendix B). QA/QC including calculation of relative percent differences (RPD) of the reported results was conducted in accordance with the MECP document: *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, April 15, 2011.*

To determine the precision of the analytical methods and field sampling procedures, parent and blind duplicate samples were collected during soil and groundwater sampling and were submitted for analysis of metals, hydride-forming metals and ORP, VOC, PHC and BTEX parameters. Precision is determined by the RPD between the duplicate and original samples and was calculated as follows:

$$RPD = \frac{|x_1 - x_2|}{x_m}$$

Where:

x_1 initial sample results

x_2 duplicate sample results

x_m mean of x_1, x_2

As outlined in the MECP Analytical Protocol, calculated relative percent differences (“RPDs”) for soil and groundwater samples should be <30% for PHC (F1-F4) and BTEX; <30% in soil and <20% in groundwater for metals, hydride-forming metals and ORP (conductivity in groundwater is <10%), and <50% in soil and <30% in groundwater for VOC. These values have been used as the acceptance criteria, when RPDs was be calculated. To permit reliable calculations, an RPD is only calculated when the original and duplicate sample concentrations are at least 5 times the report detection limit (“RDL”).

Based on the analytical results of the field duplicate and its parent sample, the RPD are within acceptable control limits, with the exception of soil RPD for PHC F2-F4 (BH21-05 SA3 and its duplicate); of soil RPD for lead, copper, zinc and nickel (BH21-03 and its duplicate DUP-1) and groundwater RPD for arsenic (BH21-11 and its duplicate DUP-2). The variability associated with these parameters for above samples and duplicate is inferred to be associated with the heterogenous nature of the soil and is not anticipated to impact the findings of this report.

Trip blank and equipment blank data for VOC/PHC F1 analysis indicated acceptable results with no detectable concentrations. The quality of the analytical results is further supported by analytical laboratory’s internal quality assurance program that includes laboratory blanks, spikes, surrogates, and duplicate samples.

All certificates of analysis or analytical reports received pursuant to clause 47 (2) (b) of the regulation comply with subsection 47(3). A certificate of analysis or analytical report has been received for each sample submitted for analysis and is provided in Appendix B. The analytical laboratory did not qualify any of the analytical results.

The field work was conducted in accordance with WSP’s Standard Operating Procedures and there were no quality issues of note identified. Accordingly, the analytical data generated during the investigation are valid and representative and may be used in this Phase Two ESA without further qualification. The RPD results are presented in Tables 7 and 8.

6.10 Phase Two Conceptual Site Model

This section summarizes Conceptual Site Model (CSM) for the property located at 1047 Richmond Road, Ottawa (i.e., the “Site”). As per Section 43 of O.Reg. 153/04, this CSM establishes the current condition of the Site.

6.10.1 Phase One ESA Information

The Site consists of an approximately 0.97-hectare parcel of land. During the 2021 Phase One ESA and 2023 Phase One ESA update, the Site was developed as commercial land with a Chrysler dealership installed. The only building was located in the middle of the property lot. In April 2023 the dealership was closed, and the Site was sold to 1047 Richmond Nominee Inc., which is in the process of demolishing the building and starting construction development. Exterior areas of the Site included asphalt-paved parking and driveway areas. Adjacent land uses included commercial and residential. Figure 2 indicates the Site location, and Figure 3 shows the Phase Two Property and Study Area.

Based on the information reviewed as part of the 2021 Phase One ESA and updated in 2023, the Phase Two Property land was initially transferred from the crown to a private individual in 1804. Between 1804 and the present, various private owners or entities have owned the land. Based on Fire Insurance Plans, Chain of Title and the Site Representative Interview, the Site use was residential until 1959, when a car dealership was developed. Accordingly, the first developed use was residential prior to the development of the automotive dealership.

6.10.2 Potentially Contaminating Activities

Based on the information obtained as part of the Phase One ESA, the multiple potentially contaminating activities (PCAs) were identified on the Site and within the surrounding Phase One Study Area as outlined in the following two tables The locations of the PCAs are provided in Figure 3. All PCAs identified on the Phase One Property were carried forward as Areas of Potential Environmental Concern (APECs) in accordance with the regulation. Not all PCAs identified in the Phase One Study Area were evaluated to contribute to areas of potential environmental concern on the Phase One Property. Rationale for the inclusion or exclusion of a PCA in an APEC is provided in the below tables.

Location	Potentially Contaminating Activity	Information Source	Rationale for Contribution from PCA to an APEC
Phase One Property	PCA A: #10 Commercial Autobody Shops – The Site was used as a car dealership and had an automotive garage and associated equipment present until at least 2022.	Site observations	PCAs are located on the Phase One Property and must be identified as APECs.
	PCA B: #28 Gasoline and Associated Products Storage in Fixed Tanks – Former underground storage tank (UST) areas identified on the Site.	Site observations, Site representative and building drawings	
	PCA C: #28 Gasoline and Associated Products Storage in Fixed Tanks – Presence of one above-ground storage tank (AST) used waste lubricant oil, three motor lubricant oil ASTs and oil-stained asphalt	Site observations	
	PCA D: #39 Paints Manufacturing, Processing and Bulk Storage – Presence of painting operations (paint booth)	Site observations	
	PCA E: #30 Importation of Fill Material of Unknown Quality – Due to the age of the Site, inferred fill materials to be present site-wide	Site observations, aerial photos, past environmental reports	
	PCA F: #55 Transformer Manufacturing, Processing and Use – Pole-mounted transformer located at the driveway of New Orchard Road	Site observations and 1956 FIP	
	PCA G: #Other The application of de-icing salt for vehicular and pedestrian safety has occurred at the Phase One Property	Site observations	

Location	Potentially Contaminating Activity	Information Source	Rationale for Contribution from PCA to an APEC
Phase One Study Area (excluding the Phase One Property)	PCA H: #46 Railyards, Tracks and Spurs – A Canadian National Railway corridor was historically located 350 m north of the Phase One Property	Aerial Photographs 1946, 1959 and 1965	The nature of impacts associated with this PCA typically do not migrate through groundwater and are not anticipated to impact the Phase One Property. The tracks are also located downgradient of the Phase One Property. PCA does not contribute to APEC.
	PCA I: #28 Gasoline and Associated Products Storage in Fixed Tanks – A former gas station was reported at 1051 Richmond Road (130 m southwest of the Phase One Property)	HLUI – 1956 FIPs – 1956	Based on the cross-gradient location of this PCA to the Site and the distance from the Site, the presence of this PCA is unlikely to impact the Phase One Property. PCA does not contribute to APEC.
	PCA J: #37 Operation of Dry-Cleaning Equipment (where chemicals are used) – A former Laundry cleaning facility was reported at 993 Richmond Road, 101 m northeast of the Phase One Property	HLUI – 1980's	Based on the cross-gradient location of this PCA to the Site, the presence of this PCA is unlikely to impact the Phase One Property. PCA does not contribute to APEC.
	PCA K: #10 Commercial Autobody Shops – An automotive repair shop is located at 1075 Richmond Road, 116 m southwest of the Phase One Property	HLUI – Since at least 1998	Based on the cross-gradient location of this PCA to the Site, and the distance from the Site, the presence of this PCA is unlikely to impact the Phase One Property. PCA does not contribute to APEC.
	PCA L: #28 Gasoline and Associated Products Storage in Fixed Tanks – Extendicare, located at 99 New Orchard Ave 30 m northwest of the Phase One Property, was a waste generator in 2006 and 2010 for light fuels & inorganic laboratory chemicals, waste oils & lubricants, and oil skimmings & sludges.	EcoLog ERIS report	Based on the cross-gradient location of this PCA to the Site, the presence of this PCA is unlikely to impact the Phase One Property. PCA does not contribute to APEC.
	PCA M: #55 Transformer Manufacturing, Processing and Use – Transformer located approximately 125 m northwest of the Phase One Property, along New Orchard Ave.	FIPs, 1956	Based on the downgradient location of this PCA to the Site and the distance from the Site, this PCA is unlikely to impact the Phase One Property. PCA does not contribute to APEC.
	PCA N: #10 Commercial Autobody Shops – Tops Car Wash Co. Limited is located at 979 Richmond Road, 129 m northeast of the Phase One Property. Location was listed as a motor vehicle repair shop in 2005, had a UST associated with it until at least 1992, and waste generator records for light fuels from 2002-2004.	EcoLog ERIS report	Based on the downgradient location of this PCA to the Site and the distance from the Site, the presence of this PCA is unlikely to impact the Phase One Property. PCA does not contribute to APEC.
	PCA O: (No PCA #) Multiple spills associated with LRT construction on the adjacent Property to the south between 2019 and 2022. Spilled products include diesel fuel (50 L in 2020), raw sewage (180 L in 2021), and hydraulic oil (various small-volume spills from 2019-2022).	EcoLog ERIS report	Based on the downgradient location of this PCA to the Site and current dewatering activities during ongoing subsurface LRT work, the presence of this PCA is unlikely to impact the Phase One Property. PCA does not contribute to APEC.

6.10.3 Areas of Potential Environmental Concern

As outlined in the tables above, multiple PCAs identified on the Phase One Property contribute to APECs. A summary of the APECs identified at the Phase Two Property based on the findings of the Phase One ESA is provided below, along with a summary of the associated Phase Two ESA testing and findings. The location of each APEC is shown in Figure 4. The Phase Two ESA test locations are shown in Figure 5.

Summary of A Summary of APECs

Area of Potential Environmental Concern[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Groundwater, soil and/or Sediment)
APEC 1 – On-site automotive garage	Centre of the Site	#10. Commercial Autobody Shops	On-Site	PHCs F1-F4, BTEX and VOCs	Soil and groundwater
APEC 2A – Former UST location	Northeast portion of the Site building	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs F1-F4 and BTEX	Soil and groundwater
APEC 2B – Former UST location	Southeast portion of the Site building				Soil and groundwater
APEC 3 – Presence of an AST, used for waste lubricant oil and oil-stain spots on the asphalt close to the AST	Northeast portion of the Site building	#28. Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs F1-F4 and BTEX	Soil and groundwater
APEC 4 – Presence of painting operations (paint booth)	Northeast of the Site building	#39. Paints Manufacturing, Processing and Bulk Storage	On-Site	Metals, Hydride-Forming Metals, ORP, VOCs and PHCs	Soil and groundwater
APEC 5 – Inferred fill materials to be present site-wide	Entire Site	# 30. Importation of Fill Material of Unknown Quality	On-Site	Metals, Hydride-Forming Metals, ORP and PHCs	Soil
APEC 6 – Pole mounted transformer and fuse box	Four pole-mounted transformers were observed on the driveway of New Orchard Ave.	#55. Transformer Manufacturing, Processing and Use	On-Site	PCBs, PHCs	Soil
APEC 7 – The application of de-icing salt for the purposes of vehicular and pedestrian safety has occurred at the Phase One Property. As per section 49.1 in O. Reg. 153/04, no testing is required.	Entire Site	#Other	On-Site	SAR, EC, sodium, chloride	Soil and groundwater

Notes:

1. Area of potential environmental concern means the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental site assessment, including through, •(a) identification of past or present uses on, in or under the phase one property, and •(b) identification of potentially contaminating activity
2. Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area
3. Contaminants of potential concern specified using the method groups as identified in the "Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011.

The following provides a description of each of the identified APECs:

APEC 1 – On-site automotive garage

The on-site automotive garage represents an APEC based on the Phase One ESA information. These include the showroom area, the service area, the paint booth, parking lot and possible refueling activities. The primary chemicals used at the Site are stored in ASTs, including new and used lubricant oil, windshield fluids. Paints, grease and janitorial cleaning products are stored in appropriate cabinets. No fuels are stored at the Site. The Site was never environmentally assessed for soil and groundwater contamination prior to this Phase Two ESA. The COCs associated with this APEC were identified to include metals (including hydride-forming metals), other regulated parameters (ORP), volatile organic compounds (VOCs), and petroleum hydrocarbons (PHCs) with potential impacts in soil and groundwater.

Boreholes and monitoring wells were installed to investigate APEC 1 including BH21-01, BH21-03, BH21-04, BH21-05, BH21-11, BH21-12, BH21-14, BH21-16, BH21-17, BH21-18, BH21-19, BH21-20, BH21-23, BH21-24, BH22-01, BH22-02, BH22-03, BH22-04, BH22-05, BH22-08, BH22-09S/D and BH22-10S/D.

The results of this testing in soil indicated exceedances of the Ministry of Environment Conservation and Parks (MECP) Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition, residential/ parkland/ institutional property use (Table 7 RPI SCS) for SAR at BH21-03 (under O. Reg 153/04, SAR exceedances can be deemed to meet applicable standards given the historical de-icing salt application), BH21-11, and BH21-13, for PHC F2-F4 at BH21-05, for PHC F1 and F3 at BH21-24, and for 1,4-dichlorobenzene at BH21-05.

The groundwater testing results indicated exceedances of 1,2-dichloroethane (1,2-DCA), and benzene at BH21-04, and 1,2-DCA at BH22-02, BH22-03 and BH22-08 (duplicate sample). An exceedance of PHC F3 was detected in groundwater from BH22-04 in July 2023 and in November 2023. PHC F2 was detected only in November 2023 exceeding Table 7 RPI SCS at BH22-04.

The extent of impacts in soil and groundwater is defined based on the closest test locations with no exceedances and is not inferred to extend beyond the property boundary to the west and north of the Site. Vertically in groundwater, the extent of impacts below BH21-04 and BH22-02 (monitoring wells screened in the upper bedrock) are delineated by BH22-01, and downgradient by BH22-9D and BH22-10D (deeper screened wells). Impacts below BH21-14, BH22-03 and BH22-04 (monitoring wells screened in the upper bedrock) are delineated by BH22-08, and downgradient by BH22-9D and BH22-10D (monitoring well screened in the deeper bedrock).

Limited excavation was advanced to remove PHC impacts identified at BH21-05 and BH21-24. All soil from the vicinity of BH21-05 and BH21-24 was removed from the Site and delineation was achieved to the south, east and west of these locations by the excavation;BH21-23 achieved delineation to the north. The excavation around BH21-05 and BH21-24 was advanced to the competent bedrock surface (3.5-3.7 mbgs), therefore, no floor samples were collected in this area. Samples collected from the excavation's east, south and west walls were from depths close to the bedrock surface. Based on the results of samples collected from BH21-23, and the south, west, and east excavation walls; soils with the elevated PHC F1-F4 concentrations identified at BH21-05 and BH21-24 have been removed from the Site. PAH was also added to the suite of analysis for the above-mentioned samples and none were detected at concentrations above the Table 7 SCS.

1-4 Dichlorobenzene above the Table 7 SCS was only detected in the duplicate soil sample collected from BH21-05 at a depth of 0.6-1.22 mbgs. The extent of 1-4 Dichlorobenzene impacts were delineated in all directions

by the Phase Two ESA (21-16 to the north, 21-17 to the east, 21-18 to the south, and 21-19 to the west). Any 1-4-Dichlorbenzene impacted soils present in the vicinity of BH21-05 were removed as a consequence of the excavation to the bedrock surface; however remediation of 1-4-Dichlorobenze to meet the Table 7 SCS was not the objective of the excavation activities. No VOC samples were collected for analysis from the excavation, other than BTEX compounds. Details of the excavation and sampling activities conducted around BH21-05 are provided in Appendix F.

APEC 2A and 2B – Former UST location

APEC 2A – Former UST Location - Northeast Portion of the Site building

One UST was formerly present on the northeast portion of the Site (APEC 2A). The Site representative indicated that the UST was removed around the 1980s. The COCs associated with this APEC were identified to include VOCs (including BTEX) and PHCs with the potential for impacts in soil and groundwater.

Boreholes and monitoring wells were installed to investigate APEC 2A, including BH21-04, BH21-14, BH21-15, BH21-21 and BH21-22. During the 2022 investigation efforts, BH22-01, BH22-02, BH22-03, BH22-04, BH22-06, BH22-07 and BH22-08 were also advanced in the vicinity of the former UST area. The results of this testing in soil indicated no exceedances of the Table 7 ICC SCS. Note that no stains or odors were noted in the soil during drilling.

The groundwater testing results indicated exceedances of 1,2-DCA and benzene at BH21-04, 1,2-DCA at BH21-14, BH22-02, BH22-03 and BH22-08 (last sampling showed results meeting Table 7 RPI SCS), trichloroethylene at BH21-04 and BH21-14, and benzene at BH22-04. No exceedances were detected in soil or groundwater sampled from other locations.

The extent of impacts in soil and groundwater at APEC 2A is defined based on the closest test locations with no exceedances. Impacts are not inferred to extend beyond the north property boundary. Vertically in groundwater, the extent of impacts below BH21-04, BH21-14, BH22-02, BH22-03 and BH22-04 (monitoring wells screened in the upper bedrock), and BH22-08 (monitoring well screened in the deeper bedrock) has not been delineated.

APEC 2B – Former UST Location - Southeast Portion of the Site building

A second potential UST area, located at the southeast of the building (APEC 2B), was reported in a review of Site historical drawings but not confirmed by the Site visit. During the 2021 Phase One ESA interview, the Site representative (who was knowledgeable of the Site's history dating back to its initial development as a car dealership in 1959) confirmed they were unaware of a UST nest ever being present at the reported location.

As a precautionary measure, three boreholes (BH21-01, BH21-25, and BH22-05) were advanced to investigate the potential UST nest and servicing island. The COCs associated with this APEC were identified to include VOCs and PHCs with the potential for impacts in soil and groundwater.

The results of this testing in soil indicated no exceedances of the Table 7 RPI SCS. In addition, during drilling at this potential UST area, the stratigraphy encountered did not suggest the presence of a former UST; no bedding material, odors, high headspace screening measurements, or stains were observed in the soil during drilling. Given that no evidence of potential impacts or other evidence suggesting the presence of a former UST was encountered in the field, and PHC concentrations in the samples collected were all below reporting detection limits (RDL), it is inferred based on the information gathered that no UST nest was historically present at APEC 2B.

Two monitoring wells were installed at APEC 2B, BH21-01 and BH22-05. Although there was not enough water to sample at BH21-01, no evidence of PHC (odor/sheens) or free phrase was identified based on inspection of the interface probe during water level measurements. No Table 7 RPI SCS exceedances were identified in groundwater collected from BH22-05. Note that on the south of Richmond Road, there is a current open pit excavation for the construction of the Ottawa LRT, which is influencing groundwater elevations and flow in this area of the Site.

APEC 3 – Presence of an AST containing used waste lubricant oil and oil-stained asphalt

One waste oil AST was on the exterior north side of the on-site building, and another four ASTs were on the interior of the north portion of the building. The ASTs were used to store new lubricant oil and windshield fluid. No oil stains were observed in the AST area inside the building during the Site visit; however, oil stains were observed on the asphalt close to the exterior AST and were considered part of APEC 3.

The COCs associated with APEC 3 were identified to include metals (including hydride-forming metals), ORP, VOCs, and PHCs with the potential for impacts in soil and groundwater.

As part of this Phase Two ESA, three boreholes and two monitoring wells were installed to investigate APEC 3, including BH21-02, BH-03, and BH21-13. The results of this testing in soil and groundwater indicated no exceedances of Table 7 RPI SCS for the tested parameters.

APEC 4 – Presence of painting operations (paint booth)

A former paint booth was present on the east side of the building, associated with a paint mixing room. A second suspected paint booth was noted on the west side of the building, without a paint mixing room associated. The COCs associated with this APEC were identified to include metals (including hydride-forming metals), ORP, VOCs, and PHCs with the potential for impacts in soil and groundwater.

As part of the Phase Two ESA, boreholes and monitoring wells were installed to investigate APEC 4, including BH21-03, BH21-04, BH21-05, BH21-11, BH21-14, BH21-16, BH21-17, BH21-18, BH21-19, BH21-21, BH21-22, BH21-23, and BH21-24. The results of soil samples analyzed indicated exceedances of the Table 7 RPI SCS for SAR at BH21-03, for PHC F2-F4 and 1,4-Dichlorobenzene at BH21-05, and PHC F1 and F3 at BH21-24.

The groundwater testing results indicated 1,2-DCA, and benzene exceedances at BH21-04. TCE exceedances in groundwater were detected at BH21-04 and BH21-14 in 2021; however, TCE exceedances were not detected in follow-up samples collected in 2022 and TCE impacts are therefore not considered to be present in groundwater at BH21-04 or BH21-14 and vertically delineated by surrounding wells. The extent of impacts in soil and groundwater is defined based on the closest test locations. No exceedances are inferred to extend beyond the north property line.

Vertically in groundwater, the extent of impacts below BH21-04 and BH21-14 (monitoring wells screened in the upper bedrock) were delineated by BH22-01 and BH22-08 (deeper screened wells) and downgradient by BH22-09(D) and BH22-10(D).

APEC 5 – Presence of Fill Material

Based on the information obtained as part of the Phase One ESA, fill material was encountered during this investigation at the Site consisting of sand / silty sand and trace gravel under the asphalt surface ranging from approximately 0.08 to 2.74 meters below ground surface (m bgs). The COCs associated with APEC 5 were

identified to include metals (including hydride-forming metals), ORP, and PHCs with the potential for impacts in soil.

APEC 5 was investigated via test locations BH21-01, BH21-02, BH21-03, BH21-05, BH21-11, BH21-12, and BH21-13 with samples of the fill material collected from these locations and submitted for analysis of the identified COCs.

PHC F2-F4 and 1,4-Dichlorobenze above the Table 7 RPI SCS were identified in a fill sample from BH21-05 (duplicate), and PHC F1 and F3 above the Table 7 RPI SCS were identified in a sample collected from BH21-24.

APEC 6 – Pole-mounted transformer and fuse box

On the driveway off New Orchard Avenue North, four pole-mounted transformers were observed at the Site. These transformers had the potential to contain PCBs and PHC parameters and were assessed as part of this Phase Two ESA for this specific APEC.

Test pit TP 21-01 was advanced beneath the pole-mounted transformers to analyze soil quality. The soil sample collected from TP21-01- indicated no exceedances of Table 7 RPI SCS for the tested PCB and PHC parameters.

APEC 7 – The application of de-icing salt for the purposes of vehicular and pedestrian safety has occurred at the Phase One Property.

Based on the information obtained as part of the Phase Two ESA, SAR concentrations were encountered during this investigation at the Site. The COCs associated with APEC 7 were identified to include ORP (SAR and EC) with the potential for impacts in soil.

APEC 7 was investigated via test locations BH21-01, BH21-02, BH21-03, BH21-04, BH21-05, BH21-11, BH21-12, and BH21-13 with samples of the overburden material collected from these locations and submitted for analysis of the identified COCs. Exceedances of SAR were identified in the fill samples from BH21-03, BH21-11 and BH21-13. As salt has only been applied to surfaces at the Site for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both, it is opinion of the QP that the site condition standards for SAR are not exceeded, as per Section 49.1 of O. Reg. 153/04.

6.10.4 Subsurface Structures and Utilities

Underground utilities at the Site include natural gas, hydro, and sewer/sanitary pipelines. Similarly, developed lands surrounding the Site are also serviced.

WSP retained the services of USL-1 Locates (USL-1), a local, private underground utility locator, to scan the general investigation areas as part of the Phase Two ESA investigation. USL-1 cleared drilling locations, and no buried services were located near the test locations. A scan of the entire Site was not conducted as part of the Phase Two ESA.

Based on WSP's review of previous environmental reports and discussions with the client, no underground utility drawings were available for the Phase Two Property. Based on the above and the findings of the Phase Two ESA, the absence of buried utility drawings is not considered to have impacted this assessment or the findings.

6.10.5 Physical Setting

6.10.5.1 Topography

The topography of the Site and surrounding areas was generally flat. The Site has a marginal downward slope to the north-northwest. The Site follows the area's topography and is at grade concerning adjacent properties.

6.10.5.2 Stratigraphy

Representative geologic cross-sections of the Site are presented in Figures 8 and 9. In general, the subsurface soil conditions encountered in the boreholes consisted of a layer of fill (present at all test locations) underlain by native soil predominantly described as sand and silty sand (isolated glacial till, silt, and silty clay reported), followed by bedrock described as dolostone, interbedded with shale, limestone, and sandstone.

The soil conditions encountered during the 2021, 2022, and 2023 borehole drilling programs are presented in the Record of Borehole Logs provided in Appendix E. The following summarizes the subsurface soil conditions encountered during the investigation.

In general, the subsurface soil conditions encountered in the boreholes advanced within the Phase Two Property consisted of surficial fill of variable depths which ranged from 0.08 to 2.74 m bgs, underlain with sandy silt and trace clay which ranged from 1.5 m bgs to 8.53 m bgs.

The fill materials at the Phase Two Property predominantly consisted of surficial gravel with sand / silty sand and trace gravel below. Native soil below the fill consisted of sand and silty sand with isolated glacial till, silt, and silty clay. Bedrock was encountered at depths ranging from 1.52 m bgs at borehole BH21-11 to 4.11 m bgs at borehole BH21-21.

6.10.5.3 Depth to Bedrock

Section 43.1(a) of Ontario Regulation 153/04 applies at the Site since one-third of the Phase Two property consists of soil less than 2 m of overburden above the bedrock surface. Bedrock was encountered in all boreholes advanced at the Site during the Phase Two investigation. Given that the average thickness of overburden at the Site is less than 2 m in at least one-third of the Site area, the Site is considered a shallow soil property as defined by O.Reg. 153/04 (as amended).

6.10.5.4 Hydrogeological Characteristics

6.10.5.4.1 Groundwater Elevations and Flow Direction

Groundwater elevations in monitoring wells ranged from 61.52 m to 62.51 m on December 22, 2021, and from 56.38 m to 63.06 m on August 8, 2023. Based on the interpreted groundwater elevation contours presented in Figures 6 and 7, the inferred predominant groundwater flow direction is towards the north/northeast.

At the time of the investigation, there was a sizeable linear excavation where ongoing dewatering related to the construction of the LRT occurred directly south and southeast of the Site. The excavation and dewatering may have influenced the shallow groundwater elevations and flow directions on the southern part of the Site. Shallow groundwater flow near the southwest section of the Site (section along Richmond Street) was inferred to be to the east toward the excavation in 2023.

The natural deep groundwater flow direction at the Site is interpreted to be to the northwest toward the Ottawa River (River flows northeast). Seasonal fluctuation in water levels on the Site should be expected. Groundwater water levels in shallow unconfined aquifers in Ontario are typically highest following the spring recharge and

decline throughout the summer and fall months into the winter. Any temporary fluctuation in water levels at the Phase Two Property is not anticipated to affect the conclusions of the Phase Two ESA.

6.10.5.4.2 Groundwater Hydraulic Gradients

The average horizontal hydraulic gradient was estimated for shallow groundwater conditions based on water levels collected on August 8, 2023. The inferred shallow groundwater contours are presented in Figure 6. The average horizontal hydraulic gradient in the shallow groundwater on the north portion of the Site in August 2023 was 0.16 m/m to the northeast. The inferred deep groundwater elevation contours measured on May 23, 2023, are presented in Figure 7. The inferred deep groundwater flow direction is to the north with an approximate gradient of 0.02 m/m.

Vertical hydraulic gradients were estimated based on August 8, 2023, data using the difference in groundwater elevations between nested monitoring wells installed in the upper bedrock (BH22-10S) and deeper bedrock (BH22-10D). The estimated vertical hydraulic gradient was 0.26 m/m, indicating a downward component of groundwater flow.

6.10.6 Applicable Site Condition Standards

The analytical results of soil and groundwater samples collected for this Phase Two ESA were compared to the Table 7 generic site conditions standards for shallow soils in a non-potable groundwater condition (residential/ parkland/institutional property use, coarse soil texture) (Table 7 RPI SCS) presented in the Ontario Ministry of the Environment (MOE[2]) document titled "*Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, April 15, 2011*". The applicable site condition standards were selected based on the following rationale:

- The Phase Two Property is not located in an area designated in a municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of groundwater.
- No water bodies were identified on the Phase Two Property.
- Based on field observations and grain size analysis results (refer to Appendix B) from soil samples collected from boreholes, the soil present at the Site is estimated to consist of soil having a grain size distribution with 50 percent or more by mass of particles with diameter greater than 75 µm mesh. Under the definition presented in O. Reg. 153/04, the soil at the Site is therefore considered to be coarse textured.
- The Site and surrounding properties located in whole or in part within 250 meters of the Site are within an area that is municipally serviced by a water supply that does not rely on groundwater as its source. No wells were identified that are used or intended for use as a source of potable water within a 250 m radius of the Site.
- The closest water body is the Ottawa River, located approximately 225 m northwest of the Site.
- There are no features on the Phase Two Property that would meet the conditions of an environmentally sensitive Site, as described in Section 41.

[2] MOE was renamed the MECP – Ministry of Environment, Conservation and Parks; however, the generic site condition standards and associate guidance documents were released by the MOE and the standards are still legally referred to as the MOE standards.

- In general, the pH range of surface soil is greater than 5 and less than 9, and the pH range of sub-surface soil is greater than 5 and less than 11. For the purposes of this Phase Two ESA investigation, the pH of surface and sub-surface soil is considered not environmentally sensitive.
- The current land use at the Phase Two Property is industrial/commercial, and the proposed future use of the Site is residential.
- The overburden thickness is less than 2 meters over more than one-third of the Phase Two Property.
- The average depth to groundwater at the Site is approximately 5.00 meters below ground surface (m bgs), ranging from 1.75 – 7.80 m bgs.

Based on the above, the 2011 Table 7 RPI SCS, which include quality standards for soil and groundwater, were used to assess the environmental conditions at the Site.

6.10.6.1.1 Environmentally Sensitive Areas

Based on the information reviewed, the QP is not aware of any circumstance in which Section 41 of the Regulation applies to the Phase Two Property. The Phase Two Property is not located in an area designated in a city official plan as a well-head protection area or other designation identified by the city for the protection of ground water. Selected soil samples were tested for pH and were noted to be within a normal range with readings between 7.77 to 8.04.

6.10.6.1.2 Shallow Soil Property or Water Body

Overburden thickness at the Phase Two Property ranges from 1.52 m bgs at BH21-11 to 4.11 m bgs at BH21-21. At least one-third of the Site has less than 2 m overburden thickness.

The property does not include all or part of a water body and is not adjacent to a water body or includes land within 30 meters of a water body. Therefore, Section 43.1(a) and 43.1(b) of the Regulation do not apply to the Phase Two Property. The closest water body is the Ottawa River, located approximately 225 m northwest of the Site.

6.10.6.1.3 Non-Potable Site Condition Standards

Section 35 of the Regulation does not apply to the Phase Two Property based on the following reasons:

- The Site, and all other properties, in whole or in part, within 250 meters of the boundaries of the Phase Two Property, are supplied by a municipal drinking water system, as defined in the Safe Drinking Water Act, 2002.
- The record of site condition does not specify agricultural or other use as the type of property use for which the record of site condition is filed.
- The Site is not located in an area designated in the municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of groundwater.
- No wells were found at the Site or within the Phase One Study Area that was in use or intended for use as a source of water for human consumption or agriculture.
- The QP has given the clerk of the municipality (City of Ottawa) a written notice of intention to apply the non-potable standards in preparing a record of site condition for the Site, and the City of Ottawa provided the approval to use non-potable conditions.

6.10.6.1.4 Soil Place On, In or Under the Phase Two Property

Fill material, inferred to have been placed at the time of Site development, was identified throughout the Phase Two Property to a maximum depth of 4.11 m bgs. Fill (gravel from a licensed quarry) was imported to the site to backfill the soil remediation excavation (2023). See Figure 19 showing the excavation location and extent.

6.10.6.1.5 Proposed Buildings and Other Structures

The Phase Two Property is developed with one commercial building surrounded by asphalt-paved parking. There is an intention to use the Phase Two Property for residential purposes in the future, with the Site redevelopment plan consisting of 3 condo towers with 36, 38, and 40 storeys respectively, 6 storeys podium, 3 levels of underground parking and a central square/park area. The development will include excavation of all overburden materials and the upper bedrock to the Phase Two Property Boundary to accommodate the proposed 3 storey underground parking structure.

6.10.6.1.6 Standards Deemed to be Met As Per O.Reg. 153/04 Section 49.1

With regards to Section 49.1 of O.Reg. 153/04, the following are of note:

- Salt has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. Therefore, as per Section 49.1 of O. Reg. 153/04, it is the QP's opinion that the site condition standards for sodium adsorption ratio (SAR) in soil are not exceeded.
- With the exception of granular material used to backfill the remediation excavation related to soil PHC impacts, excess soil, as defined by O.Reg. 406/19, has not been placed at the Site.
- There has been no discharge of drinking water to the Site.
- Fill material characterized by exceedances due to the presence of a naturally occurring range of concentrations of a contaminant for the area is not present at the Site.

6.10.7 Delineation of Contaminant Impacts

6.10.7.1.1 APEC Where Contaminants are Present at a Concentration Above the Applicable Site Condition Standard

The reported concentrations of all soil and groundwater samples submitted for analysis indicate that soil and groundwater quality at all APECs meets the applicable site condition standards except for the following:

APEC	Parameter Groups Exceeding the Applicable Site Conditions Standards in Soil	Parameter Groups Exceeding the Applicable Site Conditions Standards in Groundwater
APEC 1 – On-site automotive garage	SAR, PHC and 1,4-Dichlorobenzene	1,2-DCA, PHC F2, PHC F3, and benzene
APEC 2A – Former UST location (north of the Site building)	None	1,2-DCA and benzene
APEC 2B – Former UST location (southeast of the Site building)	None	N/A
APEC 3 – Presence of an AST, used waste lubricant oil and oil-stained asphalt	SAR	None
APEC 4 – Presence of painting operations (paint booth)	SAR, PHC and 1,4-Dichlorobenzene	1,2-DCA and benzene

APEC	Parameter Groups Exceeding the Applicable Site Conditions Standards in Soil	Parameter Groups Exceeding the Applicable Site Conditions Standards in Groundwater
APEC 5 – Inferred fill materials to be present site-wide	None	None
APEC 6 – Pole-mounted transformer and fuse box	None	N/A
APEC 7 – Application of de-icing salt	SAR	None

Notes: NA – Not Applicable

6.10.7.1.2 Contaminated Media

The Phase Two ESA identified the presence of exceedances of the applicable site condition standards for SAR, 1,4-dichlorobenzene and PHC F1-F4 in soil at the Site (refer to Figures 10A, 13A, and 12A). The detected SAR is considered to be the result of the application of salt to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice. It is therefore the QP's opinion, as per Section 49(1) of O. Reg. 153/04 that the site condition standards for SAR are not exceeded at these test locations.

PHC F1-F4 detected in soil located on the east side of the building is considered the result of the historical site activities. The VOC parameter 1,4-dichlorobenzene was detected in soil located on the east side of the building and is considered a result of the historical use of the site.

In relation to groundwater, exceedances of the applicable site condition standards for 1,2-DCA, TCE, PHC F2 and F3, and benzene were detected (refer to Figures 16A, 17A and 18A). Exceedances of TCE were inconsistently detected and the most recent groundwater samples do not indicate exceedances of TCE in groundwater. It has therefore been concluded that TCE is not present in onsite groundwater at concentrations exceeding the Table 7 RPI SCS. 1,2-DCA, PHC F2, PHC F3 and benzene on, in, or under the Phase Two ESA property at concentrations greater than the applicable site condition standards are inferred to be the result of automotive body work-related activities and/or auto repair carried out at the former car dealership on Site.

Sediment is not present at the Site.

6.10.8 Contaminants Exceeding Applicable Standards at the Site

As noted above, exceedances of the applicable site condition standards for SAR were detected in the soil at the Site. The detected SAR exceedances are considered to be the result of the application of salt to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice. Therefore, it is the QP's opinion, as per Section 49(1) of O. Reg. 153/04 that the site condition standards for SAR are not exceeded at these test locations.

In the area of BH21-05, two boreholes (BH21-23 and BH21-24) were advanced within 2 meters of BH21-05 to investigate elevated PHC F2-F4 and 1,4-dichlorobenzene concentrations in the duplicate soil sample collected from BH21-05 at a depth of 0.6 to 1.22 m bgs. Concentrations of PHC F2-F4 in soil samples collected from BH21-23 and BH21-24 were not as elevated as those detected in the BH21-05 duplicate sample. PHC F1 and F3 concentrations in a soil sample collected from BH21-04 (2.28 – 3.04 mbgs) did exceed Table 7 RPI SCS; however, detected F1 concentrations were lower by approximately 41% and detected F3 concentrations were lower by more than an order of magnitude. 1,4-dichlorobenzene was not detected at concentrations above Table 7 RPI SCS in samples collected from BH21-23 or BH21-24. Based on the results of soil sampling at BH21-23 and

BH21-24, it is WSP's opinion that the high PHC F2-F4 concentrations and elevated 1,4-dichlorobenzene concentrations in the duplicate sample from BH21-05 may have been anomalous and related to the heterogeneity of the sampled material. Across the remainder of the Site, PHC F1-F4 and 1,4-dichlorobenzene concentrations in the analyzed soil samples were below the Table 7 RPI SCS.

Although the soil analytical results taken from BH21-05 may have been anomalous and related to the heterogeneity (as mentioned above), it was decided that the area around BH21-05 would be excavated to remove any uncertainty regarding the soil quality in that area. The area encompassing BH21-05 and BH21-24 where concentrations of the PHC and/or VOC (1,4-dichlorobenzene) in soil exceeding of Table 7 RPI SCS were identified was excavated in July 2023. The area was excavated to the top of bedrock on a 2:1 slope with the excavation footprint totaling 25 m^2, with the depth of the excavation extended to approximately 3.5 to 3.7 mbgs (top of bedrock). An approximate volume of 100 m^3 of material was excavated and placed on tarps prior to offsite disposal. Limited soil samples (PHC, BTEX and PAH) were collected at the final wall limits and delineation was achieved to the south, east and west of these locations by the excavation – delineation to the north was achieved by BH21-23. No floor samples were collected as the excavation extended to the top of the bedrock, but samples were collected at the toe of the wall to represent the floor samples. All samples met the Table 7 RPI SCS for PHC F1-F4, BTEX and PAH.

Monitoring wells BH21-21, BH21-22, BH22-09 (S) and BH22-10 (S) were installed at the property limit for horizontal delineation, downgradient from BH21-04, BH22-02, BH22-03 and BH22-04 where concentrations of 1,2-DCA, PHC F2, PHC F3, and benzene above the Table 7 RPI SCS were detected in groundwater.

Monitoring wells BH22-01, BH22-08, BH22-09 (D), and BH22-10 (D) were installed at deeper depths for vertical delineation of the same impacted monitoring wells for the same COPCs.

Based on the most recent analytical results and inferred groundwater flow direction on the northern end of the Site, it is inferred that the impacts in groundwater present at the Site have not migrated off-site. The analytical results for PHCs and VOCs in groundwater are shown in Figure 16A and 18A.

6.10.9 Description of Areas of Contamination on the Property

PHC F1-F4 and 1,4-Dichlorobenzene were present in the overburden east of the Site building prior to the soil excavation. The approximate excavated area was 25 m^2.

1,2-DCA, PHC F2, PHC F3 and benzene are present in groundwater on the northern portion of the Site, north of the building in an area that is asphalt paved.

6.10.10 Potential Influence of Utilities on Contaminant Migration

The depth of the water table at the area presenting groundwater exceedances is approximately 2.20 m bgs for the shallow wells and 7.60 m bgs for the deep wells. The top of bedrock on the Site ranges from 1.5 m bgs to 4.5 m bgs. From public locates, private locates, and site reconciliation inspections, it is noted that there are no identified underground utilities in the impacted areas.

Utilities may be present in the depth range of the shallow water table, and thus utilities at the Site could influence the migration of contaminants through the bedding material of the excavated utility trenches. Evidence collected at the Site as part of the Phase Two ESA does not indicate that contaminant migration has likely not been affected by the presence of underground utilities.

6.10.11 Description of Contaminants

1,2-DCA is a volatile organic compound and chlorinated solvent. 1,2-DCA is a chemical used to make PVC pipes. 1,2-DCA is additionally used as an associate intermediate for different organic chemical compounds and as a solvent. Benzene is used as an intermediate in the production of other chemicals and one of the components of gasoline. 1,4-dichlorobenzene is used as a repellant against snakes, rats, mice, squirrels, bats, and insects, as a deodorizer for toilets, urinals and diaper pails, as an insecticidal fumigant, and as an air freshener.

PHCs are the primary constituents of products produced from crude oil distillation. The products produced from the distillation include but are not limited to products such as gasoline, diesel, kerosene, combustible oils, etc. Some of these compounds are volatile and readily evaporate when released to the ground. Depending on the ground surface's and subsurface soil's permeability, these compounds can migrate through subsurface soil until eventually reaching the water table, where they can mix with groundwater (depending on their solubility) and migrate predominately laterally along groundwater gradients.

Technically, 1,2-DCA in liquid form is denser than water and can migrate downward through the groundwater system outpacing vertical groundwater velocity if sufficient quantities are released/present in the subsurface. The concentrations of 1,2-DCA detected in on site groundwater are not susceptible to density-driven vertical migration.

6.10.12 Migration of Contaminants

1,2-DCA, PHC F2, PHC F3 and benzene are inferred to originate on-Site due to the long-term (1959-2022) operation of an auto dealership with an associated mechanical shop and paint booth. In 2021, monitoring wells BH21-21 and BH21-22 were installed at the northwestern property limit, downgradient of the Site operations. Concentrations of 1,2-DCA, PHC F2, PHC F3 and benzene in groundwater samples collected from BH21-21, and BH21-22 were below the Table 7 RPI SCS, indicating that impacts had not migrated downgradient in groundwater.

During the 2022 investigation, monitoring wells BH22-09 (S), BH22-09 (D), BH22-10 (S) and BH22-10 (D) were installed at the northern part of the property. Concentrations of 1,2-DCA, PHC F2, PHC F3 and benzene in groundwater samples collected from the northern boundary monitoring wells were also below the Table 7 SCS.

PHC F2 and F3 above the Table 7 RPI SCS were detected in deep monitoring well BH22-04 in 2023. Data from surrounding monitoring wells does not indicate that PHC impacts are wide spread in the vicinity of BH22-04.

Land use adjacent to the Site to the north and north-east is residential (log-term care/retirement building and high-rise apartment/condo). At this time, it is not anticipated that contamination from the Site is flowing off-site to the neighboring downgradient property. The redevelopment plan for the Site includes an underground parking garage on the entire footprint of the property, and it is expected that during construction all impacted groundwater will be removed during construction of the underground parking garage.

Contaminants are not considered to be migrating as soil vapour at the Site.

6.10.13 Meteorological and Climatic Considerations

Seasonal fluctuation in water levels on the Site should be expected. We note shallow groundwater water levels in unconfined aquifers in Ontario are typically highest following the spring recharge and decline throughout the summer and fall months into the winter.

6.10.14 Potential for Soil Vapour Intrusion

No buildings or indoor spaces were present in the areas with soil and groundwater exceedances and the on-Site building is currently vacant; therefore, soil vapor intrusion is not anticipated. The redevelopment plan for the Site includes the removal of all existing structures and the construction of an underground parking garage across the entire footprint of the property. Construction of the parking garage will involve the excavation of all overburden material and removal of the underlying bedrock to reach the desired base elevation for the parking garage.

All contaminated soil and rock materials will be removed and exported off-site for disposal as part of the Site redevelopment. Any groundwater that collects in the excavation during construction will be treated and appropriately discharged to a municipal sewer.

6.10.15 Potential Exposure Pathways and Receptors

The site redevelopment plan proposes a change in land use from commercial to residential. Based on the Site characterization data collected and the current/future use of the Site, the following exposure pathways are considered potentially relevant:

Human Exposure Pathways

No direct human exposure pathways were identified for the Site for the current Site use. Specifically, groundwater is not used for potable purposes, and impacted groundwater is at a depth that is unlikely to be encountered during typical construction activities at the Site. Exposure to contaminants in indoor air via vapor intrusion from soil or groundwater is not considered a complete exposure pathway as the on-site building is no longer in use and is further not located in the areas with concentrations of volatile parameters exceeding the Table 7 RPI SCS.

Considering the future redevelopment of the Site, excavation works will be required for the construction of underground parking and all overburden material and bedrock to a depth of approximately 9.0 mbgs will be removed from the site and managed in accordance with applicable regulations. During construction, is expected that all concentrations in Table 7 SCS will be removed from the Site via excavation, blasting, and dewatering. Removed materials will be appropriately tested and disposed of off-site at an appropriate licensed waste-receiving site.

Ecological Exposure Pathways

Given the former commercial usage of the Site, the future use and surrounding properties, the presence of hard cap surface across the Site (i.e., pavement and building floor slab), as well as the distance to surface water (225 m northwest). No ecological exposure pathways were identified.

7.0 CONCLUSIONS

The analytical results from the sampling and analysis program indicated that all parameters tested in the soil at the Site meet the applicable Table 7 RPI SCS, except for 1,4-dichlorobenzene and PHC F2-F4 at BH21-05, PHC F1 and F3 at BH21-24, and SAR at BH21-03, BH21-11, BH21-13. WSP notes the following:

- The presence of SAR is considered to be the result of the local application of de-icing salt for safety purposes and is therefore exempt (i.e., not considered to represent an exceedance of the site condition standard) under Ontario Regulation 153/04.
- The presence of the PHC F1-F4 and 1,4-dichlorobenzene is considered to be the result of the former operation of the Site as a car dealership and associated automotive garage operations. The area where exceedances were detected were excavated and confirmatory samples collected meet the MECP Table 7 RPI SCS for PHC F1-F4.

Given WSP's understanding that all overburden material (from the ground surface to the top of the bedrock) will be removed during the site redevelopment, all soil including the areas impacted by SAR and VOCs will be removed from the Site and disposed of at a licensed facility that accepts soil with exceedances of the MECP Table 7 RPI SCS, prior to the Site being occupied as a residential development.

Based upon the comparison of the groundwater analytical results from the 2021, 2022, and 2023 sampling programs to the MECP Table 7 SCS, no exceedances are present in groundwater with the exception of 1,2-dichloroethane (1,2-DCA) at BH22-02 and BH22-03, PHC F2 and F3 at BH22-04; and 1,2-DCA and benzene at BH21-04.

Based on the location and depth of impacted groundwater it is expected that future excavation as part of the site redevelopment will remove the impacted groundwater. Any groundwater discharged from the Site to city sewers (related to excavation dewatering) will have to be in compliance with the city sewer use bylaws.

Monitoring wells BH22-09 (S), BH22-09 (D), BH22-10 (S), and BH22-10 (D) installed at the northern property boundary do not present COCs at concentrations above Table 7 SCS. It is therefore WSP's opinion that contamination in groundwater is not migrating off-site to the north.

Based on the above and in support of the filing of a Record of Site Condition (RSC), additional work is required at the Site in the form of a risk assessment to obtain an RSC with Certificate of Property Use prior to redevelopment, or removal of all impacted soil and groundwater and completion of confirmatory soil and groundwater sampling to obtain an RSC based on generic site condition standards. In a removal scenario, confirmatory groundwater sampling will be required over two quarterly events conducted three- and six-months post-excavation to confirm the groundwater quality meets applicable site condition standards.

8.0 REFERENCES

Phase One Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario, dated November 2021, updated May 2024.

Quaternary Geology of Ontario, Southern Sheet. Map 2556. Ontario Ministry of Development and Mines dated 1991 (Map No. 2556, Quaternary Geology of Ontario, Southern Sheet, 1991).

Bedrock Geology of Ontario, Southern Sheet. Map 2544. Ontario Ministry of Development and Mines dated 1991 Map No. 2544, Bedrock Geology of Ontario, Southern Sheet, 1991).

9.0 LIMITATIONS

This report was prepared for the exclusive use of 1047 Richmond Nominee Inc. The report, which specifically includes all tables, figures and appendices, is based on data and information, collected during conducting the Phase Two ESA, and is based solely on the conditions of the property at the time of conducting investigations, supplemented by historical information and data obtained by WSP Canada Inc. as described in this report. Any data collected at the Site after November 21, 2023 is not included in this report.

The assessment of environmental conditions at this Site has been made using the results of field screening techniques and chemical analysis of soil and groundwater samples at a limited number of locations. The Site conditions between sampling locations have been inferred based on conditions observed at the sampling locations. Conditions may vary from these sample locations. Additional study, including further investigation, can reduce the inherent uncertainties associated with this type of study. However, it is never possible, even with exhaustive sampling and testing, to dismiss the possibility that part of a Site may be contaminated and remain undetected.

The services performed as described in this report were conducted in a manner consistent with that level of care and skill normally exercised by other members of the engineering and science professions currently practicing under similar conditions, subject to the time limits and financial and physical constraints applicable to the services.

Any use which a third party makes of this report, or any reliance on, or decisions to be made based on it, are the responsibilities of such third parties. WSP Canada Inc. accepts no responsibility for damages, if any, suffered by any third party (other than as noted above) as a result of decisions made or actions based on this report.

The content of this report is based on information collected during the drilling, soil and groundwater sampling activities, our present understanding of the Site conditions, and our professional judgement in light of such information at the time of this report. This report provides a professional opinion and therefore no warranty is expressed, implied, or made as to the conclusions, advice and recommendations offered in this report. This report does not provide a legal opinion regarding compliance with applicable laws. With respect to regulatory compliance issues, it should be noted that regulatory statutes and the interpretation of regulatory statutes are subject to change.

The findings and conclusions of this report are valid only as of the date of this report. If new information is discovered in future work, including excavations, borings or other studies, WSP Canada Inc. should be requested to re-evaluate the conclusions of this report, and to provide amendments as required.

The monitoring wells installed as part of this project have been constructed using licensed drilling/well contractors employing licensed well technicians. It is owner's responsibility to have a licensed well technician properly abandon all monitoring wells, if required.

10.0 CLOSURE

We trust that this report meets your current requirements. Should any clarification or further information be required, please contact the undersigned.

Signature Page

WSP Canada Inc.

Paul Hurst, MSc, PEng, QP(ESA)
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Senior Contaminant Hydrogeologist

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https://wsponline.sharepoint.com/sites/gld-152441/project files/6 deliverables/ph two report(s)/7. phase two esa october 2023/final/21494078-r-rev0-1047 richmond rd phase two oreg 153-4sept2024.docx

Tables

Table 1
Borehole and Monitoring Wells Construction Details
1047 Richmond Road, Ottawa, Ontario

BH ID	Coordinates (m)		Date Installed	Installed by	Borehole Depth (mbgs)	Monitoring Well Depth (mbgs)	Well Diameter (mm)	Screen Length (m)	Screen Interval (mbgs)	Soil Lithology Description at Screened Section
	East	North								
BH21-1	361274.13	5026289.91	24-Sep-21	Golder	7.62	7.62	50	3.05	4.57 - 7.62	Limestone
BH21-2	361297.78	5026359.31	21-Sep-21	Golder	7.01	7.01	50	3.05	3.96 - 7.01	Limestone
BH21-3	361289.20	5026355.14	22-Sep-21	Golder	7.62	7.62	50	3.05	4.57 - 7.62	Limestone
BH21-4	361313.66	5026369.74	21-Sep-21	Golder	7.62	7.62	25	3.05	4.57 - 7.62	Limestone
BH21-5	361327.88	5026358.16	24-Sep-21	Golder	7.62	7.62	50	3.05	4.57 - 7.62	Limestone
BH21-11	439016.09	5024866.18	12-Nov-21	Golder	5.54	5.54	25	3.05	2.49 - 5.54	Limestone
BH21-12	439013.76	5024886.55	11-Nov-21	Golder	1.98	No Well Installation				
BH21-13	439024.74	5024897.83	11-Nov-21	Golder	1.68	No Well Installation				
BH21-14	439036.19	5024909.39	12-Nov-21	Golder	4.57	4.57	25	1.52	3.05 - 4.57	Limestone
BH21-15A	439046.43	5024913.53	12-Nov-21	Golder	7.01	7.01	25	3.05	3.96 - 7.01	Limestone
BH21-15B	439046.40	5024913.62	12-Nov-21	Golder	3.05	3.05	25	1.52	1.53 - 3.05	Silty Sand to Sand
BH21-16	439057.99	5024901.11	11-Nov-21	Golder	1.93	No Well Installation				
BH21-17	439071.59	5024894.36	11-Nov-21	Golder	2.49	No Well Installation				
BH21-18	439064.96	5024881.64	11-Nov-21	Golder	2.74	No Well Installation				
BH21-19	439039.11	5024882.48	25-Nov-21	Golder	5.13	5.13	50	2.43	2.70 - 5.13	Limestone
BH21-20	439047.00	5024862.00	24-Nov-21	Golder	5.18	5.18	50	1.88	3.30 - 5.18	Limestone
BH21-21	439040.16	5024927.14	21-Dec-21	Golder	4.92	4.92	50	3.28	1.64 - 4.92	Silty and Sand
BH21-22	439033.00	5024915.09	21-Dec-21	Golder	4.59	4.59	50	3.28	1.31 - 4.59	Sand
BH21-23	439061.22	5024892.28	21-Dec-21	Golder	3.93	No Well Installation				
BH21-24	439061.77	5024890.31	21-Dec-21	Golder	3.93	No Well Installation				
BH21-25	439071.16	5024848.77	21-Dec-21	Golder	3.61	No Well Installation				
BH22-1	439048.70	5024906.61	11-May-22	Golder	9.60	9.60	50	1.52	8.06 - 9.60	Limestone
BH22-2	439035.44	5024907.45	09-May-22	Golder	7.46	7.46	50	3.05	4.41 - 7.46	Limestone
BH22-3	439052.58	5024916.51	10-May-22	Golder	6.70	6.7	50	1.52	5.18 - 6.7	Limestone
BH22-4	439027.09	5024905.18	09-May-22	Golder	7.92	7.92	50	3.05	4.87 - 7.92	Limestone
BH22-5	439071.33	5024856.17	11-May-22	Golder	10.66	10.66	50	3.05	7.61 - 10.66	Limestone
BH22-6	439036.59	5024908.45	03-Oct-22	Golder	7.00	7.00	50	1	6.00 - 7.00	Limestone
BH22-7	439047.33	5024904.34	03-Oct-22	Golder	7.00	7.00	50	1	6.00 - 7.01	Limestone
BH22-8	439037.03	5024909.26	04-Nov-22	Golder	10.00	10.00	50	1	9.00 - 10.00	Limestone
BH22-9 (S)	439049.13	5024939.27	15-May-23	WSP	7.62	7.62	50	3.05	4.57 - 7.62	Limestone
BH22-9 (D)	439049.96	5024938.87	15-May-23	WSP	10.06	10.06	50	1	9.06 - 10.66	Limestone
BH22-10 (S)	439066.77	5024925.75	15-May-23	WSP	7.62	7.62	50	3.05	4.57 - 7.62	Limestone
BH22-10 (D)	439067.67	5024924.96	15-May-23	WSP	10.37	10.06	50	1	9.06 - 10.06	Limestone

Notes:

mm = millimetres
m = metres
mbgs = metres below ground surface

Table to be read in conjunction with accompanying report

Completed by: EB, LO
Reviewed by: DS

Groundwater Elevations and Monitoring Details
1047 Richmond Road, Ottawa, Ontario

Monitoring Well ID	Ground Surface Elevation (m)	Top of Pipe Elevation (m)	Depth to Water October 4, 2021 (mbtop)	Groundwater Elevation October 4, 2021 (m)	Depth to Water November 30, 2021 (mbtop)	Groundwater Elevation November 30, 2021 (m)	Depth to Water December 22, 2021 (mbtop)	Groundwater Elevation December 22, 2021 (m)	Depth to Water May 26, 2022 (mbtop)	Groundwater Elevation May 26, 2022 (m)	Depth to Water November 15, 2022 (mbtop)	Groundwater Elevation November 15, 2022 (m)	Depth to Water May 23, 2023 (mbtop)	Groundwater Elevation May 23, 2023 (m)	Depth to Water June 30, 2023 (mbtop)	Groundwater Elevation June 30, 2023 (m)
BH21-1	65.73	65.66	7.62	58.04	7.56	58.10	7.59	58.07	NM	NM	NM	NM	NM	NM	NM	NM
BH21-2	65.46	64.09	3.17	60.92	3.21	60.88	3.21	60.88	NM	NM	NM	NM	NM	NM	NM	NM
BH21-3	65.24	64.52	3.56	60.96	3.08	61.44	3.08	61.44	NM	NM	NM	NM	NM	NM	NM	NM
BH21-4	65.09	64.94	2.50	62.44	2.68	62.26	2.68	62.26	2.29	62.65	3.02	61.93	2.49	62.45	2.94	62.00
BH21-5	65.47	65.37	3.85	61.52	3.94	61.43	3.84	61.52	NM	NM	NM	NM	NM	NM	NM	NM
BH21-11	65.26	65.20	NI	NI	2.9	62.30	2.9	62.30	NM	NM	NM	NM	NM	NM	NM	NM
BH21-14	64.84	64.81	NI	NI	2.45	62.36	2.41	62.40	2.1	62.71	2.765	62.04	2.37	62.44	2.40	62.41
BH21-15A	64.84	64.71	NI	NI	2.61	62.10	2.61	62.10	NM	NM	NM	NM	2.33	62.38	NM	NM
BH21-15B	64.84	64.77	NI	NI	2.52	62.25	2.52	62.25	NM	NM	NM	NM	2.31	62.47	NM	NM
BH21-19	65.95	65.88	NI	NI	3.37	62.51	3.37	62.51	NM	NM	NM	NM	NM	NM	NM	NM
BH21-20	65.93	65.85	NI	NI	3.74	62.11	3.74	62.11	NM	NM	NM	NM	NM	NM	NM	NM
BH21-21	64.41	64.28	NI	NI	NI	NI	2.30	61.98	NM	NM	NM	NM	NM	NM	2.14	NM
BH21-22	64.62	64.47	NI	NI	NI	NI	2.57	61.90	NM	NM	NM	NM	2.22	62.25	2.12	NM
BH22-1	65.02	64.85	NI	NI	NI	NI	NI	NI	7.70	57.15	8.03	56.82	7.40	57.45	7.55	57.30
BH22-2	64.90	64.82	NI	NI	NI	NI	NI	NI	6.90	57.92	2.90	61.92	2.29	62.54	3.02	61.81
BH22-3	64.85	64.72	NI	NI	NI	NI	NI	NI	2.17	62.55	6.68	58.04	6.29	58.43	7.23	57.49
BH22-4	64.75	64.61	NI	NI	NI	NI	NI	NI	6.71		6.96	57.66	7.00	57.62	6.96	57.65
BH22-5	65.94	65.85	NI	NI	NI	NI	NI	NI	7.70		NM	NM	7.86	57.99	7.77	58.08
BH22-6	64.90	64.82	NI	NI	NI	NI	NI	NI	NI		6.77	58.05	6.77	58.05	6.70	58.13
BH22-7	65.11	65.06	NI	NI	NI	NI	NI	NI	NI		6.87	58.20	6.85	58.21	NM	NM
BH22-8	64.87	64.78	NI	NI	NI	NI	NI	NI	NI		8.02	56.76	7.91	56.87	7.74	57.04
BH22-9 (S)	64.22	64.06	NI	NI	NI	NI	NI	NI	NI		NI	NI	7.35	56.71	NM	NM
BH22-9 (D)	64.23	64.18	NI	NI	NI	NI	NI	NI	NI		NI	NI	8.51	55.67	NM	NM
BH22-10 (S)	64.83	64.73	NI	NI	NI	NI	NI	NI	NI		NI	NI	7.39	57.35	NM	NM
BH22-10 (D)	64.81	64.73	NI	NI	NI	NI	NI	NI	NI		NI	NI	9.07	55.66	NM	NM

Notes:

mbtop	= metres below top of pipe
mbgs	= metres below ground surface
NI	= not installed
NM	= not measured
DECOMM	= decommissioned
OBS	= obstructed

Table to be read in conjunction with accompanying report

Completed by: EB, LO
Reviewed by: DS

Table 2
Groundwater Elevations and Monitoring Details
1047 Richmond Road, Ottawa, Ontario

Monitoring Well ID	Ground Surface Elevation (m)	Top of Pipe Elevation (m)	Depth to Water July 19, 2023 (mbtop)	Groundwater Elevation July 19, 2023 (m)	Depth to Water August 8, 2023 (mbtop)	Groundwater Elevation August 8, 2023 (m)	Depth to Water November 11, 2023 (mbtop)	Groundwater Elevation November 11, 2023 (m)	Free Phase Product Observation
BH21-1	65.73	65.66	NM	NM	7.47	58.19	NM	NM	None
BH21-2	65.46	64.09	NM	NM	2.95	61.14	NM	NM	None
BH21-3	65.24	64.52	NM	NM	2.80	61.72	NM	NM	None
BH21-4	65.09	64.94	2.40	62.54	1.88	63.06	NM	NM	None
BH21-5	65.47	65.37	NM	NM	Destroyed	Destroyed	Destroyed	Destroyed	None
BH21-11	65.26	65.20	NM	NM	2.22	62.98	2.77	62.43	None
BH21-14	64.84	64.81	2.20	62.61	1.81	63.00	2.54	62.27	None
BH21-15A	64.84	64.71	NM	NM	NM	NM	2.10	62.61	None
BH21-15B	64.84	64.77	NM	NM	NM	NM	NM	NM	None
BH21-19	65.95	65.88	NM	NM	NM	NM	NM	NM	None
BH21-20	65.93	65.85	NM	NM	NM	NM	NM	NM	None
BH21-21	64.41	64.28	NM	NM	1.90	62.38	2.59	61.69	None
BH21-22	64.62	64.47	NM	NM	1.75	62.72	2.24	62.23	None
BH22-1	65.02	64.85	7.67	57.18	NM	NM	NM	NM	None
BH22-2	64.90	64.82	2.50	62.32	NM	NM	Destroyed	Destroyed	None
BH22-3	64.85	64.72	6.70	58.02	6.66	58.06	7.17	57.55	None
BH22-4	64.75	64.61	6.69	57.92	6.40	58.22	7.00	57.61	Product (sheen) was noted in the MW development water, but a thickness was not measurable with the interface probe
BH22-5	65.94	65.85	NM	NM	7.75	58.10	7.82	58.03	None
BH22-6	64.90	64.82	6.94	57.88	6.64	58.18	6.79	58.03	None
BH22-7	65.11	65.06	6.72	58.34	6.60	58.46	NM	NM	None
BH22-8	64.87	64.78	7.78	57.00	7.57	57.21	7.98	56.80	None
BH22-9 (S)	64.22	64.06	NM	NM	5.28	58.78	5.62	58.44	None
BH22-9 (D)	64.23	64.18	NM	NM	7.80	56.38	8.28	55.90	None
BH22-10 (S)	64.83	64.73	NM	NM	6.94	57.80	6.73	58.00	None
BH22-10 (D)	64.81	64.73	NM	NM	7.78	56.95	7.75	56.98	None

Notes:

mbtop	= metres below top of pipe
mbgs	= metres below ground surface
NI	= not installed
NM	= not measured
DECOMM	= decommissioned
OBS	= obstructed

Table to be read in conjunction with accompanying report

Completed by: EB, LO
Reviewed by: DS

Summary of the Soil Samples Submitted for Analysis
1047 Richmond Road, Ottawa, Ontario

Sample Locations	Sample ID	Sample Depth (mbgs)	Sampling Date	Soil Lithology Sample Description	Headspace Readings		Parameters Analyzed
					Gastech (ppm)	PID (ppm)	
BH21-01	21-1 SA1	0.1 - 0.6	24-Sep-2021	Gravelly SAND	0	0	Metals, Hydride-Forming Metals and ORP
	21-1 SA3	1.22 - 1.8	24-Sep-2021	SILTY SAND	0	0	VOC and PHC (F1-F4), BTEX
BH21-02	21-2 SA2	0.6 - 1.22	21-Sep-2021	SAND, trace silt	0	0	Metals, Hydride-Forming Metals and ORP
	21-2 SA5	2.44 - 2.66	21-Sep-2021	Weathered Limestone	0	0	VOC and PHC (F1-F4), BTEX
BH21-03	21-3 SA1	0.076 - 0.6	22-Sep-2021	Gravelly SAND	0	7	VOC and PHC (F1-F4), BTEX
	21-3 SA2	0.6 - 1.22	22-Sep-2021	SAND	0	6	PHC (F1-F4) and BTEX
	21-3 SA3	1.22 - 1.83	22-Sep-2021	SILTY SAND, trace gravel	0	0	Metals, Hydride-Forming Metals and ORP
	21-3 DUP-1 (Field Duplicate SA3)	1.22 - 1.83	22-Sep-2021	SILTY SAND, trace gravel	0	0	Metals, Hydride-Forming Metals and ORP
BH21-04	21-4 SA1	0.05 - 0.6	21-Sep-2021	SILTY SAND, trace gravel	0	4	VOC and PHC (F1-F4), BTEX
	21-4 SA6	3 - 3.14	21-Sep-2021	SILTY SAND	0	0	PHC (F1-F4) and BTEX
BH21-05	21-5 SA2	0.6 - 1.22	22-Sep-2021	SILTY SAND and gravel	0	3	VOC and PHC (F1-F4), BTEX
	21-5 DUP-1 (Field Duplicate SA2)	0.6 - 1.22	22-Sep-2021	SILTY SAND and gravel	0	3	VOC and PHC (F1-F4), BTEX
	21-5 SA3	1.22 - 1.45	24-Sep-21	SILTY SAND and gravel	0	2	PHC (F1-F4), BTEX, Metals, Hydride-Forming Metals and ORP
BH21-11	21-11 SA2	0.76 - 1.52	12-Nov-2021	SILTY SAND	15	0	VOC, PHC (F1-F4), BTEX, Metals, Hydride-Forming Metals and ORP
	21-11 SA3	1.52 - 1.88	12-Nov-2021	Weathered Limestone	10	0	Metals, Hydride-Forming Metals and ORP
BH21-12	21-12 SA2	0.76 - 1.52	11-Nov-2021	SAND	10	0	Metals, Hydride-Forming Metals and ORP
	21-12 SA3	1.52 - 2.29	11-Nov-2021	SAND	420	0	VOC, PHC (F1-F4), BTEX, Metals, Hydride-Forming Metals and ORP
BH21-13	21-13 SA2	0.76 - 1.52	11-Nov-2021	SAND	15	0	Metals, Hydride-Forming Metals and ORP
	21-13 SA3	1.52 - 2.13	11-Nov-2021	SAND	15	0	Metals, Hydride-Forming Metals and ORP
BH21-14	21-14 SA3	1.52 - 2.13	12-Nov-21	SILTY SAND	55	0	VOC and PHC (F1-F4), BTEX
BH21-15	21-15 SA3	0.76 - 1.52	12-Nov-21	SAND	440	0	VOC and PHC (F1-F4), BTEX
BH21-16	21-16 SA2	0.76 - 1.52	11-Nov-2021	SAND	10	2	VOC and PHC (F1-F4), BTEX
BH21-17	21-17 SA2	0.76 - 1.52	11-Nov-2021	SAND	10	0	VOC and PHC (F1-F4), BTEX
BH21-18	21-18 SA2	0.76 - 1.52	11-Nov-2021	SAND	15	0	VOC and PHC (F1-F4), BTEX
BH21-19	BH21-19 SA1	0.2 - 0.61	22-Nov-2021	SAND	90	0	VOC and PHC (F1-F4), BTEX
BH21-20	BH21-20 SA2	0.76 - 1.52	24-Nov-2021	SAND, trace gravel	50	0	PHC (F1-F4) and BTEX
	Dup-1 Bh21-20 SA2 (Field Duplicate)	0.76 - 1.52	24-Nov-2021	SAND, trace gravel	50	0	PHC (F1-F4) and BTEX
BH21-21	BH21- 21 SA3	2.28 - 3.04	21-Dec-2021	SAND, trace gravel	60	1	PHC (F1-F4) and BTEX
	DUP1 BH21-21 SA3 (Field Duplicate)	2.28 - 3.04	21-Dec-2021	SAND, trace gravel	60	1	PHC (F1-F4) and BTEX
BH21-22	BH21-22 SA3	2.43 - 2.74	21-Dec-2021	SILTY, trace sand	0	16	PHC (F1-F4) and BTEX
BH21-23	BH21-23 SA4	3.04 - 3.35	21-Dec-2021	Weathered Limestone	350	1	PHC (F1-F4) and BTEX
BH21-24	BH21-24 SA4	2.28 - 3.04	21-Dec-2021	SILTY SAND	40	98	PHC (F1-F4) and BTEX
BH21-25	BH21-25 SA4	3.04 - 3.35	21-Dec-2021	SILTY SAND and gravel	0	0	PHC (F1-F4) and BTEX
BH22-1	BH22-01 SA2	0.76 - 1.52	11-May-22	Fill - SAND	10	0	VOCs, PHC (F1-F4) and BTEX
BH22-2	BH22-02 SA4	2.28 - 2.89	9-May-22	Weathered Limestone	0	0	VOCs, PHC (F1-F4) and BTEX
BH22-3	BH22-03 SA2	0.76 - 1.52	10-May-22	SILTY SAND	25	0	VOCs, PHC (F1-F4) and BTEX
BH22-4	BH22-04 SA1	0 - 0.76	9-May-22	gravelly SAND	1	55	VOCs, PHC (F1-F4) and BTEX
BH22-5	BH22-05 SA4	2.28 -3.04	11-May-22	SILTY SAND	0	0	PHC (F1-F4) and BTEX
TP21-01	TP21-01	0 - 0.15	22-Nov-2021	SAND	0	0	PHC (F1-F4), BTEX and PCB

Notes:

m bgs = metres below ground surface
ORP = other regulated parameters
BTEX = benzene, toluene, ethylbenzene, xylene
VOC = volatile organic compounds
PHC = petroleum hydrocarbons
ppm = parts per million
Table to be read in conjunction with accompanying report

Completed by: EB, LO
Reviewed by: DS

Summary of Groundwater Samples Submitted for Analysis
1047 Richmond Road, Ottawa, Ontario

Well ID	Sample ID	Sampling Date	Well Depth (mbgs)	Screen Interval (mbgs)	Lithology Description at Screened Section	Parameters Analyzed
BH21-02	BH21-02	04-Oct-2021	7.62	4.57 - 7.62	Limestone	VOC, PHC (F1-F4), BTEX, Metals, Hydride-Forming Metals and ORP
BH21-03	BH21-03	04-Oct-2021	7.01	3.96 - 7.01	Limestone	VOC, PHC (F1-F4), BTEX, Metals, Hydride-Forming Metals and ORP
BH21-04	BH21-04	04-Oct-2021	7.62	4.57 - 7.62	Limestone	VOC, PHC (F1-F4), BTEX, Metals, Hydride-Forming Metals and ORP
	BH21-04	30-Nov-2021				VOC, PHC (F1-F4), BTEX
	DUP-1	30-Nov-2021				VOC, PHC (F1-F4), BTEX
	BH21-04	9-Dec-21				VOC, PHC (F1-F4), BTEX
	BH21-05	26-May-22				VOC, PHC (F1-F4), BTEX
	BH21-04	22-Dec-22				VOC, PHC (F1-F4), BTEX
	BH21-04	15-Nov-22				VOC
	BH21-04	7-Jul-23				VOC, PHC (F1-F4), BTEX
BH21-05	BH21-05	04-Oct-2021	7.62	4.57 - 7.62	Limestone	VOC, PHC (F1-F4), BTEX, Metals, Hydride-Forming Metals and ORP
	DUP-1	04-Oct-2021				VOC, PHC (F1-F4), BTEX, Metals, Hydride-Forming Metals and ORP
BH21-11	BH21-11	30-Nov-2021	5.54	2.49 - 5.54	Limestone	VOC, PHC (F1-F4), BTEX, Metals, Hydride-Forming Metals and ORP
BH21-11	DUP-2	30-Nov-2021				Metals, Hydride-Forming Metals and ORP
BH21-14	BH21-14	30-Nov-2021	4.57	3.05 - 4.57	Limestone	VOC, PHC (F1-F4), BTEX
	BH21-14	09-Dec-2021				VOC, PHC (F1-F4), BTEX
	DUP	09-Dec-2021				VOC, PHC (F1-F4), BTEX
	BH21-14	22-Dec-21				VOC, PHC (F1-F4), BTEX
	MW 21-14	26-May-22				VOC, PHC (F1-F4), BTEX
	MW 21-14 dup	26-May-22				VOC, PHC (F1-F4), BTEX
	BH21-14	15-Nov-22				VOC
	21-14	7-Jul-23				VOC, PHC (F1-F4), BTEX
	Dup 1	7-Jul-23				VOC, PHC (F1-F4), BTEX
BH21-15A	BH21-15A	30-Nov-2021	7.01	3.96 - 7.01	Limestone	VOC, PHC (F1-F4), BTEX
BH21-15B	BH21-15B	30-Nov-2021	3.05	1.53 - 3.05	Silty Sand to Sand	VOC, PHC (F1-F4), BTEX
BH21-19	BH21-19	30-Nov-2021			Limestone	VOC, PHC (F1-F4), BTEX
BH21-20	BH21-20	30-Nov-2021	16.60	13.71 - 16.76	Limestone	VOC, PHC (F1-F4), BTEX
BH21-21	BH21-21	22-Dec-21	4.92	1.64 - 4.92	Silty and Sand	VOC, PHC (F1-F4), BTEX
	DUP	22-Dec-21				VOC, PHC (F1-F4), BTEX
BH21-22	BH21-22	22-Dec-21	4.59	1.31 - 4.59	Sand	VOC, PHC (F1-F4), BTEX
BH22-1	BH22-1	26-May-22	9.60	8.06 - 9.60	Limestone	VOC, PHC (F1-F4), BTEX
	BH22-1	16-Nov-22				VOC
	BH22-1	7-Jul-23				VOC, PHC (F1-F4), BTEX
BH22-2	BH22-2	26-May-22	7.46	4.41 - 7.46	Limestone	VOC, PHC (F1-F4), BTEX
	BH22-2	16-Nov-22				VOC
	MW22-02	9-Feb-23				VOC
	DUP-1	9-Feb-23				VOC
	MW 22-02	16-Mar-23				VOC
	DUP-1	16-Mar-23				VOC
	MW 22-02	7-Jul-23				VOC
BH22-3	BH22-3	26-May-22	6.70	5.18 - 6.7	Limestone	VOC, PHC (F1-F4), BTEX

Summary of Groundwater Samples Submitted for Analysis
1047 Richmond Road, Ottawa, Ontario

Well ID	Sample ID	Sampling Date	Well Depth (mbgs)	Screen Interval (mbgs)	Lithology Description at Screened Section	Parameters Analyzed
BH22-4	BH22-4	26-May-22	7.92	4.87 - 7.92	Limestone	VOC, PHC (F1-F4), BTEX
	BH22-4	16-Nov-22				VOC
	MW22-04	7-Jul-23				PHC (F1-F4), BTEX
	DUP-2	7-Jul-23				PHC (F1-F4), BTEX
	22-04	15-Aug-23				PHC (F1-F4), BTEX
	MW 22-04	21-Nov-23				VOC, PHC (F1-F4), BTEX
BH22-5	BH22-5	26-May-22	10.66	7.61 - 10.66	Limestone	VOC, PHC (F1-F4), BTEX
BH22-6	MW22-06	18-Jul-23	7.00	6.00 - 7.00	Limestone	VOC, PHC (F1-F4), BTEX
BH22-8	22-8	15-Nov-22	10.00	9.00 - 10.00	Limestone	VOC
	dup2	15-Nov-22				VOC
	MW22-08	19-Jul-23				VOC, PHC (F1-F4), BTEX
	MW 22-08	21-Nov-23				VOC, PHC (F1-F4), BTEX
	DUP-GW	21-Nov-23				VOC, PHC (F1-F4), BTEX
BH22-9 (S)	22-09S	29-May-23	7.62	4.57 - 7.62	Limestone	VOC
BH22-9 (D)	22-09D	29-May-23	10.06	9.06 - 10.66	Limestone	VOC
	DUP2	29-May-23				VOC
BH22-10 (S)	22-10S	29-May-23	7.62	4.57 - 7.62	Limestone	VOC
BH22-10 (D)	22-10D	29-May-23	10.06	9.06 - 10.06	Limestone	VOC

Notes:

m bgs	= metres below ground surface
ORP	= other regulated parameters
BTEX	= benzene, toluene, ethylbenzene, xylene
VOC	= volatile organic compounds
PHC	= petroleum hydrocarbons
PAH	= polycyclic aromatic hydrocarbons
PCB	= polychlorinated biphenils

Table to be read in conjunction with accompanying report

Completed by: EB, LO
Reviewed by: DS

Table 5A
Soil Analytical Results - Volatile Organic Compounds
1047 Richmond Road, Ottawa, Ontario

			Sample Location	BH21-01	BH21-02	BH21-03	BH21-04	BH21-05	BH21-05	BH21-11	BH21-12	BH21-14	BH21-15	BH21-16	BH21-17
			Sample Name	21-1 SA3	21-2 SA5	21-3 SA1	21-4 SA1	21-5 SA2	21-5 DUP-1	21-11 SA2	21-12 SA3	21-14 SA3	21-15 SA3	21-16 SA2	21-17 SA2
			Sample Date	24-09-2021	21-09-2021	22-09-2021	21-09-2021	22-09-2021	22-09-2021	12-11-2021	11-11-2021	12-11-2021	12-11-2021	11-11-2021	11-11-2021
			Sample Depth	1.22-1.8 m	2.44-2.66 m	0.076-0.6 m	0.05-0.6 m	0.6-1.22 m	0.6-1.22 m	0.76-1.52 m	1.52-2.29 m	1.52-2.13 m	0.76-1.52 m	0.76-1.52 m	0.76-1.52 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**													
Volatile Organic Compounds															
Acetone	16	ug/g	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49
trans-1,3-Dichloropropene		ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
cis-1,3-Dichloropropene		ug/g	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030
Bromomethane	0.05	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
1,2-Dibromoethane	0.05	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Carbon Tetrachloride	0.05	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
n-Hexane	2.8	ug/g	< 0.040	< 0.040	0.19	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Chlorobenzene	2.4	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
2-Butanone	16	ug/g	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Chloroform	0.05	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
4-Methyl-2-pentanone	1.7	ug/g	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
1,2-Dichlorobenzene	3.4	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	0.12	0.15	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Methyl tert-Butyl Ether	0.75	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
1,3-Dichlorobenzene	4.8	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Methylene Chloride	0.1	ug/g	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049
1,4-Dichlorobenzene	0.083	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	0.073	**0.093**	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Styrene	0.7	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Dichlorodifluoromethane	16	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Tetrachloroethene	0.28	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
1,1-Dichloroethane	3.5	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
1,1,1,2-Tetrachloroethane	0.058	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
1,2-Dichloroethane	0.05	ug/g	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049	< 0.049
1,1,2,2-Tetrachloroethane	0.05	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
1,1-Dichloroethene	0.05	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
1,1,1-Trichloroethane	0.38	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
trans-1,2-Dichloroethene	0.084	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
1,1,2-Trichloroethane	0.05	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
cis-1,2-Dichloroethene	3.4	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Trichloroethene	0.061	ug/g	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
1,2-Dichloropropane	0.05	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Trichlorofluoromethane	4	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Vinyl Chloride	0.02	ug/g	< 0.019	< 0.019	< 0.019	< 0.019	< 0.019	< 0.019	< 0.019	< 0.019	< 0.019	< 0.019	< 0.019	< 0.019
1,3-Dichloropropene, Total	0.05	ug/g	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Trihalomethanes															
Bromodichloromethane	13	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Bromoform	0.27	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Dibromochloromethane	9.4	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040

Notes:
Bold: Value exceeding Table 7 standards
ug/g: micrograms per gram
NV: No Value
<: Indicates parameter not detected above laboratory method detection limit.

REG153 (11) T7-R/P/I SOIL COARSE	Table 7 = Ontario Ministry of the Environment, Conservation and Parks (MECP), "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", April 2011. Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition

Table 5A
Soil Analytical Results - Volatile Organic Compounds
1047 Richmond Road, Ottawa, Ontario

			Sample Location	BH21-18	BH21-19	BH21-20	BH21-20	BH21-21	BH21-21	BH21-22	BH22-01	BH22-02	BH22-03	BH22-04
			Sample Name	21-18 SA2	BH21-19 SA1	BH21-20 SA2	Dup-1 Bh21-20	BH21- 21 SA3	DUP1	BH21-22 SA3	BH22-01 SA2	BH22-02 SA4	BH22-03 SA2	BH22-04 SA1
			Sample Date	11-11-2021	22-11-2021	24-11-2021	24-11-2021	21-12-2021	21-12-2021	21-12-2021	11-05-2022	09-05-2022	10-05-2022	09-05-2022
			Sample Depth	0.76-1.52 m	0.2-0.61 m	0.76-1.52 m	0.76-1.52 m	2.28-3.04 m	2.28-3.04 m	2.43-2.74 m	0.76 - 1.52 m	2.28 - 2.89 m	0.76 - 1.52 m	0 - 0.76 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**												
Volatile Organic Compounds														
Acetone	16	ug/g	< 0.49	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-Dichloropropene		ug/g	< 0.040	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene		ug/g	< 0.030	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dibromoethane	0.05	ug/g	< 0.040	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Carbon Tetrachloride	0.05	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
n-Hexane	2.8	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chlorobenzene	2.4	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Butanone	16	ug/g	< 0.40	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloroform	0.05	ug/g	< 0.040	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
4-Methyl-2-pentanone	1.7	ug/g	< 0.40	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	3.4	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Methyl tert-Butyl Ether	0.75	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	4.8	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Methylene Chloride	0.1	ug/g	< 0.049	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	0.083	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Styrene	0.7	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dichlorodifluoromethane	16	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tetrachloroethene	0.28	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloroethane	3.5	ug/g	< 0.040	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
1,1,1,2-Tetrachloroethane	0.058	ug/g	< 0.040	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
1,2-Dichloroethane	0.05	ug/g	< 0.049	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
1,1,2,2-Tetrachloroethane	0.05	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloroethene	0.05	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1-Trichloroethane	0.38	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
trans-1,2-Dichloroethene	0.084	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2-Trichloroethane	0.05	ug/g	< 0.040	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
cis-1,2-Dichloroethene	3.4	ug/g	< 0.040	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Trichloroethene	0.061	ug/g	< 0.010	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
1,2-Dichloropropane	0.05	ug/g	< 0.040	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Trichlorofluoromethane	4	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Vinyl Chloride	0.02	ug/g	< 0.019	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
1,3-Dichloropropene, Total	0.05	ug/g	< 0.050	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Trihalomethanes														
Bromodichloromethane	13	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromoform	0.27	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibromochloromethane	9.4	ug/g	< 0.040	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Notes:
Bold: Value exceeding Table 7 standards
ug/g: micrograms per gram
NV: No Value
<: Indicates parameter not detected above laboratory method d

REG153 (11) T7-R/P/I SOIL COARSE	Table 7 = Ontario Ministry of th Environmental Protection Act",

Created By: NB
Reviewed By: LO

Soil Analytical Results - Petroleum Hydrocarbons, Benzene, Toluene, Ethylbenzene and Xylenes
1047 Richmond Road, Ottawa, Ontario

		Sample Location	BH21-01	BH21-02	BH21-03	BH21-03	BH21-04	BH21-04	BH21-05	BH21-05	BH21-05	BH21-11	BH21-12
		Sample Name	21-1 SA3	21-2 SA5	21-3 SA1	21-3 SA2	21-4 SA1	21-4 SA6	21-5 SA2	21-5 DUP-1	21-5 SA3	21-11 SA2	21-12 SA3
		Sample Date	24-09-2021	21-09-2021	22-09-2021	22-09-2021	21-09-2021	21-09-2021	22-09-2021	22-09-2021	24-09-2021	12-11-2021	11-11-2021
		Sample Depth	1.22-1.8 m	2.44-2.66 m	0.076-0.6 m	0.6-1.22 m	0.05-0.6 m	3-3.14 m	0.6-1.22 m	0.6-1.22 m	1.22-1.45 m	0.76-1.52 m	1.52-2.29 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**											
BTEX													
Benzene	0.21	ug/g	< 0.0060	< 0.0060	< 0.0060	< 0.020	< 0.0060	< 0.020	< 0.0060	< 0.0060	< 0.020	< 0.0060	< 0.0060
Ethylbenzene	2	ug/g	< 0.010	< 0.010	< 0.010	< 0.020	< 0.010	< 0.020	< 0.010	< 0.010	< 0.020	< 0.010	< 0.010
Toluene	2.3	ug/g	< 0.020	< 0.020	0.039	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenes, Total	3.1	ug/g	< 0.020	< 0.020	0.045	< 0.040	< 0.020	< 0.040	< 0.020	< 0.020	< 0.040	< 0.020	< 0.020
m,p-Xylenes	NV	ug/g	< 0.020	< 0.020	0.045	< 0.040	< 0.020	< 0.040	< 0.020	< 0.020	< 0.040	< 0.020	< 0.020
o-Xylene	NV	ug/g	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Petroleum Hydrocarbons													
Petroleum Hydrocarbons - F1 (C6-C10)	55	ug/g	< 10	< 10	-	< 10	-	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F1 (C6-C10)-BTEX	55	ug/g	< 10	< 10	-	< 10	-	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16)	98	ug/g	< 10	< 10	-	< 10	-	< 10	< 10	**260**	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	300	ug/g	< 50	< 50	-	< 50	-	< 50	**1500**	**25000**	200	< 50	140
Petroleum Hydrocarbons - F4 (C34-C50)	2800	ug/g	< 50	< 50	-	< 50	-	< 50	520	**8100**	76	< 50	310
Petroleum Hydrocarbons - F4 Gravimetric	2800	ug/g	-	-	-	-	-	-	-	-	-	-	1400
Reached Baseline at C50	NV	ug/g	YES	YES	-	YES	-	YES	YES	YES	YES	YES	NO

Notes:
Bold: Value exceeding Table 7 standards
ug/g: micrograms per gram
NV: No Value
<: Indicates parameter not detected above laboratory method detection limit.

REG153 (11) T7-R/P/I SOIL COARSE	Table 7 = Ontario Ministry of the Environment, Conservation and Parks (MECP), "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", April 2011. Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition

Created By: NB
Reviewed By: LO

Soil Analytical Results - Petroleum Hydrocarbons, Benzene, Toluene, Ethylbenzene and Xylenes
1047 Richmond Road, Ottawa, Ontario

		Sample Location	BH21-14	BH21-15	BH21-16	BH21-17	BH21-18	BH21-19	BH21-20	BH21-20	BH21-21	BH21-21	BH21-22	BH21-23
		Sample Name	21-14 SA3	21-15 SA3	21-16 SA2	21-17 SA2	21-18 SA2	BH21-19 SA1	BH21-20 SA2	Dup-1 Bh21-20 SA2	BH21- 21 SA3	DUP1	BH21-22 SA3	BH21-23 SA4
		Sample Date	12-11-2021	12-11-2021	11-11-2021	11-11-2021	11-11-2021	22-11-2021	24-11-2021	24-11-2021	21-12-2021	21-12-2021	21-12-2021	21-12-2021
		Sample Depth	1.52-2.13 m	0.76-1.52 m	0.76-1.52 m	0.76-1.52 m	0.76-1.52 m	0.2-0.61 m	0.76-1.52 m	0.76-1.52 m	2.28-3.04 m	2.28-3.04 m	2.43-2.74 m	3.04-3.35 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**												
BTEX														
Benzene	0.21	ug/g	< 0.0060	< 0.0060	< 0.0060	< 0.0060	< 0.0060	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Ethylbenzene	2	ug/g	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	2.3	ug/g	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Xylenes, Total	3.1	ug/g	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
m,p-Xylenes	NV	ug/g	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
o-Xylene	NV	ug/g	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Petroleum Hydrocarbons														
Petroleum Hydrocarbons - F1 (C6-C10)	55	ug/g	< 10	< 10	< 10	< 10	< 10	< 5	< 5	< 5	< 5	< 5	6	< 5
Petroleum Hydrocarbons - F1 (C6-C10)-BTEX	55	ug/g	< 10	< 10	< 10	< 10	< 10	< 5	< 5	< 5	< 5	< 5	6	< 5
Petroleum Hydrocarbons - F2 (C10-C16)	98	ug/g	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	300	ug/g	< 50	300	100	260	< 50	< 50	< 50	< 50	< 50	< 50	260	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	2800	ug/g	< 50	780	< 50	87	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F4 Gravimetric	2800	ug/g	-	2200	-	-	-	-	-	-	-	-	-	-
Reached Baseline at C50	NV	ug/g	YES	NO	YES	YES	YES	-	-	-	-	-	-	-

Notes:
Bold: Value exceeding Table 7 standards
ug/g: micrograms per gram
NV: No Value
<: Indicates parameter not detected above laboratory method detection limit.

REG153 (11) T7-R/P/I SOIL COARSE	Table 7 = Ontario Ministry of the and Sediment Standards for Use Table 7: Generic Site Condition Condition

Soil Analytical Results - Petroleum Hydrocarbons, Benzene, Toluene, Ethylbenzene and Xylenes
1047 Richmond Road, Ottawa, Ontario

		Sample Location	BH21-24	BH21-25	BH22-01	BH22-02	BH22-03	BH22-04	BH22-05	TP21-01	East Wall	South Wall	West Wall	TP-SA11	TP-SA11
		Sample Name	BH21-24 SA4	BH21-25 SA4	BH22-01 SA2	BH22-02 SA4	BH22-03 SA2	BH22-04 SA1	BH22-05 SA4	TP21-01	EW-SA5	SW-SA4	WW-SA7	TP-SA11	DUP-3
		Sample Date	21-12-2021	21-12-2021	11-05-2022	09-05-2022	10-05-2022	09-05-2022	11-05-2022	22-11-2021	25-07-2023	25-07-2023	25-07-2023	26-07-2023	26-07-2023
		Sample Depth	2.28-3.04 m	3.04-3.35 m	0.76 - 1.52 m	2.28 - 2.89 m	0.76 - 1.52 m	0 - 0.76 m	2.28 -3.04 m	0-0.15 m	1 m	3.5-3.7 m	1-1.8 m	3.2-3.5 m	3.2-3.5 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**													
BTEX															
Benzene	0.21	ug/g	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Ethylbenzene	2	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	2.3	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Xylenes, Total	3.1	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
m,p-Xylenes	NV	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
o-Xylene	NV	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Petroleum Hydrocarbons															
Petroleum Hydrocarbons - F1 (C6-C10)	55	ug/g	**154**	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Petroleum Hydrocarbons - F1 (C6-C10)-BTEX	55	ug/g	**154**	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Petroleum Hydrocarbons - F2 (C10-C16)	98	ug/g	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	300	ug/g	**1500**	< 50	< 50	< 50	< 50	< 50	< 50	< 50	51	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	2800	ug/g	170	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F4 Gravimetric	2800	ug/g	-	-	-	-	-	-	-	-	-	-	-	-	-
Reached Baseline at C50	NV	ug/g	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

Bold: Value exceeding Table 7 standards

ug/g: micrograms per gram

NV: No Value

<: Indicates parameter not detected above laboratory method detection limit.

REG153 (11) T7-R/P/I SOIL COARSE

Table 7 = Ontario Ministry of the
and Sediment Standards for Use
Table 7: Generic Site Condition
Condition

Table 5C
Soil Analytical Results - Metals, Hydride-forming Metals and Other Regulated Parameters
1047 Richmond Road, Ottawa, Ontario

			Sample Location	BH21-01	BH21-01	BH21-02	BH21-02	BH21-03	BH21-03	BH21-03	BH21-03	BH21-04	BH21-04
			Sample Name	21-1 SA1	21-1 SA3	21-2 SA2	21-2 SA5	21-3 SA1	21-3 SA2	21-3 SA3	21-3 DUP-1	21-4 SA1	21-4 SA6
			Sample Date	24-09-2021	24-09-2021	21-09-2021	21-09-2021	22-09-2021	22-09-2021	22-09-2021	22-09-2021	21-09-2021	21-09-2021
			Sample Depth	0.1-0.6 m	1.22-1.8 m	0.6-1.22 m	2.44-2.66 m	0.076-0.6 m	0.6-1.22 m	1.22-1.83 m	1.22-1.83 m	0.05-0.6 m	3-3.14 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**											
Metals													
Barium	390	ug/g	72	-	21	-	-	-	99	110	-	-
Beryllium	4	ug/g	0.49	-	< 0.20	-	-	-	0.52	0.72	-	-
Boron	120	ug/g	9.8	-	< 5.0	-	-	-	7.8	12	-	-
Cadmium	1.2	ug/g	< 0.10	-	< 0.10	-	-	-	0.45	0.37	-	-
Chromium	160	ug/g	25	-	8.3	-	-	-	27	33	-	-
Cobalt	22	ug/g	7.6	-	3.1	-	-	-	13	14	-	-
Copper	140	ug/g	12	-	4.6	-	-	-	18	60	-	-
Lead	120	ug/g	5.6	-	2	-	-	-	23	48	-	-
Molybdenum	6.9	ug/g	< 0.50	-	< 0.50	-	-	-	< 0.50	0.52	-	-
Nickel	100	ug/g	22	-	5.5	-	-	-	25	34	-	-
Silver	20	ug/g	< 0.20	-	< 0.20	-	-	-	< 0.20	< 0.20	-	-
Thallium	1	ug/g	0.1	-	< 0.050	-	-	-	0.14	0.21	-	-
Uranium	23	ug/g	0.5	-	0.45	-	-	-	0.49	0.64	-	-
Vanadium	86	ug/g	30	-	20	-	-	-	26	29	-	-
Zinc	340	ug/g	33	-	16	-	-	-	54	89	-	-
Metals, Hydride-Forming													
Antimony	7.5	ug/g	< 0.20	-	< 0.20	-	-	-	0.33	0.46	-	-
Selenium	2.4	ug/g	< 0.50	-	< 0.50	-	-	-	< 0.50	< 0.50	-	-
Arsenic	18	ug/g	< 1.0	-	< 1.0	-	-	-	1.7	2.8	-	-
Other Regulated Parameters													
Boron, Hot Water Soluble	1.5	ug/g	0.38	-	0.15	-	-	-	0.87	0.67	-	-
Hexavalent Chromium	8	ug/g	< 0.18	-	< 0.18	-	-	-	< 0.18	< 0.18	-	-
Cyanide (WAD)	0.051	ug/g	< 0.01	-	< 0.01	-	-	-	< 0.01	< 0.01	-	-
Conductivity	0.7	ms/cm	0.54	-	0.26	-	-	-	0.34	0.41	-	-
Mercury	0.27	ug/g	< 0.050	-	< 0.050	-	-	-	0.063	0.077	-	-
Sodium Adsorption Ratio	5	-	3.6	2.3	0.88	4.1	0.29	**5.3**	**6.1**	**9.6**	0.46	0.34
pH	5 - 9	pH units	7.51	-	6.97	-	-	-	7.54	7.43	-	-
Moisture, Percent	NV	%	22	17	4.7	7.6	3.4	5.6	16	15	6.6	9.6

Notes:
Bold: Value exceeding Table 7 standards
ug/g: micrograms per gram
NV: No Value
<: Indicates parameter not detected above laboratory method detection limit.

REG153 (11) T7-R/P/I SOIL COARSE	Table 7 = Ontario Ministry of the Environment, Conservation and Parks (MECP), "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", April 2011. Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition

Created By: NB
Reviewed By: LO

Table 5C
Soil Analytical Results - Metals, Hydride-forming Metals and Other Regulated Parameters
1047 Richmond Road, Ottawa, Ontario

		Sample Location	BH21-05	BH21-05	BH21-05	BH21-11	BH21-11	BH21-12	BH21-12	BH21-13	BH21-13
		Sample Name	21-5 SA2	21-5 DUP-1	21-5 SA3	21-11 SA2	21-11 SA3	21-12 SA2	21-12 SA3	21-13 SA2	21-13 SA3
		Sample Date	22-09-2021	22-09-2021	24-09-2021	12-11-2021	12-11-2021	11-11-2021	11-11-2021	11-11-2021	11-11-2021
		Sample Depth	0.6-1.22 m	0.6-1.22 m	1.22-1.45 m	0.76-1.52 m	1.52-1.88 m	0.76-1.52 m	1.52-2.29 m	0.76-1.52 m	1.52-2.13 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**									
Metals											
Barium	390	ug/g	-	-	89	110	76	49	77	24	81
Beryllium	4	ug/g	-	-	0.4	0.61	0.46	0.31	0.54	< 0.20	1.1
Boron	120	ug/g	-	-	6.9	8.1	6.9	< 5.0	9.2	< 5.0	16
Cadmium	1.2	ug/g	-	-	0.54	0.29	0.2	< 0.10	< 0.10	< 0.10	< 0.10
Chromium	160	ug/g	-	-	22	26	24	15	39	7	41
Cobalt	22	ug/g	-	-	7.9	11	7.2	4.3	8.5	2.8	20
Copper	140	ug/g	-	-	14	22	15	8.6	17	5.3	7.8
Lead	120	ug/g	-	-	85	54	20	2.7	6.7	1.9	5.2
Molybdenum	6.9	ug/g	-	-	1.2	< 0.50	0.73	< 0.50	4.6	< 0.50	0.76
Nickel	100	ug/g	-	-	16	26	22	8.6	18	4.9	47
Silver	20	ug/g	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	1	ug/g	-	-	0.12	0.15	0.11	0.06	0.11	< 0.050	0.21
Uranium	23	ug/g	-	-	0.53	0.42	0.39	0.55	0.54	0.4	0.31
Vanadium	86	ug/g	-	-	30	27	28	27	27	15	27
Zinc	340	ug/g	-	-	43	80	60	21	32	12	35
Metals, Hydride-Forming											
Antimony	7.5	ug/g	-	-	0.23	0.53	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Selenium	2.4	ug/g	-	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	18	ug/g	-	-	1.3	1.1	< 1.0	< 1.0	< 1.0	< 1.0	2
Other Regulated Parameters											
Boron, Hot Water Soluble	1.5	ug/g	-	-	0.4	0.6	0.61	0.13	0.51	0.14	0.41
Hexavalent Chromium	8	ug/g	-	-	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18	< 0.18
Cyanide (WAD)	0.051	ug/g	-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Conductivity	0.7	ms/cm	-	-	0.27	0.33	0.37	0.13	0.59	0.06	0.38
Mercury	0.27	ug/g	-	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium Adsorption Ratio	5	-	0.24	0.21	0.36	**6.6**	**5.9**	0.71	0.7	0.54	**7.3**
pH	5 - 9	pH units	-	-	7.42	7.41	7.61	6.99	7.58	6.88	7.68
Moisture, Percent	NV	%	10	9.3	14	18	16	8.7	15	6.2	10

Notes:
Bold: Value exceeding Table 7 standards
ug/g: micrograms per gram
NV: No Value
<: Indicates parameter not detected above laboratory method detection limit.

REG153 (11) T7-R/P/I SOIL COARSE	Table 7 = Ontario Ministry of the Env Sediment Standards for Use Under F Generic Site Condition Standards for

Created By: NB
Reviewed By: LO

Table 5D

Soil Analytical Results - Polychlorinated Biphenil's

1047 Richmond Road, Ottawa, Ontario

		Sample Location	TP21-01
		Sample Name	TP21-01
		Sample Date	22-11-2021
		Sample Depth	0-0.15 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**	
Polychlorinated Biphenyls			
Polychlorinated Biphenyls	0.35	ug/g	< 0.1

Notes:

Bold: Value exceeding Table 7 standards

ug/g: micrograms per gram

NV: No Value

<: Indicates parameter not detected above laboratory method detection limit.

REG153 (11) T7-R/P/I SOIL COARSE

Table 7 = Ontario Ministry of the Environment, Conservation and Parks (MECP), "Soil, Ground Water and Sediment Standards for Use

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Table 5E

Soil Analytical Results - Polycyclic Aromatic Hydrocarbons

1047 Richmond Road, Ottawa, Ontario

			Location	East Wall	South Wall	West Wall	TP-SA11	TP-SA11
			Sample Name	EW-SA5	SW-SA4	WW-SA7	TP-SA11	DUP-3
			Sample Date	25-07-2023	25-07-2023	25-07-2023	26-07-2023	26-07-2023
			Sample Depth	1 m	3.5-3.7 m	1-1.8 m	3.2-3.5 m	3.2-3.5 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**						
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	7.9	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo[g,h,i]perylene	6.6	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno[1,2,3-cd]pyrene	0.38	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	0.15	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo[k]fluoranthene	0.78	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	0.67	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	7	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	0.6	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo[a]anthracene	0.5	ug/g	0.06	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzo[a,h]anthracene	0.1	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	6.2	ug/g	0.08	< 0.05	< 0.05	< 0.05	< 0.05
Benzo[a]pyrene	0.3	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	0.69	ug/g	0.24	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	78	ug/g	0.16	< 0.05	< 0.05	< 0.05	< 0.05
Benzo[b]fluoranthene	0.78	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	62	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Notes:

Bold: Value exceeding Table 7 standards

ug/g: micrograms per gram

<: Indicates parameter not detected above laboratory method detection limit.

REG153 (11) T7-R/P/I SOIL COARSE	Table 7 = Ontario Ministry of the Environment, Conservation and Parks (MECP), "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", April 2011. Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition

Created By: NB

Reviewed By: LO

Table 6A
Groundwater Analytical Results - Volatile Organic Compounds
1047 Richmond Road, Ottawa, Ontario

		Sample Location	BH21-02	BH21-03	BH21-04	BH21-04	BH21-04	BH21-04	BH21-04	BH21-04	BH21-04	BH21-04	BH21-05	BH21-05	BH21-11	BH21-11
		Sample Name	21-2	21-3	21-4	21-4	DUP-1	BH21-04	BH21-4	MW 21-04	21-4	MW21-04	21-5	DUP-1	21-11	DUP-2
		Sample Date	04-10-2021	04-10-2021	04-10-2021	30-11-2021	30-11-2021	09-12-2021	22-12-2021	26-05-2022	15-11-2022	07-07-2023	04-10-2021	04-10-2021	30-11-2021	30-11-2021
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**														
Volatile Organic Compounds																
Acetone	100000	ug/L	< 10	< 10	< 10	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 1.0	-
trans-1,3-Dichloropropene	NV	ug/L	< 0.40	< 0.40	< 0.40	-	-	< 0.60	-	-	-	-	< 0.40	< 0.40	-	-
cis-1,3-Dichloropropene	NV	ug/L	< 0.30	< 0.30	< 0.30	-	-	< 0.40	-	-	-	-	< 0.30	< 0.30	-	-
Bromomethane	0.89	ug/L	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.50	< 0.20	-
1,2-Dibromoethane	0.2	ug/L	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.20	< 0.10	-
Carbon Tetrachloride	0.2	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	**< 0.40**	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-
n-Hexane	5	ug/L	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 1.0	< 1.0	< 0.20	-
Chlorobenzene	140	ug/L	< 0.20	< 0.20	5.5	9.12	8.7	< 0.20	< 0.10	5.88	3.98	< 0.10	< 0.20	< 0.20	< 0.10	-
2-Butanone	21000	ug/L	< 10	< 10	< 10	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 1.0	-
Chloroform	2	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-
4-Methyl-2-pentanone	5200	ug/L	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 1.0	-
1,2-Dichlorobenzene	150	ug/L	< 0.50	< 0.50	6.3	< 0.10	< 0.10	< 0.20	< 0.10	5.99	5.13	2.5	< 0.50	< 0.50	< 0.10	-
Methyl tert-Butyl Ether	15	ug/L	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.50	< 0.20	-
1,3-Dichlorobenzene	7600	ug/L	< 0.50	< 0.50	< 0.50	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.50	< 0.50	< 0.10	-
Methylene Chloride	26	ug/L	< 2.0	< 2.0	< 2.0	< 0.30	< 0.30	< 0.60	< 0.30	< 0.30	< 0.30	< 0.30	< 2.0	< 2.0	< 0.30	-
1,4-Dichlorobenzene	0.5	ug/L	< 0.50	< 0.50	< 0.50	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.50	< 0.50	< 0.10	-
Styrene	43	ug/L	< 0.50	< 0.50	< 0.50	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.50	< 0.50	< 0.10	-
Dichlorodifluoromethane	3500	ug/L	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.40	< 0.20	< 0.40	< 0.40	< 0.40	< 1.0	< 1.0	< 0.20	-
Tetrachloroethene	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-
1,1-Dichloroethane	11	ug/L	< 0.20	< 0.20	< 0.20	< 0.30	< 0.30	< 0.60	< 0.30	< 0.30	< 0.30	< 0.30	< 0.20	< 0.20	< 0.30	-
1,1,1,2-Tetrachloroethane	1.1	ug/L	< 0.50	< 0.50	< 0.50	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.50	< 0.50	< 0.10	-
1,2-Dichloroethane	0.5	ug/L	< 0.50	< 0.50	**9.3**	< 0.20	< 0.20	**40.5**	**2.51**	**3.99**	**7.67**	**4.11**	< 0.50	< 0.50	< 0.20	-
1,1,2,2-Tetrachloroethane	0.5	ug/L	< 0.50	< 0.50	< 0.50	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.50	< 0.50	< 0.10	-
1,1-Dichloroethene	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.30	< 0.30	< 0.4	< 0.30	< 0.30	< 0.30	< 0.30	< 0.20	< 0.20	< 0.30	-
1,1,1-Trichloroethane	23	ug/L	< 0.20	< 0.20	< 0.20	< 0.30	< 0.30	< 0.60	< 0.30	< 0.30	< 0.30	< 0.30	< 0.20	< 0.20	< 0.30	-
trans-1,2-Dichloroethene	1.6	ug/L	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.50	< 0.20	-
1,1,2-Trichloroethane	0.5	ug/L	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.50	< 0.20	-
cis-1,2-Dichloroethene	1.6	ug/L	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.50	< 0.20	-
Trichloroethene	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	**4.26**	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-
1,2-Dichloropropane	0.58	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-
Trichlorofluoromethane	2000	ug/L	< 0.50	< 0.50	< 0.50	< 0.40	< 0.40	< 0.80	< 0.40	< 0.40	< 0.40	< 0.40	< 0.50	< 0.50	< 0.40	-
Vinyl Chloride	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.17	< 0.17	< 0.34	< 0.17	< 0.17	< 0.17	< 0.17	< 0.20	< 0.20	< 0.17	-
1,3-Dichloropropene, Total	0.5	ug/L	< 0.50	< 0.50	< 0.50	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.50	< 0.50	< 0.30	-
Trihalomethanes																
Bromodichloromethane	67000	ug/L	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.50	< 0.20	-
Bromoform	5	ug/L	< 1.0	< 1.0	< 1.0	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 1.0	< 1.0	< 0.10	-
Dibromochloromethane	65000	ug/L	< 0.50	< 0.50	< 0.50	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.50	< 0.50	< 0.10	-
Acid/Base/Neutral Compounds																
1,2,4-Trichlorobenzene	3	ug/L	-	-	-	-	-	< 0.60	-	-	-	-	-	-	-	-

Notes:
Bold: Value exceeding Table 7 standards
Bold: Detection limit exceeding Table 7 standards
ug/L: microgarms per liter
uS/cm: microsiemens per centimeter
NV: No value
REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards for all types of property use for groundwater in coarse textured soil in generic site condition for shallow soils in a non-potable ground water condition

Table 6A
Groundwater Analytical Results - Volatile Organic Compounds
1047 Richmond Road, Ottawa, Ontario

	Sample Location		BH21-14	BH21-14	BH21-14	BH21-14	BH21-14	BH21-14	BH21-14	BH21-14	BH21-14	BH21-15A	BH21-15B	BH21-19	BH21-20	BH21-21	BH21-21	BH21-22	BH22-01	BH22-01	BH22-01
	Sample Name		21-14	BH21-14	DUP	BH21-14	MW 21-14	MW 21-14 dup	21-14	21-14	Dup 1	21-15A	21-15B	21-19	21-20	BH21-21	DUP1	BH21-22	22-1	MW 22-01	MW22-01
	Sample Date		30-11-2021	09-12-2021	09-12-2021	22-12-2021	26-05-2022	26-05-2022	15-11-2022	07-07-2023	07-07-2023	30-11-2021	30-11-2021	30-11-2021	30-11-2021	22-12-2021	22-12-2021	22-12-2021	16-11-2022	26-05-2022	07-07-2023
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**																			
Volatile Organic Compounds																					
Acetone	100000	ug/L	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	NV	ug/L	-	< 0.30	< 0.30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	NV	ug/L	-	< 0.20	< 0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.89	ug/L	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20
1,2-Dibromoethane	0.2	ug/L	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10
Carbon Tetrachloride	0.2	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
n-Hexane	5	ug/L	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20
Chlorobenzene	140	ug/L	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	0.54	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10
2-Butanone	21000	ug/L	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0
Chloroform	2	ug/L	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20
4-Methyl-2-pentanone	5200	ug/L	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	150	ug/L	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	1.59	0.53	0.58	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10
Methyl tert-Butyl Ether	15	ug/L	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20
1,3-Dichlorobenzene	7600	ug/L	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10
Methylene Chloride	26	ug/L	< 0.30	< 0.30	< 0.30	< 0.60	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.60	< 0.30	< 0.30	< 0.30
1,4-Dichlorobenzene	0.5	ug/L	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10
Styrene	43	ug/L	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10
Dichlorodifluoromethane	3500	ug/L	< 0.20	< 0.20	< 0.20	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.40	< 0.40	< 0.40
Tetrachloroethene	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20
1,1-Dichloroethane	11	ug/L	< 0.30	< 0.30	< 0.30	< 0.60	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.60	< 0.30	< 0.30	< 0.30
1,1,1,2-Tetrachloroethane	1.1	ug/L	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10
1,2-Dichloroethane	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	**1.45**	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.5	0.45	< 0.40	< 0.20	< 0.20	< 0.20
1,1,2,2-Tetrachloroethane	0.5	ug/L	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10
1,1-Dichloroethene	0.5	ug/L	< 0.30	< 0.2	< 0.2	< 0.50	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.50	< 0.30	< 0.30	< 0.30
1,1,1-Trichloroethane	23	ug/L	< 0.30	< 0.30	< 0.30	< 0.60	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.60	< 0.30	< 0.30	< 0.30
trans-1,2-Dichloroethene	1.6	ug/L	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20
1,1,2-Trichloroethane	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20
cis-1,2-Dichloroethene	1.6	ug/L	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20
Trichloroethene	0.5	ug/L	< 0.20	**2.11**	**1.99**	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20
1,2-Dichloropropane	0.58	ug/L	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20
Trichlorofluoromethane	2000	ug/L	< 0.40	< 0.40	< 0.40	< 0.80	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.80	< 0.40	< 0.40	< 0.40
Vinyl Chloride	0.5	ug/L	< 0.17	< 0.17	< 0.17	< 0.34	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.34	< 0.17	< 0.17	< 0.17
1,3-Dichloropropene, Total	0.5	ug/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Trihalomethanes																					
Bromodichloromethane	67000	ug/L	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20
Bromoform	5	ug/L	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10
Dibromochloromethane	65000	ug/L	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10
Acid/Base/Neutral Compounds																					
1,2,4-Trichlorobenzene	3	ug/L	-	< 0.30	< 0.30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
Bold: Value exceeding Table 7 standards
Bold: Detection limit exceeding Table 7 standards
ug/L: microgarms per liter
uS/cm: microsiemens per centimeter
NV: No value
REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards
coarse textured soil in generic site c
water condition

Table 6A
Groundwater Analytical Results - Volatile Organic Compounds
1047 Richmond Road, Ottawa, Ontario

		Sample Location	BH22-02	BH22-02	BH22-02	BH22-02	BH22-02	BH22-02	BH22-2	BH22-03	BH22-04	BH22-04	BH22-04	BH22-04	BH22-4	BH22-4	BH22-05	BH22-06	BH22-08	BH22-08	BH22-08	BH22-08
		Sample Name	MW 22-02	22-2	MW22-02	DUP-1	MW 22-02	DUP-1	MW22-02	MW 22-03	MW 22-04	22-4	MW22-04	DUP-2	22-04	MW 22-04	MW 22-05	MW22-06	22-8	dup 2	MW22-8	MW 22-8	DUP-GW
		Sample Date	26-05-2022	16-11-2022	09-02-2023	09-02-2023	16-03-2023	16-03-2023	07-07-2023	26-05-2022	26-05-2022	16-11-2022	07-07-2023	07-07-2023	15-08-2023	21-11-2023	26-05-2022	18-07-2023	15-11-2022	15-11-2022	19-07-2023	21-11-2023	21-11-2023
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**																					
Volatile Organic Compounds																							
Acetone	100000	ug/L	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	NV	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	NV	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	0.89	ug/L	< 0.20	< 0.20	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,2-Dibromoethane	0.2	ug/L	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Carbon Tetrachloride	0.2	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	**< 0.40**	**< 0.40**	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
n-Hexane	5	ug/L	< 0.20	< 0.20	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Chlorobenzene	140	ug/L	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.98	< 0.10	< 0.10	< 0.10
2-Butanone	21000	ug/L	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	2	ug/L	< 0.20	< 0.20	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
4-Methyl-2-pentanone	5200	ug/L	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	150	ug/L	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	4.99	< 0.10	< 0.10	< 0.10
Methyl tert-Butyl Ether	15	ug/L	< 0.20	< 0.20	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,3-Dichlorobenzene	7600	ug/L	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Methylene Chloride	26	ug/L	< 0.30	< 0.30	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
1,4-Dichlorobenzene	0.5	ug/L	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Styrene	43	ug/L	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dichlorodifluoromethane	3500	ug/L	< 0.40	< 0.40	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Tetrachloroethene	0.5	ug/L	< 0.20	< 0.20	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethane	11	ug/L	< 0.30	< 0.30	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
1,1,1,2-Tetrachloroethane	1.1	ug/L	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
1,2-Dichloroethane	0.5	ug/L	< 0.20	**7.69**	**2.48**	**2.58**	**5.03**	**5.17**	**4.26**	**3.14**	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	**7.39**	< 0.20	< 0.20	< 0.20
1,1,2,2-Tetrachloroethane	0.5	ug/L	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
1,1-Dichloroethene	0.5	ug/L	< 0.30	< 0.30	< 0.50	< 0.50	**< 0.60**	**< 0.60**	< 0.50	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
1,1,1-Trichloroethane	23	ug/L	< 0.30	< 0.30	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
trans-1,2-Dichloroethene	1.6	ug/L	< 0.20	< 0.20	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1,2-Trichloroethane	0.5	ug/L	< 0.20	< 0.20	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
cis-1,2-Dichloroethene	1.6	ug/L	< 0.20	< 0.20	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.42	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Trichloroethene	0.5	ug/L	< 0.20	< 0.20	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,2-Dichloropropane	0.58	ug/L	< 0.20	< 0.20	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Trichlorofluoromethane	2000	ug/L	< 0.40	< 0.40	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Vinyl Chloride	0.5	ug/L	< 0.17	< 0.17	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17
1,3-Dichloropropene, Total	0.5	ug/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Trihalomethanes																							
Bromodichloromethane	67000	ug/L	< 0.20	< 0.20	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Bromoform	5	ug/L	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibromochloromethane	65000	ug/L	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acid/Base/Neutral Compounds																							
1,2,4-Trichlorobenzene	3	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
Bold: Value exceeding Table 7 standards
Bold: Detection limit exceeding Table 7 standards
ug/L: microgarms per liter
uS/cm: microsiemens per centimeter
NV: No value
REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards
coarse textured soil in generic site c
water condition

Table 6A
Groundwater Analytical Results - Volatile Organic Compounds
1047 Richmond Road, Ottawa, Ontario

		Sample Location	BH22-09D	BH22-09D	BH22-09S	BH22-10D	BH22-10S	FIELD BLANK	FIELD BLANK	FIELD BLANK	FIELD BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
		Sample Name	22-09D	DUP2	22-09S	22-10D	22-10S	F- BLANK	FIELD BLANK	Field Blank	Field Blank VOCs	TRIP BLANK	TRIP BLANK	Trip Blank	trip blank	Trip Blank VOCs
		Sample Date	29-05-2023	29-05-2023	29-05-2023	29-05-2023	29-05-2023	04-10-2021	22-12-2021	26-05-2022	29-05-2023	04-10-2021	22-12-2021	26-05-2022	15-11-2022	29-05-2023
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**														
Volatile Organic Compounds																
Acetone	100000	ug/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,3-Dichloropropene	NV	ug/L	-	-	-	-	-	< 0.40	-	-	-	< 0.40	-	-	-	-
cis-1,3-Dichloropropene	NV	ug/L	-	-	-	-	-	< 0.30	-	-	-	< 0.30	-	-	-	-
Bromomethane	0.89	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20
1,2-Dibromoethane	0.2	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10
Carbon Tetrachloride	0.2	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
n-Hexane	5	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20
Chlorobenzene	140	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10
2-Butanone	21000	ug/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	2	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
4-Methyl-2-pentanone	5200	ug/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	150	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.50	< 0.10	< 0.10	< 0.10	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10
Methyl tert-Butyl Ether	15	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20
1,3-Dichlorobenzene	7600	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.50	< 0.10	< 0.10	< 0.10	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10
Methylene Chloride	26	ug/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 2.0	< 0.30	< 0.30	< 0.30	< 2.0	< 0.30	< 0.30	< 0.30	< 0.30
1,4-Dichlorobenzene	0.5	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.50	< 0.10	< 0.10	< 0.10	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10
Styrene	43	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.50	< 0.10	< 0.10	< 0.10	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10
Dichlorodifluoromethane	3500	ug/L	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 1.0	< 0.20	< 0.40	< 0.40	< 1.0	< 0.20	< 0.40	< 0.40	< 0.40
Tetrachloroethene	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethane	11	ug/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.20	< 0.30	< 0.30	< 0.30	< 0.20	< 0.30	< 0.30	< 0.30	< 0.30
1,1,1,2-Tetrachloroethane	1.1	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.50	< 0.10	< 0.10	< 0.10	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10
1,2-Dichloroethane	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20
1,1,2,2-Tetrachloroethane	0.5	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.50	< 0.10	< 0.10	< 0.10	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10
1,1-Dichloroethene	0.5	ug/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.20	< 0.30	< 0.30	< 0.30	< 0.20	< 0.30	< 0.30	< 0.30	< 0.30
1,1,1-Trichloroethane	23	ug/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.20	< 0.30	< 0.30	< 0.30	< 0.20	< 0.30	< 0.30	< 0.30	< 0.30
trans-1,2-Dichloroethene	1.6	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20
1,1,2-Trichloroethane	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20
cis-1,2-Dichloroethene	1.6	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20
Trichloroethene	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,2-Dichloropropane	0.58	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Trichlorofluoromethane	2000	ug/L	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.50	< 0.40	< 0.40	< 0.40	< 0.50	< 0.40	< 0.40	< 0.40	< 0.40
Vinyl Chloride	0.5	ug/L	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.20	< 0.17	< 0.17	< 0.17	< 0.20	< 0.17	< 0.17	< 0.17	< 0.17
1,3-Dichloropropene, Total	0.5	ug/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	-	< 0.30	< 0.30	< 0.30	-	< 0.30	< 0.30	< 0.30	< 0.30
Trihalomethanes																
Bromodichloromethane	67000	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 0.20	< 0.20	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20
Bromoform	5	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 1.0	< 0.10	< 0.10	< 0.10	< 1.0	< 0.10	< 0.10	< 0.10	< 0.10
Dibromochloromethane	65000	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.50	< 0.10	< 0.10	< 0.10	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10
Acid/Base/Neutral Compounds																
1,2,4-Trichlorobenzene	3	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
Bold: Value exceeding Table 7 standards
Bold: Detection limit exceeding Table 7 standards
ug/L: microgarms per liter
uS/cm: microsiemens per centimeter
NV: No value
REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards
coarse textured soil in generic site c
water condition

Table 6B
Groundwater Analytical Results - Petroleum Hydrocarbons F1 to F4, Benzene, Toluene, Ethylbenzene and Xylenes
1047 Richmond Road, Ottawa, Ontario

		Sample Location	BH21-02	BH21-03	BH21-04	BH21-04	BH21-04	BH21-04	BH21-04	BH21-04	BH21-04	BH21-04	BH21-05	BH21-05
		Sample Name	21-2	21-3	21-4	21-4	DUP-1	BH21-04	BH21-4	MW 21-04	21-4	MW21-04	21-5	DUP-1
		Sample Date	04-10-2021	04-10-2021	04-10-2021	30-11-2021	30-11-2021	09-12-2021	22-12-2021	26-05-2022	15-11-2022	07-07-2023	04-10-2021	04-10-2021
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**												
Petroleum Hydrocarbons														
Petroleum Hydrocarbons - F1 (C6-C10)	420	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	-	< 25	< 25	< 25
Petroleum Hydrocarbons - F1 (C6-C10)-BTEX	420	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	-	< 25	< 25	< 25
Petroleum Hydrocarbons - F2 (C10-C16)	150	ug/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	-	< 100	< 100	< 100
Petroleum Hydrocarbons - F3 (C16-C34)	500	ug/L	< 200	< 200	< 200	< 100	< 100	< 100	< 100	< 100	-	< 100	< 200	< 200
Petroleum Hydrocarbons - F4 (C34-C50)	500	ug/L	< 200	< 200	< 200	< 100	< 100	< 100	< 100	< 100	-	< 100	< 200	< 200
BTEX														
Benzene	0.5	ug/L	< 0.17	< 0.17	0.49	**1.66**	**1.86**	**2.81**	< 0.20	**2.39**	< 0.20	< 0.20	< 0.17	< 0.17
Ethylbenzene	54	ug/L	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.20
Toluene	320	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Xylenes, Total	72	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
m,p-Xylenes	NV	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
o-Xylene	NV	ug/L	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.20

Notes:

Bold: Value exceeding Table 7 standards

ug/L: microgarms per liter

uS/cm: microsiemens per centimeter

NV: No value

REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards for all types of property use for groundwater in coarse textured soil in generic site condition for shallow soils in a non-potable ground water condition

Table 6B
Groundwater Analytical Results - Petroleum Hydrocarbons F1 to F4, Benzene, Toluene, Ethylbenzene and Xylenes
1047 Richmond Road, Ottawa, Ontario

		Sample Location	BH21-11	BH21-11	BH21-14	BH21-14	BH21-14	BH21-14	BH21-14	BH21-14	BH21-14	BH21-14	BH21-14	BH21-15A
		Sample Name	21-11	DUP-2	21-14	BH21-14	DUP	BH21-14	MW 21-14	MW 21-14 dup	21-14	21-14	Dup 1	21-15A
		Sample Date	30-11-2021	30-11-2021	30-11-2021	09-12-2021	09-12-2021	22-12-2021	26-05-2022	26-05-2022	15-11-2022	07-07-2023	07-07-2023	30-11-2021
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**												
Petroleum Hydrocarbons														
Petroleum Hydrocarbons - F1 (C6-C10)	420	ug/L	< 25	-	< 25	< 25	< 25	< 25	< 25	< 25	-	< 25	< 25	< 25
Petroleum Hydrocarbons - F1 (C6-C10)-BTEX	420	ug/L	< 25	-	< 25	< 25	< 25	< 25	< 25	< 25	-	< 25	< 25	< 25
Petroleum Hydrocarbons - F2 (C10-C16)	150	ug/L	< 100	-	< 100	< 100	< 100	< 100	< 100	< 100	-	< 100	< 100	< 100
Petroleum Hydrocarbons - F3 (C16-C34)	500	ug/L	< 100	-	< 100	< 100	< 100	< 100	< 100	< 100	-	< 100	< 100	< 100
Petroleum Hydrocarbons - F4 (C34-C50)	500	ug/L	< 100	-	< 100	< 100	< 100	< 100	< 100	< 100	-	< 100	< 100	< 100
BTEX														
Benzene	0.5	ug/L	< 0.20	-	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Ethylbenzene	54	ug/L	< 0.10	-	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Toluene	320	ug/L	< 0.20	-	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Xylenes, Total	72	ug/L	< 0.20	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
m,p-Xylenes	NV	ug/L	< 0.20	-	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
o-Xylene	NV	ug/L	< 0.10	-	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Notes:

Bold: Value exceeding Table 7 standards

ug/L: microgarms per liter

uS/cm: microsiemens per centimeter

NV: No value

REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards for all types of property use for groundwater in coarse textured soil in generic site condition for shallow soils in a non-potable ground water condition

Table 6B
Groundwater Analytical Results - Petroleum Hydrocarbons F1 to F4, Benzene, Toluene, Ethylbenzene and Xylenes
1047 Richmond Road, Ottawa, Ontario

		Sample Location	BH21-15B	BH21-19	BH21-20	BH21-21	BH21-21	BH21-22	BH22-01	BH22-01	BH22-1	BH22-02	BH22-02	BH22-02
		Sample Name	21-15B	21-19	21-20	BH21-21	DUP1	BH21-22	MW 22-01	22-1	MW22-01	MW 22-02	22-2	MW22-02
		Sample Date	30-11-2021	30-11-2021	30-11-2021	22-12-2021	22-12-2021	22-12-2021	26-05-2022	16-11-2022	07-07-2023	26-05-2022	16-11-2022	09-02-2023
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**												
Petroleum Hydrocarbons														
Petroleum Hydrocarbons - F1 (C6-C10)	420	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	-	< 25	< 25	-	-
Petroleum Hydrocarbons - F1 (C6-C10)-BTEX	420	ug/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	-	< 25	< 25	-	-
Petroleum Hydrocarbons - F2 (C10-C16)	150	ug/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	-	< 100	< 100	-	-
Petroleum Hydrocarbons - F3 (C16-C34)	500	ug/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	-	< 100	< 100	-	-
Petroleum Hydrocarbons - F4 (C34-C50)	500	ug/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	-	< 100	< 100	-	-
BTEX														
Benzene	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40
Ethylbenzene	54	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20
Toluene	320	ug/L	< 0.20	0.63	0.31	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40
Xylenes, Total	72	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
m,p-Xylenes	NV	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.40
o-Xylene	NV	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20

Notes:

Bold: Value exceeding Table 7 standards

ug/L: microgarms per liter

uS/cm: microsiemens per centimeter

NV: No value

REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards for all types of property use for groundwater in coarse textured soil in generic site condition for shallow soils in a non-potable ground water condition

Table 6B
Groundwater Analytical Results - Petroleum Hydrocarbons F1 to F4, Benzene, Toluene, Ethylbenzene and Xylenes
1047 Richmond Road, Ottawa, Ontario

		Sample Location	BH22-02	BH22-02	BH22-02	BH22-02	BH22-03	BH22-04	BH22-04	BH22-04	BH22-04	BH22-04	BH22-04	BH22-05	BH22-06
		Sample Name	DUP-1	MW 22-02	DUP-1	MW22-02	MW 22-03	MW 22-04	22-4	MW22-04	DUP-2	22-04	MW 22-04	MW 22-05	MW22-06
		Sample Date	09-02-2023	16-03-2023	16-03-2023	07-07-2023	26-05-2022	26-05-2022	16-11-2022	07-07-2023	07-07-2023	15-08-2023	21-11-2023	26-05-2022	18-07-2023
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**													
Petroleum Hydrocarbons															
Petroleum Hydrocarbons - F1 (C6-C10)	420	ug/L	-	-	-	< 25	< 25	< 25	-	< 25	< 25	< 25	< 25	< 25	< 25
Petroleum Hydrocarbons - F1 (C6-C10)-BTEX	420	ug/L	-	-	-	< 25	< 25	< 25	-	< 25	< 25	< 25	< 25	< 25	< 25
Petroleum Hydrocarbons - F2 (C10-C16)	150	ug/L	-	-	-	< 100	120	< 100	-	< 100	< 100	< 100	**214**	< 100	< 100
Petroleum Hydrocarbons - F3 (C16-C34)	500	ug/L	-	-	-	< 100	300	< 100	-	**542**	**569**	< 100	**2840**	< 100	< 100
Petroleum Hydrocarbons - F4 (C34-C50)	500	ug/L	-	-	-	< 100	< 100	< 100	-	< 100	< 100	< 100	< 100	< 100	< 100
BTEX															
Benzene	0.5	ug/L	< 0.40	< 0.40	< 0.40	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Ethylbenzene	54	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Toluene	320	ug/L	< 0.40	< 0.40	< 0.40	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Xylenes, Total	72	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
m,p-Xylenes	NV	ug/L	< 0.40	< 0.40	< 0.40	< 0.40	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
o-Xylene	NV	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Notes:

Bold: Value exceeding Table 7 standards

ug/L: microgarms per liter

uS/cm: microsiemens per centimeter

NV: No value

REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards for all types of property use for groundwater in coarse textured soil in generic site condition for shallow soils in a non-potable ground water condition

Table 6B
Groundwater Analytical Results - Petroleum Hydrocarbons F1 to F4, Benzene, Toluene, Ethylbenzene and Xylenes
1047 Richmond Road, Ottawa, Ontario

		Sample Location	BH22-08	BH22-08	BH22-08	BH22-08	BH22-08	BH22-09D	BH22-09D	BH22-09S	BH22-10D	BH22-10S	FIELD BLANK	FIELD BLANK	FIELD BLANK
		Sample Name	22-8	dup 2	MW22-8	MW 22-8	DUP-GW	22-09D	DUP2	22-09S	22-10D	22-10S	F- BLANK	FIELD BLANK	Field Blank
		Sample Date	15-11-2022	15-11-2022	19-07-2023	21-11-2023	21-11-2023	29-05-2023	29-05-2023	29-05-2023	29-05-2023	29-05-2023	04-10-2021	22-12-2021	26-05-2022
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**													
Petroleum Hydrocarbons															
Petroleum Hydrocarbons - F1 (C6-C10)	420	ug/L	-	-	< 25	< 25	< 25	-	-	-	-	-	< 25	< 25	-
Petroleum Hydrocarbons - F1 (C6-C10)-BTEX	420	ug/L	-	-	< 25	< 25	< 25	-	-	-	-	-	< 25	< 25	-
Petroleum Hydrocarbons - F2 (C10-C16)	150	ug/L	-	-	< 100	< 100	< 100	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons - F3 (C16-C34)	500	ug/L	-	-	< 100	< 100	< 100	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons - F4 (C34-C50)	500	ug/L	-	-	< 100	< 100	< 100	-	-	-	-	-	-	-	-
BTEX															
Benzene	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.17	< 0.20	< 0.20
Ethylbenzene	54	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10
Toluene	320	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Xylenes, Total	72	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
m,p-Xylenes	NV	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
o-Xylene	NV	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10

Notes:

Bold: Value exceeding Table 7 standards

ug/L: microgarms per liter

uS/cm: microsiemens per centimeter

NV: No value

REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards for all types of property use for groundwater in coarse textured soil in generic site condition for shallow soils in a non-potable ground water condition

Table 6B
Groundwater Analytical Results - Petroleum Hydrocarbons F1 to F4, Benzene, Toluene, Ethylbenzene and Xylenes
1047 Richmond Road, Ottawa, Ontario

		Sample Location	FIELD BLANK
		Sample Name	Field Blank VOCs
		Sample Date	29-05-2023
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**	
Petroleum Hydrocarbons			
Petroleum Hydrocarbons - F1 (C6-C10)	420	ug/L	-
Petroleum Hydrocarbons - F1 (C6-C10)-BTEX	420	ug/L	-
Petroleum Hydrocarbons - F2 (C10-C16)	150	ug/L	-
Petroleum Hydrocarbons - F3 (C16-C34)	500	ug/L	-
Petroleum Hydrocarbons - F4 (C34-C50)	500	ug/L	-
BTEX			
Benzene	0.5	ug/L	< 0.20
Ethylbenzene	54	ug/L	< 0.10
Toluene	320	ug/L	< 0.20
Xylenes, Total	72	ug/L	< 0.20
m,p-Xylenes	NV	ug/L	< 0.20
o-Xylene	NV	ug/L	< 0.10

Notes:

Bold: Value exceeding Table 7 standards

ug/L: microgarms per liter

uS/cm: microsiemens per centimeter

NV: No value

REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards for all types of property use for groundwater in coarse textured soil in generic site condition for shallow soils in a non-potable ground water condition

Table 6B
Groundwater Analytical Results - Petroleum Hydrocarbons F1 to F4, Benzene, Toluene, Ethylbenzene and Xylenes
1047 Richmond Road, Ottawa, Ontario

		Sample Location	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
		Sample Name	TRIP BLANK	TRIP BLANK	Trip Blank	trip blank	Trip Blank VOCs
		Sample Date	04-10-2021	22-12-2021	26-05-2022	15-11-2022	29-05-2023
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**					
Petroleum Hydrocarbons							
Petroleum Hydrocarbons - F1 (C6-C10)	420	ug/L	< 25	< 25	-	-	-
Petroleum Hydrocarbons - F1 (C6-C10)-BTEX	420	ug/L	< 25	< 25	-	-	-
Petroleum Hydrocarbons - F2 (C10-C16)	150	ug/L	-	-	-	-	-
Petroleum Hydrocarbons - F3 (C16-C34)	500	ug/L	-	-	-	-	-
Petroleum Hydrocarbons - F4 (C34-C50)	500	ug/L	-	-	-	-	-
BTEX							
Benzene	0.5	ug/L	< 0.17	< 0.20	< 0.20	< 0.20	< 0.20
Ethylbenzene	54	ug/L	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10
Toluene	320	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Xylenes, Total	72	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
m,p-Xylenes	NV	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
o-Xylene	NV	ug/L	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10

Notes:

Bold: Value exceeding Table 7 standards

ug/L: microgarms per liter

uS/cm: microsiemens per centimeter

NV: No value

REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards for all types of property use for groundwater in coarse textured soil in generic site condition for shallow soils in a non-potable ground water condition

Table 6C
Groundwater Analytical Results - Metals and Other Regulated Parameters
1047 Richmond Road, Ottawa, Ontario

		Sample Location	BH21-02	BH21-03	BH21-04	BH21-05	BH21-05	BH21-11	BH21-11
		Sample Name	21-2	21-3	21-4	21-5	DUP-1	21-11	DUP-2
		Sample Date	04-10-2021	04-10-2021	04-10-2021	04-10-2021	04-10-2021	30-11-2021	30-11-2021
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**							
Metals									
Barium	23000	ug/L	55	36	140	77	77	47.7	59.7
Beryllium	53	ug/L	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.50	< 0.50
Boron	36000	ug/L	82	86	91	150	140	85	89
Cadmium	2.1	ug/L	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.20	< 0.20
Chromium	640	ug/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0
Cobalt	52	ug/L	< 0.50	< 0.50	4.2	< 0.50	< 0.50	0.65	1.24
Copper	69	ug/L	1.6	< 0.90	< 0.90	< 0.90	< 0.90	1.2	< 1.0
Lead	20	ug/L	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Molybdenum	7300	ug/L	< 0.50	0.57	< 0.50	< 0.50	< 0.50	0.63	0.83
Nickel	390	ug/L	1.6	1.1	2.7	< 1.0	1	2.5	2.9
Silver	1.2	ug/L	< 0.090	< 0.090	< 0.090	< 0.090	< 0.090	< 0.20	< 0.20
Thallium	400	ug/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.30	< 0.30
Uranium	330	ug/L	0.69	0.64	0.52	0.54	0.54	0.75	0.84
Vanadium	200	ug/L	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.56	< 0.40
Zinc	890	ug/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Metals, Hydride-Forming									
Antimony	16000	ug/L	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0
Selenium	50	ug/L	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0
Arsenic	1500	ug/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	6	4.1
Other Regulated Parameters									
Hexavalent Chromium	110	ug/L	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2	< 2
Cyanide (free)	52	ug/L	-	-	-	-	-	3	< 2
Cyanide (WAD)	52	ug/L	< 1	< 1	< 1	< 1	< 1	-	-
Mercury	0.1	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.02	< 0.02
Sodium	1800000	ug/L	170000	87000	34000	65000	64000	65500	63100
Chloride	1800	mg/L	150	47	47	36	36	121	124
pH	NV	pH units	-	-	-	-	-	7.5	7.64

Notes:

Bold: Value exceeding Table 7 standards

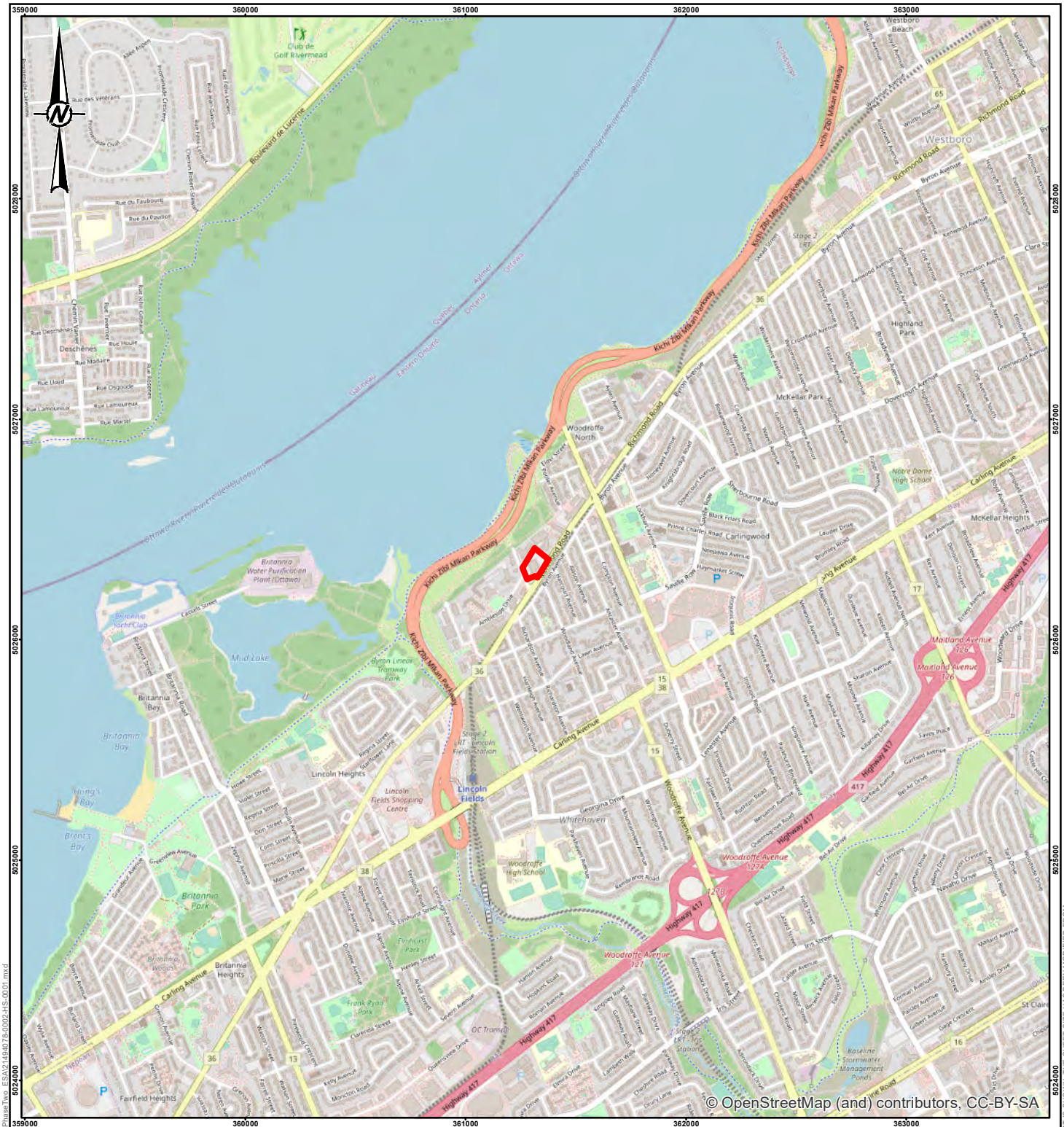
ug/L: microgarms per liter

uS/cm: microsiemens per centimeter

NV: No value

REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards for all types of property use for groundwater in coarse textured soil in generic site condition for shallow soils in a non-potable ground water condition

Figures



LEGEND

APPROXIMATE SITE BOUNDARY

0 250 500 1,000

1:25,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT

1047 RICHMOND NOMINEE INC.

PROJECT

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE

KEY PLAN

CONSULTANT

wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	JEM
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm 0

Path: S:\Clients\Fenrate\1047 Richmond Rd\69 PROJ\21494078 Fenrate GeoEnviro\0002 Phase Two ESA\21494078-0002-HS-0001.mxd

LEGEND

ROADWAY

APPROXIMATE SITE BOUNDARY

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 10 20 40

1:750 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
SITE PLAN

CONSULTANT

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	JEM
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	**2**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm

Path: S:\Clients\Fengate\1047_Richmond_R499_PRO\21494078_Fengate_GeoEnviro\0002_PhaseTwo_ESA\21494078-0002-HS-0002.mxd

LEGEND

- POTENTIALLY CONTAMINATING ACTIVITY (PCA)
- ROADWAY
- WETLAND
- WATERBODY
- APPROXIMATE SITE BOUNDARY
- PHASE ONE STUDY AREA

Potentially Contaminiating Activities ("PCA")

Location	Detail	O.Reg. 153/04 PCA#
A	Commercial Autobody Shops – The Site was used as a car dealership and had an automotive garage and associated equipment present until at least 2022.	10
B	Gasoline and Associated Products Storage in Fixed Tanks – Former underground storage tank (UST) areas identified on the Site.	28
C	Gasoline and Associated Products Storage in Fixed Tanks – Presence of one above-ground storage tank (AST) used waste lubricant oil, three motor lubricant oil ASTs and oil-stained asphalt	28
D	Paints Manufacturing, Processing and Bulk Storage – Presence of painting operations (paint booth)	39
E	Importation of Fill Material of Unknown Quality – Due to the age of the Site, inferred fill materials to be present site-wide	30
F	Transformer Manufacturing, Processing and Use – Pole-mounted transformer located at the driveway of New Orchard Road	55
G	Other – The application of de-icing salt for vehicular and pedestrian safety has occurred at the Phase One Property	(Other)
H	Railyards, Tracks and Spurs – A Canadian National Railway corridor was historically located 350 m north of the Phase One Property	46
I	Gasoline and Associated Products Storage in Fixed Tanks – A former gas station was reported at 1051 Richmond Road (130 m southwest of the Phase One Property)	28
J	Operation of Dry-Cleaning Equipment (where chemicals are used) – A former Laundry cleaning facility was reported at 993 Richmond Road, 101 m northeast of the Phase One Property	37
K	Commercial Autobody Shops – A automotive repair shop is located at 1075 Richmond Road, 116 m southwest of the Phase One Property	10
L	Gasoline and Associated Products Storage in Fixed Tanks – Extendicare, located at 99 New Orchard Ave 30 m northwest of the Phase One Property, was a waste generator in 2006 and 2010 for light fuels & inorganic laboratory chemicals, waste oils & lubricants and oil skimmings & sludges.	28
M	Transformer Manufacturing, Processing and Use – Transformer located approximately 125 m northwest of the Phase One Property, along New Orchard Ave.	55
N	Commercial Autobody Shops – Tops Car Wash Co. Limited is located at 979 Richmond Road, 129 m northeast of the Phase One Property. It was listed as a motor vehicle repair shop in 2005, had a UST associated with it until at least 1992, and waste generator records for light fuels from 2002-2004.	10
O	NA – Multiple spills associated with LRT construction on the adjacent Property to the south between 2019 and 2022. Spilled products include diesel fuel (50 L in 2020), raw sewage (180 L in 2021), and hydraulic oil (various small-volume spills from 2019-2022).	NA

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 25 50 100
1:2,750 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
POTENTIALLY CONTAMINATING ACTIVITIES

CONSULTANT

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	JEM
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm 0

Path: S:\Clients\Fengate\1047_Richmond_R499_PRO\21494078_Fengate_GeoEnviro0002_PhaseTwo_ESA\21494078-0002-HS-00\3.mxd

LEGEND

- APEC 1
- APEC 2A
- APEC 2B
- APEC 3
- APEC 4
- APEC 5
- APEC 6
- APEC 7
- ROADWAY
- APPROXIMATE SITE BOUNDARY

Areas of Potential Environmental Concern ("APEC")		
APEC	**Description**	**O. Reg 153/04 - PCA#**
APEC 1	On-site Automotive garage	10
APEC 2A	Former UST Location - Northeast Portion of the Site Building	28
APEC 2B	Former UST Location - Southeast Portion of the Site Building	
APEC 3	Presence of an AST, used waste lubricant oil and oil-stained ashphalt	28
APEC 4	Presence of painting operations (paint booth)	39
APEC 5	Inferred fill materials to be present site-wide	30
APEC 6	Pole mounted transformer	55
APEC 7	Application of de-icing salt	(other)

NOTE(S)
1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)
1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY WSP UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © KING'S PRINTER 2023
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 10 20 40
1:750 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

CONSULTANT

YYYY-MM-DD	2023-10-02
DESIGNED	DS
PREPARED	JEM
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	**4**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm

Path: S:\Clients\Fengate\1047 - Richmond, R d\99 - PROJ\21494078_Fengate_GeoEnviro\0002 - Phase Two_ ESA\21494078-0002-HS-0104.mxd

LEGEND

- APPROXIMATE BOREHOLE LOCATION
- APPROXIMATE TEST PIT LOCATION
- CROSS-SECTION LOCATION
- APPROXIMATE SITE BOUNDARY

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 10 20 40

1:750 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
BOREHOLE AND MONITORING WELL LOCATION PLAN

CONSULTANT

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	JEM
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	**5**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm

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LEGEND

- APPROXIMATE BOREHOLE LOCATION
- APPROXIMATE TEST PIT LOCATION
- GROUNDWATER CONTOUR
- INFERRED GROUNDWATER FLOW
- CROSS-SECTION LOCATION
- APPROXIMATE SITE BOUNDARY

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

22-09 — Borehole ID
56.71 — Groundwater Elevation

0 10 20 40
1:750 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
SHALLOW GROUNDWATER ELEVATIONS (AUGUST 8, 2023)

CONSULTANT

YYYY-MM-DD	2023-09-27
DESIGNED	DS
PREPARED	JEM
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	**6**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm

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LEGEND

- APPROXIMATE BOREHOLE LOCATION
- APPROXIMATE TEST PIT LOCATION
- CROSS-SECTION LOCATION
- APPROXIMATE SITE BOUNDARY

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE
2. (*) GROUNDWATER LEVEL JULY 19, 2023.

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

Groundwater Elevation

Well ID — 22-05 (58.10)

0 10 20 40

1:750 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
DEEP GROUNDWATER ELEVATION (AUG. 2023)

CONSULTANT

wsp

YYYY-MM-DD	2023-09-27
DESIGNED	DS
PREPARED	JEM
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	7

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm

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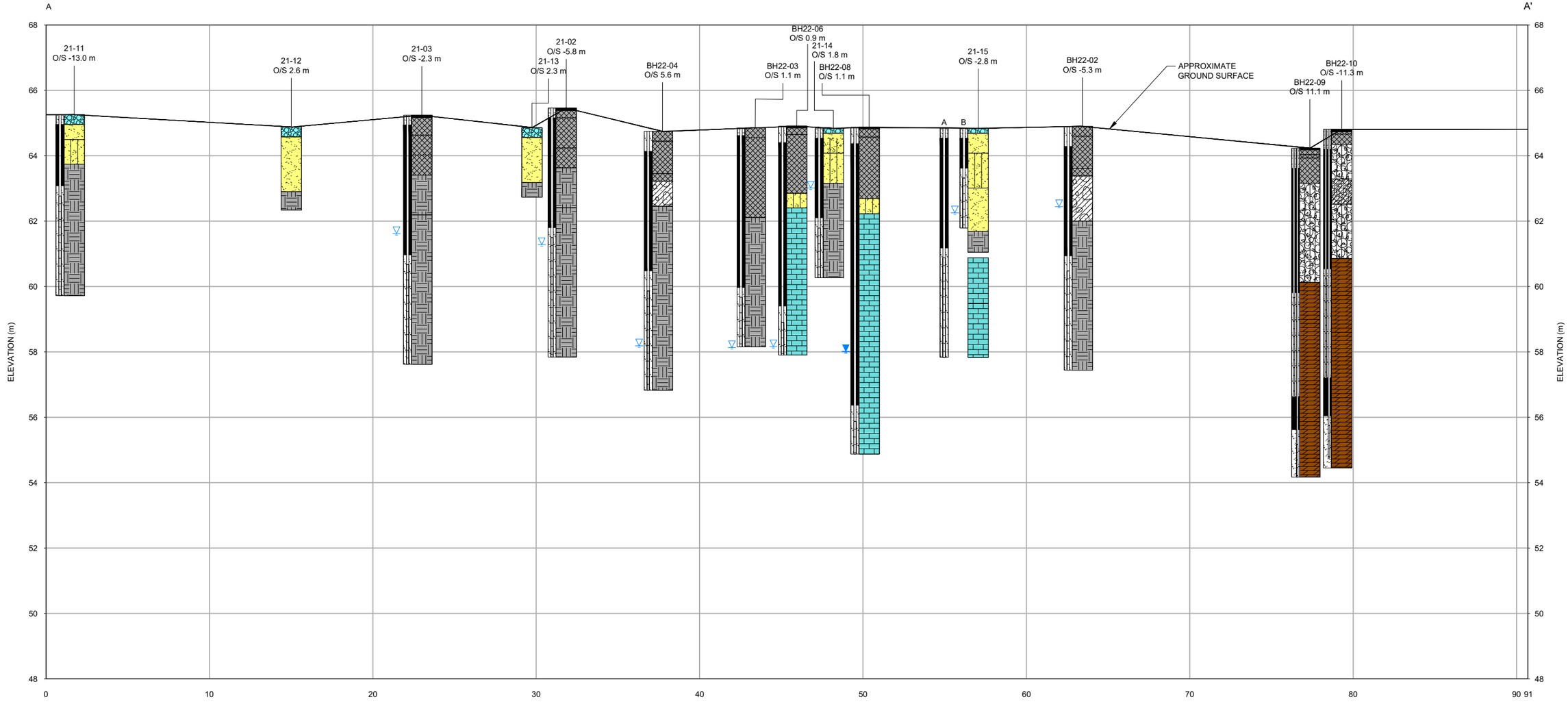
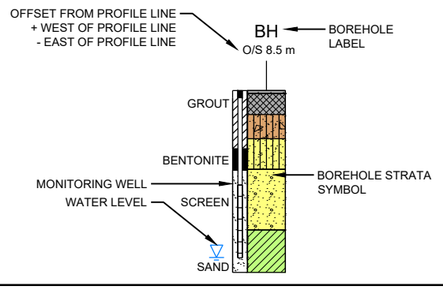


SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- BEDROCK

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-07-18
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
CROSS SECTION A-A'

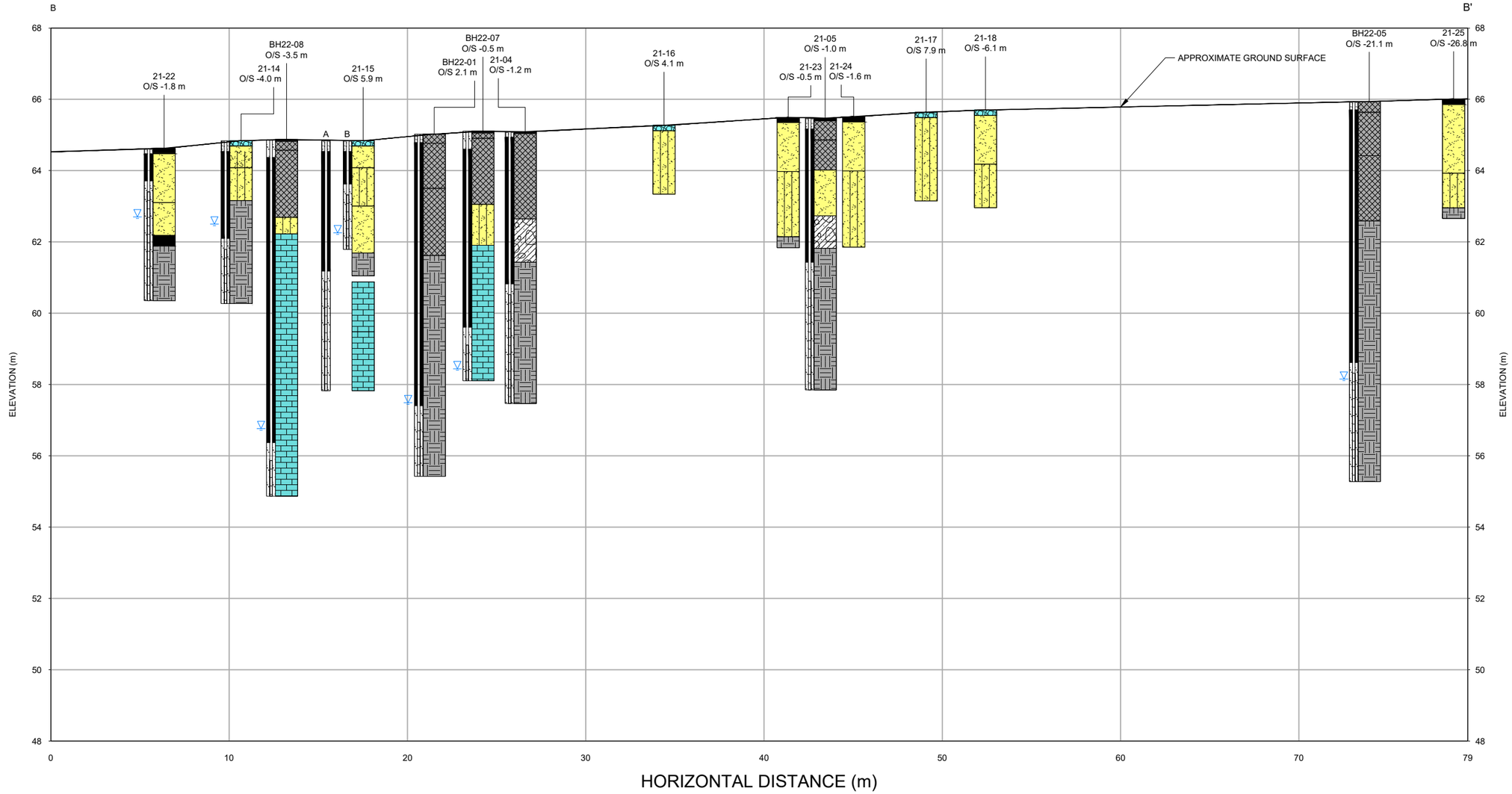
PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0001	0	8

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

0

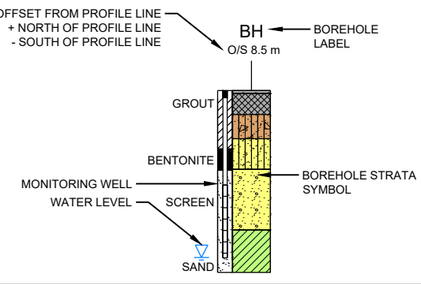
Path: \\pdde.gdi\ccomplexdata\office\Ontario\SM\Clients\Fengate\1047_Richmond_Rd\99_PRO\21494078_Fengate_GeoEnviro\0007_PhaseTwo_ESA_2023\ | File Name: 21494078-0007-HS-0008.dwg



SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- BEDROCK

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-07-18
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
CROSS SECTION B-B'

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0001	0	9

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

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Parameter	Unit	REG153 (11) T7 R/P/I SOIL COARSE [1]	BH21-13	BH21-13
			11-Nov-2021	11-Nov-2021
			21-13 SA2	21-13 SA3
Sample Depth	m		0.76 - 1.52	1.52 - 2.13
SAR	ug/g	5	0.54	7.3

Parameter	Unit	REG153 (11) T7 R/P/I SOIL COARSE [1]	BH21-11	BH21-11
			12-Nov-2021	12-Nov-2021
			21-11 SA2	21-12 SA3
Sample Depth	m		0.76 - 1.52	1.52 -1.88
SAR	ug/g	5	6.6	5.9

Parameter	Unit	REG153 (11) T7 R/P/I SOIL COARSE [1]	BH21-03	BH21-03	BH21-03	BH21-03
			22-Sep-2021	22-Sep-2021	22-Sep-2021	22-Sep-2021 [3]
			21-03 SA2	21-03 SA2	21-03 SA3	21-03DUP-1 (Dup of SA3)
Sample Depth	m		0.076 - 0.6	0.6 - 1.22	1.22 - 1.83	1.22 - 1.83
SAR	ug/g	5	No Exceedences	5.3	6.1	6.6

LEGEND

- CROSS-SECTION LOCATION
- APPROXIMATE BOREHOLE LOCATION
- APPROXIMATE TEST PIT LOCATION
- LOCATION WHERE ALL SAMPLES MEET APPLICABLE STANDARDS
- LOCATION WHERE APPLICABLE STANDARD IS DEEMED NOT TO BE AN EXCEEDANCE AS PER SECTION 49.1 OF O.Reg 153/04
- APPROXIMATE SITE BOUNDARY

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE
2. BOLD AND SHADED VALUE INDICATES PARAMETER IS GREATER THAN REG153, TABLE 7 I/C/C STANDARDS
3. UNDERLINED VALUE INDICATES PARAMETER IS GREATER THAN REG153, TABLE 7 R/P/I STANDARDS
4. [1]O.REG 153 (2011) TABLE 7 STANDARDS FOR INDUSTRIAL/COMMERCIAL/COMMUNITY (I/C/C) PROPERTY USE FOR COARSE TEXTURED SOIL IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION
5. [2]O.REG 153 (2011) TABLE STANDARDS FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL (R/P/I) PROPERTY USE FOR COARSE TEXTURED SOIL IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION
6. * OTHER PARAMETERS CONSIST OF: CONDUCTIVITY, CYANIDE (WAD), pH, SODIUM ADSORPTION RATIO (SAR)
7. - INDICATES PARAMETER IS NOT ANALYZED OR NOT APPLICABLE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 10 20 40
1:750 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
SOIL ANALYTICAL RESULTS - SAR

CONSULTANT

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	JEM
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	**10A**

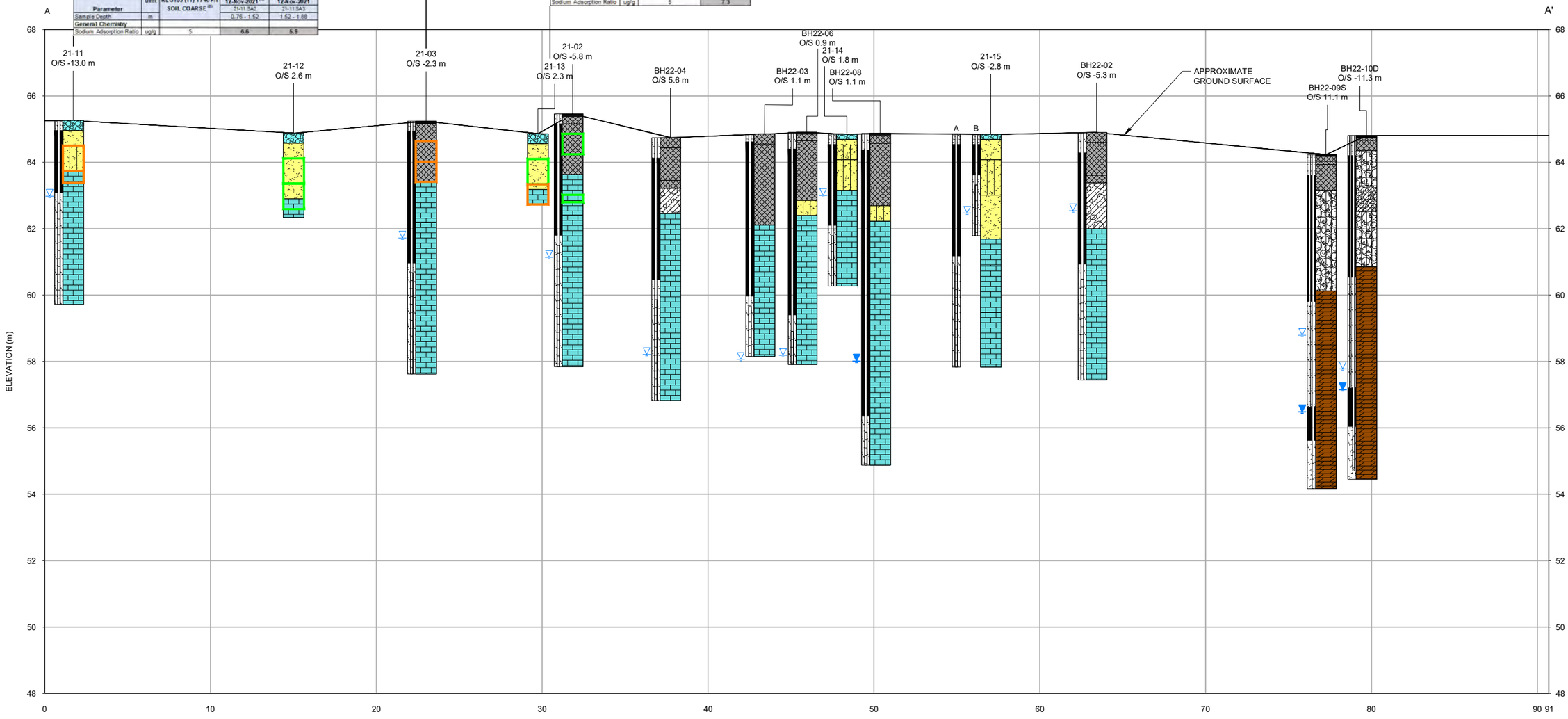
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
25mm
0

Path: S:\Clients\Fengate\1047_Richmond_Rd\99_PRO\21494078_Fengate_GeoEnviro\0002_PhaseTwo_ESA\21494078-0002-HS-0010A.mxd

Parameter	Unit	REG153 (11) T7-R/P/I SOIL COARSE [2]	BH21-03 22-Sep-2021 [3]	BH21-03 22-Sep-2021	BH21-03 22-Sep-2021
			21-3DUP-1	21-3 SA2	21-3 SA3
Sample Depth	m		1.22 - 1.83	0.6 - 1.22	1.22 - 1.83
General Chemistry					
Sodium Adsorption Ratio	ug/g	5	9.6	5.3	6.1

Parameter	Unit	REG153 (11) T7-R/P/I SOIL COARSE [2]	BH21-11 12-Nov-2021 [4]	BH21-11 12-Nov-2021
			21-11 SA2	21-11 SA3
Sample Depth	m		0.76 - 1.52	1.52 - 1.88
General Chemistry				
Sodium Adsorption Ratio	ug/g	5	6.6	5.9

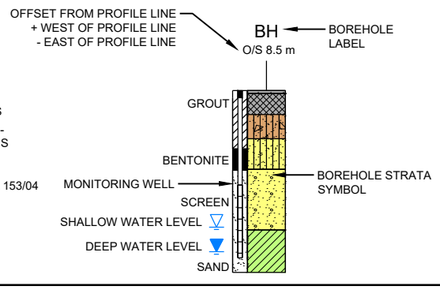
Parameter	Unit	REG153 (11) T7-R/P/I SOIL COARSE [2]	BH21-13 11-Nov-2021
			21-13 SA3
Sample Depth	m		1.52 - 2.13
General Chemistry			
Sodium Adsorption Ratio	ug/g	5	7.3



SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- SOIL SAMPLE MEETS APPLICABLE STANDARDS
- SOIL SAMPLE ANALYZED - APPLICABLE STANDARD IS DEEMED NOT TO BE AN EXCEEDANCE AS PER SECTION 49.1 OF O. REG. 153/04

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
CROSS SECTION A-A' (SOIL EXCEEDANCES - SAR)

PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	10B

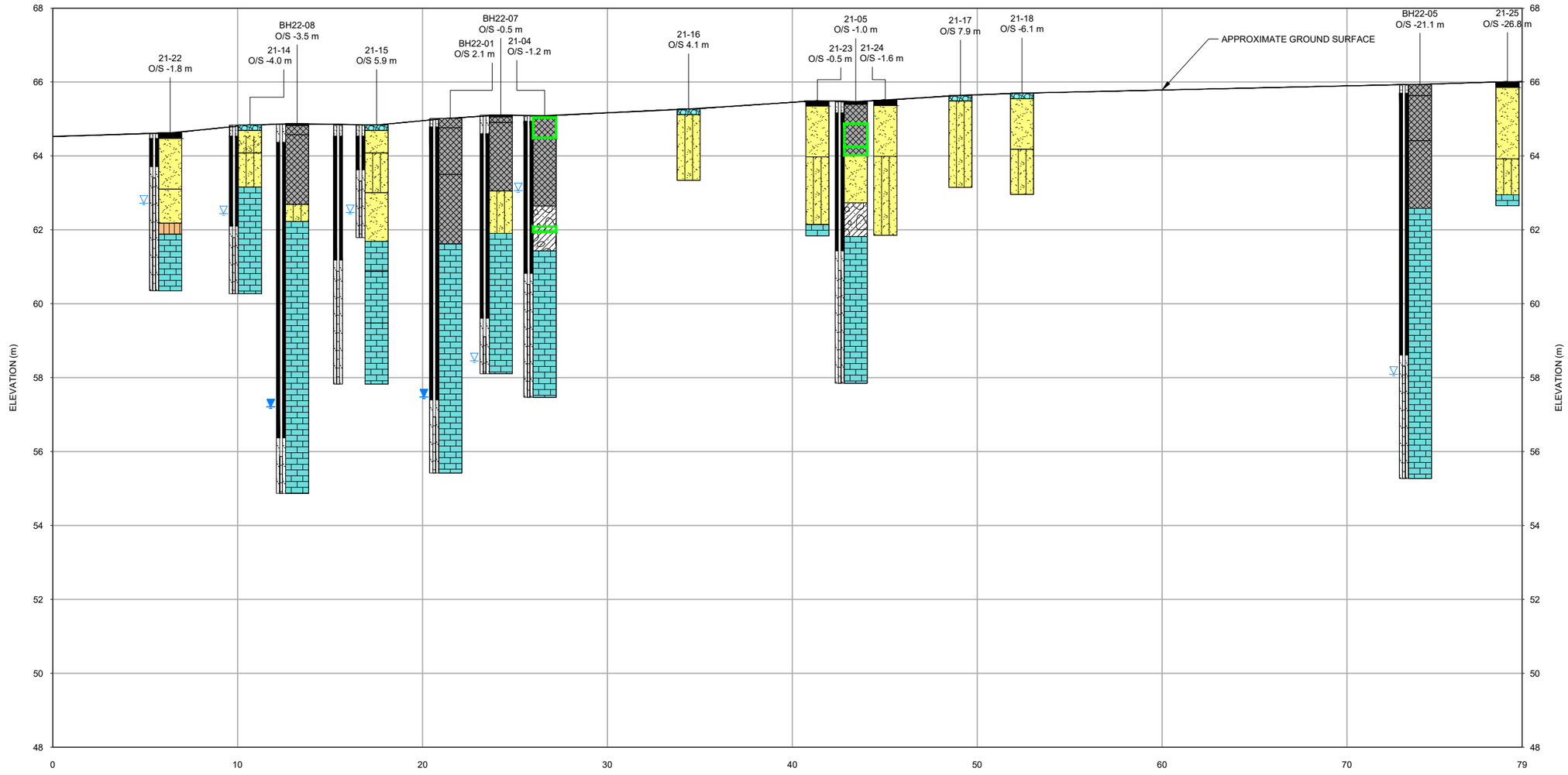
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

Path: \\pdfile.gdi\ccomplexdata\office\Ontario\SMK\Clients\Fengate\1047_Richmond_Rd\99_PRO\21494078_Fengate_GeoEnviro\0007_PhaseTwo_ESA_2023\ | File Name: 21494078-0007-HS-0010B.dwg

B

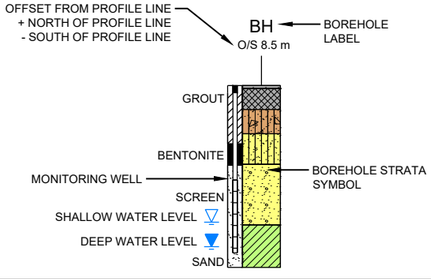
B'



SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- SOIL SAMPLE MEETS APPLICABLE STANDARDS

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
CROSS SECTION B-B' (SOIL EXCEEDANCES - SAR)

PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	10C

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

0

Path: \\golder.gds\corp\exdata\ofltce\Ontario\SIM\Clients\Fengate\1047_Richmond_Rd\99_PROJ\21494078_Fengate_GeoEnviro\0007_PhaseTwo_ESA_2023\ | File Name: 21494078-0007-HS-0010B.dwg

LEGEND

- APPROXIMATE BOREHOLE LOCATION
- APPROXIMATE TEST PIT LOCATION
- LOCATION WHERE ALL SAMPLES MEET APPLICABLE STANDARDS
- APPROXIMATE SITE BOUNDARY

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE
2. BOLD AND SHADED VALUE INDICATES PARAMETER IS GREATER THAN REG153, TABLE 7 I/C/C STANDARDS
3. UNDERLINED VALUE INDICATES PARAMETER IS GREATER THAN REG153, TABLE 7 R/P/I STANDARDS
4. [1]O.REG 153 (2011) TABLE 7 STANDARDS FOR INDUSTRIAL/COMMERCIAL/COMMUNITY (I/C/C) PROPERTY USE FOR COARSE TEXTURED SOIL IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION
5. [2]O.REG 153 (2011) TABLE STANDARDS FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL (R/P/I) PROPERTY USE FOR COARSE TEXTURED SOIL IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION
6. * OTHER PARAMETERS CONSIST OF: CONDUCTIVITY, CYANIDE (WAD), pH, SODIUM ADSORPTION RATIO (SAR)
7. - INDICATES PARAMETER IS NOT ANALYZED OR NOT APPLICABLE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 10 20 40
1:750 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
SOIL ANALYTICAL RESULTS - METALS AND HYDRIDE FORMING METALS AND ORP (EXCLUDING SAR)

CONSULTANT

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	JEM
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	**11A**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm 0

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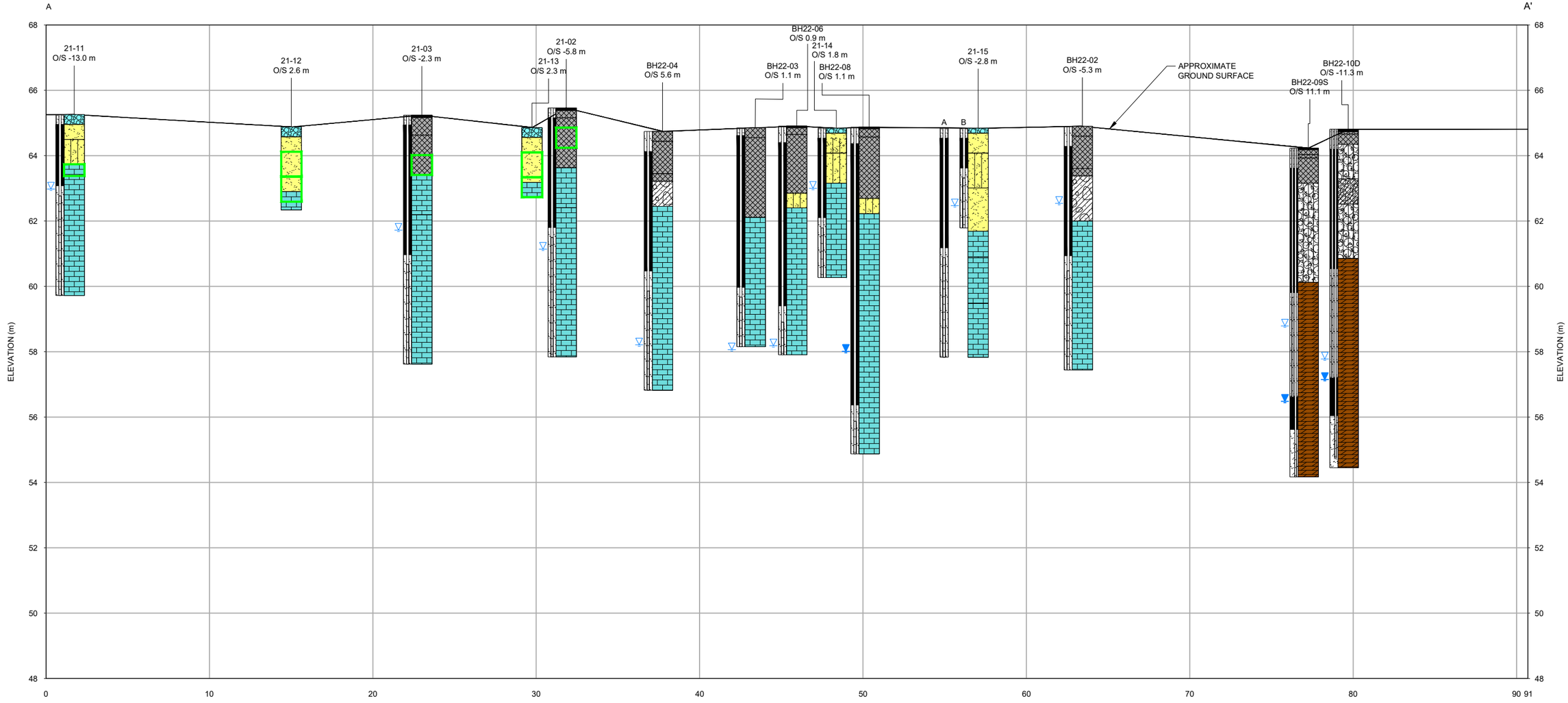
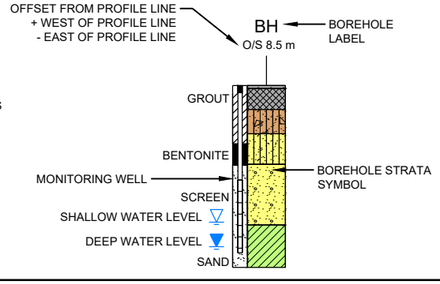


SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- SOIL SAMPLE MEETS APPLICABLE STANDARDS

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
CROSS SECTION A-A' (SOIL EXCEEDANCES - METALS AND HYDRIDE FORMING METALS AND ORP, EXCLUDING SAR)

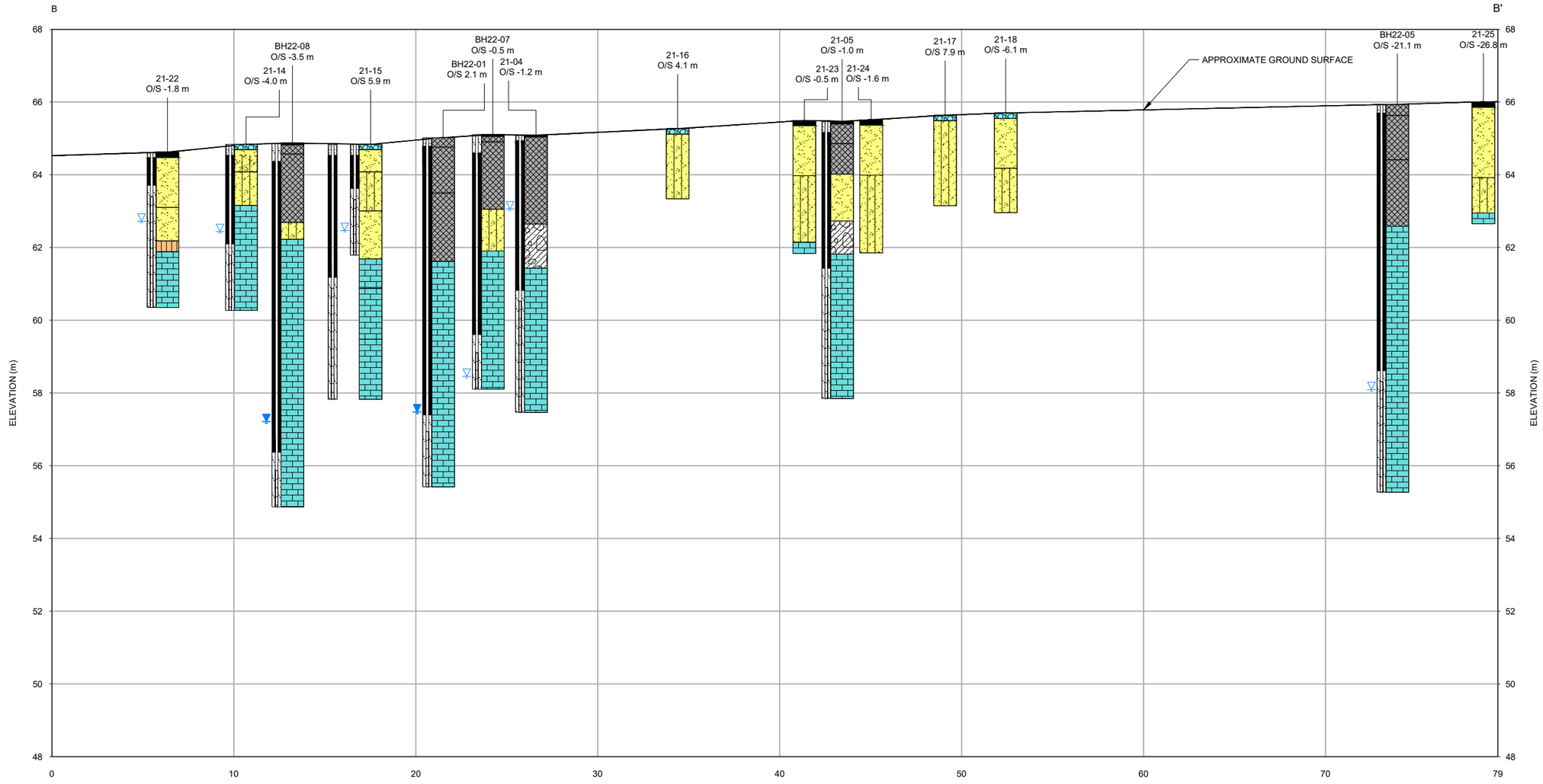
PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	11B

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

0

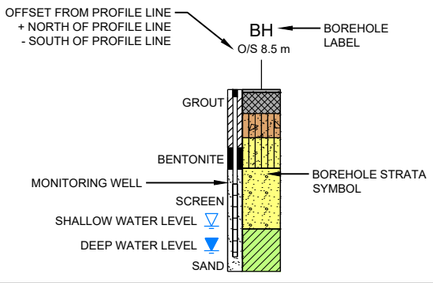
Path: \\pdde.gdi\ccomplexdata\office\Ontario\SMK\Clients\Fengate\1047_Richmond_Rd\99_PRO\21494078_Fengate_GeoEnviro\0007_PhaseTwo_ESA_2023\ | File Name: 21494078-0007-HS-0011B.dwg



SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
CROSS SECTION B-B' (SOIL EXCEEDANCES - METALS AND HYDRIDE FORMING METALS AND ORP, EXCLUDING SAR)

PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	11C

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

0

Path: \\golder.gds\complexdata\office\Ontario\SIM\Clients\Fengate\1047_Richmond_Rd\99_PROJ\21494078_Fengate_GeoEnviro\0007_PhaseTwo_ESA_2023\ | File Name: 21494078-0007-HS-0011B.dwg

Parameter	Unit	REG153 (11) T7-R/P/I SOIL COARSE [1]	BH21-05 22-Sep-2021 21-5 SA2	BH21-05 22-Sep-2021 Field Duplicate of SA2	BH21-05 22-Sep-2021 21-5 SA3
Sample Depth	**m**		0.6 - 1.22	0.6 - 1.22	0.6 - 1.22
PHC-F2 (C10-C16)	ug/g	98	-	260	No exceedences
PHC - F3 (C16-C34)	ug/g	300	1500	25000	No exceedences
PHC - F3 (C34-C50)	ug/g	2800	-	8100	No exceedences

Parameter	Unit	REG153 (11) T7-R/P/I SOIL COARSE [1]	BH21-24 21-Dec-2021 21-24 SA4
Sample Depth	**m**		2.28 - 3.04.
PHC - F1 (C6-C10)	ug/g	55	**154**
PHC - F2 (C10-C16)	ug/g	98	-
PHC - F3 (C16-C34)	ug/g	300	1500
PHC - F3 (C34-C50)	ug/g	2800	170

LEGEND

- APPROXIMATE BOREHOLE LOCATION
- APPROXIMATE TEST PIT LOCATION
- LOCATION WHERE ALL SAMPLES MEET APPLICABLE STANDARDS
- LOCATION WHERE ONE OR MORE SAMPLES EXCEEDS APPLICABLE STANDARDS
- APPROXIMATE SITE BOUNDARY

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE
2. BOLD AND SHADED VALUE INDICATES PARAMETER IS GREATER THAN REG153, TABLE 7 I/C/C STANDARDS
3. UNDERLINED VALUE INDICATES PARAMETER IS GREATER THAN REG153, TABLE 7 R/P/I STANDARDS
4. [(1)]O.REG 153 (2011) TABLE 7 STANDARDS FOR INDUSTRIAL/COMMERCIAL/COMMUNITY (I/C/C) PROPERTY USE FOR COARSE TEXTURED SOIL IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION
5. [(2)]O.REG 153 (2011) TABLE STANDARDS FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL (R/P/I) PROPERTY USE FOR COARSE TEXTURED SOIL IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION
6. * OTHER PARAMETERS CONSIST OF: CONDUCTIVITY, CYANIDE (WAD), pH, SODIUM ADSORPTION RATIO (SAR)
7. - INDICATES PARAMETER IS NOT ANALYZED OR NOT APPLICABLE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 10 20 40
1:750 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
SOIL ANALYTICAL RESULTS - PETROLEUM HYDROCARBONS

CONSULTANT

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	JEM
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	**12A**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
0 25mm

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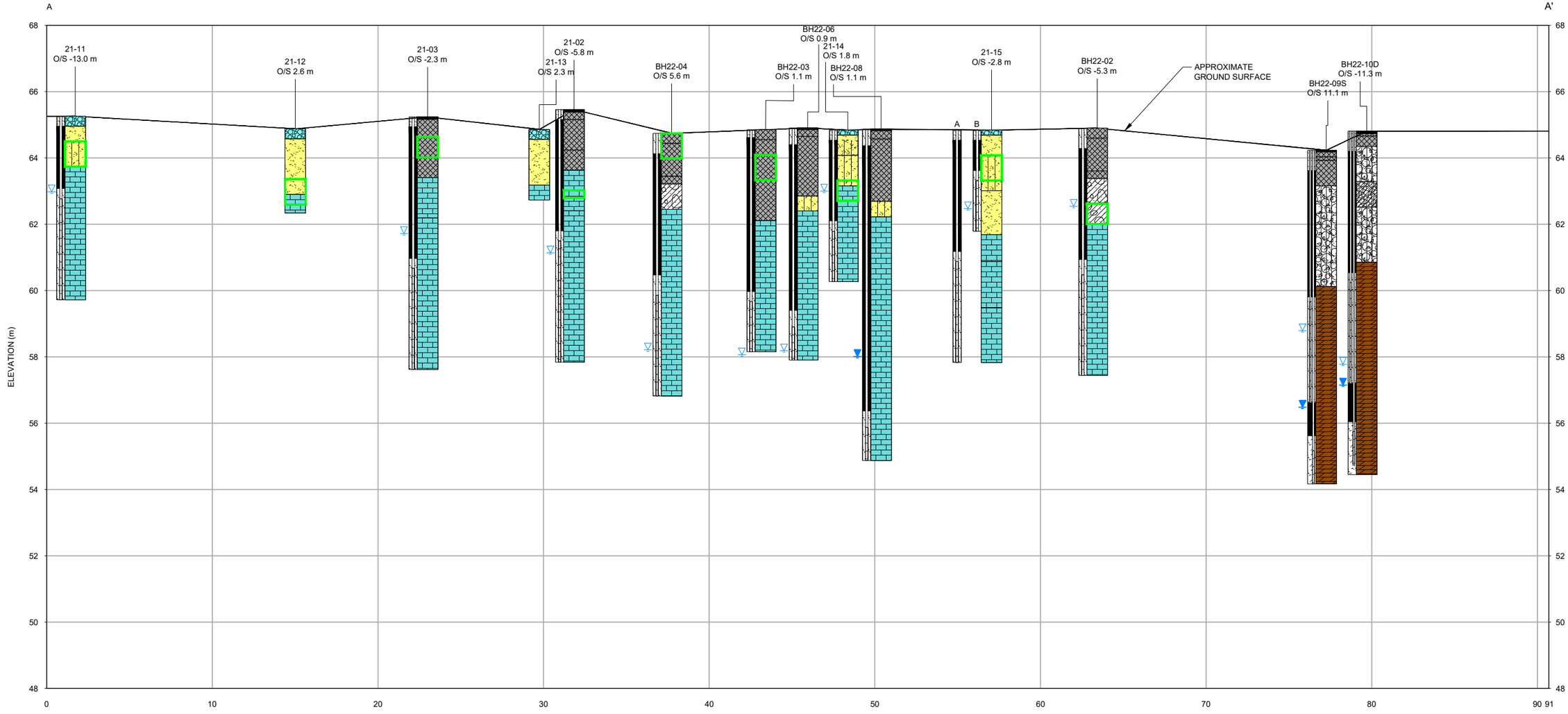
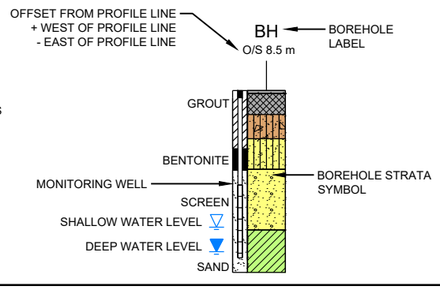


SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- SOIL SAMPLE MEETS APPLICABLE STANDARDS

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
CROSS SECTION A-A' (SOIL EXCEEDANCES - PETROLEUM HYDROCARBON AND BTEX)

PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	12B

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

0

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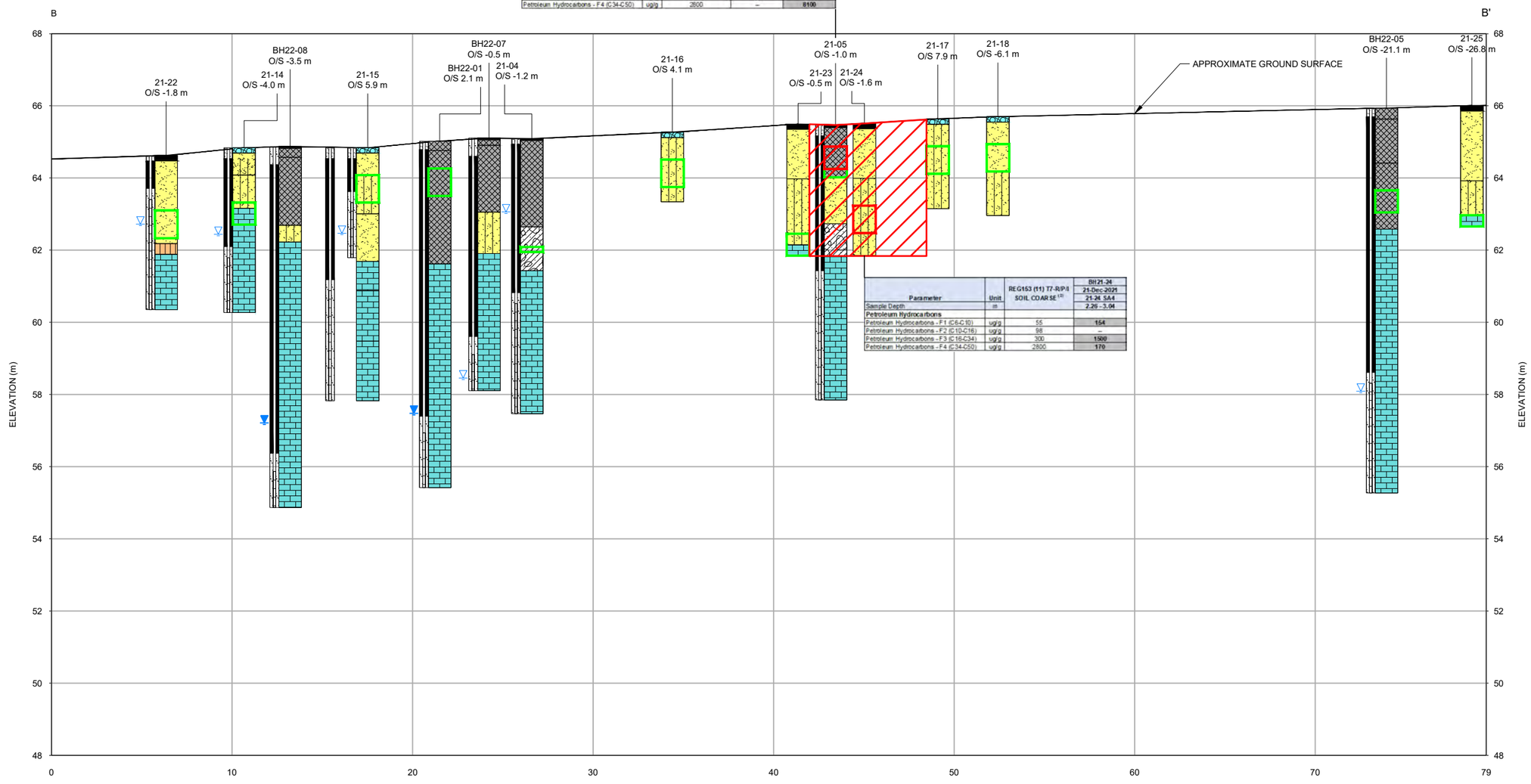
Parameter	Unit	REG153 (11) T7-R/P/I SOIL COARSE[10]	BH21-06 22-Sep-2021 21-5 SA2	BH21-05 22-Sep-2021 21-5 DUP-1
Sample Depth	m		0.6 - 1.22	0.6 - 1.22
Petroleum Hydrocarbons				
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	98	–	260
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	300	1500	25000
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	2800	–	8100

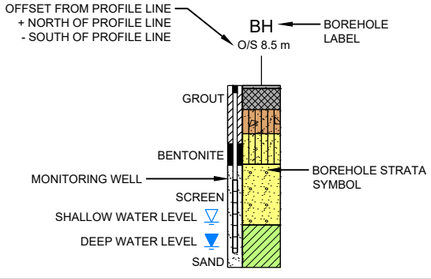
Parameter	Unit	REG153 (11) T7-R/P/I SOIL COARSE[10]	BH21-24 21-Dec-2021 21-24 SA4
Sample Depth	m		2.26 - 3.04
Petroleum Hydrocarbons			
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	55	154
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	98	–
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	300	1500
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	2800	170



SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- SOIL SAMPLE MEETS APPLICABLE STANDARDS
- SOIL SAMPLE EXCEEDS APPLICABLE STANDARDS

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
CROSS SECTION B-B' (SOIL EXCEEDANCES - PETROLEUM HYDROCARBON AND BTEX)

PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	12C

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

0

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Parameter	Unit	REG153 (11) T7-R/P/I SOIL COARSE [1]	BH21-05 22-Sep-2021 21-5 SA2	BH21-05 22-Sep-2021 Field Duplicate of SA2
Sample Depth	m		0.6 - 1.22	0.6 - 1.22
1, 4-Dichlorobenzene	ug/g	0.083	-	0.093

LEGEND

- APPROXIMATE BOREHOLE LOCATION
- APPROXIMATE TEST PIT LOCATION
- LOCATION WHERE ALL SAMPLES MEET APPLICABLE STANDARDS
- LOCATION WHERE ONE OR MORE SAMPLES EXCEEDS APPLICABLE STANDARDS
- APPROXIMATE SITE BOUNDARY

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE
2. BOLD AND SHADED VALUE INDICATES PARAMETER IS GREATER THAN REG153, TABLE 7 I/C/C STANDARDS
3. UNDERLINED VALUE INDICATES PARAMETER IS GREATER THAN REG153, TABLE 7 R/P/I STANDARDS
4. [1]O.REG 153 (2011) TABLE 7 STANDARDS FOR INDUSTRIAL/COMMERCIAL/COMMUNITY (I/C/C) PROPERTY USE FOR COARSE TEXTURED SOIL IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION
5. [2]O.REG 153 (2011) TABLE STANDARDS FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL (R/P/I) PROPERTY USE FOR COARSE TEXTURED SOIL IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION
6. * OTHER PARAMETERS CONSIST OF: CONDUCTIVITY, CYANIDE (WAD), pH, SODIUM ADSORPTION RATIO (SAR)
7. - INDICATES PARAMETER IS NOT ANALYZED OR NOT APPLICABLE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 10 20 40
1:750 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
SOIL ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS

CONSULTANT

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	JEM
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	**13A**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 0 25mm

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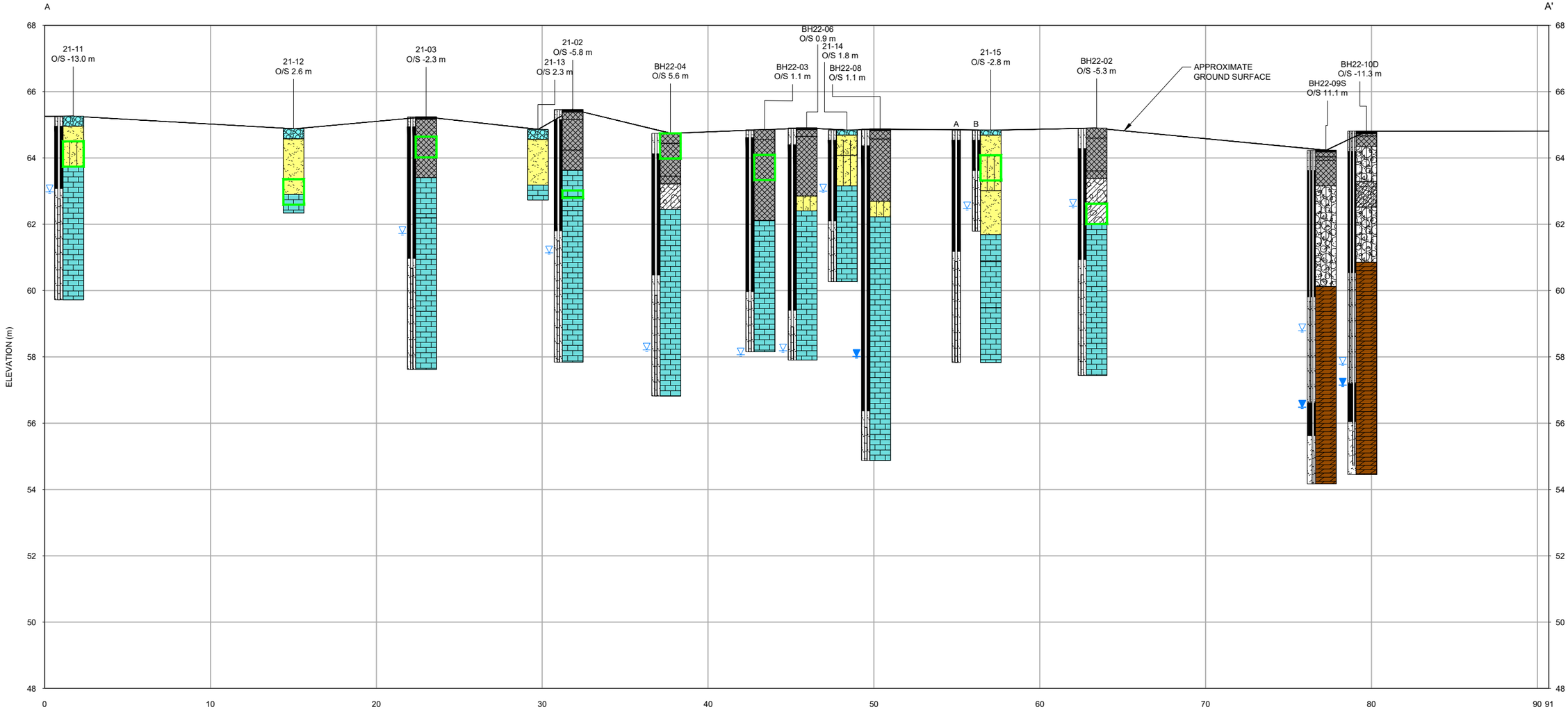
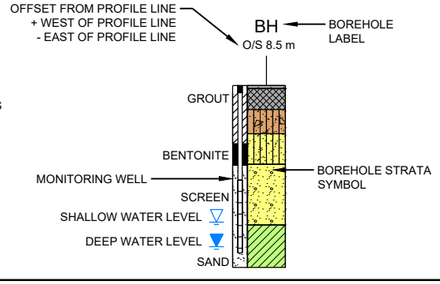


SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- SOIL SAMPLE MEETS APPLICABLE STANDARDS

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
CROSS SECTION A-A' (SOIL EXCEEDANCES - VOLATILE ORGANIC COMPOUNDS)

PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	13B

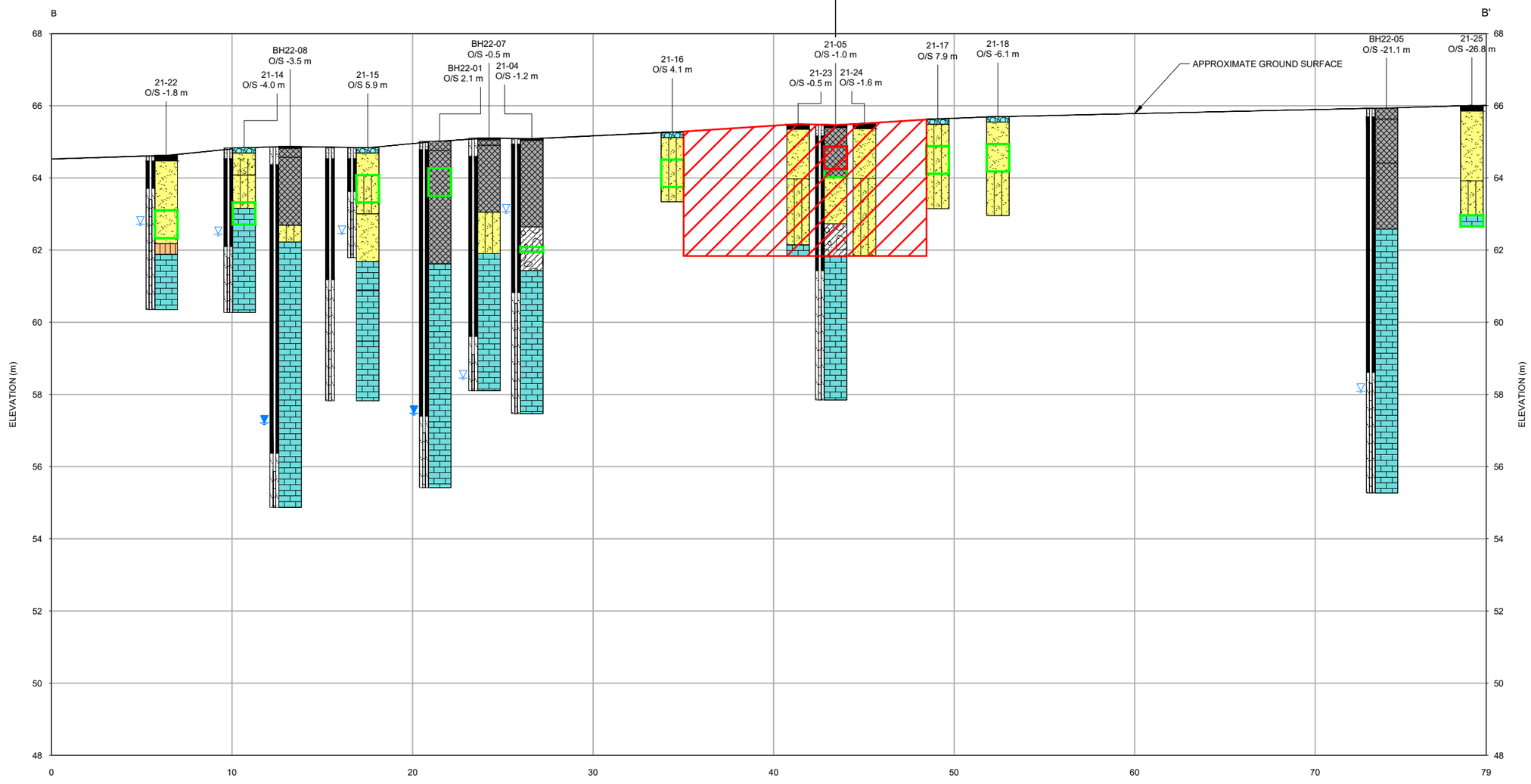
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

0

Path: \\pdfile.gdi\ccomplexdata\office\Ontario\SMI\Clients\Fengate\1047_Richmond_Rd\99_PRO\21494078_Fengate_GeoEnviro\0007_PhaseTwo_ESA_2023\ | File Name: 21494078-0007-HS-0013B.dwg

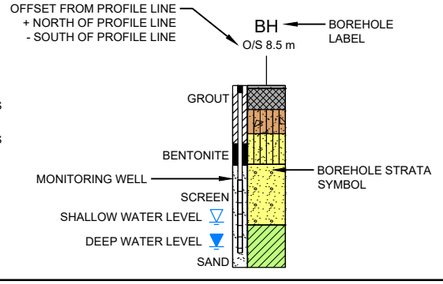
Parameter	Unit	REG153 (t1) T7-R/P/I	BH21-05 22-Sep-2021 21-5 SA2	BH21-05 22-Sep-2021 21-5 DUP-1
Sample Depth	m	SOIL COARSE [2]	0.6 - 1.22	0.6 - 1.22
VOCs				
1,4-Dichlorobenzene	ug/g	0.083	–	0.093



SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- SOIL SAMPLE MEETS APPLICABLE STANDARDS
- SOIL SAMPLE EXCEEDS APPLICABLE STANDARDS

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
CROSS SECTION B-B' (SOIL EXCEEDANCES - VOLATILE ORGANIC COMPOUNDS)

PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	13C

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

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LEGEND

- APPROXIMATE BOREHOLE LOCATION
- APPROXIMATE TEST PIT LOCATION
- LOCATION WHERE SAMPLE MEETS APPLICABLE STANDARDS
- APPROXIMATE SITE BOUNDARY

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE
2. BOLD AND SHADED VALUE INDICATES PARAMETER IS GREATER THAN REG153, TABLE 7 I/C/C STANDARDS
3. UNDERLINED VALUE INDICATES PARAMETER IS GREATER THAN REG153, TABLE 7 R/P/I STANDARDS
4. [1]O.REG 153 (2011) TABLE 7 STANDARDS FOR INDUSTRIAL/COMMERCIAL/COMMUNITY (I/C/C) PROPERTY USE FOR COARSE TEXTURED SOIL IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION
5. [2]O.REG 153 (2011) TABLE STANDARDS FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL (R/P/I) PROPERTY USE FOR COARSE TEXTURED SOIL IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION
6. * OTHER PARAMETERS CONSIST OF: CONDUCTIVITY, CYANIDE (WAD), pH, SODIUM ADSORPTION RATIO (SAR)
7. - INDICATES PARAMETER IS NOT ANALYZED OR NOT APPLICABLE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 10 20 40
1:750 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
SOIL ANALYTICAL RESULTS - POLYCHLORINATED BIPHENYL'S

CONSULTANT

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	JEM
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	**14**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
25mm
0

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LEGEND

- APPROXIMATE BOREHOLE LOCATION
- APPROXIMATE TEST PIT LOCATION
- LOCATION WHERE ALL SAMPLES MEET APPLICABLE STANDARDS
- APPROXIMATE SITE BOUNDARY

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE
2. (1)O.REG 153 (2011) TABLE 7 STANDARDS FOR ALL TYPES OF PROPERTY USE FOR GROUNDWATER IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUNDWATER CONDITION
3. BOLD AND SHADED INDICATES PARAMETER IS GREATER THAN REG153 (11) T7-GW
4. mbgs: METRES BELOW GROUND SURFACE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 10 20 40

1:750 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
GROUNDWATER ANALYTICAL RESULTS - METALS AND HYDRIDE FORMING METALS AND ORP

CONSULTANT

wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	JEM
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	**15A**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm 0

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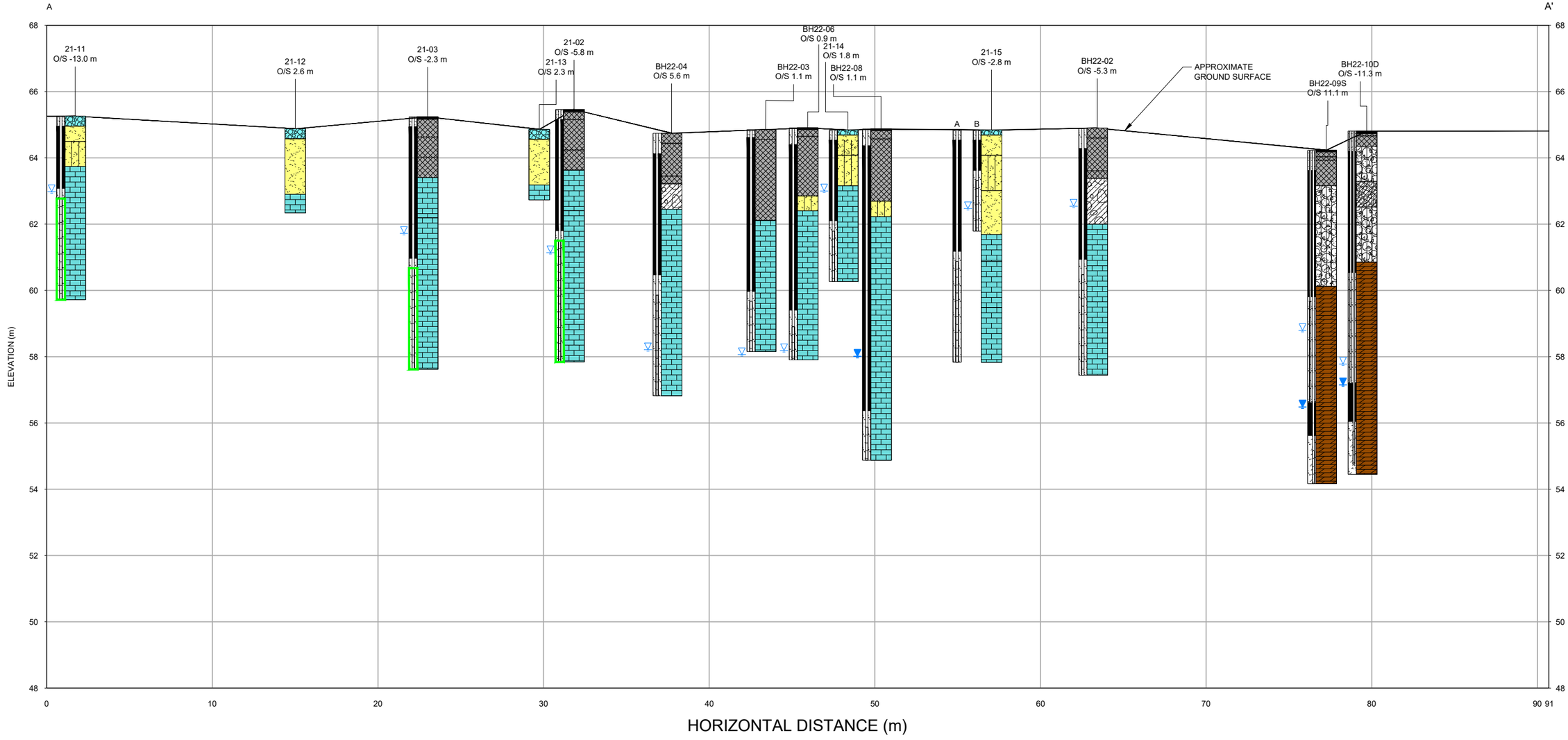
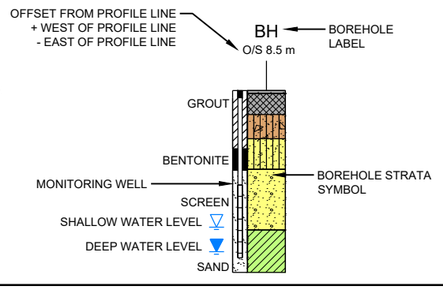


SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- GROUNDWATER SAMPLE MEETS APPLICABLE STANDARDS

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
CROSS SECTION A-A' (GROUNDWATER EXCEEDANCES - METALS AND HYDRIDE FORMING METALS AND ORP)

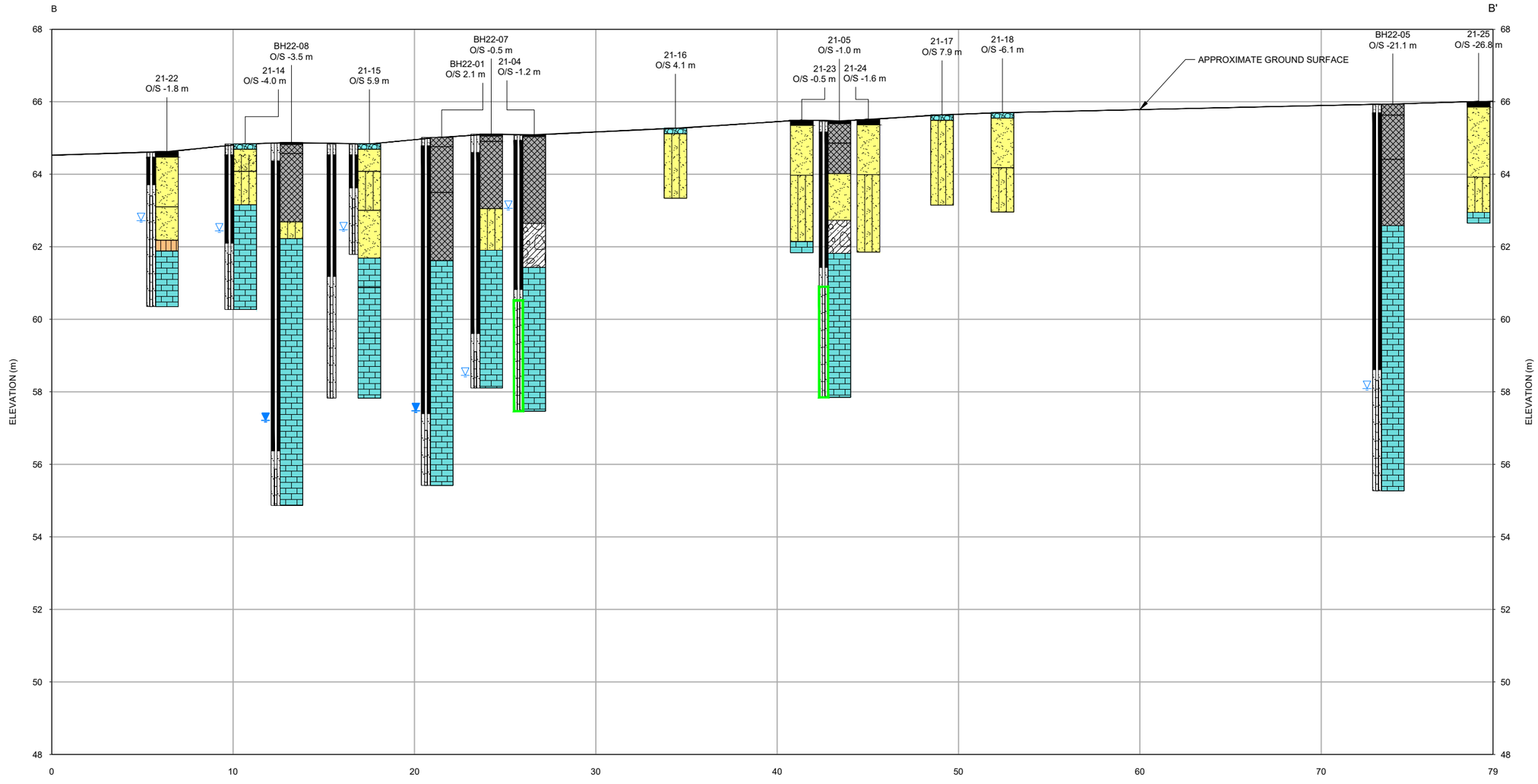
PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	15B

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

0

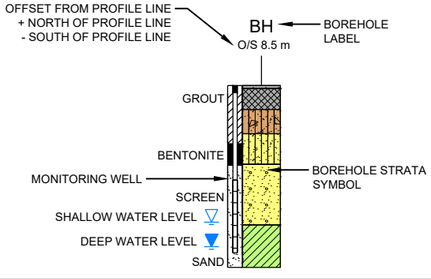
Path: \\pdde.gdi\ccomplexdata\office\Ontario\SMI\Clients\Fengate\1047_Richmond_Rd\99_PRO\21494078_Fengate_GeoEnviro\0007_PhaseTwo_ESA_2023\ | File Name: 21494078-0007-HS-0015B.dwg



SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- GROUNDWATER SAMPLE MEETS APPLICABLE STANDARDS

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
CROSS SECTION B-B' (GROUNDWATER EXCEEDANCES - METALS AND HYDRIDE FORMING METALS AND ORP)

PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	15C

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

0

Path: \\golder.gds\corp\exdata\ofltce\Ontario\SIM\Clients\Fengate\1047_Richmond_Rd\99_PROJ\21494078_Fengate_GeoEnviro\0007_PhaseTwo_ESA_2023\ | File Name: 21494078-0007-HS-0015B.dwg

Parameter	Unit	REG153 (11) T7-GW COARSE [1]	BH22-04	BH22-04	BH22-04	BH22-04	BH22-05
			26-May-2022	15-Nov-2022	7-Jul-2023	7-Jul-2023	15-Aug-2023
			22-4	22-4	22-4	DUP-2	22-04
Screened Interval (mbgs)			4.87 - 7.92	4.87 - 7.92	4.87 - 7.92	4.87 - 7.92	4.87 - 7.93
PHC F3	ug/l	500	No exceedance	No exceedance	**542**	**569**	No exceedance

LEGEND

- APPROXIMATE BOREHOLE LOCATION
- APPROXIMATE TEST PIT LOCATION
- LOCATION WHERE ALL SAMPLES MEET APPLICABLE STANDARDS
- LOCATION WHERE ONE OR MORE SAMPLES EXCEED APPLICABLE STANDARDS
- APPROXIMATE SITE BOUNDARY

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE
2. [1]O.REG 153 (2011) TABLE 7 STANDARDS FOR ALL TYPES OF PROPERTY USE FOR GROUNDWATER IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUNDWATER CONDITION
3. BOLD AND SHADED INDICATES PARAMETER IS GREATER THAN REG153 (11) T7-GW
4. mbgs: METRES BELOW GROUND SURFACE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 10 20 40
1:750 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
GROUNDWATER ANALYTICAL RESULTS - PETROLEUM HYDROCARBONS

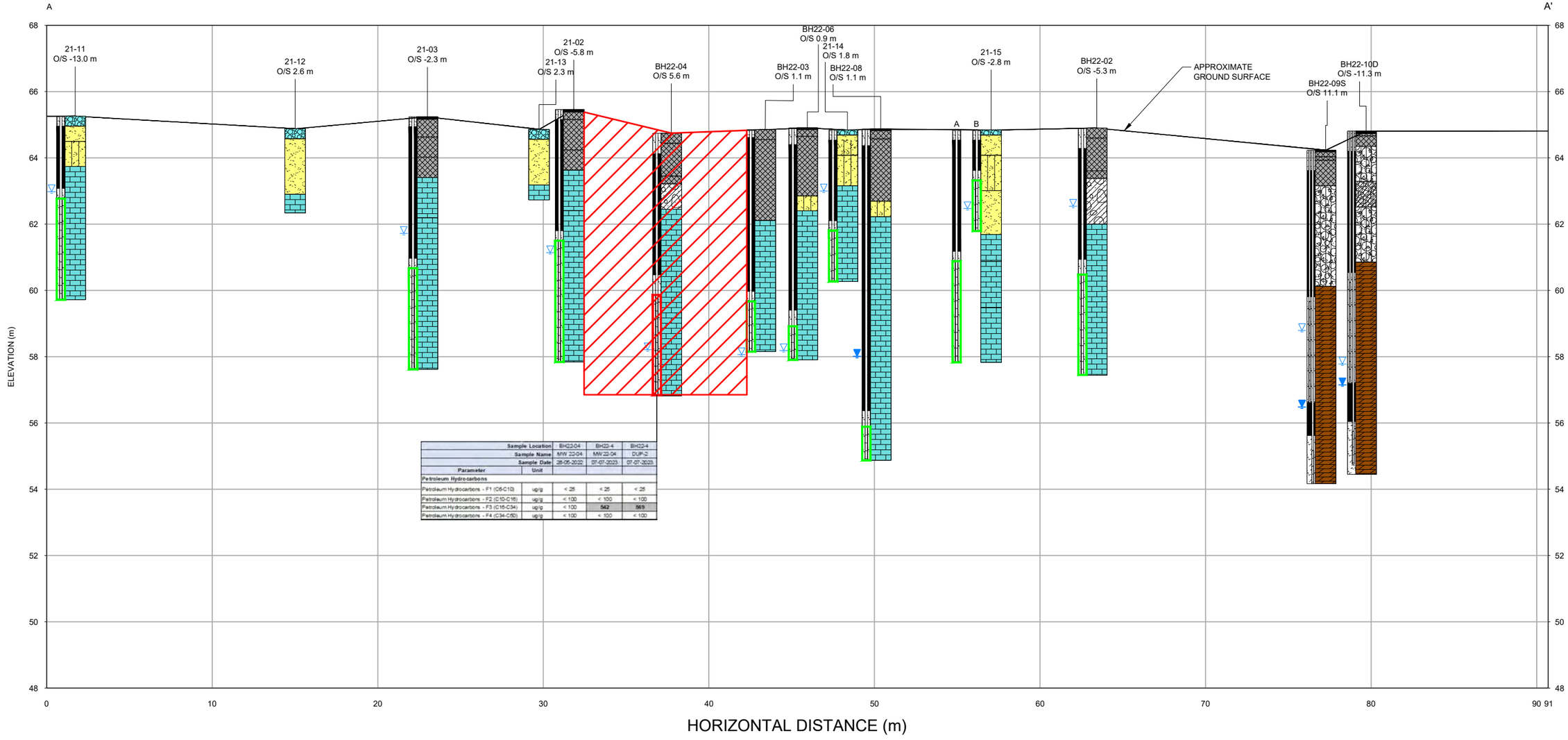
CONSULTANT

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	RRD
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	**16A**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
25mm
0

Path: S:\Clients\Fengate\1047_Richmond_Rd\99_PRO\21494078_Fengate_GeoEnviro\0002_PhaseTwo_ESA\21494078-0002-HS-0016A.mxd

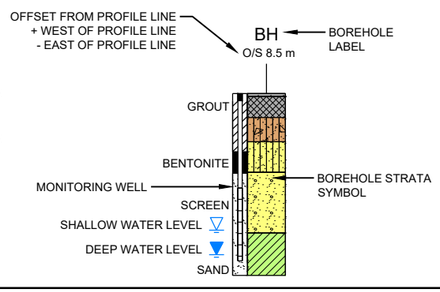


Sample Location		BH22-04	BH22-4	BH22-4
Sample Name		MW 22-04	MW 22-04	DUP-2
Sample Date		26-06-2022	07-07-2023	07-07-2023
Parameter	**Unit**			
Petroleum Hydrocarbons				
Petroleum Hydrocarbons - F1 (C6-C10)	ug/g	< 25	< 25	< 25
Petroleum Hydrocarbons - F2 (C10-C16)	ug/g	< 100	< 100	< 100
Petroleum Hydrocarbons - F3 (C16-C34)	ug/g	< 100	**542**	**569**
Petroleum Hydrocarbons - F4 (C34-C50)	ug/g	< 100	< 100	< 100

SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- GROUNDWATER SAMPLE MEETS APPLICABLE STANDARDS
- GROUNDWATER SAMPLE EXCEEDS APPLICABLE STANDARDS

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

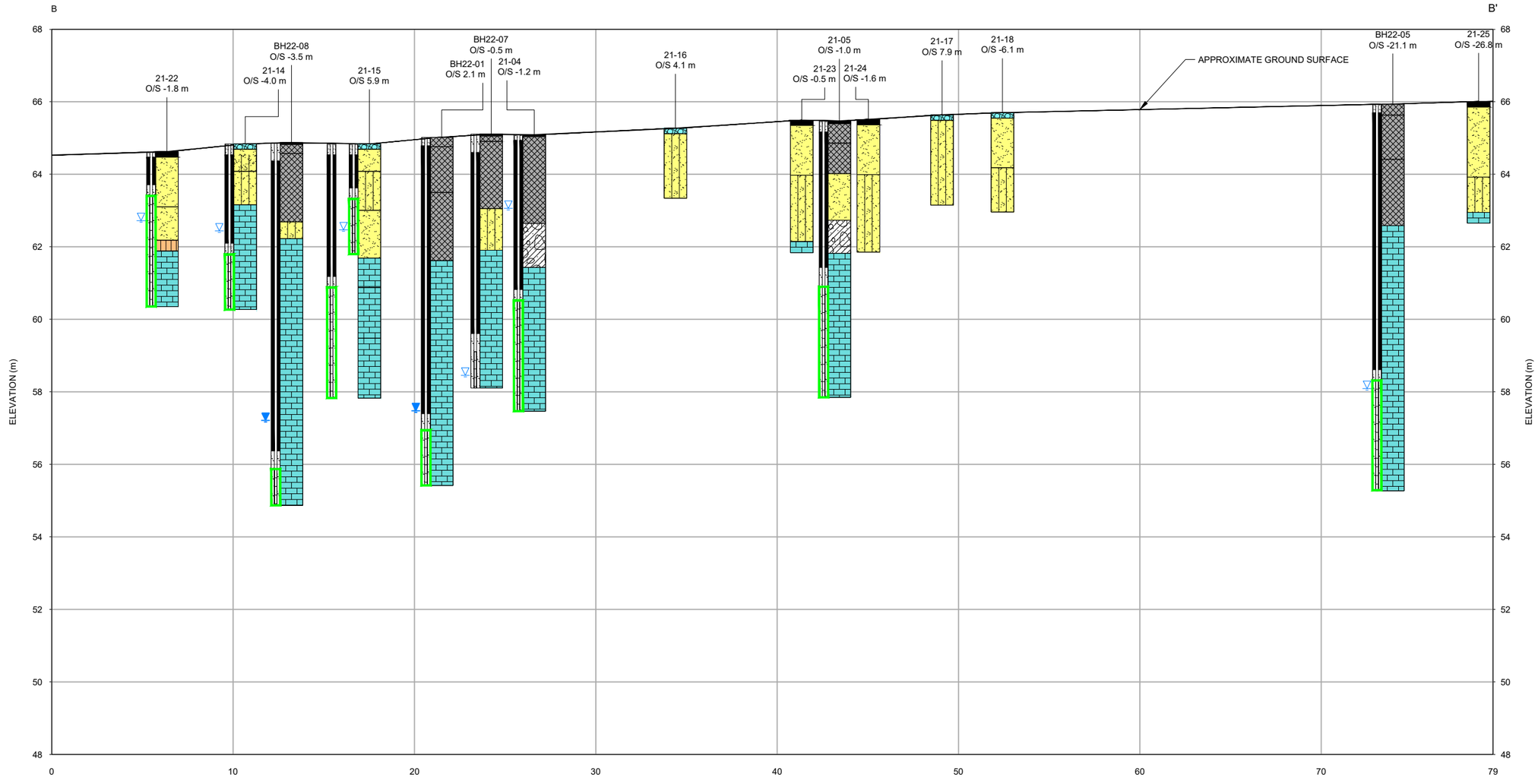
TITLE
CROSS SECTION A-A' (GROUNDWATER EXCEEDANCES - PETROLEUM HYDROCARBONS)

PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	16B

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25 mm

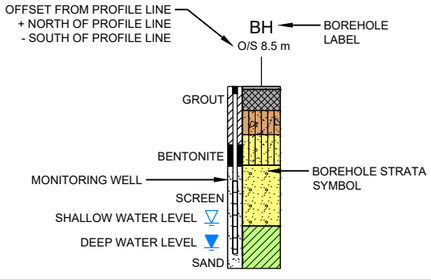
Path: \\pdxlegr.gds\complexdata\ot\fice\Ontario\SIM\Clients\Fengate\1047_Richmond_Rd\99_PROJ\21494078_Fengate_GeoEnviro\0007_PhaseTwo_ESA_2023\ | File Name: 21494078-0007-HS-0016B.dwg



SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- GROUNDWATER SAMPLE MEETS APPLICABLE STANDARDS

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
CROSS SECTION B-B' (GROUNDWATER EXCEEDANCES - PETROLEUM HYDROCARBONS)

PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	16C

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

0

Path: \\golder.gds\corp\exdata\ofltce\Ontario\SIM\Clients\Fengate\1047_Richmond_Rd\99_PROJ\21494078_Fengate_GeoEnviro\0007_PhaseTwo_ESA_2023\ | File Name: 21494078-0007-HS-0016B.dwg

Parameter	Unit	REG153 (11) T7-GW COARSE [1]	BH21-04 04-Oct-2021	BH21-04 30-Nov-2021	BH21-04 30-Nov-2021	BH21-04 9-Dec-2021	BH21-04 22-Dec-2021	BH21-04 26-May-2022	BH21-04 15-Nov-2022	BH21-04 07-July-2023
Screened Interval (mbgs)			4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62
			21-4	DUP-1	21-4	BH21-4	BH21-4	BH21-4	21-4	MW21-04
Benzene	ug/l	0.5	No exceedence	1.86	1.66	2.81	No exceedence	2.39	No exceedance	No exceedance

LEGEND

- APPROXIMATE BOREHOLE LOCATION
- APPROXIMATE TEST PIT LOCATION
- LOCATION WHERE ALL SAMPLES MEET APPLICABLE STANDARDS
- LOCATION WHERE ONE OR MORE SAMPLES EXCEED APPLICABLE STANDARDS
- APPROXIMATE SITE BOUNDARY

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE
2. [1]O.REG 153 (2011) TABLE 7 STANDARDS FOR ALL TYPES OF PROPERTY USE FOR GROUNDWATER IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUNDWATER CONDITION
3. BOLD AND SHADED INDICATES PARAMETER IS GREATER THAN REG153 (11) T7-GW
4. mbgs: METRES BELOW GROUND SURFACE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 10 20 40
1:750 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
GROUNDWATER ANALYTICAL RESULTS - BTEX

CONSULTANT

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	RRD
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	**17A**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
25mm
0

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A

A'

21-11
O/S -13.0 m

21-12
O/S 2.6 m

21-03
O/S -2.3 m

21-13
O/S 2.3 m

21-02
O/S -5.8 m

BH22-04
O/S 5.6 m

BH22-03
O/S 1.1 m

BH22-06
O/S 0.9 m

21-14
O/S 1.8 m

BH22-08
O/S 1.1 m

21-15
O/S -2.8 m

A

B

BH22-02
O/S -5.3 m

APPROXIMATE
GROUND SURFACE

BH22-09S
O/S 11.1 m

BH22-10D
O/S -11.3 m

Sample Location		BH22-04	BH22-04
Sample Name		22-Apr	MW 22-04
Sample Date		16-11-2022	26-05-2022
Parameter	Unit		
BTEX			
Benzene	ug/g	< 0.20	< 0.20
Toluene	ug/g	< 0.20	< 0.20

ELEVATION (m)

68
66
64
62
60
58
56
54
52
50
48

0
10
20
30
40
50
60
70
80
90 91

HORIZONTAL DISTANCE (m)

SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- GROUNDWATER SAMPLE MEETS APPLICABLE STANDARDS
- GROUNDWATER SAMPLE EXCEEDS APPLICABLE STANDARDS

LEGEND

OFFSET FROM PROFILE LINE
+ WEST OF PROFILE LINE
- EAST OF PROFILE LINE

BH
O/S 8.5 m
BOREHOLE LABEL

GROUT
BENTONITE
MONITORING WELL
SCREEN
SHALLOW WATER LEVEL
DEEP WATER LEVEL
SAND
BOREHOLE STRATA SYMBOL

0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
CROSS SECTION A-A' (GROUNDWATER EXCEEDANCES - BTEX)

PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	17B

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

0

Path: \\pdc-file01.pdc.wspgroup.com\dfs\Projects\21494078-0007-HS\Active\Environmental\Drawings\Cross Section\21494078-0007-HS-0017B.dwg | File Name: 21494078-0007-HS-0017B.dwg | Date: 2023-08-28 | Time: 10:39:18 AM | User: dsmith | Office: CAOTT | Project: C:\Users\dsmith\Desktop\Projects\21494078-0007-HS-0017B.dwg | Plot Scale: 1.000 | Plot Device: ANSI B (11.00 x 17.00 Inches) | Plot Style: WSP.ctb | Plot Date: 2023-08-28 10:39:18 AM | Plot By: dsmith | Xrefs: | Images: | Layouts: | Blocks: | Fields: | Tables: | Materials: | Plots: | Styles: | Linetypes: | Shapes: | Textstyles: | Dimstyles: | Multileaderstyles: | Tablestyles: | Visualstyles: | Groups: | Views: | Layers: | Colors: | Plotstyles: | Plotdevices: | Plotconfigs: | Plotlayouts: | Plotlayers: | Plotcolors: | Plotplotstyles: | Plotplotdevices: | Plotplotconfigs: | Plotplotlayouts: | Plotplotlayers: | Plotplotcolors: | Plotplotplotstyles: | Plotplotplotdevices: | Plotplotplotconfigs: | Plotplotplotlayouts: | 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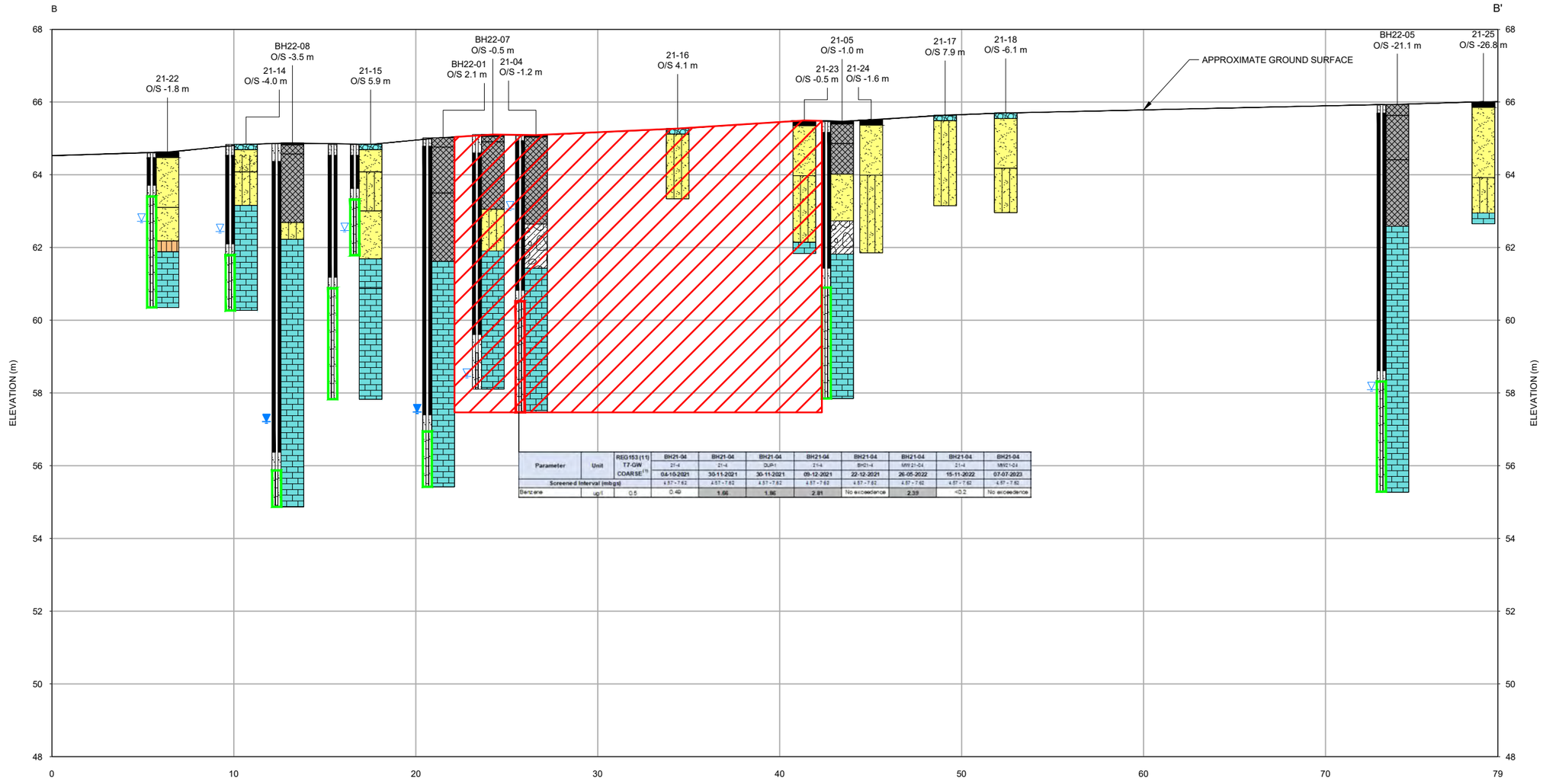
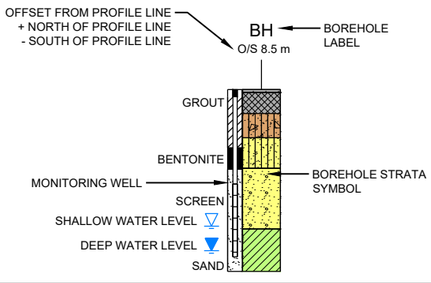


Parameter	Unit	REG153 (11) T7-GW COARSE[1]	BH21-04 21-4 04-10-2021	BH21-04 21-4 30-11-2021	BH21-04 DUP-1 30-11-2021	BH21-04 21-4 08-12-2021	BH21-04 BH21-4 22-12-2021	BH21-04 MW 21-04 26-05-2022	BH21-04 21-4 15-11-2022	BH21-04 MW21-04 07-07-2023
Screened Interval (mbgs)			4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62
Benzene	ug/l	0.5	0.49	1.66	1.86	2.81	No exceedance	2.39	<0.2	No exceedance

SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- GROUNDWATER SAMPLE MEETS APPLICABLE STANDARDS
- GROUNDWATER SAMPLE EXCEEDS APPLICABLE STANDARDS

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
CROSS SECTION B-B' (GROUNDWATER EXCEEDANCES - BTEX)

PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	17C

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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0

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Parameter	Unit	REG153 (11) T7-GW COARSE [1]	BH21-14 30-Nov-2021 21-14	BH21-14 09-Dec-2021 BH21-14	BH21-14 09-Dec-2021 DUP	BH21-14 22-Dec-2021 BH21-14	BH21-14 26-May-2022 BH21-14	BH21-14 15-Nov-2022 BH21-14	BH21-14 07-Jul-2023 21-14	BH21-14 07-Jul-2023 Dup 1
Screened Interval (mbgs)			3.07 - 4.57	3.07 - 4.57	3.07 - 4.57	3.07 - 4.57	3.07 - 4.57	3.07 - 4.57	3.07 - 4.57	3.07 - 4.57
1,2-Dichloroethane	ug/l	0.5	No exceedence	No exceedence	No exceedence	No exceedence	No exceedence	1.45	No exceedence	No exceedance
Trichloroethene	ug/l	0.5	No exceedence	2.11	1.99	No exceedence	No exceedence	No exceedence	No exceedence	No exceedance

Parameter	Unit	REG153 (11) T7-GW COARSE [1]	BH22-08 15-Nov-2022 22-8	BH22-08 15-Nov-2022 dup 2	BH22-08 25-May-2023 MW22-8
Screened Interval (mbgs)			5.18 - 6.7	5.18 - 6.7	5.18 - 6.7
1,2-Dichloroethane	ug/l	0.5	No exceedence	7.39	No exceedence

Parameter	Unit	REG153 (11) T7-GW COARSE [1]	BH22-03 26-May-2022 22-3
Screened Interval (mbgs)			5.18 - 6.7
1,2-Dichloroethane	ug/l	0.5	3.14

Parameter	Unit	REG153 (11) T7-GW COARSE [1]	BH22-02 26-May-2022 MW 22-02	BH22-02 16-Nov-2022 22-2	BH22-02 09-Feb-2023 MW22-02	BH22-02 16-Mar-2023 DUP-1	BH22-02 09-Feb-2023 MW 22-02	BH22-02 09-Feb-2023 DUP-1	BH22-2 07-Jul-2023 MW22-02
Screened Interval (mbgs)			4.41 - 7.46	4.41 - 7.46	4.41 - 7.46	4.41 - 7.46	4.41 - 7.46	4.41 - 7.46	4.41 - 7.46
Carbon Tetrachloride	ug/l	0.2	No exceedence	No exceedence	No exceedence	No exceedence	< 0.40	< 0.40	No exceedence
1,1-Dichloroethene	ug/l	0.5	No exceedence	No exceedence	No exceedence	No exceedence	< 0.60	< 0.60	No exceedence
1,2-Dichloroethane	ug/l	0.5	No exceedence	7.69	2.48	2.58	5.03	5.17	4.26

Parameter	Unit	REG153 (11) T7-GW COARSE [1]	BH21-04 04-Oct-2021 21-4	BH21-04 30-Nov-2021 DUP-1	BH21-04 30-Nov-2021 21-4	BH21-04 9-Dec-2021 BH21-4	BH21-04 22-Dec-2021 BH21-4	BH21-04 26-May-2022 dup2	BH21-04 15-Nov-2022 BH21-4	BH21-04 07-Jul-2023 MW21-4
Screened Interval (mbgs)			4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62
Carbon Tetrachloride	ug/l	0.2	No exceedence	No exceedence	No exceedence	<0.40	No exceedence	No exceedence	No exceedence	No exceedence
1,2-Dichloroethane	ug/l	0.5	9.3	No exceedence	No exceedence	40.5	2.51	3.99	7.67	4.11
Trichloroethene	ug/l	0.5	No exceedence	No exceedence	No exceedence	4.26	No exceedence	No exceedence	No exceedence	No exceedence

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22-09 (D)
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22-10 (S)
22-10 (D)
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RICHMOND RD
NEW ORCHARD AVE N
AMBLESIDE DR
BYRON AVE
WOODLAND AVE

LEGEND

- APPROXIMATE BOREHOLE LOCATION
- APPROXIMATE TEST PIT LOCATION
- LOCATION WHERE ALL SAMPLES MEET APPLICABLE STANDARDS
- LOCATION WHERE ONE OR MORE SAMPLES EXCEED APPLICABLE STANDARDS
- APPROXIMATE SITE BOUNDARY

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE
2. [1]O.REG 153 (2011) TABLE 7 STANDARDS FOR ALL TYPES OF PROPERTY USE FOR GROUNDWATER IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUNDWATER CONDITION
3. BOLD AND SHADED INDICATES PARAMETER IS GREATER THAN REG153 (11) T7-GW
4. mbgs: METRES BELOW GROUND SURFACE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 10 20 40
1:750 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
GROUNDWATER ANALYTICAL RESULTS – VOLATILE ORGANIC COMPOUNDS

CONSULTANT

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	RRD
REVIEWED	DS
APPROVED	PH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	0	**18A**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM:
25mm
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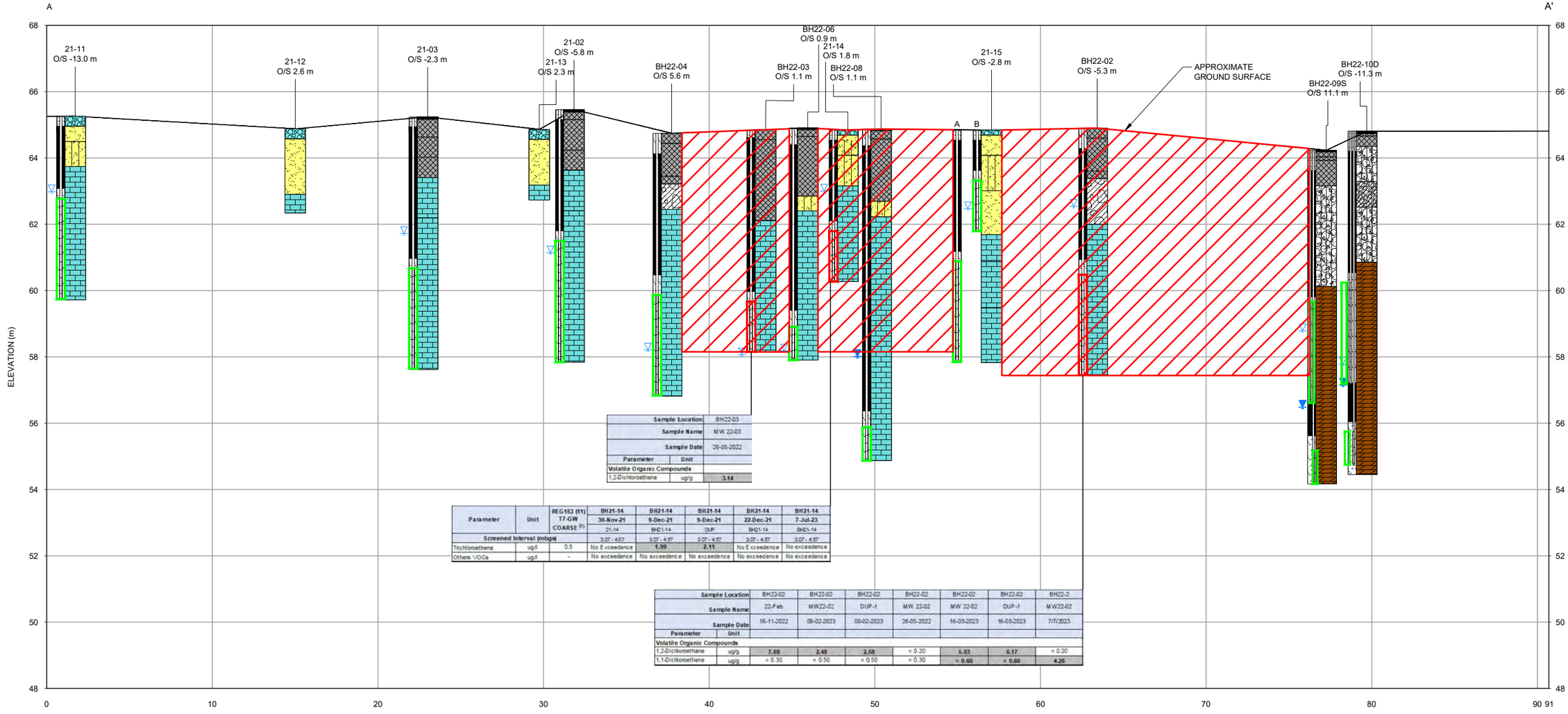
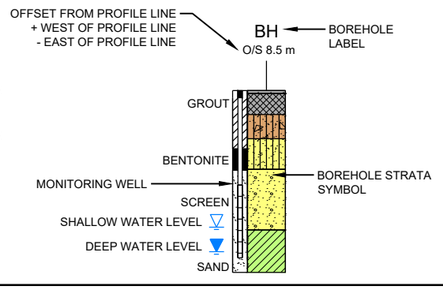


SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- GROUNDWATER SAMPLE MEETS APPLICABLE STANDARDS
- GROUNDWATER SAMPLE EXCEEDS APPLICABLE STANDARDS

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

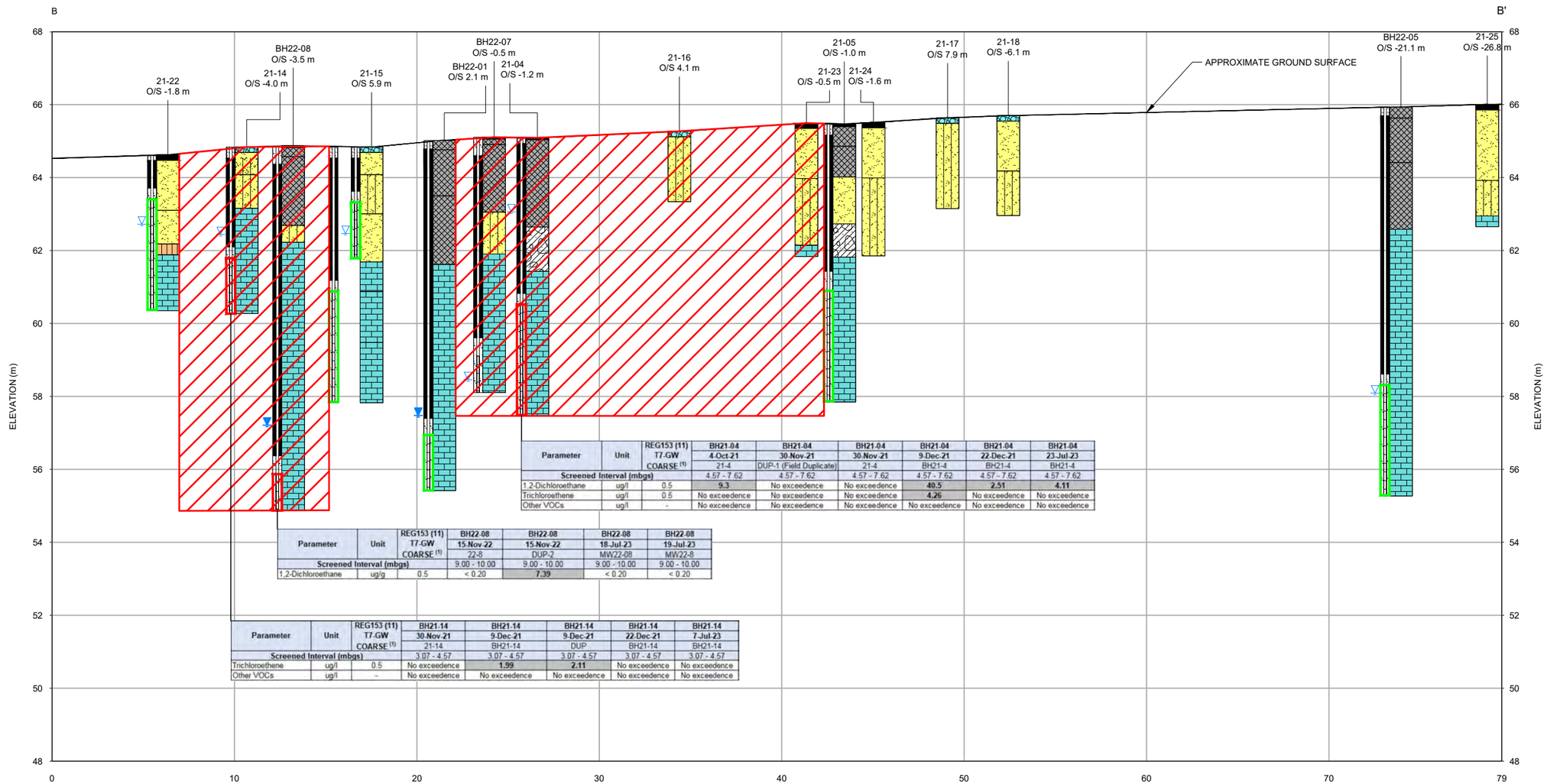
TITLE
CROSS SECTION A-A' (GROUNDWATER EXCEEDANCES - VOLATILE ORGANIC COMPOUNDS)

PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	18B

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm

Path: \\pldfile.gdi\complexdata\office\Ontario\SMI\Clients\Fengate\1047_Richmond_Rd\99_PRO\21494078_Fengate_GeoEnviro\0007_PhaseTwo_ESA_2023\ | File Name: 21494078-0007-HS-0018B.dwg



Parameter	Unit	REG153 (11) T7-GW COARSE [1]	BH21-04 4-Oct-21	BH21-04 30-Nov-21	BH21-04 30-Nov-21	BH21-04 9-Dec-21	BH21-04 22-Dec-21	BH21-04 23-Jul-23
			21-4	DUP-1 (Field Duplicate)	21-4	BH21-4	BH21-4	BH21-4
Screened Interval (mbgs)			4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62	4.57 - 7.62
1,2-Dichloroethane	ug/l	0.5	**9.3**	No exceedence	No exceedence	**40.5**	**2.51**	**4.11**
Trichloroethene	ug/l	0.5	No exceedence	No exceedence	No exceedence	**4.26**	No exceedence	No exceedence
Other VOCs	ug/l	-	No exceedence	No exceedence	No exceedence	No exceedence	No exceedence	No exceedence

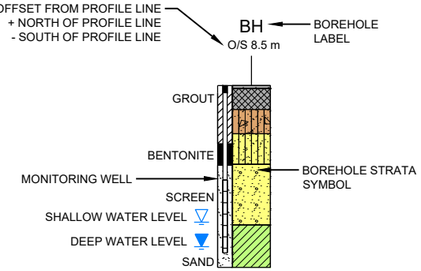
Parameter	Unit	REG153 (11) T7-GW COARSE [1]	BH22-08 15-Nov-22	BH22-08 15-Nov-22	BH22-08 18-Jul-23	BH22-08 19-Jul-23
			22-8	DUP-2	MW22-08	MW22-8
Screened Interval (mbgs)			9.00 - 10.00	9.00 - 10.00	9.00 - 10.00	9.00 - 10.00
1,2-Dichloroethane	ug/g	0.5	< 0.20	**7.39**	< 0.20	< 0.20

Parameter	Unit	REG153 (11) T7-GW COARSE [1]	BH21-14 30-Nov-21	BH21-14 9-Dec-21	BH21-14 9-Dec-21	BH21-14 22-Dec-21	BH21-14 7-Jul-23
			21-14	BH21-14	DUP	BH21-14	BH21-14
Screened Interval (mbgs)			3.07 - 4.57	3.07 - 4.57	3.07 - 4.57	3.07 - 4.57	3.07 - 4.57
Trichloroethene	ug/l	0.5	No exceedence	**1.99**	**2.11**	No exceedence	No exceedence
Other VOCs	ug/l	-	No exceedence	No exceedence	No exceedence	No exceedence	No exceedence

SOIL STRATIGRAPHY

- ASPHALT
- FILL
- SAND
- SILTY SAND
- SILT
- GRAVEL
- GRAVELLY CLAYEY SAND
- GRAVELLY SILTY SAND TILL
- GLACIAL TILL
- LIMESTONE
- DOLOMITE
- GROUNDWATER SAMPLE MEETS APPLICABLE STANDARDS
- GROUNDWATER SAMPLE EXCEEDS APPLICABLE STANDARDS

LEGEND



0 2.5 5
1:125 VERTICAL SCALE METRES

0 5 10
1:250 HORIZONTAL SCALE METRES

CLIENT
1047 RICHMOND NOMINEE INC.

CONSULTANT
wsp

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

YYYY-MM-DD	2023-08-28
DESIGNED	DS
PREPARED	MK
REVIEWED	DS
APPROVED	KS

TITLE
CROSS SECTION B-B' (GROUNDWATER EXCEEDANCES - VOLATILE ORGANIC COMPOUNDS)

PROJECT NO.	CONTROL	REV.	FIGURE
21494078		----	18C

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25 mm 0

Path: \\pdde.gdi\ccomplexdata\office\Ontario\SMK\Clients\Fengate\1047_Richmond_Rd\99_PRO\21494078_Fengate_GeoEnviro\0007_PhaseTwo_ESA_2023\ | File Name: 21494078-0007-HS-0018B.dwg

LEGEND

- APPROXIMATE SAMPLE LOCATION
- LOCATIONS WHERE ALL SAMPLES MEET APPLICABLE STANDARDS
- SLOPE 2:1
- EXCAVATION AREA

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE
2. O.REG 153 (2011) TABLE STANDARDS FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL (R/P/I) PROPERTY USE FOR COARSE TEXTURED SOIL IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION.

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 1.5 3 6
1:125 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
SITE EXCAVATION AREA AND CONFIRMATORY SAMPLE LOCATION

CONSULTANT

YYYY-MM-DD	9/27/2023
DESIGNED	RF
PREPARED	JT
REVIEWED	DS
APPROVED	KS

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0008	0	**19**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm

Path: S:\Clients\Fengate\1047_Richmond_Rd\99_PROJ\21494078_Fengate_GeoEnviro\0008_Excavation\21494078-0008-HS-0001.mxd

APPENDIX A

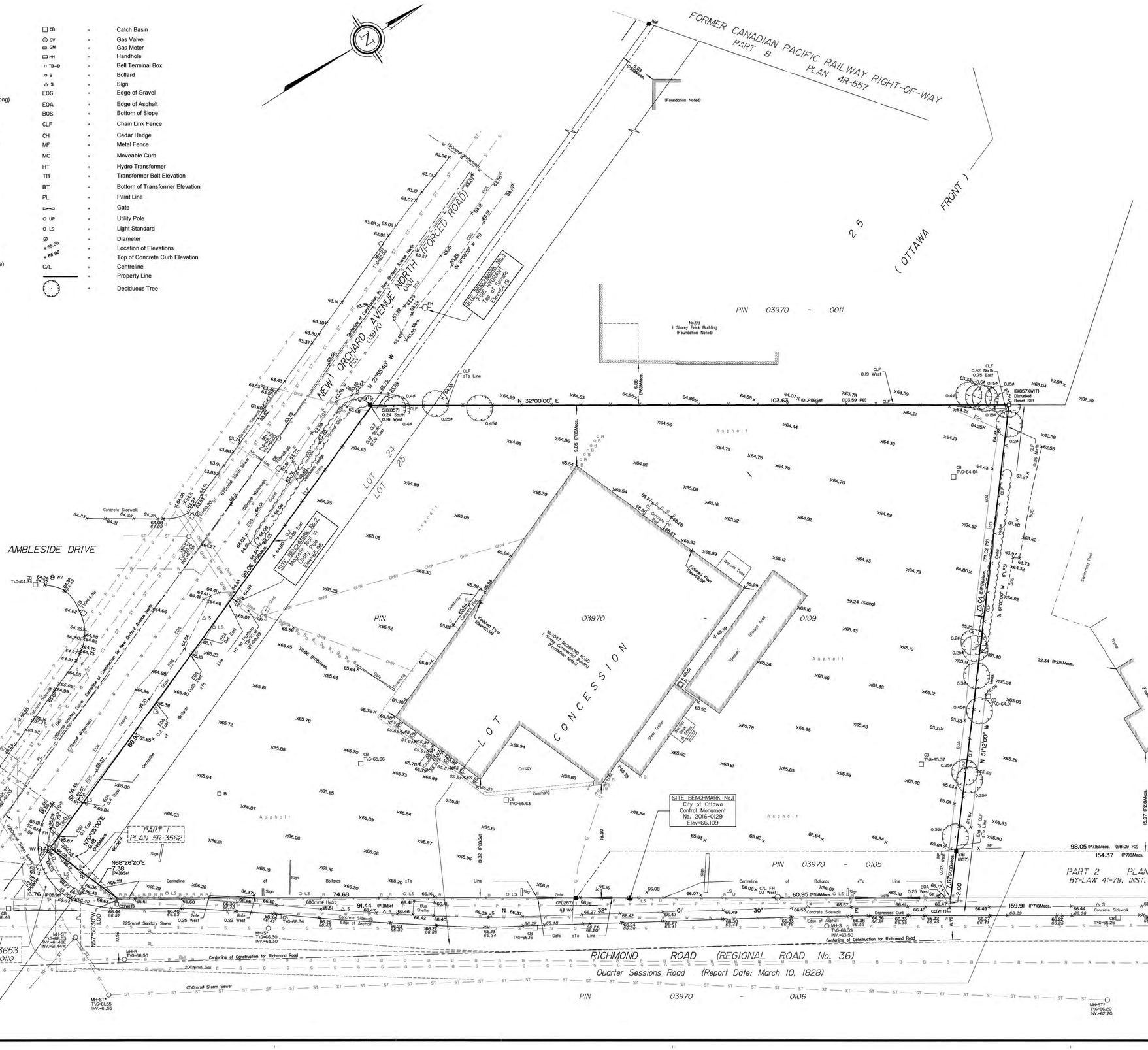
Legal Plan of Survey

Notes & Legend

Denotes

—□—	"	Survey Monument Planted
—■—	"	Survey Monument Found
SIB	"	Standard Iron Bar
SSIB	"	Short Standard Iron Bar
IB	"	Iron Bar
CP	"	Concrete Pin
IBø	"	Round Iron Bar
CC	"	Cut Cross
SSIB*	"	Short Standard Iron Bar (0.30m Long)
(WIT)	"	Witness
Meas.	"	Measured
(AOG)	"	Annis, O'Sullivan, Vollebekk Ltd.
(PI)	"	(AOG) Plan September 23, 1981
(P2)	"	Carleton Condominium Plan 169
(P3)	"	Plan 4R-31800
(P4)	"	Plan 5R-3653
(P5)	"	(647) Plan February 25, 1982
(P6)	"	(857) Plan February 7, 1984
(P7)	"	Plan 4R-1218
(PB)	"	(1287) Plan September 24, 1997
(DI)	"	Inst. N545545
FH	"	Fire Hydrant
WV	"	Water Valve
SP	"	Water Stand Post
MH-ST	"	Maintenance Hole (Storm Sewer)
MH-S	"	Maintenance Hole (Sanitary)
MH-B	"	Maintenance Hole (Bell Telephone)
MH-H	"	Maintenance Hole (Hydro)
MH-G	"	Maintenance Hole (Gas)
MH	"	Maintenance Hole (Unidentified)
VC	"	Valve Chamber (Watermain)
ST	"	Underground Storm Sewer
S	"	Underground Sanitary Sewer
W	"	Underground Water
P	"	Underground Hydro
G	"	Underground Gas
B	"	Underground Bell
TV	"	Underground Rogers
OHW	"	Overhead Wires

CB	"	Catch Basin
GV	"	Gas Valve
GM	"	Gas Meter
HH	"	Handhole
TB-B	"	Bell Terminal Box
B	"	Bollard
S	"	Sign
EOG	"	Edge of Gravel
EOA	"	Edge of Asphalt
BOS	"	Bottom of Slope
CLF	"	Chain Link Fence
CH	"	Cedar Hedge
MF	"	Metal Fence
MC	"	Moveable Curb
HT	"	Hydro Transformer
TB	"	Transformer Bolt Elevation
BT	"	Bottom of Transformer Elevation
PL	"	Paint Line
	"	Gate
UP	"	Utility Pole
LS	"	Light Standard
Ø	"	Diameter
x 65.00	"	Location of Elevations
+ 65.00	"	Top of Concrete Curb Elevation
C/L	"	Centreline
	"	Property Line
	"	Deciduous Tree



TOPOGRAPHICAL PLAN OF SURVEY OF

PART OF LOTS 24 AND 25 CONCESSION 1 (OTTAWA FRONT) GEOGRAPHIC TOWNSHIP OF NEPEAN CITY OF OTTAWA

Surveyed by Annis, O'Sullivan, Vollebekk Ltd.

Scale 1 : 300

12 9 6 3 0 6 12 Metres

Metric

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

Surveyor's Certificate

I CERTIFY THAT :

1. This survey and plan are correct and in accordance with the Surveys Act and the Surveyors Act and the regulations made under them.
2. The survey was completed on the 29th day of September, 2021.

Oct 1, 2021
Date

E. H. Herweyer
Ontario Land Surveyor

Distances shown on this plan are ground distances and can be converted to grid distances by multiplying by the combined scale factor of 0.999982.

For bearing comparisons, a rotation of 0°01'00" counter-clockwise was applied to bearings on P1,P4 & P5.
For bearing comparisons, a rotation of 0°19'10" counter-clockwise was applied to bearings on P6.
For bearing comparisons, a rotation of 0°01'30" counter-clockwise was applied to bearings on P2 & P7.

Coordinates are derived from Can-Net 2016 Real Time Network GPS observations referenced to Specified Control Points 01919680005 and 01919750705, MTM Zone 9 (76°30' West Longitude) NAD-83 (original).

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
V-16989

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

ELEVATION NOTES

1. Elevations shown are geodetic derived from City of Ottawa Monument No.2016-0129 with a published elevation of 66.109m and are referred to the CGVD28 geodetic datum.
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 E-01-09.
4. Sanitary and storm sewer grades and inverts were derived from Plan 2353 (Sheet 4, 5 & 6 of 6) & Plan I-10-c-1.
5. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.
6. Manholes noted with a " * " were not located in the field due to field conditions and construction work. The location of these manholes is derived per the noted drawings above.

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ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850 / Fax: (613) 727-1079
Email: Nepean@aovltd.com

Ontario Land Surveyors

Job No. 21985-21 F:\engtle\Dvp\mnt Prt_hp24_25 Conl OF T F DG

APPENDIX B

Laboratory Certificates of Analysis

Your Project #: 21494078
Site Location: 1047 RICHMOND
Your C.O.C. #: na

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/10/13
Report #: R6851793
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C1S1463
Received: 2021/09/28, 15:20

Sample Matrix: Soil
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Hot Water Extractable Boron (1)	5	2021/10/01	2021/10/01	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum (1)	6	N/A	2021/10/01		EPA 8260C m
Free (WAD) Cyanide (1)	5	2021/10/01	2021/10/01	CAM SOP-00457	OMOE E3015 m
Conductivity (1)	5	2021/10/01	2021/10/01	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1, 2)	5	2021/10/01	2021/10/01	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (1, 3)	1	N/A	2021/10/13	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (1, 3)	2	N/A	2021/09/30	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (1, 4)	1	2021/10/08	2021/10/11	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (1, 4)	1	2021/09/30	2021/10/01	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (1, 4)	5	2021/09/30	2021/09/30	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS (1)	5	2021/10/01	2021/10/01	CAM SOP-00447	EPA 6020B m
Moisture (1)	8	N/A	2021/09/29	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture (1)	5	N/A	2021/09/30	CAM SOP-00445	Carter 2nd ed 51.2 m
pH CaCl2 EXTRACT (1)	5	2021/10/01	2021/10/01	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR) (1)	5	N/A	2021/10/01	CAM SOP-00102	EPA 6010C
Sodium Adsorption Ratio (SAR) (1)	8	N/A	2021/10/12	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs (1)	4	N/A	2021/10/01	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds in Soil (1)	1	N/A	2021/10/01	CAM SOP-00228	EPA 8260C m
Volatile Organic Compounds in Soil (1)	1	N/A	2021/09/30	CAM SOP-00228	EPA 8260C m

Remarks:

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

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

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

Your Project #: 21494078
Site Location: 1047 RICHMOND
Your C.O.C. #: na

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/10/13
Report #: R6851793
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C1S1463
Received: 2021/09/28, 15:20

otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) Soils are reported on a dry weight basis unless otherwise specified.
(3) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
(4) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: emese.gitej@bureauveritas.com
Phone# (905)817-5829
==========
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BV Labs Job #: C1S1463
Report Date: 2021/10/13

Golder Associates Ltd
Client Project #: 21494078
Site Location: 1047 RICHMOND
Sampler Initials: DG

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		QUD247	QUD251			QUD251			QUD254		
Sampling Date		2021/09/24 11:00	2021/09/21 11:30			2021/09/21 11:30			2021/09/24 08:05		
COC Number		na	na			na			na		
	UNITS	21-1 SA1	21-2 SA2	RDL	QC Batch	21-2 SA2 Lab-Dup	RDL	QC Batch	21-5 SA3	RDL	QC Batch
Calculated Parameters											
Sodium Adsorption Ratio	N/A	3.6	0.88		7607144				0.36		7607144
Inorganics											
Conductivity	mS/cm	0.54	0.26	0.002	7612428				0.27	0.002	7612428
Moisture	%	22	4.7	1.0	7610577	5.7	1.0	7610577	14	1.0	7610577
Available (CaCl2) pH	pH	7.51	6.97		7612293				7.42		7612293
WAD Cyanide (Free)	ug/g	<0.01	<0.01	0.01	7612164				<0.01	0.01	7612164
Chromium (VI)	ug/g	<0.18	<0.18	0.18	7611943				<0.18	0.18	7611943
Metals											
Hot Water Ext. Boron (B)	ug/g	0.38	0.15	0.050	7612002				0.40	0.050	7612002
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	0.20	7611998				0.23	0.20	7611998
Acid Extractable Arsenic (As)	ug/g	<1.0	<1.0	1.0	7611998				1.3	1.0	7611998
Acid Extractable Barium (Ba)	ug/g	72	21	0.50	7611998				89	0.50	7611998
Acid Extractable Beryllium (Be)	ug/g	0.49	<0.20	0.20	7611998				0.40	0.20	7611998
Acid Extractable Boron (B)	ug/g	9.8	<5.0	5.0	7611998				6.9	5.0	7611998
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	0.10	7611998				0.54	0.10	7611998
Acid Extractable Chromium (Cr)	ug/g	25	8.3	1.0	7611998				22	1.0	7611998
Acid Extractable Cobalt (Co)	ug/g	7.6	3.1	0.10	7611998				7.9	0.10	7611998
Acid Extractable Copper (Cu)	ug/g	12	4.6	0.50	7611998				14	0.50	7611998
Acid Extractable Lead (Pb)	ug/g	5.6	2.0	1.0	7611998				85	1.0	7611998
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	0.50	7611998				1.2	0.50	7611998
Acid Extractable Nickel (Ni)	ug/g	22	5.5	0.50	7611998				16	0.50	7611998
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	0.50	7611998				<0.50	0.50	7611998
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	0.20	7611998				<0.20	0.20	7611998
Acid Extractable Thallium (Tl)	ug/g	0.10	<0.050	0.050	7611998				0.12	0.050	7611998
Acid Extractable Uranium (U)	ug/g	0.50	0.45	0.050	7611998				0.53	0.050	7611998
Acid Extractable Vanadium (V)	ug/g	30	20	5.0	7611998				30	5.0	7611998
Acid Extractable Zinc (Zn)	ug/g	33	16	5.0	7611998				43	5.0	7611998
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	0.050	7611998				<0.050	0.050	7611998

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

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		QUD258		QUD259		
Sampling Date		2021/09/22 08:30		2021/09/22		
COC Number		na		na		
	UNITS	21-3 SA3	QC Batch	21-3 DUP-1	RDL	QC Batch
Calculated Parameters						
Sodium Adsorption Ratio	N/A	6.1	7607144	9.6		7610400
Inorganics						
Conductivity	mS/cm	0.34	7612428	0.41	0.002	7612465
Moisture	%	16	7610577	15	1.0	7611396
Available (CaCl2) pH	pH	7.54	7612293	7.43		7612293
WAD Cyanide (Free)	ug/g	<0.01	7612164	<0.01	0.01	7612164
Chromium (VI)	ug/g	<0.18	7611943	<0.18	0.18	7611943
Metals						
Hot Water Ext. Boron (B)	ug/g	0.87	7612002	0.67	0.050	7612310
Acid Extractable Antimony (Sb)	ug/g	0.33	7611998	0.46	0.20	7612314
Acid Extractable Arsenic (As)	ug/g	1.7	7611998	2.8	1.0	7612314
Acid Extractable Barium (Ba)	ug/g	99	7611998	110	0.50	7612314
Acid Extractable Beryllium (Be)	ug/g	0.52	7611998	0.72	0.20	7612314
Acid Extractable Boron (B)	ug/g	7.8	7611998	12	5.0	7612314
Acid Extractable Cadmium (Cd)	ug/g	0.45	7611998	0.37	0.10	7612314
Acid Extractable Chromium (Cr)	ug/g	27	7611998	33	1.0	7612314
Acid Extractable Cobalt (Co)	ug/g	13	7611998	14	0.10	7612314
Acid Extractable Copper (Cu)	ug/g	18	7611998	60	0.50	7612314
Acid Extractable Lead (Pb)	ug/g	23	7611998	48	1.0	7612314
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	7611998	0.52	0.50	7612314
Acid Extractable Nickel (Ni)	ug/g	25	7611998	34	0.50	7612314
Acid Extractable Selenium (Se)	ug/g	<0.50	7611998	<0.50	0.50	7612314
Acid Extractable Silver (Ag)	ug/g	<0.20	7611998	<0.20	0.20	7612314
Acid Extractable Thallium (Tl)	ug/g	0.14	7611998	0.21	0.050	7612314
Acid Extractable Uranium (U)	ug/g	0.49	7611998	0.64	0.050	7612314
Acid Extractable Vanadium (V)	ug/g	26	7611998	29	5.0	7612314
Acid Extractable Zinc (Zn)	ug/g	54	7611998	89	5.0	7612314
Acid Extractable Mercury (Hg)	ug/g	0.063	7611998	0.077	0.050	7612314

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs Job #: C1S1463
Report Date: 2021/10/13

Golder Associates Ltd
Client Project #: 21494078
Site Location: 1047 RICHMOND
Sampler Initials: DG

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

BV Labs ID		QUD250			QUD254			QUD257		
Sampling Date		2021/09/21 10:40			2021/09/24 08:05			2021/09/22 08:15		
COC Number		na			na			na		
	UNITS	21-4 SA6	RDL	QC Batch	21-5 SA3	RDL	QC Batch	21-3 SA2	RDL	QC Batch
Inorganics										
Moisture	%	9.6	1.0	7609199				5.6	1.0	7608490
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	0.020	7610488	<0.020	0.020	7632544	<0.020	0.020	7610488
Toluene	ug/g	<0.020	0.020	7610488	<0.020	0.020	7632544	<0.020	0.020	7610488
Ethylbenzene	ug/g	<0.020	0.020	7610488	<0.020	0.020	7632544	<0.020	0.020	7610488
o-Xylene	ug/g	<0.020	0.020	7610488	<0.020	0.020	7632544	<0.020	0.020	7610488
p+m-Xylene	ug/g	<0.040	0.040	7610488	<0.040	0.040	7632544	<0.040	0.040	7610488
Total Xylenes	ug/g	<0.040	0.040	7610488	<0.040	0.040	7632544	<0.040	0.040	7610488
F1 (C6-C10)	ug/g	<10	10	7610488	<10	10	7632544	<10	10	7610488
F1 (C6-C10) - BTEX	ug/g	<10	10	7610488	<10	10	7632544	<10	10	7610488
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7609831	<10	10	7628860	<10	10	7609831
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7609831	200	50	7628860	<50	50	7609831
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7609831	76	50	7628860	<50	50	7609831
Reached Baseline at C50	ug/g	Yes		7609831	Yes		7628860	Yes		7609831
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	100		7610488	106		7632544	103		7610488
4-Bromofluorobenzene	%	102		7610488	90		7632544	94		7610488
D10-o-Xylene	%	93		7610488	78		7632544	103		7610488
D4-1,2-Dichloroethane	%	95		7610488	106		7632544	96		7610488
o-Terphenyl	%	106		7609831	90		7628860	100		7609831

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

BV Labs ID		QUD257		
Sampling Date		2021/09/22 08:15		
COC Number		na		
	UNITS	21-3 SA2 Lab-Dup	RDL	QC Batch
Inorganics				
Moisture	%	5.1	1.0	7608490

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

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

BV Labs ID		QUD248	QUD252	QUD253	QUD255		
Sampling Date		2021/09/24 11:30	2021/09/21 12:00	2021/09/22 10:50	2021/09/22 10:50		
COC Number		na	na	na	na		
	UNITS	21-1 SA3	21-2 SA5	21-5 SA2	21-5 DUP-1	RDL	QC Batch
Inorganics							
Moisture	%	17	7.6	10	9.3	1.0	7609199
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	<0.050	<0.050	0.050	7607143
Volatile Organics							
Acetone (2-Propanone)	ug/g	<0.49	<0.49	<0.49	<0.49	0.49	7612202
Benzene	ug/g	<0.0060	<0.0060	<0.0060	<0.0060	0.0060	7612202
Bromodichloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Bromoform	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Bromomethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Carbon Tetrachloride	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Chlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Chloroform	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Dibromochloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	0.12	0.15	0.040	7612202
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	0.073	0.093	0.040	7612202
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,1-Dichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,2-Dichloroethane	ug/g	<0.049	<0.049	<0.049	<0.049	0.049	7612202
1,1-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,2-Dichloropropane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	<0.030	<0.030	0.030	7612202
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Ethylbenzene	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	7612202
Ethylene Dibromide	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Hexane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	<0.049	<0.049	0.049	7612202
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	<0.40	<0.40	0.40	7612202
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	<0.40	<0.40	0.40	7612202
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Styrene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

BV Labs ID		QUD248	QUD252	QUD253	QUD255		
Sampling Date		2021/09/24 11:30	2021/09/21 12:00	2021/09/22 10:50	2021/09/22 10:50		
COC Number		na	na	na	na		
	UNITS	21-1 SA3	21-2 SA5	21-5 SA2	21-5 DUP-1	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Tetrachloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Toluene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	7612202
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Trichloroethylene	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	7612202
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Vinyl Chloride	ug/g	<0.019	<0.019	<0.019	<0.019	0.019	7612202
p+m-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	7612202
o-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	7612202
Total Xylenes	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	7612202
F1 (C6-C10)	ug/g	<10	<10	<10	<10	10	7612202
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	<10	10	7612202
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	260	10	7609831
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	1500	25000	50	7609831
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	520	8100	50	7609831
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		7609831
Surrogate Recovery (%)							
o-Terphenyl	%	101	101	92	99		7609831
4-Bromofluorobenzene	%	91	91	90	90		7612202
D10-o-Xylene	%	86	81	88	74		7612202
D4-1,2-Dichloroethane	%	116	115	118	117		7612202
D8-Toluene	%	90	89	89	90		7612202

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 VOCS BY HS (SOIL)

BV Labs ID		QUD249			QUD249			QUD256		
Sampling Date		2021/09/21 09:40			2021/09/21 09:40			2021/09/22 08:00		
COC Number		na			na			na		
	UNITS	21-4 SA1	RDL	QC Batch	21-4 SA1 Lab-Dup	RDL	QC Batch	21-3 SA1	RDL	QC Batch
Inorganics										
Moisture	%	6.6	1.0	7608769	6.7	1.0	7608769	3.4	1.0	7608769
Calculated Parameters										
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	7607143				<0.050	0.050	7607143
Volatile Organics										
Acetone (2-Propanone)	ug/g	<0.49	0.49	7609853	<0.49	0.49	7609853	<0.49	0.49	7612260
Benzene	ug/g	<0.0060	0.0060	7609853	<0.0060	0.0060	7609853	<0.0060	0.0060	7612260
Bromodichloromethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Bromoform	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Bromomethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Carbon Tetrachloride	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Chlorobenzene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Chloroform	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Dibromochloromethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,2-Dichlorobenzene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,3-Dichlorobenzene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,4-Dichlorobenzene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,1-Dichloroethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,2-Dichloroethane	ug/g	<0.049	0.049	7609853	<0.049	0.049	7609853	<0.049	0.049	7612260
1,1-Dichloroethylene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,2-Dichloropropane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	7609853	<0.030	0.030	7609853	<0.030	0.030	7612260
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Ethylbenzene	ug/g	<0.010	0.010	7609853	<0.010	0.010	7609853	<0.010	0.010	7612260
Ethylene Dibromide	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Hexane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	0.19	0.040	7612260
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	7609853	<0.049	0.049	7609853	<0.049	0.049	7612260
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	7609853	<0.40	0.40	7609853	<0.40	0.40	7612260
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	7609853	<0.40	0.40	7609853	<0.40	0.40	7612260
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260

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

O.REG 153 VOCS BY HS (SOIL)

BV Labs ID		QUD249			QUD249			QUD256		
Sampling Date		2021/09/21 09:40			2021/09/21 09:40			2021/09/22 08:00		
COC Number		na			na			na		
	UNITS	21-4 SA1	RDL	QC Batch	21-4 SA1 Lab-Dup	RDL	QC Batch	21-3 SA1	RDL	QC Batch
Styrene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Tetrachloroethylene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Toluene	ug/g	<0.020	0.020	7609853	<0.020	0.020	7609853	0.039	0.020	7612260
1,1,1-Trichloroethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,1,2-Trichloroethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Trichloroethylene	ug/g	<0.010	0.010	7609853	<0.010	0.010	7609853	<0.010	0.010	7612260
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Vinyl Chloride	ug/g	<0.019	0.019	7609853	<0.019	0.019	7609853	<0.019	0.019	7612260
p+m-Xylene	ug/g	<0.020	0.020	7609853	<0.020	0.020	7609853	0.045	0.020	7612260
o-Xylene	ug/g	<0.020	0.020	7609853	<0.020	0.020	7609853	<0.020	0.020	7612260
Total Xylenes	ug/g	<0.020	0.020	7609853	<0.020	0.020	7609853	0.045	0.020	7612260
Surrogate Recovery (%)										
4-Bromofluorobenzene	%	106		7609853	105		7609853	87		7612260
D10-o-Xylene	%	99		7609853	95		7609853	97		7612260
D4-1,2-Dichloroethane	%	101		7609853	102		7609853	104		7612260
D8-Toluene	%	96		7609853	95		7609853	94		7612260

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

O.REG 153 VOCS BY HS (SOIL)

BV Labs ID		QUD256		
Sampling Date		2021/09/22 08:00		
COC Number		na		
	UNITS	21-3 SA1 Lab-Dup	RDL	QC Batch
Volatile Organics				
Acetone (2-Propanone)	ug/g	<0.49	0.49	7612260
Benzene	ug/g	<0.0060	0.0060	7612260
Bromodichloromethane	ug/g	<0.040	0.040	7612260
Bromoform	ug/g	<0.040	0.040	7612260
Bromomethane	ug/g	<0.040	0.040	7612260
Carbon Tetrachloride	ug/g	<0.040	0.040	7612260
Chlorobenzene	ug/g	<0.040	0.040	7612260
Chloroform	ug/g	<0.040	0.040	7612260
Dibromochloromethane	ug/g	<0.040	0.040	7612260
1,2-Dichlorobenzene	ug/g	<0.040	0.040	7612260
1,3-Dichlorobenzene	ug/g	<0.040	0.040	7612260
1,4-Dichlorobenzene	ug/g	<0.040	0.040	7612260
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	7612260
1,1-Dichloroethane	ug/g	<0.040	0.040	7612260
1,2-Dichloroethane	ug/g	<0.049	0.049	7612260
1,1-Dichloroethylene	ug/g	<0.040	0.040	7612260
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	7612260
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	7612260
1,2-Dichloropropane	ug/g	<0.040	0.040	7612260
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	7612260
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	7612260
Ethylbenzene	ug/g	<0.010	0.010	7612260
Ethylene Dibromide	ug/g	<0.040	0.040	7612260
Hexane	ug/g	0.18	0.040	7612260
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	7612260
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	7612260
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	7612260
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	7612260
Styrene	ug/g	<0.040	0.040	7612260
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	7612260

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

O.REG 153 VOCS BY HS (SOIL)

BV Labs ID		QUD256		
Sampling Date		2021/09/22 08:00		
COC Number		na		
	UNITS	21-3 SA1 Lab-Dup	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	7612260
Tetrachloroethylene	ug/g	<0.040	0.040	7612260
Toluene	ug/g	0.036	0.020	7612260
1,1,1-Trichloroethane	ug/g	<0.040	0.040	7612260
1,1,2-Trichloroethane	ug/g	<0.040	0.040	7612260
Trichloroethylene	ug/g	<0.010	0.010	7612260
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	7612260
Vinyl Chloride	ug/g	<0.019	0.019	7612260
p+m-Xylene	ug/g	0.046	0.020	7612260
o-Xylene	ug/g	<0.020	0.020	7612260
Total Xylenes	ug/g	0.046	0.020	7612260
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	86		7612260
D10-o-Xylene	%	95		7612260
D4-1,2-Dichloroethane	%	103		7612260
D8-Toluene	%	94		7612260

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

BV Labs Job #: C1S1463
Report Date: 2021/10/13

Golder Associates Ltd
Client Project #: 21494078
Site Location: 1047 RICHMOND
Sampler Initials: DG

RESULTS OF ANALYSES OF SOIL

BV Labs ID		QUD248	QUD249	QUD250	QUD252	QUD253	QUD255	QUD256	
Sampling Date		2021/09/24 11:30	2021/09/21 09:40	2021/09/21 10:40	2021/09/21 12:00	2021/09/22 10:50	2021/09/22 10:50	2021/09/22 08:00	
COC Number		na	na	na	na	na	na	na	
	UNITS	21-1 SA3	21-4 SA1	21-4 SA6	21-2 SA5	21-5 SA2	21-5 DUP-1	21-3 SA1	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	2.3	0.46 (1)	0.34 (1)	4.1	0.24 (1)	0.21 (1)	0.29	7626412

QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

BV Labs ID		QUD257	
Sampling Date		2021/09/22 08:15	
COC Number		na	
	UNITS	21-3 SA2	QC Batch
Calculated Parameters			
Sodium Adsorption Ratio	N/A	5.3	7626412

QC Batch = Quality Control Batch

BV Labs Job #: C1S1463
Report Date: 2021/10/13

Golder Associates Ltd
Client Project #: 21494078
Site Location: 1047 RICHMOND
Sampler Initials: DG

TEST SUMMARY

BV Labs ID: QUD247
Sample ID: 21-1 SA1
Matrix: Soil

Collected: 2021/09/24
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7612002	2021/10/01	2021/10/01	Archana Patel
Free (WAD) Cyanide	TECH	7612164	2021/10/01	2021/10/01	Aditiben Patel
Conductivity	AT	7612428	2021/10/01	2021/10/01	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7611943	2021/10/01	2021/10/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7611998	2021/10/01	2021/10/01	Daniel Teclu
Moisture	BAL	7610577	N/A	2021/09/30	Abhijot Kaur
pH CaCl2 EXTRACT	AT	7612293	2021/10/01	2021/10/01	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7607144	N/A	2021/10/01	Automated Statchk

BV Labs ID: QUD248
Sample ID: 21-1 SA3
Matrix: Soil

Collected: 2021/09/24
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/09/30	Agnieszka Brzuzy-Snopko
Moisture	BAL	7609199	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7612202	N/A	2021/10/01	Denis Reid

BV Labs ID: QUD249
Sample ID: 21-4 SA1
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Moisture	BAL	7608769	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds in Soil	GC/MS	7609853	N/A	2021/09/30	Juan Pangilinan

BV Labs ID: QUD249 Dup
Sample ID: 21-4 SA1
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7608769	N/A	2021/09/29	Kruti Jitesh Patel
Volatile Organic Compounds in Soil	GC/MS	7609853	N/A	2021/09/30	Juan Pangilinan

BV Labs ID: QUD250
Sample ID: 21-4 SA6
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7610488	N/A	2021/09/30	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/09/30	Agnieszka Brzuzy-Snopko
Moisture	BAL	7609199	N/A	2021/09/29	Kruti Jitesh Patel

TEST SUMMARY

BV Labs ID: QUD250
Sample ID: 21-4 SA6
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk

BV Labs ID: QUD251
Sample ID: 21-2 SA2
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7612002	2021/10/01	2021/10/01	Archana Patel
Free (WAD) Cyanide	TECH	7612164	2021/10/01	2021/10/01	Aditiben Patel
Conductivity	AT	7612428	2021/10/01	2021/10/01	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7611943	2021/10/01	2021/10/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7611998	2021/10/01	2021/10/01	Daniel Teclu
Moisture	BAL	7610577	N/A	2021/09/30	Abhijot Kaur
pH CaCl2 EXTRACT	AT	7612293	2021/10/01	2021/10/01	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7607144	N/A	2021/10/01	Automated Statchk

BV Labs ID: QUD251 Dup
Sample ID: 21-2 SA2
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7610577	N/A	2021/09/30	Abhijot Kaur

BV Labs ID: QUD252
Sample ID: 21-2 SA5
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/09/30	Agnieszka Brzuzy-Snopko
Moisture	BAL	7609199	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7612202	N/A	2021/10/01	Denis Reid

BV Labs ID: QUD253
Sample ID: 21-5 SA2
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/09/30	Agnieszka Brzuzy-Snopko
Moisture	BAL	7609199	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7612202	N/A	2021/10/01	Denis Reid

BV Labs Job #: C1S1463
Report Date: 2021/10/13

Golder Associates Ltd
Client Project #: 21494078
Site Location: 1047 RICHMOND
Sampler Initials: DG

TEST SUMMARY

BV Labs ID: QUD254
Sample ID: 21-5 SA3
Matrix: Soil

Collected: 2021/09/24
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7612002	2021/10/01	2021/10/01	Archana Patel
Free (WAD) Cyanide	TECH	7612164	2021/10/01	2021/10/01	Aditiben Patel
Conductivity	AT	7612428	2021/10/01	2021/10/01	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7611943	2021/10/01	2021/10/01	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7632544	N/A	2021/10/13	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7628860	2021/10/08	2021/10/11	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7611998	2021/10/01	2021/10/01	Daniel Teclu
Moisture	BAL	7610577	N/A	2021/09/30	Abhijot Kaur
pH CaCl2 EXTRACT	AT	7612293	2021/10/01	2021/10/01	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7607144	N/A	2021/10/01	Automated Statchk

BV Labs ID: QUD255
Sample ID: 21-5 DUP-1
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/09/30	Agnieszka Brzuzy-Snopko
Moisture	BAL	7609199	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7612202	N/A	2021/10/01	Denis Reid

BV Labs ID: QUD256
Sample ID: 21-3 SA1
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Moisture	BAL	7608769	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds in Soil	GC/MS	7612260	N/A	2021/10/01	Karen Hughes

BV Labs ID: QUD256 Dup
Sample ID: 21-3 SA1
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds in Soil	GC/MS	7612260	N/A	2021/10/01	Karen Hughes

BV Labs ID: QUD257
Sample ID: 21-3 SA2
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7610488	N/A	2021/09/30	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/10/01	Agnieszka Brzuzy-Snopko

TEST SUMMARY

BV Labs ID: QUD257
Sample ID: 21-3 SA2
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7608490	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk

BV Labs ID: QUD257 Dup
Sample ID: 21-3 SA2
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7608490	N/A	2021/09/29	Kruti Jitesh Patel

BV Labs ID: QUD258
Sample ID: 21-3 SA3
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7612002	2021/10/01	2021/10/01	Archana Patel
Free (WAD) Cyanide	TECH	7612164	2021/10/01	2021/10/01	Aditiben Patel
Conductivity	AT	7612428	2021/10/01	2021/10/01	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7611943	2021/10/01	2021/10/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7611998	2021/10/01	2021/10/01	Daniel Teclu
Moisture	BAL	7610577	N/A	2021/09/30	Abhijot Kaur
pH CaCl2 EXTRACT	AT	7612293	2021/10/01	2021/10/01	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7607144	N/A	2021/10/01	Automated Statchk

BV Labs ID: QUD259
Sample ID: 21-3 DUP-1
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7612310	2021/10/01	2021/10/01	Archana Patel
Free (WAD) Cyanide	TECH	7612164	2021/10/01	2021/10/01	Aditiben Patel
Conductivity	AT	7612465	2021/10/01	2021/10/01	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7611943	2021/10/01	2021/10/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7612314	2021/10/01	2021/10/01	Viviana Canzonieri
Moisture	BAL	7611396	N/A	2021/09/30	Abhijot Kaur
pH CaCl2 EXTRACT	AT	7612293	2021/10/01	2021/10/01	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7610400	N/A	2021/10/01	Automated Statchk

GENERAL COMMENTS

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

Package 1	9.0°C

Revised Report [2021/10/13]: Samples 21-1 SA3, 21-4 SA1, SA-4 SA6, SA-2 SA5, 21-5 SA2, 21-5 DUP-1, 21-3 SA1 and 21-3 SA2 have been analyzed for SAR; sample 21-5 SA3 has been analyzed for Reg.153 PHCs as per client request.

Sample QUD250 [21-4 SA6] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample QUD254 [21-5 SA3] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample QUD259 [21-3 DUP-1] : Sample analyzed for Reg. 153 Metals & Inorganics as per client request.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7608490	MUC	RPD [QUD257-02]	Moisture	2021/09/29	9.3		%	20
7608769	MYG	RPD [QUD249-01]	Moisture	2021/09/29	1.5		%	20
7609199	MUC	RPD	Moisture	2021/09/29	9.2		%	20
7609831	ABS	Matrix Spike	o-Terphenyl	2021/09/30		91	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/09/30		96	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/09/30		97	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/09/30		98	%	50 - 130
7609831	ABS	Spiked Blank	o-Terphenyl	2021/09/30		93	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/09/30		97	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/09/30		98	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/09/30		99	%	80 - 120
7609831	ABS	Method Blank	o-Terphenyl	2021/09/30		93	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/09/30	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/09/30	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/09/30	<50		ug/g	
7609831	ABS	RPD	F2 (C10-C16 Hydrocarbons)	2021/09/30	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/09/30	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/09/30	NC		%	30
7609853	JPN	Matrix Spike [QUD249-02]	4-Bromofluorobenzene	2021/09/30		112	%	60 - 140
			D10-o-Xylene	2021/09/30		106	%	60 - 130
			D4-1,2-Dichloroethane	2021/09/30		98	%	60 - 140
			D8-Toluene	2021/09/30		106	%	60 - 140
			Acetone (2-Propanone)	2021/09/30		94	%	60 - 140
			Benzene	2021/09/30		92	%	60 - 140
			Bromodichloromethane	2021/09/30		100	%	60 - 140
			Bromoform	2021/09/30		95	%	60 - 140
			Bromomethane	2021/09/30		99	%	60 - 140
			Carbon Tetrachloride	2021/09/30		103	%	60 - 140
			Chlorobenzene	2021/09/30		99	%	60 - 140
			Chloroform	2021/09/30		99	%	60 - 140
			Dibromochloromethane	2021/09/30		90	%	60 - 140
			1,2-Dichlorobenzene	2021/09/30		96	%	60 - 140
			1,3-Dichlorobenzene	2021/09/30		98	%	60 - 140
			1,4-Dichlorobenzene	2021/09/30		114	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2021/09/30		106	%	60 - 140
			1,1-Dichloroethane	2021/09/30		96	%	60 - 140
			1,2-Dichloroethane	2021/09/30		93	%	60 - 140
			1,1-Dichloroethylene	2021/09/30		101	%	60 - 140
			cis-1,2-Dichloroethylene	2021/09/30		100	%	60 - 140
			trans-1,2-Dichloroethylene	2021/09/30		103	%	60 - 140
			1,2-Dichloropropane	2021/09/30		96	%	60 - 140
			cis-1,3-Dichloropropene	2021/09/30		80	%	60 - 140
			trans-1,3-Dichloropropene	2021/09/30		84	%	60 - 140
			Ethylbenzene	2021/09/30		92	%	60 - 140
			Ethylene Dibromide	2021/09/30		92	%	60 - 140
			Hexane	2021/09/30		104	%	60 - 140
			Methylene Chloride(Dichloromethane)	2021/09/30		110	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2021/09/30		96	%	60 - 140
			Methyl Isobutyl Ketone	2021/09/30		93	%	60 - 140
			Methyl t-butyl ether (MTBE)	2021/09/30		89	%	60 - 140
			Styrene	2021/09/30		108	%	60 - 140
			1,1,1,2-Tetrachloroethane	2021/09/30		102	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,1,2,2-Tetrachloroethane	2021/09/30		92	%	60 - 140
			Tetrachloroethylene	2021/09/30		99	%	60 - 140
			Toluene	2021/09/30		95	%	60 - 140
			1,1,1-Trichloroethane	2021/09/30		104	%	60 - 140
			1,1,2-Trichloroethane	2021/09/30		99	%	60 - 140
			Trichloroethylene	2021/09/30		107	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2021/09/30		106	%	60 - 140
			Vinyl Chloride	2021/09/30		106	%	60 - 140
			p+m-Xylene	2021/09/30		98	%	60 - 140
			o-Xylene	2021/09/30		92	%	60 - 140
7609853	JPN	Spiked Blank	4-Bromofluorobenzene	2021/09/30		113	%	60 - 140
			D10-o-Xylene	2021/09/30		112	%	60 - 130
			D4-1,2-Dichloroethane	2021/09/30		103	%	60 - 140
			D8-Toluene	2021/09/30		104	%	60 - 140
			Acetone (2-Propanone)	2021/09/30		98	%	60 - 140
			Benzene	2021/09/30		94	%	60 - 130
			Bromodichloromethane	2021/09/30		105	%	60 - 130
			Bromoform	2021/09/30		104	%	60 - 130
			Bromomethane	2021/09/30		106	%	60 - 140
			Carbon Tetrachloride	2021/09/30		102	%	60 - 130
			Chlorobenzene	2021/09/30		101	%	60 - 130
			Chloroform	2021/09/30		103	%	60 - 130
			Dibromochloromethane	2021/09/30		114	%	60 - 130
			1,2-Dichlorobenzene	2021/09/30		98	%	60 - 130
			1,3-Dichlorobenzene	2021/09/30		98	%	60 - 130
			1,4-Dichlorobenzene	2021/09/30		114	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2021/09/30		106	%	60 - 140
			1,1-Dichloroethane	2021/09/30		98	%	60 - 130
			1,2-Dichloroethane	2021/09/30		99	%	60 - 130
			1,1-Dichloroethylene	2021/09/30		99	%	60 - 130
			cis-1,2-Dichloroethylene	2021/09/30		104	%	60 - 130
			trans-1,2-Dichloroethylene	2021/09/30		103	%	60 - 130
			1,2-Dichloropropane	2021/09/30		100	%	60 - 130
			cis-1,3-Dichloropropene	2021/09/30		91	%	60 - 130
			trans-1,3-Dichloropropene	2021/09/30		98	%	60 - 130
			Ethylbenzene	2021/09/30		91	%	60 - 130
			Ethylene Dibromide	2021/09/30		100	%	60 - 130
			Hexane	2021/09/30		102	%	60 - 130
			Methylene Chloride(Dichloromethane)	2021/09/30		115	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/09/30		105	%	60 - 140
			Methyl Isobutyl Ketone	2021/09/30		106	%	60 - 130
			Methyl t-butyl ether (MTBE)	2021/09/30		92	%	60 - 130
			Styrene	2021/09/30		111	%	60 - 130
			1,1,1,2-Tetrachloroethane	2021/09/30		105	%	60 - 130
			1,1,2,2-Tetrachloroethane	2021/09/30		101	%	60 - 130
			Tetrachloroethylene	2021/09/30		98	%	60 - 130
			Toluene	2021/09/30		96	%	60 - 130
			1,1,1-Trichloroethane	2021/09/30		105	%	60 - 130
			1,1,2-Trichloroethane	2021/09/30		106	%	60 - 130
			Trichloroethylene	2021/09/30		108	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2021/09/30		105	%	60 - 130
			Vinyl Chloride	2021/09/30		106	%	60 - 130
			p+m-Xylene	2021/09/30		97	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			o-Xylene	2021/09/30		92	%	60 - 130
7609853	JPN	Method Blank	4-Bromofluorobenzene	2021/09/30		106	%	60 - 140
			D10-o-Xylene	2021/09/30		103	%	60 - 130
			D4-1,2-Dichloroethane	2021/09/30		108	%	60 - 140
			D8-Toluene	2021/09/30		93	%	60 - 140
			Acetone (2-Propanone)	2021/09/30	<0.49		ug/g	
			Benzene	2021/09/30	<0.0060		ug/g	
			Bromodichloromethane	2021/09/30	<0.040		ug/g	
			Bromoform	2021/09/30	<0.040		ug/g	
			Bromomethane	2021/09/30	<0.040		ug/g	
			Carbon Tetrachloride	2021/09/30	<0.040		ug/g	
			Chlorobenzene	2021/09/30	<0.040		ug/g	
			Chloroform	2021/09/30	<0.040		ug/g	
			Dibromochloromethane	2021/09/30	<0.040		ug/g	
			1,2-Dichlorobenzene	2021/09/30	<0.040		ug/g	
			1,3-Dichlorobenzene	2021/09/30	<0.040		ug/g	
			1,4-Dichlorobenzene	2021/09/30	<0.040		ug/g	
			Dichlorodifluoromethane (FREON 12)	2021/09/30	<0.040		ug/g	
			1,1-Dichloroethane	2021/09/30	<0.040		ug/g	
			1,2-Dichloroethane	2021/09/30	<0.049		ug/g	
			1,1-Dichloroethylene	2021/09/30	<0.040		ug/g	
			cis-1,2-Dichloroethylene	2021/09/30	<0.040		ug/g	
			trans-1,2-Dichloroethylene	2021/09/30	<0.040		ug/g	
			1,2-Dichloropropane	2021/09/30	<0.040		ug/g	
			cis-1,3-Dichloropropene	2021/09/30	<0.030		ug/g	
			trans-1,3-Dichloropropene	2021/09/30	<0.040		ug/g	
			Ethylbenzene	2021/09/30	<0.010		ug/g	
			Ethylene Dibromide	2021/09/30	<0.040		ug/g	
			Hexane	2021/09/30	<0.040		ug/g	
			Methylene Chloride(Dichloromethane)	2021/09/30	<0.049		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2021/09/30	<0.40		ug/g	
			Methyl Isobutyl Ketone	2021/09/30	<0.40		ug/g	
			Methyl t-butyl ether (MTBE)	2021/09/30	<0.040		ug/g	
			Styrene	2021/09/30	<0.040		ug/g	
			1,1,1,2-Tetrachloroethane	2021/09/30	<0.040		ug/g	
			1,1,2,2-Tetrachloroethane	2021/09/30	<0.040		ug/g	
			Tetrachloroethylene	2021/09/30	<0.040		ug/g	
			Toluene	2021/09/30	<0.020		ug/g	
			1,1,1-Trichloroethane	2021/09/30	<0.040		ug/g	
			1,1,2-Trichloroethane	2021/09/30	<0.040		ug/g	
			Trichloroethylene	2021/09/30	<0.010		ug/g	
			Trichlorofluoromethane (FREON 11)	2021/09/30	<0.040		ug/g	
			Vinyl Chloride	2021/09/30	<0.019		ug/g	
			p+m-Xylene	2021/09/30	<0.020		ug/g	
			o-Xylene	2021/09/30	<0.020		ug/g	
			Total Xylenes	2021/09/30	<0.020		ug/g	
7609853	JPN	RPD [QUD249-02]	Acetone (2-Propanone)	2021/09/30	NC		%	50
			Benzene	2021/09/30	NC		%	50
			Bromodichloromethane	2021/09/30	NC		%	50
			Bromoform	2021/09/30	NC		%	50
			Bromomethane	2021/09/30	NC		%	50
			Carbon Tetrachloride	2021/09/30	NC		%	50
			Chlorobenzene	2021/09/30	NC		%	50

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Chloroform	2021/09/30	NC		%	50
			Dibromochloromethane	2021/09/30	NC		%	50
			1,2-Dichlorobenzene	2021/09/30	NC		%	50
			1,3-Dichlorobenzene	2021/09/30	NC		%	50
			1,4-Dichlorobenzene	2021/09/30	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2021/09/30	NC		%	50
			1,1-Dichloroethane	2021/09/30	NC		%	50
			1,2-Dichloroethane	2021/09/30	NC		%	50
			1,1-Dichloroethylene	2021/09/30	NC		%	50
			cis-1,2-Dichloroethylene	2021/09/30	NC		%	50
			trans-1,2-Dichloroethylene	2021/09/30	NC		%	50
			1,2-Dichloropropane	2021/09/30	NC		%	50
			cis-1,3-Dichloropropene	2021/09/30	NC		%	50
			trans-1,3-Dichloropropene	2021/09/30	NC		%	50
			Ethylbenzene	2021/09/30	NC		%	50
			Ethylene Dibromide	2021/09/30	NC		%	50
			Hexane	2021/09/30	NC		%	50
			Methylene Chloride(Dichloromethane)	2021/09/30	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2021/09/30	NC		%	50
			Methyl Isobutyl Ketone	2021/09/30	NC		%	50
			Methyl t-butyl ether (MTBE)	2021/09/30	NC		%	50
			Styrene	2021/09/30	NC		%	50
			1,1,1,2-Tetrachloroethane	2021/09/30	NC		%	50
			1,1,2,2-Tetrachloroethane	2021/09/30	NC		%	50
			Tetrachloroethylene	2021/09/30	NC		%	50
			Toluene	2021/09/30	NC		%	50
			1,1,1-Trichloroethane	2021/09/30	NC		%	50
			1,1,2-Trichloroethane	2021/09/30	NC		%	50
			Trichloroethylene	2021/09/30	NC		%	50
			Trichlorofluoromethane (FREON 11)	2021/09/30	NC		%	50
			Vinyl Chloride	2021/09/30	NC		%	50
			p+m-Xylene	2021/09/30	NC		%	50
			o-Xylene	2021/09/30	NC		%	50
			Total Xylenes	2021/09/30	NC		%	50
7610488	H_W	Matrix Spike	1,4-Difluorobenzene	2021/09/30		97	%	60 - 140
			4-Bromofluorobenzene	2021/09/30		103	%	60 - 140
			D10-o-Xylene	2021/09/30		111	%	60 - 140
			D4-1,2-Dichloroethane	2021/09/30		91	%	60 - 140
			Benzene	2021/09/30		107	%	50 - 140
			Toluene	2021/09/30		111	%	50 - 140
			Ethylbenzene	2021/09/30		124	%	50 - 140
			o-Xylene	2021/09/30		119	%	50 - 140
			p+m-Xylene	2021/09/30		119	%	50 - 140
			F1 (C6-C10)	2021/09/30		105	%	60 - 140
7610488	H_W	Spiked Blank	1,4-Difluorobenzene	2021/09/30		96	%	60 - 140
			4-Bromofluorobenzene	2021/09/30		104	%	60 - 140
			D10-o-Xylene	2021/09/30		106	%	60 - 140
			D4-1,2-Dichloroethane	2021/09/30		86	%	60 - 140
			Benzene	2021/09/30		102	%	50 - 140
			Toluene	2021/09/30		107	%	50 - 140
			Ethylbenzene	2021/09/30		120	%	50 - 140
			o-Xylene	2021/09/30		115	%	50 - 140
			p+m-Xylene	2021/09/30		115	%	50 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F1 (C6-C10)	2021/09/30		96	%	80 - 120
7610488	H_W	Method Blank	1,4-Difluorobenzene	2021/09/30		104	%	60 - 140
			4-Bromofluorobenzene	2021/09/30		96	%	60 - 140
			D10-o-Xylene	2021/09/30		102	%	60 - 140
			D4-1,2-Dichloroethane	2021/09/30		95	%	60 - 140
			Benzene	2021/09/30	<0.020		ug/g	
			Toluene	2021/09/30	<0.020		ug/g	
			Ethylbenzene	2021/09/30	<0.020		ug/g	
			o-Xylene	2021/09/30	<0.020		ug/g	
			p+m-Xylene	2021/09/30	<0.040		ug/g	
			Total Xylenes	2021/09/30	<0.040		ug/g	
			F1 (C6-C10)	2021/09/30	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/09/30	<10		ug/g	
7610488	H_W	RPD	Benzene	2021/09/30	NC		%	50
			Toluene	2021/09/30	NC		%	50
			Ethylbenzene	2021/09/30	NC		%	50
			o-Xylene	2021/09/30	NC		%	50
			p+m-Xylene	2021/09/30	NC		%	50
			Total Xylenes	2021/09/30	NC		%	50
			F1 (C6-C10)	2021/09/30	NC		%	30
			F1 (C6-C10) - BTEX	2021/09/30	NC		%	30
7610577	MUC	RPD [QUD251-02]	Moisture	2021/09/30	19		%	20
7611396	MUC	RPD	Moisture	2021/09/30	2.2		%	20
7611943	VP2	Matrix Spike	Chromium (VI)	2021/10/01		28 (1)	%	70 - 130
7611943	VP2	Spiked Blank	Chromium (VI)	2021/10/01		92	%	80 - 120
7611943	VP2	Method Blank	Chromium (VI)	2021/10/01	<0.18		ug/g	
7611943	VP2	RPD	Chromium (VI)	2021/10/01	NC		%	35
7611998	DT1	Matrix Spike	Acid Extractable Antimony (Sb)	2021/10/01		85	%	75 - 125
			Acid Extractable Arsenic (As)	2021/10/01		100	%	75 - 125
			Acid Extractable Barium (Ba)	2021/10/01		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/10/01		101	%	75 - 125
			Acid Extractable Boron (B)	2021/10/01		86	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/10/01		95	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/10/01		93	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/10/01		92	%	75 - 125
			Acid Extractable Copper (Cu)	2021/10/01		NC	%	75 - 125
			Acid Extractable Lead (Pb)	2021/10/01		NC	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/10/01		94	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/10/01		91	%	75 - 125
			Acid Extractable Selenium (Se)	2021/10/01		98	%	75 - 125
			Acid Extractable Silver (Ag)	2021/10/01		98	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/10/01		98	%	75 - 125
			Acid Extractable Uranium (U)	2021/10/01		98	%	75 - 125
			Acid Extractable Vanadium (V)	2021/10/01		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/10/01		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/10/01		88	%	75 - 125
7611998	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2021/10/01		101	%	80 - 120
			Acid Extractable Arsenic (As)	2021/10/01		104	%	80 - 120
			Acid Extractable Barium (Ba)	2021/10/01		104	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/10/01		99	%	80 - 120
			Acid Extractable Boron (B)	2021/10/01		95	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/10/01		98	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/10/01		100	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Cobalt (Co)	2021/10/01		100	%	80 - 120
			Acid Extractable Copper (Cu)	2021/10/01		99	%	80 - 120
			Acid Extractable Lead (Pb)	2021/10/01		100	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/10/01		96	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/10/01		99	%	80 - 120
			Acid Extractable Selenium (Se)	2021/10/01		103	%	80 - 120
			Acid Extractable Silver (Ag)	2021/10/01		101	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/10/01		104	%	80 - 120
			Acid Extractable Uranium (U)	2021/10/01		101	%	80 - 120
			Acid Extractable Vanadium (V)	2021/10/01		106	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/10/01		102	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/10/01		95	%	80 - 120
7611998	DT1	Method Blank	Acid Extractable Antimony (Sb)	2021/10/01	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/10/01	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/10/01	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/10/01	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/10/01	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/10/01	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/10/01	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/10/01	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/10/01	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/10/01	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/10/01	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/10/01	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/10/01	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/10/01	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/10/01	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/10/01	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/10/01	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/10/01	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/10/01	<0.050		ug/g	
7611998	DT1	RPD	Acid Extractable Antimony (Sb)	2021/10/01	1.1		%	30
			Acid Extractable Arsenic (As)	2021/10/01	0.021		%	30
			Acid Extractable Barium (Ba)	2021/10/01	0.25		%	30
			Acid Extractable Beryllium (Be)	2021/10/01	1.3		%	30
			Acid Extractable Boron (B)	2021/10/01	7.7		%	30
			Acid Extractable Cadmium (Cd)	2021/10/01	19		%	30
			Acid Extractable Chromium (Cr)	2021/10/01	2.1		%	30
			Acid Extractable Cobalt (Co)	2021/10/01	0.43		%	30
			Acid Extractable Copper (Cu)	2021/10/01	1.5		%	30
			Acid Extractable Lead (Pb)	2021/10/01	2.1		%	30
			Acid Extractable Molybdenum (Mo)	2021/10/01	12		%	30
			Acid Extractable Nickel (Ni)	2021/10/01	0.088		%	30
			Acid Extractable Selenium (Se)	2021/10/01	NC		%	30
			Acid Extractable Silver (Ag)	2021/10/01	NC		%	30
			Acid Extractable Thallium (Tl)	2021/10/01	4.6		%	30
			Acid Extractable Uranium (U)	2021/10/01	3.8		%	30
			Acid Extractable Vanadium (V)	2021/10/01	1.5		%	30
			Acid Extractable Zinc (Zn)	2021/10/01	13		%	30
			Acid Extractable Mercury (Hg)	2021/10/01	9.4		%	30
7612002	APT	Matrix Spike	Hot Water Ext. Boron (B)	2021/10/01		98	%	75 - 125
7612002	APT	Spiked Blank	Hot Water Ext. Boron (B)	2021/10/01		94	%	75 - 125
7612002	APT	Method Blank	Hot Water Ext. Boron (B)	2021/10/01	<0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7612002	APT	RPD	Hot Water Ext. Boron (B)	2021/10/01	3.9		%	40
7612164	ABP	Matrix Spike	WAD Cyanide (Free)	2021/10/01		104	%	75 - 125
7612164	ABP	Spiked Blank	WAD Cyanide (Free)	2021/10/01		100	%	80 - 120
7612164	ABP	Method Blank	WAD Cyanide (Free)	2021/10/01	<0.01		ug/g	
7612164	ABP	RPD	WAD Cyanide (Free)	2021/10/01	NC		%	35
7612202	DR1	Matrix Spike	4-Bromofluorobenzene	2021/10/01		102	%	60 - 140
			D10-o-Xylene	2021/10/01		100	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		111	%	60 - 140
			D8-Toluene	2021/10/01		105	%	60 - 140
			Acetone (2-Propanone)	2021/10/01		114	%	60 - 140
			Benzene	2021/10/01		95	%	60 - 140
			Bromodichloromethane	2021/10/01		104	%	60 - 140
			Bromoform	2021/10/01		98	%	60 - 140
			Bromomethane	2021/10/01		111	%	60 - 140
			Carbon Tetrachloride	2021/10/01		100	%	60 - 140
			Chlorobenzene	2021/10/01		94	%	60 - 140
			Chloroform	2021/10/01		104	%	60 - 140
			Dibromochloromethane	2021/10/01		95	%	60 - 140
			1,2-Dichlorobenzene	2021/10/01		95	%	60 - 140
			1,3-Dichlorobenzene	2021/10/01		90	%	60 - 140
			1,4-Dichlorobenzene	2021/10/01		103	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2021/10/01		105	%	60 - 140
			1,1-Dichloroethane	2021/10/01		101	%	60 - 140
			1,2-Dichloroethane	2021/10/01		103	%	60 - 140
			1,1-Dichloroethylene	2021/10/01		103	%	60 - 140
			cis-1,2-Dichloroethylene	2021/10/01		105	%	60 - 140
			trans-1,2-Dichloroethylene	2021/10/01		103	%	60 - 140
			1,2-Dichloropropane	2021/10/01		103	%	60 - 140
			cis-1,3-Dichloropropene	2021/10/01		100	%	60 - 140
			trans-1,3-Dichloropropene	2021/10/01		107	%	60 - 140
			Ethylbenzene	2021/10/01		88	%	60 - 140
			Ethylene Dibromide	2021/10/01		98	%	60 - 140
			Hexane	2021/10/01		104	%	60 - 140
			Methylene Chloride(Dichloromethane)	2021/10/01		118	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01		114	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/01		101	%	60 - 140
			Methyl t-butyl ether (MTBE)	2021/10/01		93	%	60 - 140
			Styrene	2021/10/01		102	%	60 - 140
			1,1,1,2-Tetrachloroethane	2021/10/01		95	%	60 - 140
			1,1,2,2-Tetrachloroethane	2021/10/01		106	%	60 - 140
			Tetrachloroethylene	2021/10/01		95	%	60 - 140
			Toluene	2021/10/01		101	%	60 - 140
			1,1,1-Trichloroethane	2021/10/01		104	%	60 - 140
			1,1,2-Trichloroethane	2021/10/01		102	%	60 - 140
			Trichloroethylene	2021/10/01		104	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2021/10/01		105	%	60 - 140
			Vinyl Chloride	2021/10/01		110	%	60 - 140
			p+m-Xylene	2021/10/01		92	%	60 - 140
			o-Xylene	2021/10/01		89	%	60 - 140
			F1 (C6-C10)	2021/10/01		86	%	60 - 140
7612202	DR1	Spiked Blank	4-Bromofluorobenzene	2021/10/01		103	%	60 - 140
			D10-o-Xylene	2021/10/01		100	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		113	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			D8-Toluene	2021/10/01		104	%	60 - 140
			Acetone (2-Propanone)	2021/10/01		125	%	60 - 140
			Benzene	2021/10/01		94	%	60 - 130
			Bromodichloromethane	2021/10/01		105	%	60 - 130
			Bromoform	2021/10/01		102	%	60 - 130
			Bromomethane	2021/10/01		107	%	60 - 140
			Carbon Tetrachloride	2021/10/01		98	%	60 - 130
			Chlorobenzene	2021/10/01		93	%	60 - 130
			Chloroform	2021/10/01		104	%	60 - 130
			Dibromochloromethane	2021/10/01		97	%	60 - 130
			1,2-Dichlorobenzene	2021/10/01		94	%	60 - 130
			1,3-Dichlorobenzene	2021/10/01		87	%	60 - 130
			1,4-Dichlorobenzene	2021/10/01		101	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2021/10/01		98	%	60 - 140
			1,1-Dichloroethane	2021/10/01		101	%	60 - 130
			1,2-Dichloroethane	2021/10/01		106	%	60 - 130
			1,1-Dichloroethylene	2021/10/01		99	%	60 - 130
			cis-1,2-Dichloroethylene	2021/10/01		106	%	60 - 130
			trans-1,2-Dichloroethylene	2021/10/01		101	%	60 - 130
			1,2-Dichloropropane	2021/10/01		104	%	60 - 130
			cis-1,3-Dichloropropene	2021/10/01		97	%	60 - 130
			trans-1,3-Dichloropropene	2021/10/01		102	%	60 - 130
			Ethylbenzene	2021/10/01		85	%	60 - 130
			Ethylene Dibromide	2021/10/01		101	%	60 - 130
			Hexane	2021/10/01		100	%	60 - 130
			Methylene Chloride(Dichloromethane)	2021/10/01		118	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01		128	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/01		112	%	60 - 130
			Methyl t-butyl ether (MTBE)	2021/10/01		92	%	60 - 130
			Styrene	2021/10/01		103	%	60 - 130
			1,1,1,2-Tetrachloroethane	2021/10/01		94	%	60 - 130
			1,1,2,2-Tetrachloroethane	2021/10/01		111	%	60 - 130
			Tetrachloroethylene	2021/10/01		91	%	60 - 130
			Toluene	2021/10/01		98	%	60 - 130
			1,1,1-Trichloroethane	2021/10/01		102	%	60 - 130
			1,1,2-Trichloroethane	2021/10/01		105	%	60 - 130
			Trichloroethylene	2021/10/01		102	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2021/10/01		101	%	60 - 130
			Vinyl Chloride	2021/10/01		105	%	60 - 130
			p+m-Xylene	2021/10/01		90	%	60 - 130
			o-Xylene	2021/10/01		88	%	60 - 130
			F1 (C6-C10)	2021/10/01		92	%	80 - 120
7612202	DR1	Method Blank	4-Bromofluorobenzene	2021/10/01		91	%	60 - 140
			D10-o-Xylene	2021/10/01		83	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		115	%	60 - 140
			D8-Toluene	2021/10/01		90	%	60 - 140
			Acetone (2-Propanone)	2021/10/01	<0.49		ug/g	
			Benzene	2021/10/01	<0.0060		ug/g	
			Bromodichloromethane	2021/10/01	<0.040		ug/g	
			Bromoform	2021/10/01	<0.040		ug/g	
			Bromomethane	2021/10/01	<0.040		ug/g	
			Carbon Tetrachloride	2021/10/01	<0.040		ug/g	
			Chlorobenzene	2021/10/01	<0.040		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Chloroform	2021/10/01	<0.040		ug/g	
			Dibromochloromethane	2021/10/01	<0.040		ug/g	
			1,2-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			1,3-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			1,4-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			Dichlorodifluoromethane (FREON 12)	2021/10/01	<0.040		ug/g	
			1,1-Dichloroethane	2021/10/01	<0.040		ug/g	
			1,2-Dichloroethane	2021/10/01	<0.049		ug/g	
			1,1-Dichloroethylene	2021/10/01	<0.040		ug/g	
			cis-1,2-Dichloroethylene	2021/10/01	<0.040		ug/g	
			trans-1,2-Dichloroethylene	2021/10/01	<0.040		ug/g	
			1,2-Dichloropropane	2021/10/01	<0.040		ug/g	
			cis-1,3-Dichloropropene	2021/10/01	<0.030		ug/g	
			trans-1,3-Dichloropropene	2021/10/01	<0.040		ug/g	
			Ethylbenzene	2021/10/01	<0.010		ug/g	
			Ethylene Dibromide	2021/10/01	<0.040		ug/g	
			Hexane	2021/10/01	<0.040		ug/g	
			Methylene Chloride(Dichloromethane)	2021/10/01	<0.049		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01	<0.40		ug/g	
			Methyl Isobutyl Ketone	2021/10/01	<0.40		ug/g	
			Methyl t-butyl ether (MTBE)	2021/10/01	<0.040		ug/g	
			Styrene	2021/10/01	<0.040		ug/g	
			1,1,1,2-Tetrachloroethane	2021/10/01	<0.040		ug/g	
			1,1,2,2-Tetrachloroethane	2021/10/01	<0.040		ug/g	
			Tetrachloroethylene	2021/10/01	<0.040		ug/g	
			Toluene	2021/10/01	<0.020		ug/g	
			1,1,1-Trichloroethane	2021/10/01	<0.040		ug/g	
			1,1,2-Trichloroethane	2021/10/01	<0.040		ug/g	
			Trichloroethylene	2021/10/01	<0.010		ug/g	
			Trichlorofluoromethane (FREON 11)	2021/10/01	<0.040		ug/g	
			Vinyl Chloride	2021/10/01	<0.019		ug/g	
			p+m-Xylene	2021/10/01	<0.020		ug/g	
			o-Xylene	2021/10/01	<0.020		ug/g	
			Total Xylenes	2021/10/01	<0.020		ug/g	
			F1 (C6-C10)	2021/10/01	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/10/01	<10		ug/g	
7612202	DR1	RPD	Acetone (2-Propanone)	2021/10/01	NC		%	50
			Benzene	2021/10/01	NC		%	50
			Bromodichloromethane	2021/10/01	NC		%	50
			Bromoform	2021/10/01	NC		%	50
			Bromomethane	2021/10/01	NC		%	50
			Carbon Tetrachloride	2021/10/01	NC		%	50
			Chlorobenzene	2021/10/01	NC		%	50
			Chloroform	2021/10/01	NC		%	50
			Dibromochloromethane	2021/10/01	NC		%	50
			1,2-Dichlorobenzene	2021/10/01	NC		%	50
			1,3-Dichlorobenzene	2021/10/01	NC		%	50
			1,4-Dichlorobenzene	2021/10/01	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2021/10/01	NC		%	50
			1,1-Dichloroethane	2021/10/01	NC		%	50
			1,2-Dichloroethane	2021/10/01	NC		%	50
			1,1-Dichloroethylene	2021/10/01	NC		%	50
			cis-1,2-Dichloroethylene	2021/10/01	NC		%	50

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			trans-1,2-Dichloroethylene	2021/10/01	NC		%	50
			1,2-Dichloropropane	2021/10/01	NC		%	50
			cis-1,3-Dichloropropene	2021/10/01	NC		%	50
			trans-1,3-Dichloropropene	2021/10/01	NC		%	50
			Ethylbenzene	2021/10/01	NC		%	50
			Ethylene Dibromide	2021/10/01	NC		%	50
			Hexane	2021/10/01	NC		%	50
			Methylene Chloride(Dichloromethane)	2021/10/01	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01	NC		%	50
			Methyl Isobutyl Ketone	2021/10/01	NC		%	50
			Methyl t-butyl ether (MTBE)	2021/10/01	1.8		%	50
			Styrene	2021/10/01	NC		%	50
			1,1,1,2-Tetrachloroethane	2021/10/01	NC		%	50
			1,1,2,2-Tetrachloroethane	2021/10/01	NC		%	50
			Tetrachloroethylene	2021/10/01	NC		%	50
			Toluene	2021/10/01	NC		%	50
			1,1,1-Trichloroethane	2021/10/01	NC		%	50
			1,1,2-Trichloroethane	2021/10/01	NC		%	50
			Trichloroethylene	2021/10/01	NC		%	50
			Trichlorofluoromethane (FREON 11)	2021/10/01	NC		%	50
			Vinyl Chloride	2021/10/01	NC		%	50
			p+m-Xylene	2021/10/01	NC		%	50
			o-Xylene	2021/10/01	NC		%	50
			Total Xylenes	2021/10/01	NC		%	50
			F1 (C6-C10)	2021/10/01	NC		%	30
			F1 (C6-C10) - BTEX	2021/10/01	NC		%	30
7612260	KH2	Matrix Spike [QUD256-03]	4-Bromofluorobenzene	2021/10/01		113	%	60 - 140
			D10-o-Xylene	2021/10/01		101	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		100	%	60 - 140
			D8-Toluene	2021/10/01		104	%	60 - 140
			Acetone (2-Propanone)	2021/10/01		91	%	60 - 140
			Benzene	2021/10/01		91	%	60 - 140
			Bromodichloromethane	2021/10/01		99	%	60 - 140
			Bromoform	2021/10/01		95	%	60 - 140
			Bromomethane	2021/10/01		104	%	60 - 140
			Carbon Tetrachloride	2021/10/01		101	%	60 - 140
			Chlorobenzene	2021/10/01		96	%	60 - 140
			Chloroform	2021/10/01		98	%	60 - 140
			Dibromochloromethane	2021/10/01		106	%	60 - 140
			1,2-Dichlorobenzene	2021/10/01		93	%	60 - 140
			1,3-Dichlorobenzene	2021/10/01		95	%	60 - 140
			1,4-Dichlorobenzene	2021/10/01		111	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2021/10/01		95	%	60 - 140
			1,1-Dichloroethane	2021/10/01		94	%	60 - 140
			1,2-Dichloroethane	2021/10/01		93	%	60 - 140
			1,1-Dichloroethylene	2021/10/01		97	%	60 - 140
			cis-1,2-Dichloroethylene	2021/10/01		99	%	60 - 140
			trans-1,2-Dichloroethylene	2021/10/01		101	%	60 - 140
			1,2-Dichloropropane	2021/10/01		94	%	60 - 140
			cis-1,3-Dichloropropene	2021/10/01		93	%	60 - 140
			trans-1,3-Dichloropropene	2021/10/01		99	%	60 - 140
			Ethylbenzene	2021/10/01		88	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Ethylene Dibromide	2021/10/01		92	%	60 - 140
			Hexane	2021/10/01		99	%	60 - 140
			Methylene Chloride(Dichloromethane)	2021/10/01		109	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01		95	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/01		93	%	60 - 140
			Methyl t-butyl ether (MTBE)	2021/10/01		87	%	60 - 140
			Styrene	2021/10/01		105	%	60 - 140
			1,1,1,2-Tetrachloroethane	2021/10/01		100	%	60 - 140
			1,1,2,2-Tetrachloroethane	2021/10/01		91	%	60 - 140
			Tetrachloroethylene	2021/10/01		97	%	60 - 140
			Toluene	2021/10/01		92	%	60 - 140
			1,1,1-Trichloroethane	2021/10/01		103	%	60 - 140
			1,1,2-Trichloroethane	2021/10/01		98	%	60 - 140
			Trichloroethylene	2021/10/01		105	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2021/10/01		103	%	60 - 140
			Vinyl Chloride	2021/10/01		101	%	60 - 140
			p+m-Xylene	2021/10/01		94	%	60 - 140
			o-Xylene	2021/10/01		89	%	60 - 140
7612260	KH2	Spiked Blank	4-Bromofluorobenzene	2021/10/01		114	%	60 - 140
			D10-o-Xylene	2021/10/01		107	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		104	%	60 - 140
			D8-Toluene	2021/10/01		103	%	60 - 140
			Acetone (2-Propanone)	2021/10/01		101	%	60 - 140
			Benzene	2021/10/01		95	%	60 - 130
			Bromodichloromethane	2021/10/01		107	%	60 - 130
			Bromoform	2021/10/01		106	%	60 - 130
			Bromomethane	2021/10/01		108	%	60 - 140
			Carbon Tetrachloride	2021/10/01		103	%	60 - 130
			Chlorobenzene	2021/10/01		99	%	60 - 130
			Chloroform	2021/10/01		104	%	60 - 130
			Dibromochloromethane	2021/10/01		113	%	60 - 130
			1,2-Dichlorobenzene	2021/10/01		97	%	60 - 130
			1,3-Dichlorobenzene	2021/10/01		96	%	60 - 130
			1,4-Dichlorobenzene	2021/10/01		113	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2021/10/01		102	%	60 - 140
			1,1-Dichloroethane	2021/10/01		99	%	60 - 130
			1,2-Dichloroethane	2021/10/01		102	%	60 - 130
			1,1-Dichloroethylene	2021/10/01		99	%	60 - 130
			cis-1,2-Dichloroethylene	2021/10/01		106	%	60 - 130
			trans-1,2-Dichloroethylene	2021/10/01		104	%	60 - 130
			1,2-Dichloropropane	2021/10/01		101	%	60 - 130
			cis-1,3-Dichloropropene	2021/10/01		98	%	60 - 130
			trans-1,3-Dichloropropene	2021/10/01		102	%	60 - 130
			Ethylbenzene	2021/10/01		88	%	60 - 130
			Ethylene Dibromide	2021/10/01		99	%	60 - 130
			Hexane	2021/10/01		101	%	60 - 130
			Methylene Chloride(Dichloromethane)	2021/10/01		116	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01		110	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/01		111	%	60 - 130
			Methyl t-butyl ether (MTBE)	2021/10/01		92	%	60 - 130
			Styrene	2021/10/01		110	%	60 - 130
			1,1,1,2-Tetrachloroethane	2021/10/01		104	%	60 - 130
			1,1,2,2-Tetrachloroethane	2021/10/01		102	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Tetrachloroethylene	2021/10/01		96	%	60 - 130
			Toluene	2021/10/01		94	%	60 - 130
			1,1,1-Trichloroethane	2021/10/01		105	%	60 - 130
			1,1,2-Trichloroethane	2021/10/01		105	%	60 - 130
			Trichloroethylene	2021/10/01		109	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2021/10/01		105	%	60 - 130
			Vinyl Chloride	2021/10/01		105	%	60 - 130
			p+m-Xylene	2021/10/01		95	%	60 - 130
			o-Xylene	2021/10/01		90	%	60 - 130
7612260	KH2	Method Blank	4-Bromofluorobenzene	2021/10/01		107	%	60 - 140
			D10-o-Xylene	2021/10/01		99	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		110	%	60 - 140
			D8-Toluene	2021/10/01		91	%	60 - 140
			Acetone (2-Propanone)	2021/10/01	<0.49		ug/g	
			Benzene	2021/10/01	<0.0060		ug/g	
			Bromodichloromethane	2021/10/01	<0.040		ug/g	
			Bromoform	2021/10/01	<0.040		ug/g	
			Bromomethane	2021/10/01	<0.040		ug/g	
			Carbon Tetrachloride	2021/10/01	<0.040		ug/g	
			Chlorobenzene	2021/10/01	<0.040		ug/g	
			Chloroform	2021/10/01	<0.040		ug/g	
			Dibromochloromethane	2021/10/01	<0.040		ug/g	
			1,2-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			1,3-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			1,4-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			Dichlorodifluoromethane (FREON 12)	2021/10/01	<0.040		ug/g	
			1,1-Dichloroethane	2021/10/01	<0.040		ug/g	
			1,2-Dichloroethane	2021/10/01	<0.049		ug/g	
			1,1-Dichloroethylene	2021/10/01	<0.040		ug/g	
			cis-1,2-Dichloroethylene	2021/10/01	<0.040		ug/g	
			trans-1,2-Dichloroethylene	2021/10/01	<0.040		ug/g	
			1,2-Dichloropropane	2021/10/01	<0.040		ug/g	
			cis-1,3-Dichloropropene	2021/10/01	<0.030		ug/g	
			trans-1,3-Dichloropropene	2021/10/01	<0.040		ug/g	
			Ethylbenzene	2021/10/01	<0.010		ug/g	
			Ethylene Dibromide	2021/10/01	<0.040		ug/g	
			Hexane	2021/10/01	<0.040		ug/g	
			Methylene Chloride(Dichloromethane)	2021/10/01	<0.049		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01	<0.40		ug/g	
			Methyl Isobutyl Ketone	2021/10/01	<0.40		ug/g	
			Methyl t-butyl ether (MTBE)	2021/10/01	<0.040		ug/g	
			Styrene	2021/10/01	<0.040		ug/g	
			1,1,1,2-Tetrachloroethane	2021/10/01	<0.040		ug/g	
			1,1,2,2-Tetrachloroethane	2021/10/01	<0.040		ug/g	
			Tetrachloroethylene	2021/10/01	<0.040		ug/g	
			Toluene	2021/10/01	<0.020		ug/g	
			1,1,1-Trichloroethane	2021/10/01	<0.040		ug/g	
			1,1,2-Trichloroethane	2021/10/01	<0.040		ug/g	
			Trichloroethylene	2021/10/01	<0.010		ug/g	
			Trichlorofluoromethane (FREON 11)	2021/10/01	<0.040		ug/g	
			Vinyl Chloride	2021/10/01	<0.019		ug/g	
			p+m-Xylene	2021/10/01	<0.020		ug/g	
			o-Xylene	2021/10/01	<0.020		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Xylenes	2021/10/01	<0.020		ug/g	
7612260	KH2	RPD [QUD256-03]	Acetone (2-Propanone)	2021/10/01	NC		%	50
			Benzene	2021/10/01	NC		%	50
			Bromodichloromethane	2021/10/01	NC		%	50
			Bromoform	2021/10/01	NC		%	50
			Bromomethane	2021/10/01	NC		%	50
			Carbon Tetrachloride	2021/10/01	NC		%	50
			Chlorobenzene	2021/10/01	NC		%	50
			Chloroform	2021/10/01	NC		%	50
			Dibromochloromethane	2021/10/01	NC		%	50
			1,2-Dichlorobenzene	2021/10/01	NC		%	50
			1,3-Dichlorobenzene	2021/10/01	NC		%	50
			1,4-Dichlorobenzene	2021/10/01	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2021/10/01	NC		%	50
			1,1-Dichloroethane	2021/10/01	NC		%	50
			1,2-Dichloroethane	2021/10/01	NC		%	50
			1,1-Dichloroethylene	2021/10/01	NC		%	50
			cis-1,2-Dichloroethylene	2021/10/01	NC		%	50
			trans-1,2-Dichloroethylene	2021/10/01	NC		%	50
			1,2-Dichloropropane	2021/10/01	NC		%	50
			cis-1,3-Dichloropropene	2021/10/01	NC		%	50
			trans-1,3-Dichloropropene	2021/10/01	NC		%	50
			Ethylbenzene	2021/10/01	NC		%	50
			Ethylene Dibromide	2021/10/01	NC		%	50
			Hexane	2021/10/01	1.8		%	50
			Methylene Chloride(Dichloromethane)	2021/10/01	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01	NC		%	50
			Methyl Isobutyl Ketone	2021/10/01	NC		%	50
			Methyl t-butyl ether (MTBE)	2021/10/01	NC		%	50
			Styrene	2021/10/01	NC		%	50
			1,1,1,2-Tetrachloroethane	2021/10/01	NC		%	50
			1,1,2,2-Tetrachloroethane	2021/10/01	NC		%	50
			Tetrachloroethylene	2021/10/01	NC		%	50
			Toluene	2021/10/01	7.4		%	50
			1,1,1-Trichloroethane	2021/10/01	NC		%	50
			1,1,2-Trichloroethane	2021/10/01	NC		%	50
			Trichloroethylene	2021/10/01	NC		%	50
			Trichlorofluoromethane (FREON 11)	2021/10/01	NC		%	50
			Vinyl Chloride	2021/10/01	NC		%	50
			p+m-Xylene	2021/10/01	1.1		%	50
			o-Xylene	2021/10/01	NC		%	50
			Total Xylenes	2021/10/01	1.1		%	50
7612293	TAK	Spiked Blank	Available (CaCl2) pH	2021/10/01		100	%	97 - 103
7612293	TAK	RPD	Available (CaCl2) pH	2021/10/01	0.084		%	N/A
7612310	APT	Matrix Spike	Hot Water Ext. Boron (B)	2021/10/01		96	%	75 - 125
7612310	APT	Spiked Blank	Hot Water Ext. Boron (B)	2021/10/01		93	%	75 - 125
7612310	APT	Method Blank	Hot Water Ext. Boron (B)	2021/10/01	<0.050		ug/g	
7612310	APT	RPD	Hot Water Ext. Boron (B)	2021/10/01	0.19		%	40
7612314	VIV	Matrix Spike	Acid Extractable Antimony (Sb)	2021/10/01		84	%	75 - 125
			Acid Extractable Arsenic (As)	2021/10/01		100	%	75 - 125
			Acid Extractable Barium (Ba)	2021/10/01		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/10/01		111	%	75 - 125
			Acid Extractable Boron (B)	2021/10/01		105	%	75 - 125

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Cadmium (Cd)	2021/10/01		96	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/10/01		NC	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/10/01		94	%	75 - 125
			Acid Extractable Copper (Cu)	2021/10/01		89	%	75 - 125
			Acid Extractable Lead (Pb)	2021/10/01		100	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/10/01		95	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/10/01		95	%	75 - 125
			Acid Extractable Selenium (Se)	2021/10/01		102	%	75 - 125
			Acid Extractable Silver (Ag)	2021/10/01		99	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/10/01		99	%	75 - 125
			Acid Extractable Uranium (U)	2021/10/01		101	%	75 - 125
			Acid Extractable Vanadium (V)	2021/10/01		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/10/01		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/10/01		98	%	75 - 125
7612314	VIV	Spiked Blank	Acid Extractable Antimony (Sb)	2021/10/01		93	%	80 - 120
			Acid Extractable Arsenic (As)	2021/10/01		102	%	80 - 120
			Acid Extractable Barium (Ba)	2021/10/01		100	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/10/01		100	%	80 - 120
			Acid Extractable Boron (B)	2021/10/01		94	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/10/01		92	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/10/01		93	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/10/01		94	%	80 - 120
			Acid Extractable Copper (Cu)	2021/10/01		91	%	80 - 120
			Acid Extractable Lead (Pb)	2021/10/01		98	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/10/01		94	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/10/01		94	%	80 - 120
			Acid Extractable Selenium (Se)	2021/10/01		103	%	80 - 120
			Acid Extractable Silver (Ag)	2021/10/01		96	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/10/01		98	%	80 - 120
			Acid Extractable Uranium (U)	2021/10/01		98	%	80 - 120
			Acid Extractable Vanadium (V)	2021/10/01		101	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/10/01		95	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/10/01		96	%	80 - 120
7612314	VIV	Method Blank	Acid Extractable Antimony (Sb)	2021/10/01	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/10/01	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/10/01	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/10/01	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/10/01	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/10/01	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/10/01	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/10/01	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/10/01	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/10/01	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/10/01	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/10/01	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/10/01	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/10/01	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/10/01	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/10/01	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/10/01	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/10/01	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/10/01	<0.050		ug/g	
7612314	VIV	RPD	Acid Extractable Antimony (Sb)	2021/10/01	NC		%	30

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Arsenic (As)	2021/10/01	6.0		%	30
			Acid Extractable Barium (Ba)	2021/10/01	0.62		%	30
			Acid Extractable Beryllium (Be)	2021/10/01	2.6		%	30
			Acid Extractable Boron (B)	2021/10/01	1.4		%	30
			Acid Extractable Cadmium (Cd)	2021/10/01	23		%	30
			Acid Extractable Chromium (Cr)	2021/10/01	7.5		%	30
			Acid Extractable Cobalt (Co)	2021/10/01	3.7		%	30
			Acid Extractable Copper (Cu)	2021/10/01	1.5		%	30
			Acid Extractable Lead (Pb)	2021/10/01	0.12		%	30
			Acid Extractable Molybdenum (Mo)	2021/10/01	NC		%	30
			Acid Extractable Nickel (Ni)	2021/10/01	5.5		%	30
			Acid Extractable Selenium (Se)	2021/10/01	NC		%	30
			Acid Extractable Silver (Ag)	2021/10/01	NC		%	30
			Acid Extractable Thallium (Tl)	2021/10/01	9.2		%	30
			Acid Extractable Uranium (U)	2021/10/01	5.4		%	30
			Acid Extractable Vanadium (V)	2021/10/01	3.3		%	30
			Acid Extractable Zinc (Zn)	2021/10/01	2.9		%	30
			Acid Extractable Mercury (Hg)	2021/10/01	NC		%	30
7612428	NYS	Spiked Blank	Conductivity	2021/10/01		100	%	90 - 110
7612428	NYS	Method Blank	Conductivity	2021/10/01	<0.002		mS/cm	
7612428	NYS	RPD	Conductivity	2021/10/01	2.4		%	10
7612465	NYS	Spiked Blank	Conductivity	2021/10/01		100	%	90 - 110
7612465	NYS	Method Blank	Conductivity	2021/10/01	<0.002		mS/cm	
7612465	NYS	RPD	Conductivity	2021/10/01	0		%	10
7628860	DN0	Spiked Blank	o-Terphenyl	2021/10/11		94	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/10/11		104	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/10/11		101	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/10/11		105	%	80 - 120
7628860	DN0	RPD	F2 (C10-C16 Hydrocarbons)	2021/10/11	2.7		%	30
			F3 (C16-C34 Hydrocarbons)	2021/10/11	3.1		%	30
			F4 (C34-C50 Hydrocarbons)	2021/10/11	3.4		%	30
7628860	DN0	Method Blank	o-Terphenyl	2021/10/11		91	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/10/11	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/10/11	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/10/11	<50		ug/g	
7632544	H_W	Spiked Blank	1,4-Difluorobenzene	2021/10/13		99	%	60 - 140
			4-Bromofluorobenzene	2021/10/13		100	%	60 - 140
			D10-o-Xylene	2021/10/13		91	%	60 - 140
			D4-1,2-Dichloroethane	2021/10/13		107	%	60 - 140
			Benzene	2021/10/13		103	%	50 - 140
			Toluene	2021/10/13		102	%	50 - 140
			Ethylbenzene	2021/10/13		115	%	50 - 140
			o-Xylene	2021/10/13		109	%	50 - 140
			p+m-Xylene	2021/10/13		111	%	50 - 140
			F1 (C6-C10)	2021/10/13		89	%	80 - 120
7632544	H_W	RPD	Benzene	2021/10/13	2.2		%	50
			Toluene	2021/10/13	1.7		%	50
			Ethylbenzene	2021/10/13	2.9		%	50
			o-Xylene	2021/10/13	0.60		%	50
			p+m-Xylene	2021/10/13	2.2		%	50
			F1 (C6-C10)	2021/10/13	1.3		%	30
			Benzene	2021/10/13	NC		%	50
			Toluene	2021/10/13	NC		%	50

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Ethylbenzene	2021/10/13	NC		%	50
			o-Xylene	2021/10/13	NC		%	50
			p+m-Xylene	2021/10/13	NC		%	50
			Total Xylenes	2021/10/13	NC		%	50
			F1 (C6-C10)	2021/10/13	NC		%	30
			F1 (C6-C10) - BTEX	2021/10/13	NC		%	30
7632544	H_W	Method Blank	1,4-Difluorobenzene	2021/10/13		107	%	60 - 140
			4-Bromofluorobenzene	2021/10/13		94	%	60 - 140
			D10-o-Xylene	2021/10/13		78	%	60 - 140
			D4-1,2-Dichloroethane	2021/10/13		107	%	60 - 140
			Benzene	2021/10/13	<0.020		ug/g	
			Toluene	2021/10/13	<0.020		ug/g	
			Ethylbenzene	2021/10/13	<0.020		ug/g	
			o-Xylene	2021/10/13	<0.020		ug/g	
			p+m-Xylene	2021/10/13	<0.040		ug/g	
			Total Xylenes	2021/10/13	<0.040		ug/g	
			F1 (C6-C10)	2021/10/13	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/10/13	<10		ug/g	

N/A = Not Applicable

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

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

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

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

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

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

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

(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was reanalyzed with the same results

VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

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

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvlabs.com

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

CHAIN OF CUSTODY RECORD
ENV COC - 00014v2

Page 1 of 2

Invoice Information	Invoice to (requires report)	Report Information (if differs from invoice)		Project Information	
Company :	Golder	Company:		Quotation #:	
Contact Name:	Daniel Stabile	Contact Name:		P.O. #/ AFE#:	
Street Address:		Street Address:		Project #:	21494078
City:	Prov: Postal Code:	City:	Prov: Postal Code:	Site #:	
Phone:	905-213-4732	Phone:		Site Location:	1047 Richmond
Email:	dstabile@golder.com	Email:		Site Location Province:	Ontario
Copies:		Copies:		Sampled By:	DG

28-Sep-21 15:20
Ema Gitej
C1S1463
ENV-1188

Regulatory Criteria

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

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

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

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

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

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

Date Required: YY MM DD

Comments

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX/ F1	5 F2 - F4	6 VOCs	7 Reg 153 metals and inorganics	8 Reg 153 ICPMS metals	9 Reg 153 metals (Hg, Cr VI, ICPMS metals, HWS - B)	10 metals and ORP (see email)	11	12	13	14	15	16	17	18	19	20	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE
1	21-1 SA1	21	9	24	11	0	Soil	NA	Y	N							X										4	
2	21-1 SA3	21	9	24	11	30	Soil	NA	Y	N	X	X	X														4	
3	21-4 SA1	21	9	21	9	40	Soil	NA	Y	N			X														3	
4	21-4 SA6	21	9	21	10	40	Soil	NA	Y	N	X	X															3	
5	21-2 SA2	21	9	21	11	30	Soil	NA	Y	N							X										4	
6	21-2 SA5	21	9	21	12	0	Soil	NA	Y	N	X	X	X														3	
7	21-5 SA2	21	9	22	10	50	Soil	NA	Y	N	X	X	X														4	
8	21-5 SA3	21	9	24	8	5	Soil	NA	Y	N							X										4	
9	21-5 Dup-1	21	9	22	10	50	Soil	NA	Y	N	X	X	X														4	
10	21-3 SA1	21	9	22	8	0	Soil	NA	Y	N			X														4	
11	21-3 SA2	21	9	22	8	15	Soil	NA	Y	N	X	X															4	
12	21-3 SA3	21	9	22	8	30	Soil	NA	Y	N							X										4	

RECEIVED IN OTTAWA

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

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

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

LAB USE ONLY	Yes	No	°C	1	2	3	Temperature reading by:
Seal present		✓					
Seal intact		✓					
Cooling media present ICE	✓			9	9	9	QWW

	Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Special Instructions
1	Tonyla	2021	09	28			AISLINN MULLAHY QWW	2021	09	28	15	20	
2								2021	09	29	08	00	

3/3/4°C

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CHAIN OF CUSTODY RECORD

ENV COC - 00014v2

CONTINUED

[PAGE 1 REFERENCE]

Company:	Golder
Contact Name:	Daniel Stabile
Project #:	21494078

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

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX/F1	5 F2 - F4	6 VOCs	7 Reg 153 metals and inorganics	8 Reg 153 ICPMS metals	9 Reg 153 metals (Hg, CrVI, ICPMS metals, HWS- B)	10	11	12	13	14	15	16	17	18	19	20	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE	Same as above / Comments
13	21-3 SA3	21	9	22	8	30	Soil	NA	N	N							X											1		
14																														
15																														
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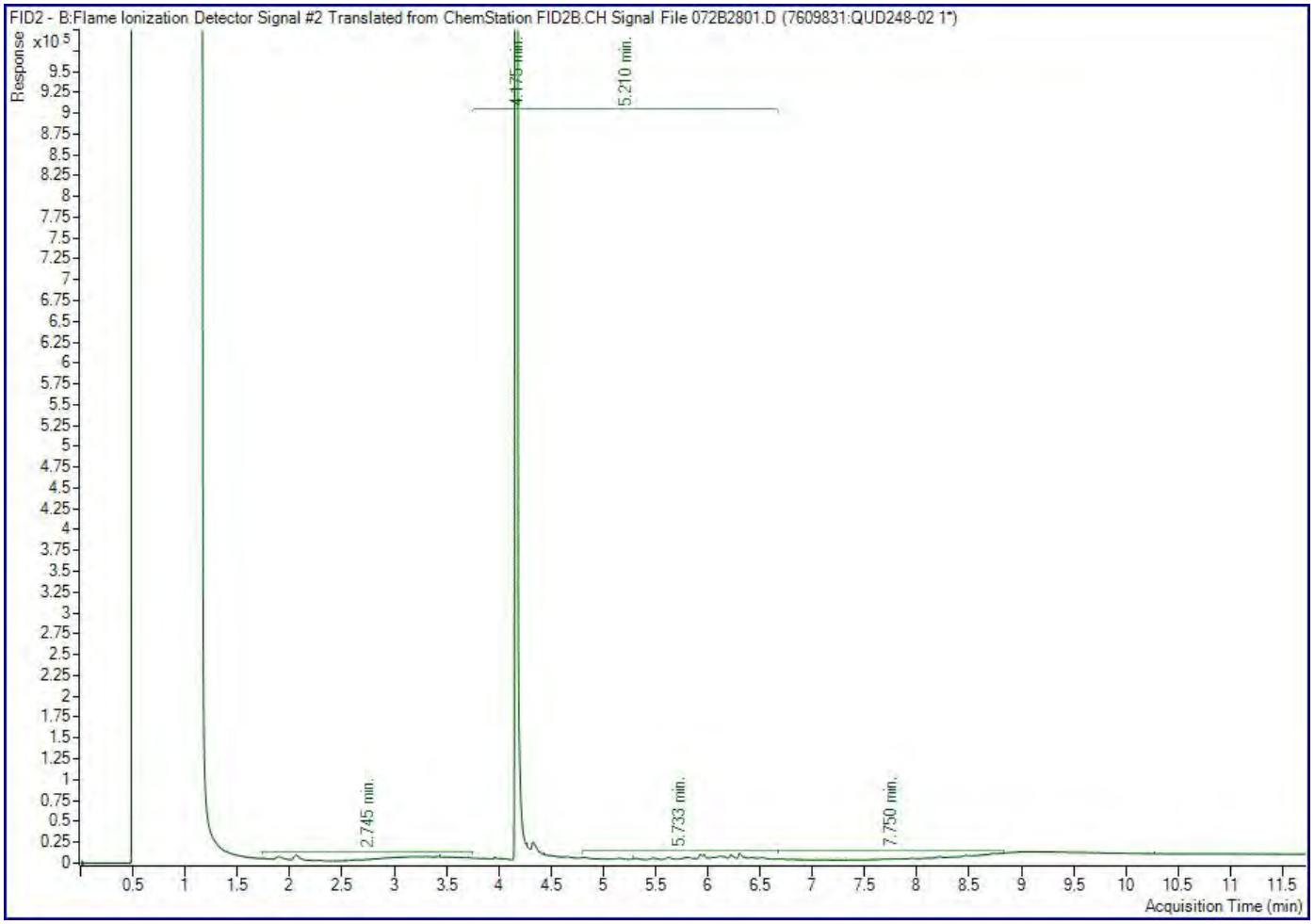
see page 1.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD248

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-1 SA3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

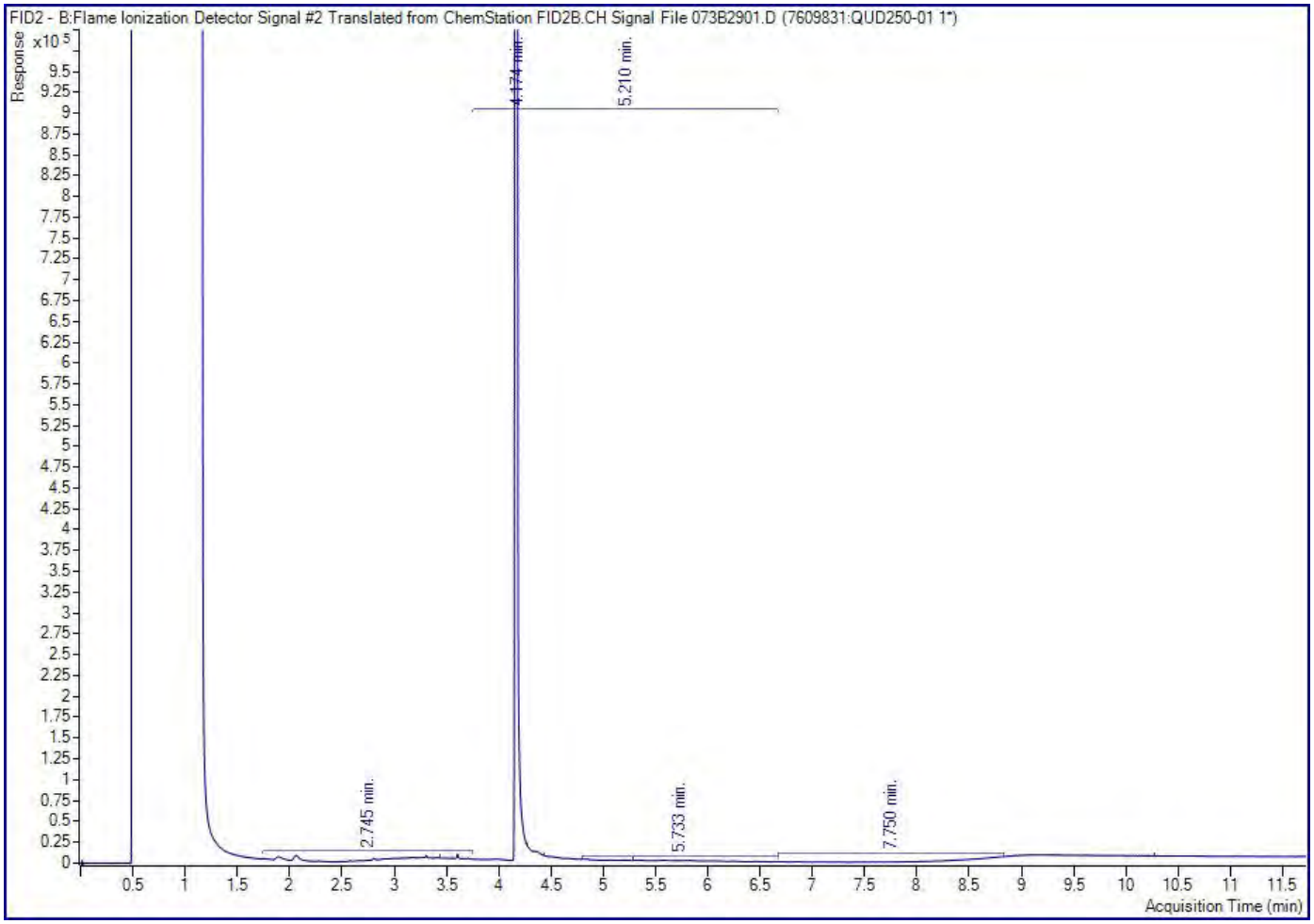


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD250

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-4 SA6

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

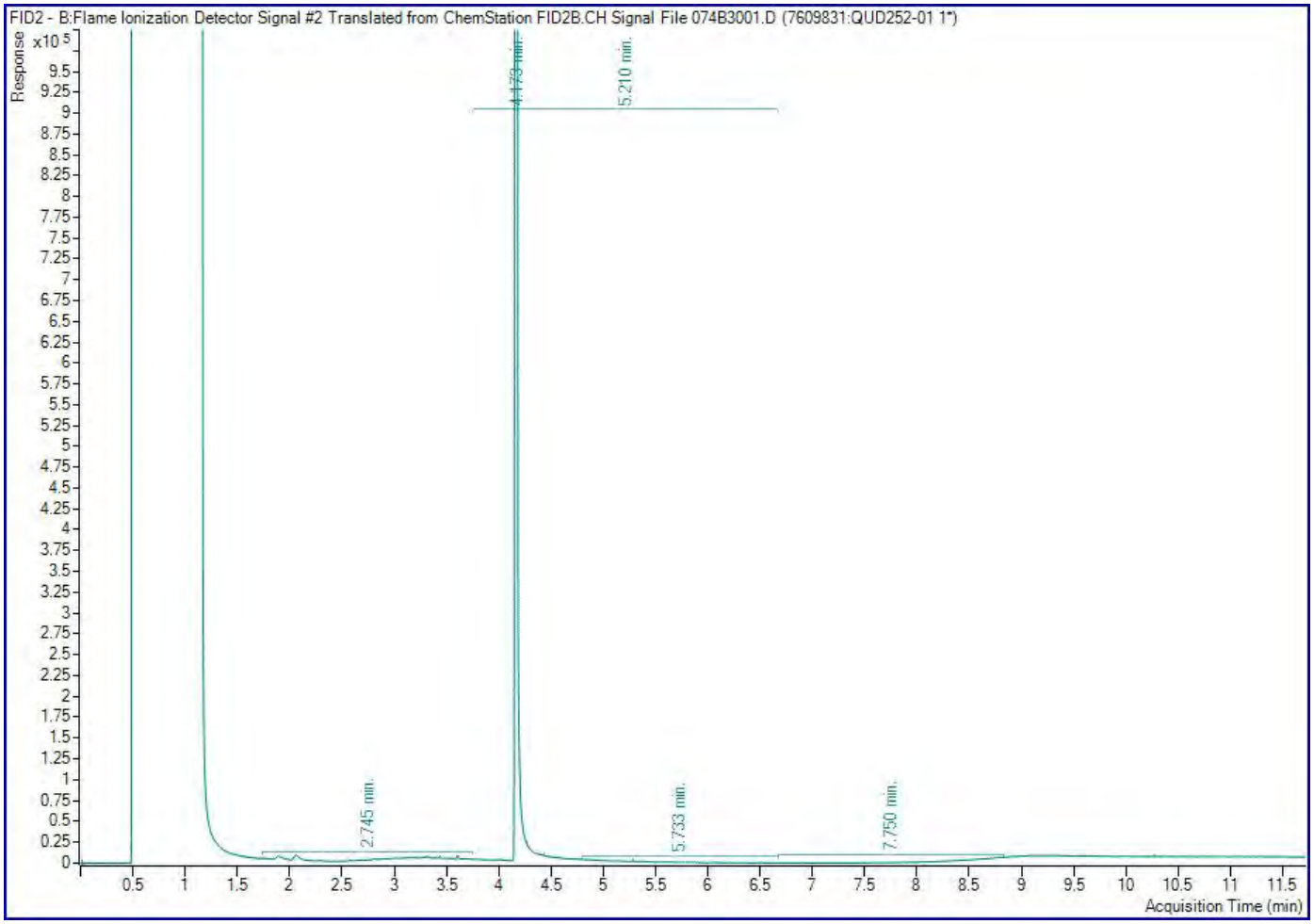


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD252

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-2 SA5

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

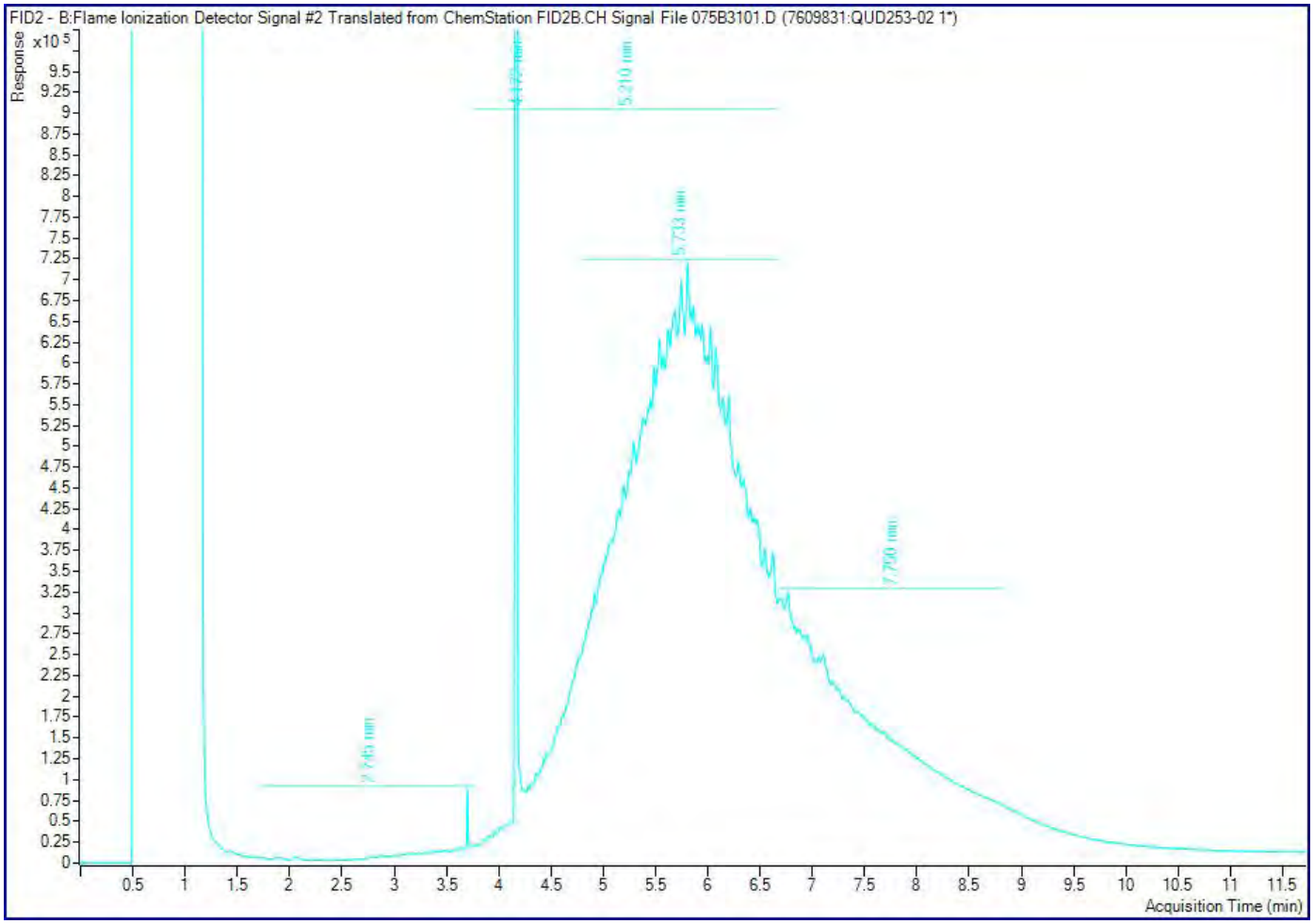


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD253

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-5 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

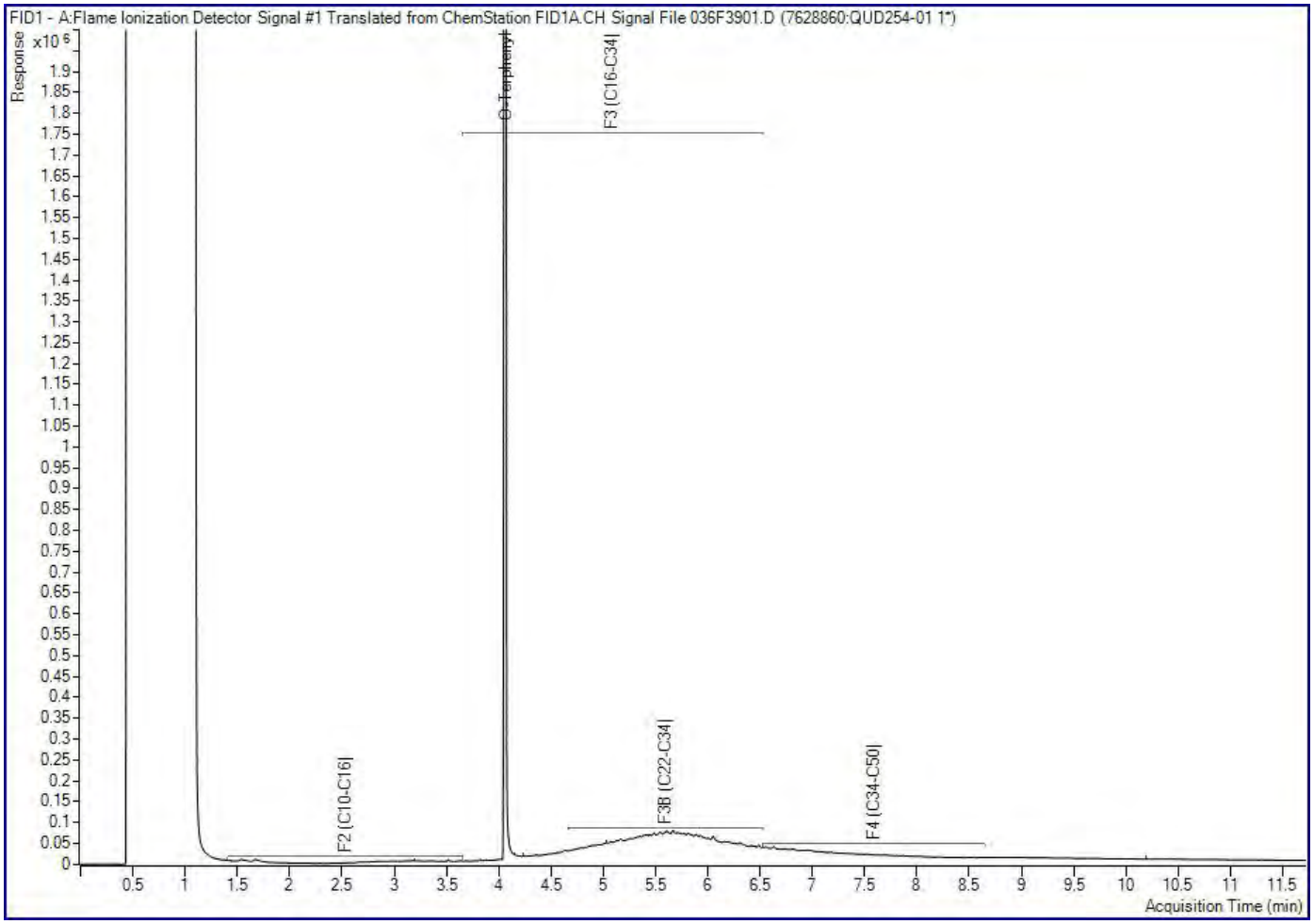


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD254

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-5 SA3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

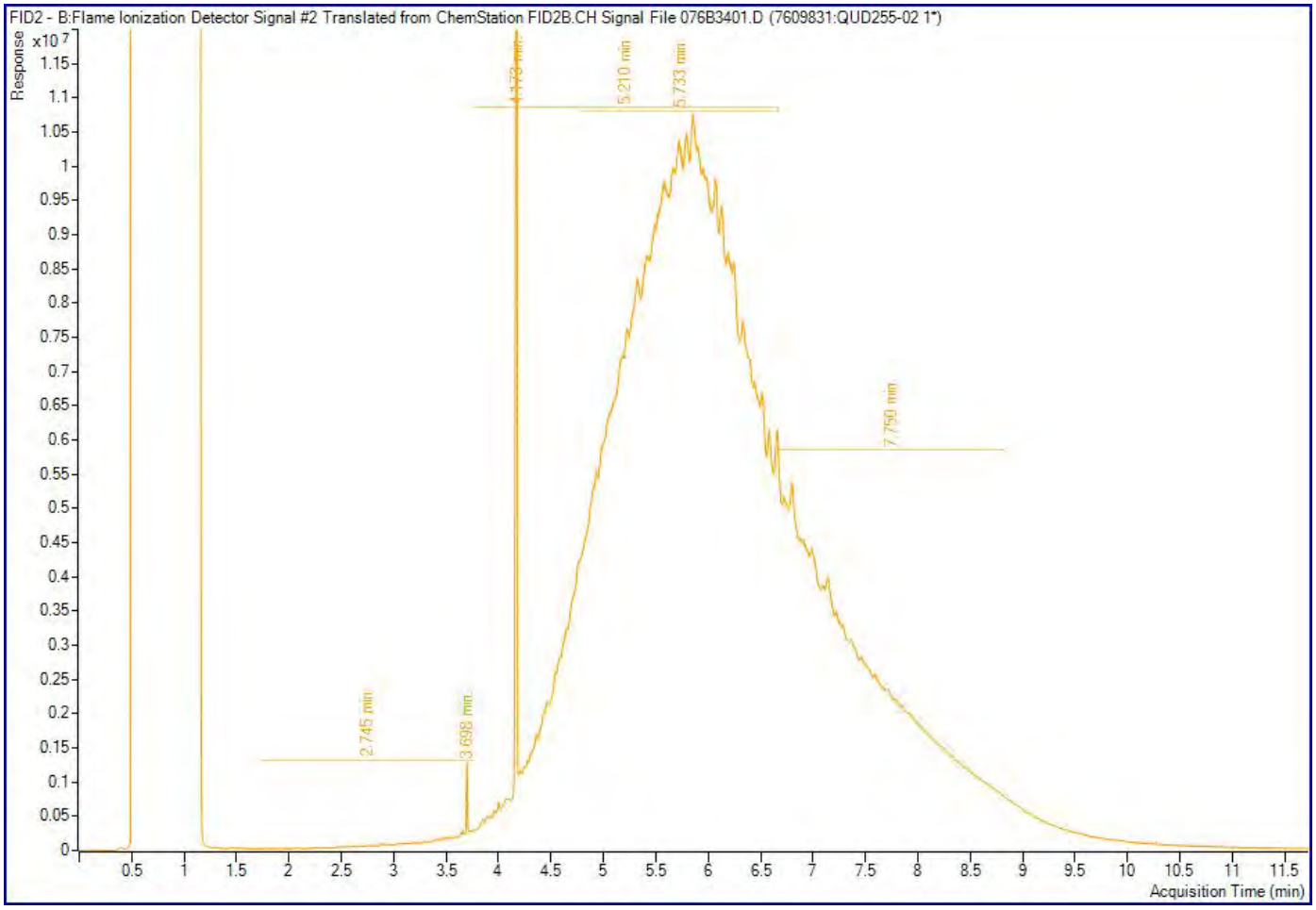


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD255

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-5 DUP-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

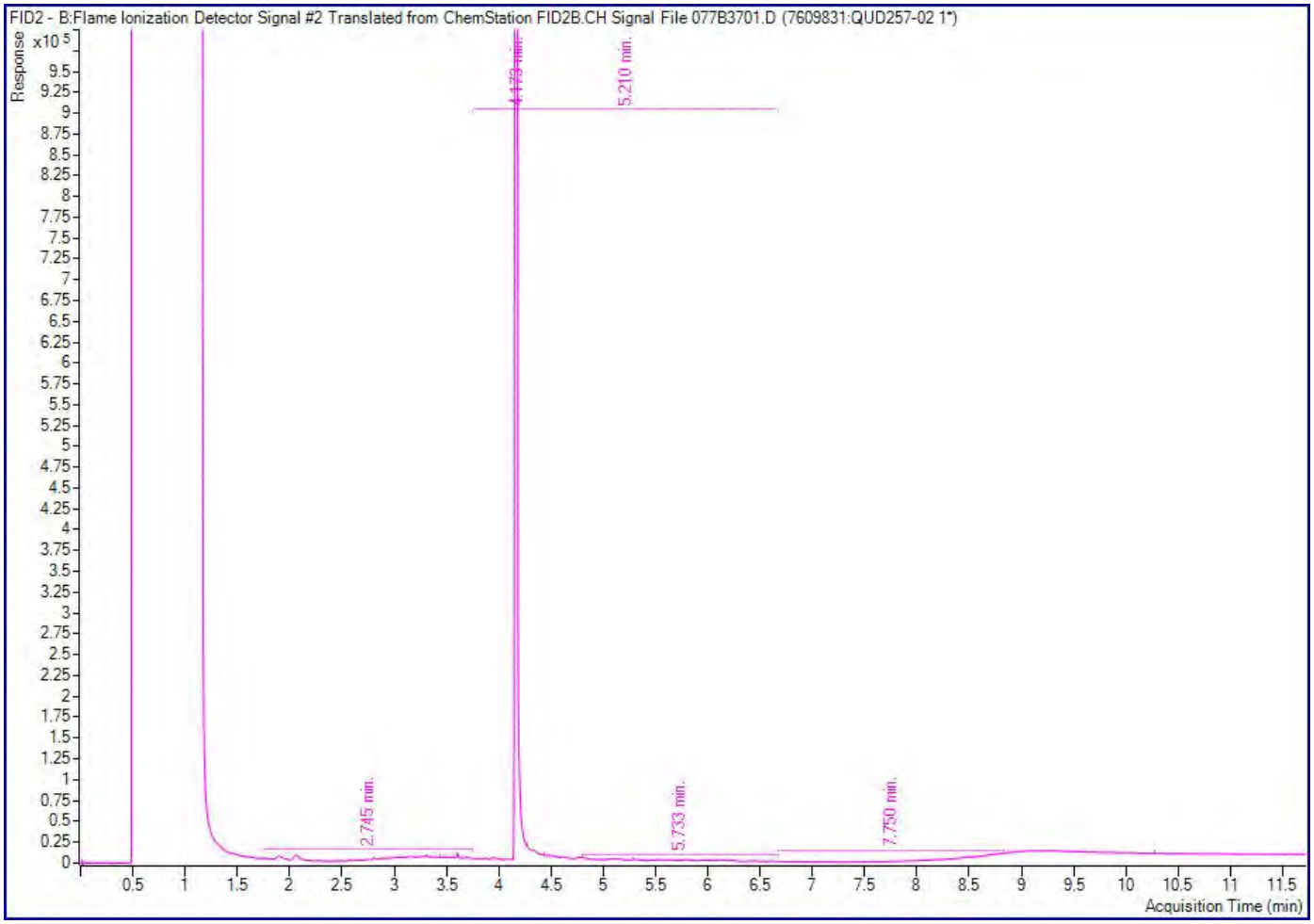


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD257

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-3 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 21484078
Your C.O.C. #: 849032-01-01

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/10/06
Report #: R6842743
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1S7480
Received: 2021/10/04, 15:40

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
1,3-Dichloropropene Sum (1)	5	N/A	2021/10/05		EPA 8260C m
Chloride by Automated Colourimetry (1)	5	N/A	2021/10/05	CAM SOP-00463	SM 23 4500-Cl E m
Chromium (VI) in Water (1)	5	N/A	2021/10/05	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide (1)	5	N/A	2021/10/05	CAM SOP-00457	OMOE E3015 m
Petroleum Hydrocarbons F2-F4 in Water (1, 2)	5	2021/10/05	2021/10/06	CAM SOP-00316	CCME PHC-CWS m
Mercury (1)	5	2021/10/05	2021/10/05	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS (1)	5	N/A	2021/10/05	CAM SOP-00447	EPA 6020B m
Volatile Organic Compounds and F1 PHCs (1)	7	N/A	2021/10/05	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
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Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following “Alberta Environment’s Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods

Your Project #: 21484078
Your C.O.C. #: 849032-01-01

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/10/06
Report #: R6842743
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1S7480
Received: 2021/10/04, 15:40

September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: emese.gitej@bureauveritas.com
Phone# (905)817-5829
==========
This report has been generated and distributed using a secure automated process.
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

VOLATILE ORGANICS BY GC/MS (WATER)

BV Labs ID		QVN124	QVN125		
Sampling Date		2021/10/04 13:15	2021/10/04		
COC Number		849032-01-01	849032-01-01		
	UNITS	F- BLANK	TRIP BLANK	RDL	QC Batch
Volatile Organics					
Acetone (2-Propanone)	ug/L	<10	<10	10	7614573
Benzene	ug/L	<0.17	<0.17	0.17	7614573
Bromodichloromethane	ug/L	<0.50	<0.50	0.50	7614573
Bromoform	ug/L	<1.0	<1.0	1.0	7614573
Bromomethane	ug/L	<0.50	<0.50	0.50	7614573
Carbon Tetrachloride	ug/L	<0.20	<0.20	0.20	7614573
Chlorobenzene	ug/L	<0.20	<0.20	0.20	7614573
Chloroform	ug/L	<0.20	<0.20	0.20	7614573
Dibromochloromethane	ug/L	<0.50	<0.50	0.50	7614573
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	7614573
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	7614573
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	7614573
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	1.0	7614573
1,1-Dichloroethane	ug/L	<0.20	<0.20	0.20	7614573
1,2-Dichloroethane	ug/L	<0.50	<0.50	0.50	7614573
1,1-Dichloroethylene	ug/L	<0.20	<0.20	0.20	7614573
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	7614573
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	7614573
1,2-Dichloropropane	ug/L	<0.20	<0.20	0.20	7614573
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	0.30	7614573
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	0.40	7614573
Ethylbenzene	ug/L	<0.20	<0.20	0.20	7614573
Ethylene Dibromide	ug/L	<0.20	<0.20	0.20	7614573
Hexane	ug/L	<1.0	<1.0	1.0	7614573
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	2.0	7614573
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	10	7614573
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	5.0	7614573
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	0.50	7614573
Styrene	ug/L	<0.50	<0.50	0.50	7614573
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	7614573
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	7614573
Tetrachloroethylene	ug/L	<0.20	<0.20	0.20	7614573
Toluene	ug/L	<0.20	<0.20	0.20	7614573
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	0.20	7614573
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	0.50	7614573

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

VOLATILE ORGANICS BY GC/MS (WATER)

BV Labs ID		QVN124	QVN125		
Sampling Date		2021/10/04 13:15	2021/10/04		
COC Number		849032-01-01	849032-01-01		
	UNITS	F- BLANK	TRIP BLANK	RDL	QC Batch
Trichloroethylene	ug/L	<0.20	<0.20	0.20	7614573
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	0.50	7614573
Vinyl Chloride	ug/L	<0.20	<0.20	0.20	7614573
p+m-Xylene	ug/L	<0.20	<0.20	0.20	7614573
o-Xylene	ug/L	<0.20	<0.20	0.20	7614573
Total Xylenes	ug/L	<0.20	<0.20	0.20	7614573
F1 (C6-C10)	ug/L	<25	<25	25	7614573
F1 (C6-C10) - BTEX	ug/L	<25	<25	25	7614573
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	83	83		7614573
D4-1,2-Dichloroethane	%	99	100		7614573
D8-Toluene	%	97	96		7614573

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 METALS & INORGANICS PKG (WTR)

BV Labs ID		QVN119			QVN119			QVN120		
Sampling Date		2021/10/04 08:00			2021/10/04 08:00			2021/10/04 11:35		
COC Number		849032-01-01			849032-01-01			849032-01-01		
	UNITS	21-5	RDL	QC Batch	21-5 Lab-Dup	RDL	QC Batch	21-4	RDL	QC Batch
Inorganics										
WAD Cyanide (Free)	ug/L	<1	1	7618434	<1	1	7618434	<1	1	7618434
Dissolved Chloride (Cl-)	mg/L	36	1.0	7618326				47	1.0	7618326
Metals										
Chromium (VI)	ug/L	<0.50	0.50	7616546	<0.50	0.50	7616546	<0.50	0.50	7616546
Mercury (Hg)	ug/L	<0.10	0.10	7618346				<0.10	0.10	7618346
Dissolved Antimony (Sb)	ug/L	<0.50	0.50	7618322				<0.50	0.50	7618322
Dissolved Arsenic (As)	ug/L	<1.0	1.0	7618322				<1.0	1.0	7618322
Dissolved Barium (Ba)	ug/L	77	2.0	7618322				140	2.0	7618322
Dissolved Beryllium (Be)	ug/L	<0.40	0.40	7618322				<0.40	0.40	7618322
Dissolved Boron (B)	ug/L	150	10	7618322				91	10	7618322
Dissolved Cadmium (Cd)	ug/L	<0.090	0.090	7618322				<0.090	0.090	7618322
Dissolved Chromium (Cr)	ug/L	<5.0	5.0	7618322				<5.0	5.0	7618322
Dissolved Cobalt (Co)	ug/L	<0.50	0.50	7618322				4.2	0.50	7618322
Dissolved Copper (Cu)	ug/L	<0.90	0.90	7618322				<0.90	0.90	7618322
Dissolved Lead (Pb)	ug/L	<0.50	0.50	7618322				<0.50	0.50	7618322
Dissolved Molybdenum (Mo)	ug/L	<0.50	0.50	7618322				<0.50	0.50	7618322
Dissolved Nickel (Ni)	ug/L	<1.0	1.0	7618322				2.7	1.0	7618322
Dissolved Selenium (Se)	ug/L	<2.0	2.0	7618322				<2.0	2.0	7618322
Dissolved Silver (Ag)	ug/L	<0.090	0.090	7618322				<0.090	0.090	7618322
Dissolved Sodium (Na)	ug/L	65000	100	7618322				34000	100	7618322
Dissolved Thallium (Tl)	ug/L	<0.050	0.050	7618322				<0.050	0.050	7618322
Dissolved Uranium (U)	ug/L	0.54	0.10	7618322				0.52	0.10	7618322
Dissolved Vanadium (V)	ug/L	<0.50	0.50	7618322				<0.50	0.50	7618322
Dissolved Zinc (Zn)	ug/L	<5.0	5.0	7618322				<5.0	5.0	7618322

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

BV Labs Job #: C1S7480
Report Date: 2021/10/06

Golder Associates Ltd
Client Project #: 21484078
Sampler Initials: ALE

O.REG 153 METALS & INORGANICS PKG (WTR)

BV Labs ID		QVN121		QVN122	QVN123			QVN123		
Sampling Date		2021/10/04 12:40		2021/10/04 13:15	2021/10/04			2021/10/04		
COC Number		849032-01-01		849032-01-01	849032-01-01			849032-01-01		
	UNITS	21-2	RDL	21-3	DUP-1	RDL	QC Batch	DUP-1 Lab-Dup	RDL	QC Batch
Inorganics										
WAD Cyanide (Free)	ug/L	<1	1	<1	<1	1	7618434			
Dissolved Chloride (Cl-)	mg/L	150	2.0	47	36	1.0	7618326			
Metals										
Chromium (VI)	ug/L	<0.50	0.50	<0.50	<0.50	0.50	7616546			
Mercury (Hg)	ug/L	<0.10	0.10	<0.10	<0.10	0.10	7618346			
Dissolved Antimony (Sb)	ug/L	<0.50	0.50	<0.50	<0.50	0.50	7618322	<0.50	0.50	7618322
Dissolved Arsenic (As)	ug/L	<1.0	1.0	<1.0	<1.0	1.0	7618322	<1.0	1.0	7618322
Dissolved Barium (Ba)	ug/L	55	2.0	36	77	2.0	7618322	75	2.0	7618322
Dissolved Beryllium (Be)	ug/L	<0.40	0.40	<0.40	<0.40	0.40	7618322	<0.40	0.40	7618322
Dissolved Boron (B)	ug/L	82	10	86	140	10	7618322	150	10	7618322
Dissolved Cadmium (Cd)	ug/L	<0.090	0.090	<0.090	<0.090	0.090	7618322	<0.090	0.090	7618322
Dissolved Chromium (Cr)	ug/L	<5.0	5.0	<5.0	<5.0	5.0	7618322	<5.0	5.0	7618322
Dissolved Cobalt (Co)	ug/L	<0.50	0.50	<0.50	<0.50	0.50	7618322	<0.50	0.50	7618322
Dissolved Copper (Cu)	ug/L	1.6	0.90	<0.90	<0.90	0.90	7618322	<0.90	0.90	7618322
Dissolved Lead (Pb)	ug/L	<0.50	0.50	<0.50	<0.50	0.50	7618322	<0.50	0.50	7618322
Dissolved Molybdenum (Mo)	ug/L	<0.50	0.50	0.57	<0.50	0.50	7618322	<0.50	0.50	7618322
Dissolved Nickel (Ni)	ug/L	1.6	1.0	1.1	1.0	1.0	7618322	<1.0	1.0	7618322
Dissolved Selenium (Se)	ug/L	<2.0	2.0	<2.0	<2.0	2.0	7618322	<2.0	2.0	7618322
Dissolved Silver (Ag)	ug/L	<0.090	0.090	<0.090	<0.090	0.090	7618322	<0.090	0.090	7618322
Dissolved Sodium (Na)	ug/L	170000	100	87000	64000	100	7618322	65000	100	7618322
Dissolved Thallium (Tl)	ug/L	<0.050	0.050	<0.050	<0.050	0.050	7618322	<0.050	0.050	7618322
Dissolved Uranium (U)	ug/L	0.69	0.10	0.64	0.54	0.10	7618322	0.51	0.10	7618322
Dissolved Vanadium (V)	ug/L	<0.50	0.50	<0.50	<0.50	0.50	7618322	<0.50	0.50	7618322
Dissolved Zinc (Zn)	ug/L	<5.0	5.0	<5.0	<5.0	5.0	7618322	<5.0	5.0	7618322

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

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

BV Labs ID		QVN119	QVN120			QVN120		
Sampling Date		2021/10/04 08:00	2021/10/04 11:35			2021/10/04 11:35		
COC Number		849032-01-01	849032-01-01			849032-01-01		
	UNITS	21-5	21-4	RDL	QC Batch	21-4 Lab-Dup	RDL	QC Batch
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	0.50	7618207			
Volatile Organics								
Acetone (2-Propanone)	ug/L	<10	<10	10	7614573	<10	10	7614573
Benzene	ug/L	<0.17	0.49	0.17	7614573	0.42	0.17	7614573
Bromodichloromethane	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
Bromoform	ug/L	<1.0	<1.0	1.0	7614573	<1.0	1.0	7614573
Bromomethane	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
Carbon Tetrachloride	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
Chlorobenzene	ug/L	<0.20	5.5	0.20	7614573	4.8	0.20	7614573
Chloroform	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
Dibromochloromethane	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
1,2-Dichlorobenzene	ug/L	<0.50	6.3	0.50	7614573	5.7	0.50	7614573
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	1.0	7614573	<1.0	1.0	7614573
1,1-Dichloroethane	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
1,2-Dichloroethane	ug/L	<0.50	9.3	0.50	7614573	8.3	0.50	7614573
1,1-Dichloroethylene	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
1,2-Dichloropropane	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	0.30	7614573	<0.30	0.30	7614573
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	0.40	7614573	<0.40	0.40	7614573
Ethylbenzene	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
Ethylene Dibromide	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
Hexane	ug/L	<1.0	<1.0	1.0	7614573	<1.0	1.0	7614573
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	2.0	7614573	<2.0	2.0	7614573
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	10	7614573	<10	10	7614573
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	5.0	7614573	<5.0	5.0	7614573
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
Styrene	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
Tetrachloroethylene	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573

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

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

BV Labs ID		QVN119	QVN120			QVN120		
Sampling Date		2021/10/04 08:00	2021/10/04 11:35			2021/10/04 11:35		
COC Number		849032-01-01	849032-01-01			849032-01-01		
	UNITS	21-5	21-4	RDL	QC Batch	21-4 Lab-Dup	RDL	QC Batch
Toluene	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
Trichloroethylene	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
Vinyl Chloride	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
p+m-Xylene	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
o-Xylene	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
Total Xylenes	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
F1 (C6-C10)	ug/L	<25	<25	25	7614573	<25	25	7614573
F1 (C6-C10) - BTEX	ug/L	<25	<25	25	7614573	<25	25	7614573
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	100	7619044			
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	200	7619044			
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	200	7619044			
Reached Baseline at C50	ug/L	Yes	Yes		7619044			
Surrogate Recovery (%)								
o-Terphenyl	%	93	98		7619044			
4-Bromofluorobenzene	%	84	86		7614573	86		7614573
D4-1,2-Dichloroethane	%	123	120		7614573	123		7614573
D8-Toluene	%	91	91		7614573	90		7614573

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

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

BV Labs ID		QVN121	QVN122	QVN123		
Sampling Date		2021/10/04 12:40	2021/10/04 13:15	2021/10/04		
COC Number		849032-01-01	849032-01-01	849032-01-01		
	UNITS	21-2	21-3	DUP-1	RDL	QC Batch
Calculated Parameters						
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	<0.50	0.50	7618207
Volatile Organics						
Acetone (2-Propanone)	ug/L	<10	<10	<10	10	7614573
Benzene	ug/L	<0.17	<0.17	<0.17	0.17	7614573
Bromodichloromethane	ug/L	<0.50	<0.50	<0.50	0.50	7614573
Bromoform	ug/L	<1.0	<1.0	<1.0	1.0	7614573
Bromomethane	ug/L	<0.50	<0.50	<0.50	0.50	7614573
Carbon Tetrachloride	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Chlorobenzene	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Chloroform	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Dibromochloromethane	ug/L	<0.50	<0.50	<0.50	0.50	7614573
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	0.50	7614573
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	0.50	7614573
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	0.50	7614573
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	<1.0	1.0	7614573
1,1-Dichloroethane	ug/L	<0.20	<0.20	<0.20	0.20	7614573
1,2-Dichloroethane	ug/L	<0.50	<0.50	<0.50	0.50	7614573
1,1-Dichloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	7614573
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	0.50	7614573
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	0.50	7614573
1,2-Dichloropropane	ug/L	<0.20	<0.20	<0.20	0.20	7614573
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	<0.30	0.30	7614573
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	<0.40	0.40	7614573
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Ethylene Dibromide	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Hexane	ug/L	<1.0	<1.0	<1.0	1.0	7614573
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	<2.0	2.0	7614573
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	<10	10	7614573
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	<5.0	5.0	7614573
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	<0.50	0.50	7614573
Styrene	ug/L	<0.50	<0.50	<0.50	0.50	7614573
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	0.50	7614573
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	0.50	7614573
Tetrachloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Toluene	ug/L	<0.20	<0.20	<0.20	0.20	7614573

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

BV Labs ID		QVN121	QVN122	QVN123		
Sampling Date		2021/10/04 12:40	2021/10/04 13:15	2021/10/04		
COC Number		849032-01-01	849032-01-01	849032-01-01		
	UNITS	21-2	21-3	DUP-1	RDL	QC Batch
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	<0.20	0.20	7614573
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	<0.50	0.50	7614573
Trichloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	<0.50	0.50	7614573
Vinyl Chloride	ug/L	<0.20	<0.20	<0.20	0.20	7614573
p+m-Xylene	ug/L	<0.20	<0.20	<0.20	0.20	7614573
o-Xylene	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Total Xylenes	ug/L	<0.20	<0.20	<0.20	0.20	7614573
F1 (C6-C10)	ug/L	<25	<25	<25	25	7614573
F1 (C6-C10) - BTEX	ug/L	<25	<25	<25	25	7614573
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	<100	100	7619044
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	<200	200	7619044
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	<200	200	7619044
Reached Baseline at C50	ug/L	Yes	Yes	Yes		7619044
Surrogate Recovery (%)						
o-Terphenyl	%	94	96	98		7619044
4-Bromofluorobenzene	%	83	83	83		7614573
D4-1,2-Dichloroethane	%	120	126	120		7614573
D8-Toluene	%	93	91	93		7614573

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

TEST SUMMARY

BV Labs ID: QVN119
Sample ID: 21-5
Matrix: Water

Collected: 2021/10/04
Shipped:
Received: 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7618207	N/A	2021/10/05	Automated Statchk
Chloride by Automated Colourimetry	KONE	7618326	N/A	2021/10/05	Alina Dobreanu
Chromium (VI) in Water	IC	7616546	N/A	2021/10/05	Lang Le
Free (WAD) Cyanide	SKAL/CN	7618434	N/A	2021/10/05	Louise Harding
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7619044	2021/10/05	2021/10/06	Anna Stuglik-Rolland
Mercury	CV/AA	7618346	2021/10/05	2021/10/05	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7618322	N/A	2021/10/05	Arefa Dabhad
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

BV Labs ID: QVN119 Dup
Sample ID: 21-5
Matrix: Water

Collected: 2021/10/04
Shipped:
Received: 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chromium (VI) in Water	IC	7616546	N/A	2021/10/05	Lang Le
Free (WAD) Cyanide	SKAL/CN	7618434	N/A	2021/10/05	Louise Harding

BV Labs ID: QVN120
Sample ID: 21-4
Matrix: Water

Collected: 2021/10/04
Shipped:
Received: 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7618207	N/A	2021/10/05	Automated Statchk
Chloride by Automated Colourimetry	KONE	7618326	N/A	2021/10/05	Alina Dobreanu
Chromium (VI) in Water	IC	7616546	N/A	2021/10/05	Lang Le
Free (WAD) Cyanide	SKAL/CN	7618434	N/A	2021/10/05	Louise Harding
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7619044	2021/10/05	2021/10/06	Anna Stuglik-Rolland
Mercury	CV/AA	7618346	2021/10/05	2021/10/05	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7618322	N/A	2021/10/05	Arefa Dabhad
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

BV Labs ID: QVN120 Dup
Sample ID: 21-4
Matrix: Water

Collected: 2021/10/04
Shipped:
Received: 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

BV Labs ID: QVN121
Sample ID: 21-2
Matrix: Water

Collected: 2021/10/04
Shipped:
Received: 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7618207	N/A	2021/10/05	Automated Statchk
Chloride by Automated Colourimetry	KONE	7618326	N/A	2021/10/05	Alina Dobreanu
Chromium (VI) in Water	IC	7616546	N/A	2021/10/05	Lang Le
Free (WAD) Cyanide	SKAL/CN	7618434	N/A	2021/10/05	Louise Harding

TEST SUMMARY

BV Labs ID: QVN121 **Collected:** 2021/10/04
Sample ID: 21-2 **Shipped:**
Matrix: Water **Received:** 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7619044	2021/10/05	2021/10/06	Anna Stuglik-Rolland
Mercury	CV/AA	7618346	2021/10/05	2021/10/05	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7618322	N/A	2021/10/05	Arefa Dabhad
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

BV Labs ID: QVN122 **Collected:** 2021/10/04
Sample ID: 21-3 **Shipped:**
Matrix: Water **Received:** 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7618207	N/A	2021/10/05	Automated Statchk
Chloride by Automated Colourimetry	KONE	7618326	N/A	2021/10/05	Alina Dobreanu
Chromium (VI) in Water	IC	7616546	N/A	2021/10/05	Lang Le
Free (WAD) Cyanide	SKAL/CN	7618434	N/A	2021/10/05	Louise Harding
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7619044	2021/10/05	2021/10/06	Anna Stuglik-Rolland
Mercury	CV/AA	7618346	2021/10/05	2021/10/05	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7618322	N/A	2021/10/05	Arefa Dabhad
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

BV Labs ID: QVN123 **Collected:** 2021/10/04
Sample ID: DUP-1 **Shipped:**
Matrix: Water **Received:** 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7618207	N/A	2021/10/05	Automated Statchk
Chloride by Automated Colourimetry	KONE	7618326	N/A	2021/10/05	Alina Dobreanu
Chromium (VI) in Water	IC	7616546	N/A	2021/10/05	Lang Le
Free (WAD) Cyanide	SKAL/CN	7618434	N/A	2021/10/05	Louise Harding
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7619044	2021/10/05	2021/10/06	Anna Stuglik-Rolland
Mercury	CV/AA	7618346	2021/10/05	2021/10/05	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7618322	N/A	2021/10/05	Arefa Dabhad
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

BV Labs ID: QVN123 Dup **Collected:** 2021/10/04
Sample ID: DUP-1 **Shipped:**
Matrix: Water **Received:** 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	7618322	N/A	2021/10/05	Arefa Dabhad

BV Labs ID: QVN124 **Collected:** 2021/10/04
Sample ID: F- BLANK **Shipped:**
Matrix: Water **Received:** 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

BV Labs Job #: C1S7480
Report Date: 2021/10/06

Golder Associates Ltd
Client Project #: 21484078
Sampler Initials: ALE

TEST SUMMARY

BV Labs ID: QVN125
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2021/10/04
Shipped:
Received: 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

GENERAL COMMENTS

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

Package 1	8.0°C

Methyl Mercury analysis not completed as per client request.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7614573	YY	Matrix Spike [QVN119-08]	4-Bromofluorobenzene	2021/10/05		100	%	70 - 130
			D4-1,2-Dichloroethane	2021/10/05		109	%	70 - 130
			D8-Toluene	2021/10/05		105	%	70 - 130
			Acetone (2-Propanone)	2021/10/05		114	%	60 - 140
			Benzene	2021/10/05		96	%	70 - 130
			Bromodichloromethane	2021/10/05		110	%	70 - 130
			Bromoform	2021/10/05		102	%	70 - 130
			Bromomethane	2021/10/05		99	%	60 - 140
			Carbon Tetrachloride	2021/10/05		102	%	70 - 130
			Chlorobenzene	2021/10/05		99	%	70 - 130
			Chloroform	2021/10/05		105	%	70 - 130
			Dibromochloromethane	2021/10/05		130 (1)	%	70 - 130
			1,2-Dichlorobenzene	2021/10/05		102	%	70 - 130
			1,3-Dichlorobenzene	2021/10/05		102	%	70 - 130
			1,4-Dichlorobenzene	2021/10/05		101	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2021/10/05		74	%	60 - 140
			1,1-Dichloroethane	2021/10/05		104	%	70 - 130
			1,2-Dichloroethane	2021/10/05		104	%	70 - 130
			1,1-Dichloroethylene	2021/10/05		103	%	70 - 130
			cis-1,2-Dichloroethylene	2021/10/05		105	%	70 - 130
			trans-1,2-Dichloroethylene	2021/10/05		102	%	70 - 130
			1,2-Dichloropropane	2021/10/05		104	%	70 - 130
			cis-1,3-Dichloropropene	2021/10/05		99	%	70 - 130
			trans-1,3-Dichloropropene	2021/10/05		106	%	70 - 130
			Ethylbenzene	2021/10/05		90	%	70 - 130
			Ethylene Dibromide	2021/10/05		100	%	70 - 130
			Hexane	2021/10/05		101	%	70 - 130
			Methylene Chloride(Dichloromethane)	2021/10/05		114	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/10/05		106	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/05		88	%	70 - 130
			Methyl t-butyl ether (MTBE)	2021/10/05		91	%	70 - 130
			Styrene	2021/10/05		82	%	70 - 130
			1,1,1,2-Tetrachloroethane	2021/10/05		104	%	70 - 130
			1,1,2,2-Tetrachloroethane	2021/10/05		106	%	70 - 130
			Tetrachloroethylene	2021/10/05		97	%	70 - 130
			Toluene	2021/10/05		95	%	70 - 130
			1,1,1-Trichloroethane	2021/10/05		107	%	70 - 130
			1,1,2-Trichloroethane	2021/10/05		116	%	70 - 130
			Trichloroethylene	2021/10/05		104	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2021/10/05		102	%	70 - 130
			Vinyl Chloride	2021/10/05		97	%	70 - 130
			p+m-Xylene	2021/10/05		93	%	70 - 130
			o-Xylene	2021/10/05		93	%	70 - 130
			F1 (C6-C10)	2021/10/05		107	%	60 - 140
7614573	YY	Spiked Blank	4-Bromofluorobenzene	2021/10/05		101	%	70 - 130
			D4-1,2-Dichloroethane	2021/10/05		111	%	70 - 130
			D8-Toluene	2021/10/05		107	%	70 - 130
			Acetone (2-Propanone)	2021/10/05		122	%	60 - 140
			Benzene	2021/10/05		92	%	70 - 130
			Bromodichloromethane	2021/10/05		106	%	70 - 130
			Bromoform	2021/10/05		101	%	70 - 130
			Bromomethane	2021/10/05		94	%	60 - 140
			Carbon Tetrachloride	2021/10/05		97	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Chlorobenzene	2021/10/05		95	%	70 - 130
			Chloroform	2021/10/05		101	%	70 - 130
			Dibromochloromethane	2021/10/05		127	%	70 - 130
			1,2-Dichlorobenzene	2021/10/05		99	%	70 - 130
			1,3-Dichlorobenzene	2021/10/05		98	%	70 - 130
			1,4-Dichlorobenzene	2021/10/05		100	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2021/10/05		75	%	60 - 140
			1,1-Dichloroethane	2021/10/05		99	%	70 - 130
			1,2-Dichloroethane	2021/10/05		102	%	70 - 130
			1,1-Dichloroethylene	2021/10/05		98	%	70 - 130
			cis-1,2-Dichloroethylene	2021/10/05		103	%	70 - 130
			trans-1,2-Dichloroethylene	2021/10/05		98	%	70 - 130
			1,2-Dichloropropane	2021/10/05		102	%	70 - 130
			cis-1,3-Dichloropropene	2021/10/05		96	%	70 - 130
			trans-1,3-Dichloropropene	2021/10/05		102	%	70 - 130
			Ethylbenzene	2021/10/05		89	%	70 - 130
			Ethylene Dibromide	2021/10/05		99	%	70 - 130
			Hexane	2021/10/05		99	%	70 - 130
			Methylene Chloride(Dichloromethane)	2021/10/05		110	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/10/05		114	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/05		97	%	70 - 130
			Methyl t-butyl ether (MTBE)	2021/10/05		90	%	70 - 130
			Styrene	2021/10/05		85	%	70 - 130
			1,1,1,2-Tetrachloroethane	2021/10/05		100	%	70 - 130
			1,1,2,2-Tetrachloroethane	2021/10/05		105	%	70 - 130
			Tetrachloroethylene	2021/10/05		90	%	70 - 130
			Toluene	2021/10/05		93	%	70 - 130
			1,1,1-Trichloroethane	2021/10/05		101	%	70 - 130
			1,1,2-Trichloroethane	2021/10/05		113	%	70 - 130
			Trichloroethylene	2021/10/05		99	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2021/10/05		97	%	70 - 130
			Vinyl Chloride	2021/10/05		94	%	70 - 130
			p+m-Xylene	2021/10/05		91	%	70 - 130
			o-Xylene	2021/10/05		91	%	70 - 130
			F1 (C6-C10)	2021/10/05		100	%	60 - 140
7614573	YY	Method Blank	4-Bromofluorobenzene	2021/10/05		85	%	70 - 130
			D4-1,2-Dichloroethane	2021/10/05		119	%	70 - 130
			D8-Toluene	2021/10/05		91	%	70 - 130
			Acetone (2-Propanone)	2021/10/05	<10		ug/L	
			Benzene	2021/10/05	<0.17		ug/L	
			Bromodichloromethane	2021/10/05	<0.50		ug/L	
			Bromoform	2021/10/05	<1.0		ug/L	
			Bromomethane	2021/10/05	<0.50		ug/L	
			Carbon Tetrachloride	2021/10/05	<0.20		ug/L	
			Chlorobenzene	2021/10/05	<0.20		ug/L	
			Chloroform	2021/10/05	<0.20		ug/L	
			Dibromochloromethane	2021/10/05	<0.50		ug/L	
			1,2-Dichlorobenzene	2021/10/05	<0.50		ug/L	
			1,3-Dichlorobenzene	2021/10/05	<0.50		ug/L	
			1,4-Dichlorobenzene	2021/10/05	<0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2021/10/05	<1.0		ug/L	
			1,1-Dichloroethane	2021/10/05	<0.20		ug/L	
			1,2-Dichloroethane	2021/10/05	<0.50		ug/L	
			1,1-Dichloroethylene	2021/10/05	<0.20		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			cis-1,2-Dichloroethylene	2021/10/05	<0.50		ug/L	
			trans-1,2-Dichloroethylene	2021/10/05	<0.50		ug/L	
			1,2-Dichloropropane	2021/10/05	<0.20		ug/L	
			cis-1,3-Dichloropropene	2021/10/05	<0.30		ug/L	
			trans-1,3-Dichloropropene	2021/10/05	<0.40		ug/L	
			Ethylbenzene	2021/10/05	<0.20		ug/L	
			Ethylene Dibromide	2021/10/05	<0.20		ug/L	
			Hexane	2021/10/05	<1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2021/10/05	<2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2021/10/05	<10		ug/L	
			Methyl Isobutyl Ketone	2021/10/05	<5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2021/10/05	<0.50		ug/L	
			Styrene	2021/10/05	<0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2021/10/05	<0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2021/10/05	<0.50		ug/L	
			Tetrachloroethylene	2021/10/05	<0.20		ug/L	
			Toluene	2021/10/05	<0.20		ug/L	
			1,1,1-Trichloroethane	2021/10/05	<0.20		ug/L	
			1,1,2-Trichloroethane	2021/10/05	<0.50		ug/L	
			Trichloroethylene	2021/10/05	<0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2021/10/05	<0.50		ug/L	
			Vinyl Chloride	2021/10/05	<0.20		ug/L	
			p+m-Xylene	2021/10/05	<0.20		ug/L	
			o-Xylene	2021/10/05	<0.20		ug/L	
			Total Xylenes	2021/10/05	<0.20		ug/L	
			F1 (C6-C10)	2021/10/05	<25		ug/L	
			F1 (C6-C10) - BTEX	2021/10/05	<25		ug/L	
7614573	YY	RPD [QVN120-08]	Acetone (2-Propanone)	2021/10/05	NC		%	30
			Benzene	2021/10/05	16		%	30
			Bromodichloromethane	2021/10/05	NC		%	30
			Bromoform	2021/10/05	NC		%	30
			Bromomethane	2021/10/05	NC		%	30
			Carbon Tetrachloride	2021/10/05	NC		%	30
			Chlorobenzene	2021/10/05	13		%	30
			Chloroform	2021/10/05	NC		%	30
			Dibromochloromethane	2021/10/05	NC		%	30
			1,2-Dichlorobenzene	2021/10/05	11		%	30
			1,3-Dichlorobenzene	2021/10/05	NC		%	30
			1,4-Dichlorobenzene	2021/10/05	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2021/10/05	NC		%	30
			1,1-Dichloroethane	2021/10/05	NC		%	30
			1,2-Dichloroethane	2021/10/05	11		%	30
			1,1-Dichloroethylene	2021/10/05	NC		%	30
			cis-1,2-Dichloroethylene	2021/10/05	NC		%	30
			trans-1,2-Dichloroethylene	2021/10/05	NC		%	30
			1,2-Dichloropropane	2021/10/05	NC		%	30
			cis-1,3-Dichloropropene	2021/10/05	NC		%	30
			trans-1,3-Dichloropropene	2021/10/05	NC		%	30
			Ethylbenzene	2021/10/05	NC		%	30
			Ethylene Dibromide	2021/10/05	NC		%	30
			Hexane	2021/10/05	NC		%	30
			Methylene Chloride(Dichloromethane)	2021/10/05	NC		%	30
			Methyl Ethyl Ketone (2-Butanone)	2021/10/05	NC		%	30
			Methyl Isobutyl Ketone	2021/10/05	NC		%	30

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methyl t-butyl ether (MTBE)	2021/10/05	NC		%	30
			Styrene	2021/10/05	NC		%	30
			1,1,1,2-Tetrachloroethane	2021/10/05	NC		%	30
			1,1,2,2-Tetrachloroethane	2021/10/05	NC		%	30
			Tetrachloroethylene	2021/10/05	NC		%	30
			Toluene	2021/10/05	NC		%	30
			1,1,1-Trichloroethane	2021/10/05	NC		%	30
			1,1,2-Trichloroethane	2021/10/05	NC		%	30
			Trichloroethylene	2021/10/05	NC		%	30
			Trichlorofluoromethane (FREON 11)	2021/10/05	NC		%	30
			Vinyl Chloride	2021/10/05	NC		%	30
			p+m-Xylene	2021/10/05	NC		%	30
			o-Xylene	2021/10/05	NC		%	30
			Total Xylenes	2021/10/05	NC		%	30
			F1 (C6-C10)	2021/10/05	NC		%	30
			F1 (C6-C10) - BTEX	2021/10/05	NC		%	30
7616546	LLE	Matrix Spike [QVN119-06]	Chromium (VI)	2021/10/05		91	%	80 - 120
7616546	LLE	Spiked Blank	Chromium (VI)	2021/10/05		101	%	80 - 120
7616546	LLE	Method Blank	Chromium (VI)	2021/10/05	<0.50		ug/L	
7616546	LLE	RPD [QVN119-06]	Chromium (VI)	2021/10/05	NC		%	20
7618322	ADA	Matrix Spike [QVN123-05]	Dissolved Antimony (Sb)	2021/10/05		105	%	80 - 120
			Dissolved Arsenic (As)	2021/10/05		102	%	80 - 120
			Dissolved Barium (Ba)	2021/10/05		104	%	80 - 120
			Dissolved Beryllium (Be)	2021/10/05		100	%	80 - 120
			Dissolved Boron (B)	2021/10/05		95	%	80 - 120
			Dissolved Cadmium (Cd)	2021/10/05		102	%	80 - 120
			Dissolved Chromium (Cr)	2021/10/05		97	%	80 - 120
			Dissolved Cobalt (Co)	2021/10/05		96	%	80 - 120
			Dissolved Copper (Cu)	2021/10/05		94	%	80 - 120
			Dissolved Lead (Pb)	2021/10/05		97	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/10/05		105	%	80 - 120
			Dissolved Nickel (Ni)	2021/10/05		95	%	80 - 120
			Dissolved Selenium (Se)	2021/10/05		102	%	80 - 120
			Dissolved Silver (Ag)	2021/10/05		97	%	80 - 120
			Dissolved Sodium (Na)	2021/10/05		NC	%	80 - 120
			Dissolved Thallium (Tl)	2021/10/05		96	%	80 - 120
			Dissolved Uranium (U)	2021/10/05		100	%	80 - 120
			Dissolved Vanadium (V)	2021/10/05		101	%	80 - 120
			Dissolved Zinc (Zn)	2021/10/05		98	%	80 - 120
7618322	ADA	Spiked Blank	Dissolved Antimony (Sb)	2021/10/05		105	%	80 - 120
			Dissolved Arsenic (As)	2021/10/05		105	%	80 - 120
			Dissolved Barium (Ba)	2021/10/05		107	%	80 - 120
			Dissolved Beryllium (Be)	2021/10/05		101	%	80 - 120
			Dissolved Boron (B)	2021/10/05		97	%	80 - 120
			Dissolved Cadmium (Cd)	2021/10/05		103	%	80 - 120
			Dissolved Chromium (Cr)	2021/10/05		99	%	80 - 120
			Dissolved Cobalt (Co)	2021/10/05		100	%	80 - 120
			Dissolved Copper (Cu)	2021/10/05		97	%	80 - 120
			Dissolved Lead (Pb)	2021/10/05		97	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/10/05		105	%	80 - 120
			Dissolved Nickel (Ni)	2021/10/05		98	%	80 - 120
			Dissolved Selenium (Se)	2021/10/05		101	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Silver (Ag)	2021/10/05		99	%	80 - 120
			Dissolved Sodium (Na)	2021/10/05		102	%	80 - 120
			Dissolved Thallium (Tl)	2021/10/05		101	%	80 - 120
			Dissolved Uranium (U)	2021/10/05		99	%	80 - 120
			Dissolved Vanadium (V)	2021/10/05		104	%	80 - 120
			Dissolved Zinc (Zn)	2021/10/05		104	%	80 - 120
7618322	ADA	Method Blank	Dissolved Antimony (Sb)	2021/10/05	<0.50		ug/L	
			Dissolved Arsenic (As)	2021/10/05	<1.0		ug/L	
			Dissolved Barium (Ba)	2021/10/05	<2.0		ug/L	
			Dissolved Beryllium (Be)	2021/10/05	<0.40		ug/L	
			Dissolved Boron (B)	2021/10/05	<10		ug/L	
			Dissolved Cadmium (Cd)	2021/10/05	<0.090		ug/L	
			Dissolved Chromium (Cr)	2021/10/05	<5.0		ug/L	
			Dissolved Cobalt (Co)	2021/10/05	<0.50		ug/L	
			Dissolved Copper (Cu)	2021/10/05	<0.90		ug/L	
			Dissolved Lead (Pb)	2021/10/05	<0.50		ug/L	
			Dissolved Molybdenum (Mo)	2021/10/05	<0.50		ug/L	
			Dissolved Nickel (Ni)	2021/10/05	<1.0		ug/L	
			Dissolved Selenium (Se)	2021/10/05	<2.0		ug/L	
			Dissolved Silver (Ag)	2021/10/05	<0.090		ug/L	
			Dissolved Sodium (Na)	2021/10/05	<100		ug/L	
			Dissolved Thallium (Tl)	2021/10/05	<0.050		ug/L	
			Dissolved Uranium (U)	2021/10/05	<0.10		ug/L	
			Dissolved Vanadium (V)	2021/10/05	<0.50		ug/L	
			Dissolved Zinc (Zn)	2021/10/05	<5.0		ug/L	
7618322	ADA	RPD [QVN123-05]	Dissolved Antimony (Sb)	2021/10/05	NC		%	20
			Dissolved Arsenic (As)	2021/10/05	NC		%	20
			Dissolved Barium (Ba)	2021/10/05	2.6		%	20
			Dissolved Beryllium (Be)	2021/10/05	NC		%	20
			Dissolved Boron (B)	2021/10/05	1.6		%	20
			Dissolved Cadmium (Cd)	2021/10/05	NC		%	20
			Dissolved Chromium (Cr)	2021/10/05	NC		%	20
			Dissolved Cobalt (Co)	2021/10/05	NC		%	20
			Dissolved Copper (Cu)	2021/10/05	NC		%	20
			Dissolved Lead (Pb)	2021/10/05	NC		%	20
			Dissolved Molybdenum (Mo)	2021/10/05	NC		%	20
			Dissolved Nickel (Ni)	2021/10/05	0.70		%	20
			Dissolved Selenium (Se)	2021/10/05	NC		%	20
			Dissolved Silver (Ag)	2021/10/05	NC		%	20
			Dissolved Sodium (Na)	2021/10/05	1.9		%	20
			Dissolved Thallium (Tl)	2021/10/05	NC		%	20
			Dissolved Uranium (U)	2021/10/05	6.3		%	20
			Dissolved Vanadium (V)	2021/10/05	NC		%	20
			Dissolved Zinc (Zn)	2021/10/05	NC		%	20
7618326	ADB	Matrix Spike	Dissolved Chloride (Cl-)	2021/10/05		NC	%	80 - 120
7618326	ADB	Spiked Blank	Dissolved Chloride (Cl-)	2021/10/05		102	%	80 - 120
7618326	ADB	Method Blank	Dissolved Chloride (Cl-)	2021/10/05	<1.0		mg/L	
7618326	ADB	RPD	Dissolved Chloride (Cl-)	2021/10/05	1.1		%	20
7618346	GR1	Matrix Spike	Mercury (Hg)	2021/10/05		98	%	75 - 125
7618346	GR1	Spiked Blank	Mercury (Hg)	2021/10/05		97	%	80 - 120
7618346	GR1	Method Blank	Mercury (Hg)	2021/10/05	<0.10		ug/L	
7618346	GR1	RPD	Mercury (Hg)	2021/10/05	NC		%	20
7618434	LHA	Matrix Spike [QVN119-07]	WAD Cyanide (Free)	2021/10/05		105	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7618434	LHA	Spiked Blank	WAD Cyanide (Free)	2021/10/05		104	%	80 - 120
7618434	LHA	Method Blank	WAD Cyanide (Free)	2021/10/05	<1		ug/L	
7618434	LHA	RPD [QVN119-07]	WAD Cyanide (Free)	2021/10/05	NC		%	20
7619044	AS2	Matrix Spike	o-Terphenyl	2021/10/06		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/10/06		105	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2021/10/06		104	%	60 - 130
			F4 (C34-C50 Hydrocarbons)	2021/10/06		108	%	60 - 130
7619044	AS2	Spiked Blank	o-Terphenyl	2021/10/06		96	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/10/06		102	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2021/10/06		103	%	60 - 130
			F4 (C34-C50 Hydrocarbons)	2021/10/06		105	%	60 - 130
7619044	AS2	Method Blank	o-Terphenyl	2021/10/06		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/10/06	<100		ug/L	
			F3 (C16-C34 Hydrocarbons)	2021/10/06	<200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2021/10/06	<200		ug/L	
7619044	AS2	RPD	F2 (C10-C16 Hydrocarbons)	2021/10/06	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/10/06	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/10/06	NC		%	30

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

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

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

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

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

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

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

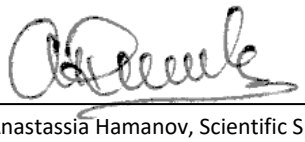
(1) The recovery was above the upper control limit. This may represent a high bias in some results for this specific analyte. For results that were not detected (ND), this potential bias has no impact.

BV Labs Job #: C1S7480
Report Date: 2021/10/06

Golder Associates Ltd
Client Project #: 21484078
Sampler Initials: ALE

VALIDATION SIGNATURE PAGE

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



Anastassia Hamanov, Scientific Specialist

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvlabs.com

RUSH!

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

Page 1 of 1

04-Oct-21 15:40

Ema Gitej

C1S7480

M2K ENV-601

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name	#2292 Golder Associates Ltd	Company Name		Quotation #	B80683
Attention	Accounts Payable	Attention	Daniel Stabile	P.O. #	
Address	100 Scotia Crt Whitby ON L1N 8Y6	Address		Project	21484078
Tel	(905) 723-2727 Fax (905) 723-2182	Tel	Fax	Project Name	
Email	CanadaAccountsPayableInvoices@golder.com	Email	Daniel_Stabile@golder.com	Site #	
				Sampled By	AL

Bottle Order #: 849032

COC #: C#849032-01-01

Project Manager: Ema Gitej

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

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

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

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

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

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

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O Reg 153 VOCs by HS & F1-F4	O Reg 153 Metals & Inorganics Pkg	Methyl Mercury	# of Bottles	Comments
1		21-5	Oct 4/21	900	GW	Y	X	X	X	11	
2		21-4		1135		Y	X	X	X	11	
3		21-2		1240		Y	X	X	X	11	
4		21-3		1315		Y	X	X	X	11	
5		DUP-1		/		Y	X	X	X	11	
6		F-Blank	Oct 4/21	1315	/	N	X			3	
7		Trip Blank	/	/	/	N	X			2	
8											
9											
10											

RECEIVED IN OTTAWA

On Ice 2021/10/04

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Aaron Trakhtman	Oct 4/21	1535	Aisling Mulcahy Maudy Mulcahy	2021/10/04 2021/10/05	15:40 08:40	0

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal Present	Yes	No
	8 8 8	Intact	✓	

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

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

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

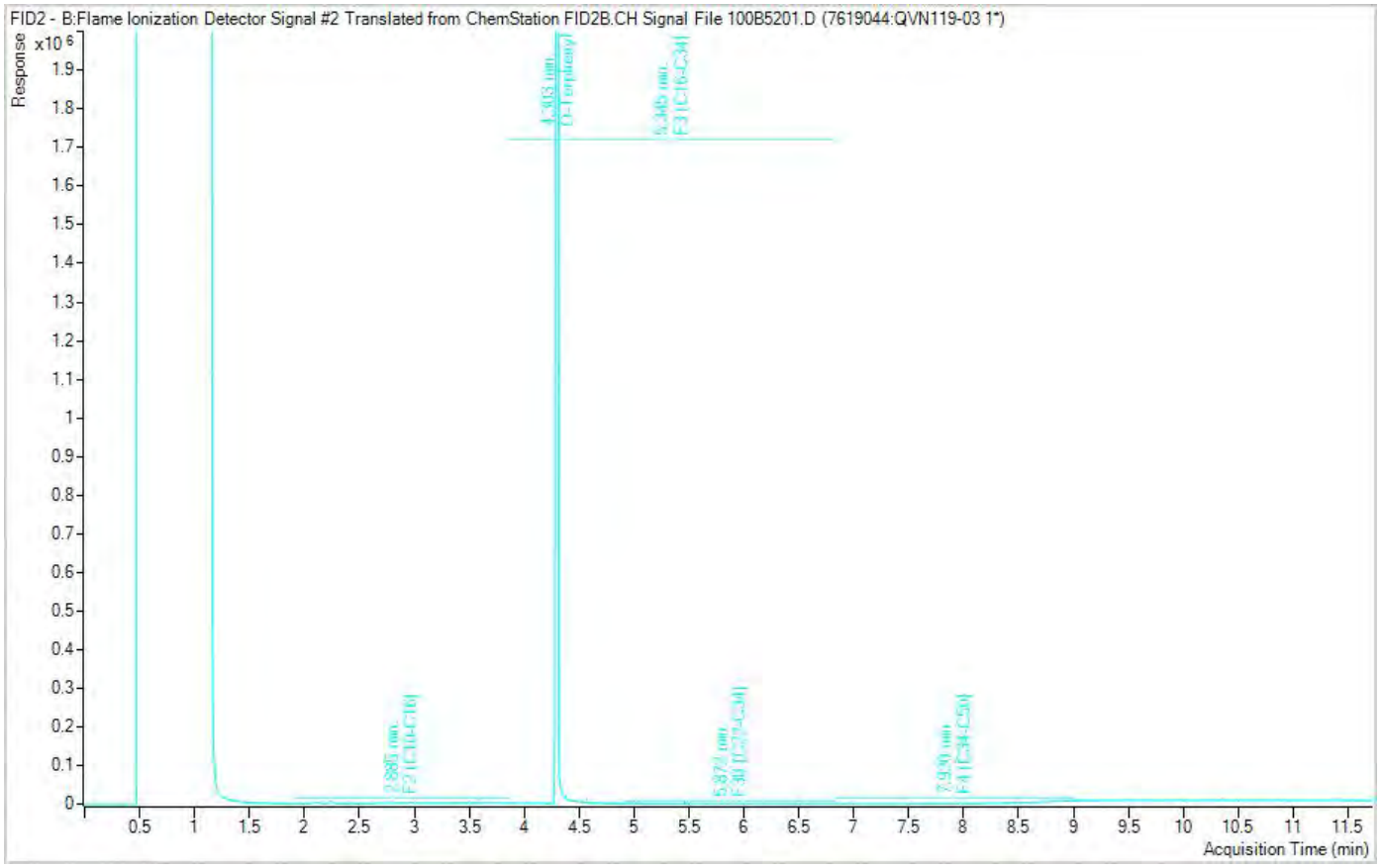
SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

White: BV Labs Yellow: Client

BV Labs Job #: C1S7480
Report Date: 2021/10/06
BV Labs Sample: QVN119

Golder Associates Ltd
Client Project #: 21484078
Client ID: 21-5

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

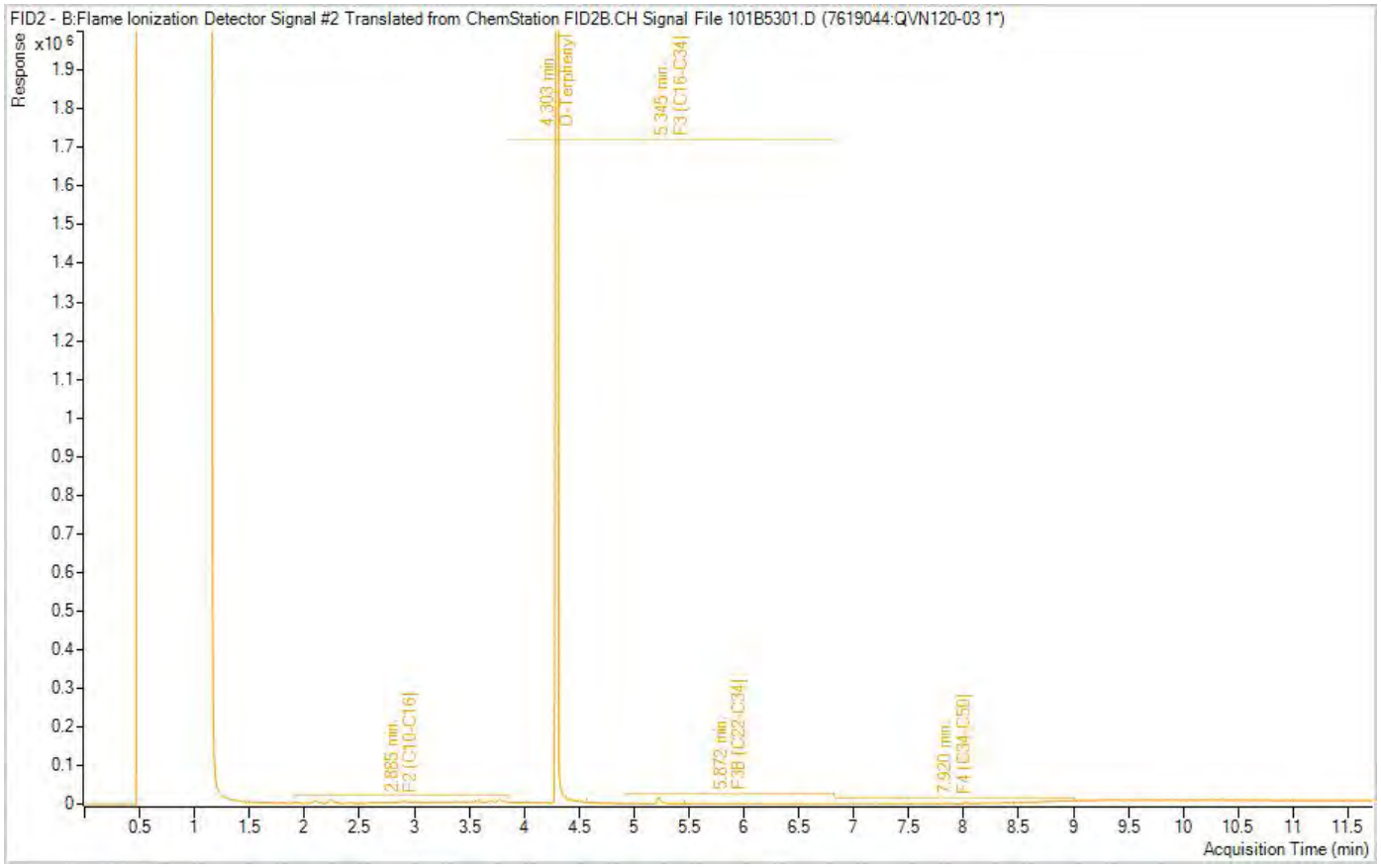


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S7480
Report Date: 2021/10/06
BV Labs Sample: QVN120

Golder Associates Ltd
Client Project #: 21484078
Client ID: 21-4

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

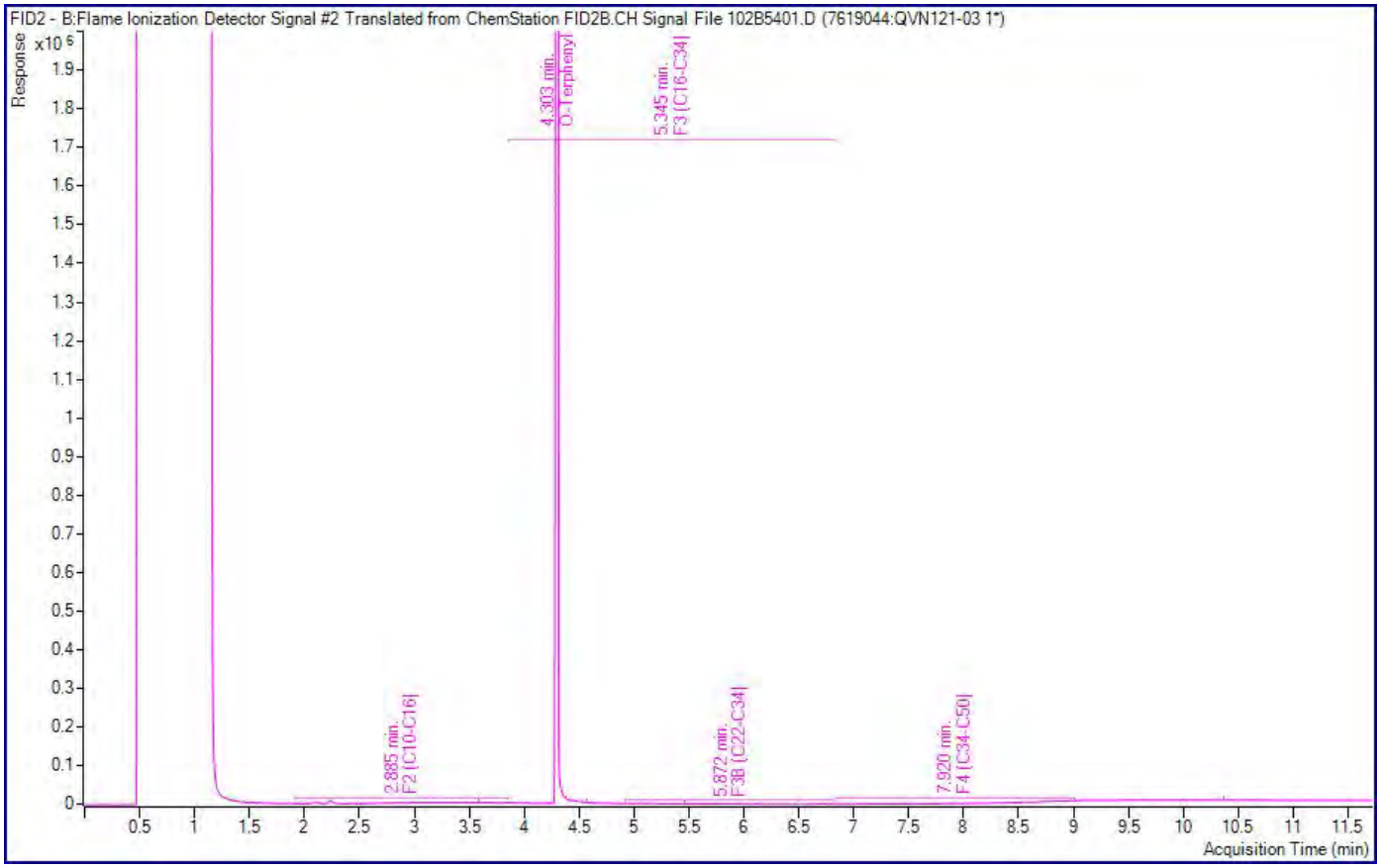


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S7480
Report Date: 2021/10/06
BV Labs Sample: QVN121

Golder Associates Ltd
Client Project #: 21484078
Client ID: 21-2

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

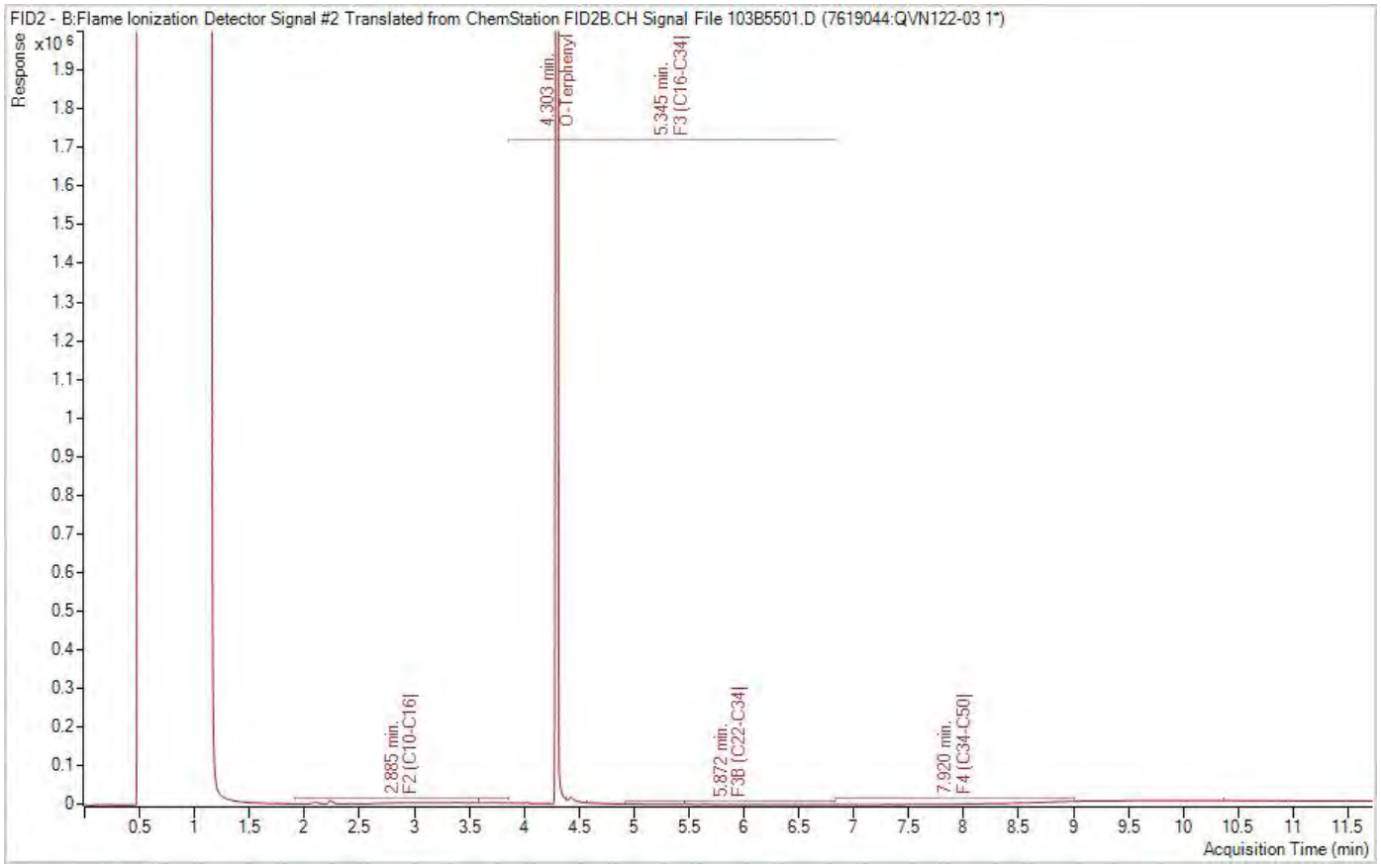


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S7480
Report Date: 2021/10/06
BV Labs Sample: QVN122

Golder Associates Ltd
Client Project #: 21484078
Client ID: 21-3

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

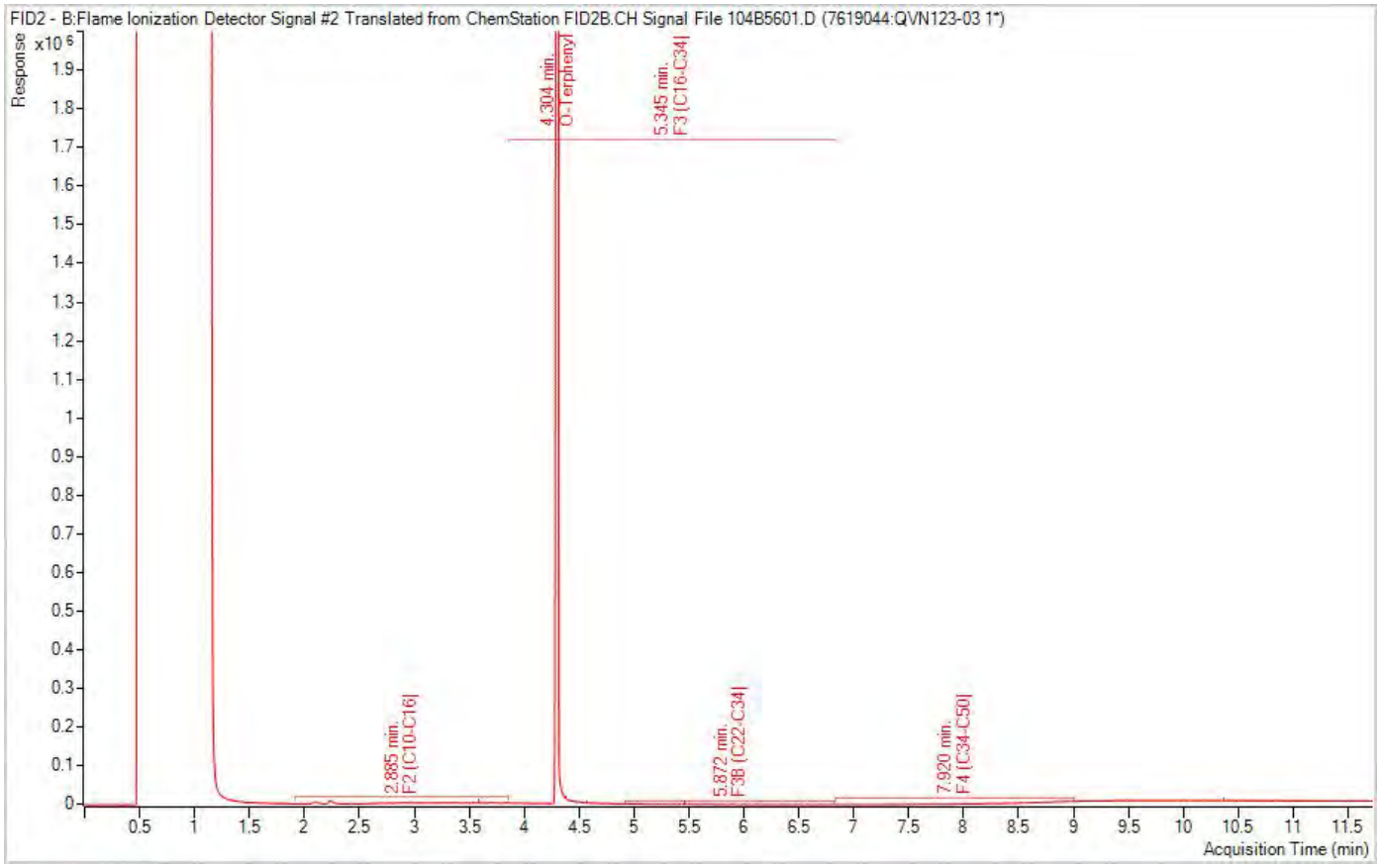


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S7480
Report Date: 2021/10/06
BV Labs Sample: QVN123

Golder Associates Ltd
Client Project #: 21484078
Client ID: DUP-1

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 21494078
Your C.O.C. #: 855386-01-01, 855386-02-01

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2022/01/11
Report #: R6957298
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1X6358
Received: 2021/11/15, 13:20

Sample Matrix: Soil
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Hot Water Extractable Boron (1)	6	2021/11/17	2021/11/17	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum (1)	7	N/A	2021/11/17		EPA 8260C m
Free (WAD) Cyanide (1)	6	2021/11/17	2021/11/17	CAM SOP-00457	OMOE E3015 m
Conductivity (1)	6	2021/11/17	2021/11/17	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1, 2)	6	2021/11/17	2021/11/17	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydrocarbons F2-F4 in Soil (1, 3)	7	2021/11/16	2021/11/17	CAM SOP-00316	CCME CWS m
F4G (CCME Hydrocarbons Gravimetric) (1)	2	2021/11/18	2021/11/18	CAM SOP-00316	CCME PHC-CWS m
Acid Extractable Metals by ICPMS (1)	6	2021/11/17	2021/11/17	CAM SOP-00447	EPA 6020B m
Moisture (1)	11	N/A	2021/11/16	CAM SOP-00445	Carter 2nd ed 51.2 m
pH CaCl2 EXTRACT (1)	6	2021/11/17	2021/11/17	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR) (1)	6	N/A	2021/11/17	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs (1)	7	N/A	2021/11/17	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

Your Project #: 21494078
Your C.O.C. #: 855386-01-01, 855386-02-01

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2022/01/11
Report #: R6957298
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1X6358
Received: 2021/11/15, 13:20

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) Soils are reported on a dry weight basis unless otherwise specified.
(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: emese.gitej@bureauveritas.com
Phone# (905)817-5829
==========
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		RFW712			RFW713	RFW714		
Sampling Date		2021/11/12 12:30			2021/11/12 13:00	2021/11/11 14:00		
COC Number		855386-01-01			855386-01-01	855386-01-01		
	UNITS	21-11 SA2	RDL	QC Batch	21-11 SA3	21-12 SA2	RDL	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A	6.6		7704789	5.9	0.71		7704789
Inorganics								
Conductivity	mS/cm	0.33	0.002	7705253	0.37	0.13	0.002	7705253
Moisture	%				16	8.7	1.0	7704833
Available (CaCl2) pH	pH	7.41		7705354	7.61	6.99		7705354
WAD Cyanide (Free)	ug/g	<0.01	0.01	7705073	<0.01	<0.01	0.01	7705073
Chromium (VI)	ug/g	<0.18	0.18	7705099	<0.18	<0.18	0.18	7705099
Metals								
Hot Water Ext. Boron (B)	ug/g	0.60	0.050	7705250	0.61	0.13	0.050	7705250
Acid Extractable Antimony (Sb)	ug/g	0.53	0.20	7705373	<0.20	<0.20	0.20	7705373
Acid Extractable Arsenic (As)	ug/g	1.1	1.0	7705373	<1.0	<1.0	1.0	7705373
Acid Extractable Barium (Ba)	ug/g	110	0.50	7705373	76	49	0.50	7705373
Acid Extractable Beryllium (Be)	ug/g	0.61	0.20	7705373	0.46	0.31	0.20	7705373
Acid Extractable Boron (B)	ug/g	8.1	5.0	7705373	6.9	<5.0	5.0	7705373
Acid Extractable Cadmium (Cd)	ug/g	0.29	0.10	7705373	0.20	<0.10	0.10	7705373
Acid Extractable Chromium (Cr)	ug/g	26	1.0	7705373	24	15	1.0	7705373
Acid Extractable Cobalt (Co)	ug/g	11	0.10	7705373	7.2	4.3	0.10	7705373
Acid Extractable Copper (Cu)	ug/g	22	0.50	7705373	15	8.6	0.50	7705373
Acid Extractable Lead (Pb)	ug/g	54	1.0	7705373	20	2.7	1.0	7705373
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7705373	0.73	<0.50	0.50	7705373
Acid Extractable Nickel (Ni)	ug/g	26	0.50	7705373	22	8.6	0.50	7705373
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7705373	<0.50	<0.50	0.50	7705373
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7705373	<0.20	<0.20	0.20	7705373
Acid Extractable Thallium (Tl)	ug/g	0.15	0.050	7705373	0.11	0.060	0.050	7705373
Acid Extractable Uranium (U)	ug/g	0.42	0.050	7705373	0.39	0.55	0.050	7705373
Acid Extractable Vanadium (V)	ug/g	27	5.0	7705373	28	27	5.0	7705373
Acid Extractable Zinc (Zn)	ug/g	80	5.0	7705373	60	21	5.0	7705373
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7705373	<0.050	<0.050	0.050	7705373

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		RFW715			RFW715			RFW716		
Sampling Date		2021/11/11 14:10			2021/11/11 14:10			2021/11/11 15:00		
COC Number		855386-01-01			855386-01-01			855386-01-01		
	UNITS	21-12 SA3	RDL	QC Batch	21-12 SA3 Lab-Dup	RDL	QC Batch	21-13 SA2	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.70		7704789				0.54		7704789
Inorganics										
Conductivity	mS/cm	0.59	0.002	7705253	0.61	0.002	7705253	0.060	0.002	7705253
Moisture	%							6.2	1.0	7704833
Available (CaCl2) pH	pH	7.58		7705354				6.88		7705354
WAD Cyanide (Free)	ug/g	<0.01	0.01	7705073				<0.01	0.01	7705073
Chromium (VI)	ug/g	<0.18	0.18	7705099				<0.18	0.18	7705099
Metals										
Hot Water Ext. Boron (B)	ug/g	0.51	0.050	7705250	0.56	0.050	7705250	0.14	0.050	7705250
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7705373	<0.20	0.20	7705373	<0.20	0.20	7705373
Acid Extractable Arsenic (As)	ug/g	<1.0	1.0	7705373	1.1	1.0	7705373	<1.0	1.0	7705373
Acid Extractable Barium (Ba)	ug/g	77	0.50	7705373	74	0.50	7705373	24	0.50	7705373
Acid Extractable Beryllium (Be)	ug/g	0.54	0.20	7705373	0.56	0.20	7705373	<0.20	0.20	7705373
Acid Extractable Boron (B)	ug/g	9.2	5.0	7705373	9.8	5.0	7705373	<5.0	5.0	7705373
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7705373	<0.10	0.10	7705373	<0.10	0.10	7705373
Acid Extractable Chromium (Cr)	ug/g	39	1.0	7705373	40	1.0	7705373	7.0	1.0	7705373
Acid Extractable Cobalt (Co)	ug/g	8.5	0.10	7705373	8.5	0.10	7705373	2.8	0.10	7705373
Acid Extractable Copper (Cu)	ug/g	17	0.50	7705373	17	0.50	7705373	5.3	0.50	7705373
Acid Extractable Lead (Pb)	ug/g	6.7	1.0	7705373	6.6	1.0	7705373	1.9	1.0	7705373
Acid Extractable Molybdenum (Mo)	ug/g	4.6	0.50	7705373	4.6	0.50	7705373	<0.50	0.50	7705373
Acid Extractable Nickel (Ni)	ug/g	18	0.50	7705373	18	0.50	7705373	4.9	0.50	7705373
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7705373	<0.50	0.50	7705373	<0.50	0.50	7705373
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7705373	<0.20	0.20	7705373	<0.20	0.20	7705373
Acid Extractable Thallium (Tl)	ug/g	0.11	0.050	7705373	0.11	0.050	7705373	<0.050	0.050	7705373
Acid Extractable Uranium (U)	ug/g	0.54	0.050	7705373	0.51	0.050	7705373	0.40	0.050	7705373
Acid Extractable Vanadium (V)	ug/g	27	5.0	7705373	26	5.0	7705373	15	5.0	7705373
Acid Extractable Zinc (Zn)	ug/g	32	5.0	7705373	31	5.0	7705373	12	5.0	7705373
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7705373	<0.050	0.050	7705373	<0.050	0.050	7705373

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

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		RFW717		
Sampling Date		2021/11/11 15:10		
COC Number		855386-01-01		
	UNITS	21-13 SA3	RDL	QC Batch
Calculated Parameters				
Sodium Adsorption Ratio	N/A	7.3		7704789
Inorganics				
Conductivity	mS/cm	0.38	0.002	7705253
Moisture	%	10	1.0	7704833
Available (CaCl2) pH	pH	7.68		7705354
WAD Cyanide (Free)	ug/g	<0.01	0.01	7705073
Chromium (VI)	ug/g	<0.18	0.18	7705099
Metals				
Hot Water Ext. Boron (B)	ug/g	0.41	0.050	7705250
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7705373
Acid Extractable Arsenic (As)	ug/g	2.0	1.0	7705373
Acid Extractable Barium (Ba)	ug/g	81	0.50	7705373
Acid Extractable Beryllium (Be)	ug/g	1.1	0.20	7705373
Acid Extractable Boron (B)	ug/g	16	5.0	7705373
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7705373
Acid Extractable Chromium (Cr)	ug/g	41	1.0	7705373
Acid Extractable Cobalt (Co)	ug/g	20	0.10	7705373
Acid Extractable Copper (Cu)	ug/g	7.8	0.50	7705373
Acid Extractable Lead (Pb)	ug/g	5.2	1.0	7705373
Acid Extractable Molybdenum (Mo)	ug/g	0.76	0.50	7705373
Acid Extractable Nickel (Ni)	ug/g	47	0.50	7705373
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7705373
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7705373
Acid Extractable Thallium (Tl)	ug/g	0.21	0.050	7705373
Acid Extractable Uranium (U)	ug/g	0.31	0.050	7705373
Acid Extractable Vanadium (V)	ug/g	27	5.0	7705373
Acid Extractable Zinc (Zn)	ug/g	35	5.0	7705373
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7705373

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		RFW712	RFW715	RFW718	RFW719	RFW721		
Sampling Date		2021/11/12 12:30	2021/11/11 14:10	2021/11/12 16:00	2021/11/12 15:00	2021/11/11 16:00		
COC Number		855386-01-01	855386-01-01	855386-01-01	855386-01-01	855386-01-01		
	UNITS	21-11 SA2	21-12 SA3	21-14 SA3	21-15 SA3	21-16 SA2	RDL	QC Batch
Inorganics								
Moisture	%	18	15	17	11	8.5	1.0	7704833
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7704186
Volatile Organics								
Acetone (2-Propanone)	ug/g	<0.49	<0.49	<0.49	<0.49	<0.49	0.49	7705309
Benzene	ug/g	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.0060	7705309
Bromodichloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Bromoform	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Bromomethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Carbon Tetrachloride	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Chlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Chloroform	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Dibromochloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,1-Dichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,2-Dichloroethane	ug/g	<0.049	<0.049	<0.049	<0.049	<0.049	0.049	7705309
1,1-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,2-Dichloropropane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	7705309
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Ethylbenzene	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7705309
Ethylene Dibromide	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Hexane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	<0.049	<0.049	<0.049	0.049	7705309
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	7705309
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	7705309
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Styrene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		RFW712	RFW715	RFW718	RFW719	RFW721		
Sampling Date		2021/11/12 12:30	2021/11/11 14:10	2021/11/12 16:00	2021/11/12 15:00	2021/11/11 16:00		
COC Number		855386-01-01	855386-01-01	855386-01-01	855386-01-01	855386-01-01		
	UNITS	21-11 SA2	21-12 SA3	21-14 SA3	21-15 SA3	21-16 SA2	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Tetrachloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Toluene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7705309
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Trichloroethylene	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7705309
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Vinyl Chloride	ug/g	<0.019	<0.019	<0.019	<0.019	<0.019	0.019	7705309
p+m-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7705309
o-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7705309
Total Xylenes	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7705309
F1 (C6-C10)	ug/g	<10	<10	<10	<10	<10	10	7705309
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	<10	<10	10	7705309
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	<10	<10	10	7704766
F3 (C16-C34 Hydrocarbons)	ug/g	<50	140	<50	300	100	50	7704766
F4 (C34-C50 Hydrocarbons)	ug/g	<50	310	<50	780	<50	50	7704766
Reached Baseline at C50	ug/g	Yes	No	Yes	No	Yes		7704766
Surrogate Recovery (%)								
o-Terphenyl	%	101	92	101	101	102		7704766
4-Bromofluorobenzene	%	92	91	91	91	91		7705309
D10-o-Xylene	%	80	81	83	81	82		7705309
D4-1,2-Dichloroethane	%	107	108	108	107	107		7705309
D8-Toluene	%	89	90	90	90	90		7705309

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		RFW734	RFW735			RFW735		
Sampling Date		2021/11/11 17:00	2021/11/11 18:00			2021/11/11 18:00		
COC Number		855386-02-01	855386-02-01			855386-02-01		
	UNITS	21-17 SA2	21-18 SA2	RDL	QC Batch	21-18 SA2 Lab-Dup	RDL	QC Batch
Inorganics								
Moisture	%	15	9.9	1.0	7704833	9.6	1.0	7704833
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	7704186			
Volatile Organics								
Acetone (2-Propanone)	ug/g	<0.49	<0.49	0.49	7705309			
Benzene	ug/g	<0.0060	<0.0060	0.0060	7705309			
Bromodichloromethane	ug/g	<0.040	<0.040	0.040	7705309			
Bromoform	ug/g	<0.040	<0.040	0.040	7705309			
Bromomethane	ug/g	<0.040	<0.040	0.040	7705309			
Carbon Tetrachloride	ug/g	<0.040	<0.040	0.040	7705309			
Chlorobenzene	ug/g	<0.040	<0.040	0.040	7705309			
Chloroform	ug/g	<0.040	<0.040	0.040	7705309			
Dibromochloromethane	ug/g	<0.040	<0.040	0.040	7705309			
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	7705309			
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	7705309			
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	7705309			
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	0.040	7705309			
1,1-Dichloroethane	ug/g	<0.040	<0.040	0.040	7705309			
1,2-Dichloroethane	ug/g	<0.049	<0.049	0.049	7705309			
1,1-Dichloroethylene	ug/g	<0.040	<0.040	0.040	7705309			
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	7705309			
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	7705309			
1,2-Dichloropropane	ug/g	<0.040	<0.040	0.040	7705309			
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	7705309			
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	7705309			
Ethylbenzene	ug/g	<0.010	<0.010	0.010	7705309			
Ethylene Dibromide	ug/g	<0.040	<0.040	0.040	7705309			
Hexane	ug/g	<0.040	<0.040	0.040	7705309			
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	0.049	7705309			
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	0.40	7705309			
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	0.40	7705309			
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	0.040	7705309			
Styrene	ug/g	<0.040	<0.040	0.040	7705309			

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

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

Bureau Veritas ID		RFW734	RFW735			RFW735		
Sampling Date		2021/11/11 17:00	2021/11/11 18:00			2021/11/11 18:00		
COC Number		855386-02-01	855386-02-01			855386-02-01		
	UNITS	21-17 SA2	21-18 SA2	RDL	QC Batch	21-18 SA2 Lab-Dup	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	7705309			
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	7705309			
Tetrachloroethylene	ug/g	<0.040	<0.040	0.040	7705309			
Toluene	ug/g	<0.020	<0.020	0.020	7705309			
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	0.040	7705309			
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	0.040	7705309			
Trichloroethylene	ug/g	<0.010	<0.010	0.010	7705309			
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	0.040	7705309			
Vinyl Chloride	ug/g	<0.019	<0.019	0.019	7705309			
p+m-Xylene	ug/g	<0.020	<0.020	0.020	7705309			
o-Xylene	ug/g	<0.020	<0.020	0.020	7705309			
Total Xylenes	ug/g	<0.020	<0.020	0.020	7705309			
F1 (C6-C10)	ug/g	<10	<10	10	7705309			
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	7705309			
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	7704766			
F3 (C16-C34 Hydrocarbons)	ug/g	260	<50	50	7704766			
F4 (C34-C50 Hydrocarbons)	ug/g	87	<50	50	7704766			
Reached Baseline at C50	ug/g	Yes	Yes		7704766			
Surrogate Recovery (%)								
o-Terphenyl	%	99	103		7704766			
4-Bromofluorobenzene	%	90	92		7705309			
D10-o-Xylene	%	77	83		7705309			
D4-1,2-Dichloroethane	%	109	107		7705309			
D8-Toluene	%	89	90		7705309			

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

PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		RFW715	RFW719		
Sampling Date		2021/11/11 14:10	2021/11/12 15:00		
COC Number		855386-01-01	855386-01-01		
	UNITS	**21-12 SA3**	**21-15 SA3**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons					
F4G-sg (Grav. Heavy Hydrocarbons)	ug/g	1400	2200	100	7707684

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

TEST SUMMARY

Bureau Veritas ID: RFW712 **Collected:** 2021/11/12
Sample ID: 21-11 SA2 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW713 **Collected:** 2021/11/12
Sample ID: 21-11 SA3 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk

Bureau Veritas ID: RFW714 **Collected:** 2021/11/11
Sample ID: 21-12 SA2 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk

Bureau Veritas ID: RFW715 **Collected:** 2021/11/11
Sample ID: 21-12 SA3 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John

TEST SUMMARY

Bureau Veritas ID: RFW715
Sample ID: 21-12 SA3
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
F4G (CCME Hydrocarbons Gravimetric)	BAL	7707684	2021/11/18	2021/11/18	Rashmi Dubey
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW715 Dup
Sample ID: 21-12 SA3
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu

Bureau Veritas ID: RFW716
Sample ID: 21-13 SA2
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk

Bureau Veritas ID: RFW717
Sample ID: 21-13 SA3
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal

TEST SUMMARY

Bureau Veritas ID: RFW717 **Collected:** 2021/11/11
Sample ID: 21-13 SA3 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk

Bureau Veritas ID: RFW718 **Collected:** 2021/11/12
Sample ID: 21-14 SA3 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW719 **Collected:** 2021/11/12
Sample ID: 21-15 SA3 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
F4G (CCME Hydrocarbons Gravimetric)	BAL	7707684	2021/11/18	2021/11/18	Rashmi Dubey
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW721 **Collected:** 2021/11/11
Sample ID: 21-16 SA2 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW734 **Collected:** 2021/11/11
Sample ID: 21-17 SA2 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

TEST SUMMARY

Bureau Veritas ID: RFW735
Sample ID: 21-18 SA2
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW735 Dup
Sample ID: 21-18 SA2
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal

GENERAL COMMENTS

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

Package 1	7.0°C

Sample RFW712 [21-11 SA2] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Sample RFW718 [21-14 SA3] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Sample RFW719 [21-15 SA3] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Sample RFW721 [21-16 SA2] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Sample RFW734 [21-17 SA2] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Sample RFW735 [21-18 SA2] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7704766	DN0	Matrix Spike	o-Terphenyl	2021/11/17		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/11/17		108	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/11/17		114	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/11/17		119	%	50 - 130
7704766	DN0	Spiked Blank	o-Terphenyl	2021/11/17		101	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/11/17		109	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/11/17		114	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/11/17		117	%	80 - 120
7704766	DN0	Method Blank	o-Terphenyl	2021/11/17		96	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/11/17	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/11/17	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/11/17	<50		ug/g	
7704766	DN0	RPD	F2 (C10-C16 Hydrocarbons)	2021/11/17	17		%	30
			F3 (C16-C34 Hydrocarbons)	2021/11/17	10		%	30
			F4 (C34-C50 Hydrocarbons)	2021/11/17	NC		%	30
7704833	MYG	RPD [RFW735-01]	Moisture	2021/11/16	3.1		%	20
7705073	LHA	Matrix Spike	WAD Cyanide (Free)	2021/11/17		96	%	75 - 125
7705073	LHA	Spiked Blank	WAD Cyanide (Free)	2021/11/17		97	%	80 - 120
7705073	LHA	Method Blank	WAD Cyanide (Free)	2021/11/17	<0.01		ug/g	
7705073	LHA	RPD	WAD Cyanide (Free)	2021/11/17	NC		%	35
7705099	VP2	Matrix Spike	Chromium (VI)	2021/11/17		17 (1)	%	70 - 130
7705099	VP2	Spiked Blank	Chromium (VI)	2021/11/17		92	%	80 - 120
7705099	VP2	Method Blank	Chromium (VI)	2021/11/17	<0.18		ug/g	
7705099	VP2	RPD	Chromium (VI)	2021/11/17	NC		%	35
7705250	JOH	Matrix Spike [RFW715-03]	Hot Water Ext. Boron (B)	2021/11/17		109	%	75 - 125
7705250	JOH	Spiked Blank	Hot Water Ext. Boron (B)	2021/11/17		100	%	75 - 125
7705250	JOH	Method Blank	Hot Water Ext. Boron (B)	2021/11/17	<0.050		ug/g	
7705250	JOH	RPD [RFW715-03]	Hot Water Ext. Boron (B)	2021/11/17	8.2		%	40
7705253	KIT	Spiked Blank	Conductivity	2021/11/17		98	%	90 - 110
7705253	KIT	Method Blank	Conductivity	2021/11/17	<0.002		mS/cm	
7705253	KIT	RPD [RFW715-03]	Conductivity	2021/11/17	3.5		%	10
7705309	JPN	Matrix Spike	4-Bromofluorobenzene	2021/11/17		105	%	60 - 140
			D10-o-Xylene	2021/11/17		99	%	60 - 130
			D4-1,2-Dichloroethane	2021/11/17		98	%	60 - 140
			D8-Toluene	2021/11/17		106	%	60 - 140
			Acetone (2-Propanone)	2021/11/17		103	%	60 - 140
			Benzene	2021/11/17		87	%	60 - 140
			Bromodichloromethane	2021/11/17		99	%	60 - 140
			Bromoform	2021/11/17		99	%	60 - 140
			Bromomethane	2021/11/17		93	%	60 - 140
			Carbon Tetrachloride	2021/11/17		95	%	60 - 140
			Chlorobenzene	2021/11/17		97	%	60 - 140
			Chloroform	2021/11/17		96	%	60 - 140
			Dibromochloromethane	2021/11/17		96	%	60 - 140
			1,2-Dichlorobenzene	2021/11/17		96	%	60 - 140
			1,3-Dichlorobenzene	2021/11/17		93	%	60 - 140
			1,4-Dichlorobenzene	2021/11/17		111	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2021/11/17		85	%	60 - 140
			1,1-Dichloroethane	2021/11/17		93	%	60 - 140
			1,2-Dichloroethane	2021/11/17		91	%	60 - 140
			1,1-Dichloroethylene	2021/11/17		95	%	60 - 140
			cis-1,2-Dichloroethylene	2021/11/17		101	%	60 - 140
			trans-1,2-Dichloroethylene	2021/11/17		95	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,2-Dichloropropane	2021/11/17		95	%	60 - 140
			cis-1,3-Dichloropropene	2021/11/17		94	%	60 - 140
			trans-1,3-Dichloropropene	2021/11/17		105	%	60 - 140
			Ethylbenzene	2021/11/17		89	%	60 - 140
			Ethylene Dibromide	2021/11/17		94	%	60 - 140
			Hexane	2021/11/17		98	%	60 - 140
			Methylene Chloride(Dichloromethane)	2021/11/17		112	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2021/11/17		110	%	60 - 140
			Methyl Isobutyl Ketone	2021/11/17		102	%	60 - 140
			Methyl t-butyl ether (MTBE)	2021/11/17		90	%	60 - 140
			Styrene	2021/11/17		106	%	60 - 140
			1,1,1,2-Tetrachloroethane	2021/11/17		98	%	60 - 140
			1,1,2,2-Tetrachloroethane	2021/11/17		95	%	60 - 140
			Tetrachloroethylene	2021/11/17		91	%	60 - 140
			Toluene	2021/11/17		89	%	60 - 140
			1,1,1-Trichloroethane	2021/11/17		97	%	60 - 140
			1,1,2-Trichloroethane	2021/11/17		100	%	60 - 140
			Trichloroethylene	2021/11/17		102	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2021/11/17		94	%	60 - 140
			Vinyl Chloride	2021/11/17		94	%	60 - 140
			p+m-Xylene	2021/11/17		92	%	60 - 140
			o-Xylene	2021/11/17		91	%	60 - 140
			F1 (C6-C10)	2021/11/17		98	%	60 - 140
7705309	JPN	Spiked Blank	4-Bromofluorobenzene	2021/11/17		104	%	60 - 140
			D10-o-Xylene	2021/11/17		109	%	60 - 130
			D4-1,2-Dichloroethane	2021/11/17		99	%	60 - 140
			D8-Toluene	2021/11/17		106	%	60 - 140
			Acetone (2-Propanone)	2021/11/17		96	%	60 - 140
			Benzene	2021/11/17		89	%	60 - 130
			Bromodichloromethane	2021/11/17		100	%	60 - 130
			Bromoform	2021/11/17		99	%	60 - 130
			Bromomethane	2021/11/17		90	%	60 - 140
			Carbon Tetrachloride	2021/11/17		98	%	60 - 130
			Chlorobenzene	2021/11/17		98	%	60 - 130
			Chloroform	2021/11/17		98	%	60 - 130
			Dibromochloromethane	2021/11/17		97	%	60 - 130
			1,2-Dichlorobenzene	2021/11/17		96	%	60 - 130
			1,3-Dichlorobenzene	2021/11/17		95	%	60 - 130
			1,4-Dichlorobenzene	2021/11/17		113	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2021/11/17		87	%	60 - 140
			1,1-Dichloroethane	2021/11/17		95	%	60 - 130
			1,2-Dichloroethane	2021/11/17		92	%	60 - 130
			1,1-Dichloroethylene	2021/11/17		97	%	60 - 130
			cis-1,2-Dichloroethylene	2021/11/17		103	%	60 - 130
			trans-1,2-Dichloroethylene	2021/11/17		98	%	60 - 130
			1,2-Dichloropropane	2021/11/17		97	%	60 - 130
			cis-1,3-Dichloropropene	2021/11/17		88	%	60 - 130
			trans-1,3-Dichloropropene	2021/11/17		95	%	60 - 130
			Ethylbenzene	2021/11/17		90	%	60 - 130
			Ethylene Dibromide	2021/11/17		95	%	60 - 130
			Hexane	2021/11/17		101	%	60 - 130
			Methylene Chloride(Dichloromethane)	2021/11/17		114	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/11/17		104	%	60 - 140
			Methyl Isobutyl Ketone	2021/11/17		97	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methyl t-butyl ether (MTBE)	2021/11/17		91	%	60 - 130
			Styrene	2021/11/17		108	%	60 - 130
			1,1,1,2-Tetrachloroethane	2021/11/17		100	%	60 - 130
			1,1,2,2-Tetrachloroethane	2021/11/17		99	%	60 - 130
			Tetrachloroethylene	2021/11/17		94	%	60 - 130
			Toluene	2021/11/17		91	%	60 - 130
			1,1,1-Trichloroethane	2021/11/17		100	%	60 - 130
			1,1,2-Trichloroethane	2021/11/17		101	%	60 - 130
			Trichloroethylene	2021/11/17		105	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2021/11/17		97	%	60 - 130
			Vinyl Chloride	2021/11/17		97	%	60 - 130
			p+m-Xylene	2021/11/17		93	%	60 - 130
			o-Xylene	2021/11/17		92	%	60 - 130
			F1 (C6-C10)	2021/11/17		92	%	80 - 120
7705309	JPN	Method Blank	4-Bromofluorobenzene	2021/11/17		90	%	60 - 140
			D10-o-Xylene	2021/11/17		75	%	60 - 130
			D4-1,2-Dichloroethane	2021/11/17		105	%	60 - 140
			D8-Toluene	2021/11/17		90	%	60 - 140
			Acetone (2-Propanone)	2021/11/17	<0.49		ug/g	
			Benzene	2021/11/17	<0.0060		ug/g	
			Bromodichloromethane	2021/11/17	<0.040		ug/g	
			Bromoform	2021/11/17	<0.040		ug/g	
			Bromomethane	2021/11/17	<0.040		ug/g	
			Carbon Tetrachloride	2021/11/17	<0.040		ug/g	
			Chlorobenzene	2021/11/17	<0.040		ug/g	
			Chloroform	2021/11/17	<0.040		ug/g	
			Dibromochloromethane	2021/11/17	<0.040		ug/g	
			1,2-Dichlorobenzene	2021/11/17	<0.040		ug/g	
			1,3-Dichlorobenzene	2021/11/17	<0.040		ug/g	
			1,4-Dichlorobenzene	2021/11/17	<0.040		ug/g	
			Dichlorodifluoromethane (FREON 12)	2021/11/17	<0.040		ug/g	
			1,1-Dichloroethane	2021/11/17	<0.040		ug/g	
			1,2-Dichloroethane	2021/11/17	<0.049		ug/g	
			1,1-Dichloroethylene	2021/11/17	<0.040		ug/g	
			cis-1,2-Dichloroethylene	2021/11/17	<0.040		ug/g	
			trans-1,2-Dichloroethylene	2021/11/17	<0.040		ug/g	
			1,2-Dichloropropane	2021/11/17	<0.040		ug/g	
			cis-1,3-Dichloropropene	2021/11/17	<0.030		ug/g	
			trans-1,3-Dichloropropene	2021/11/17	<0.040		ug/g	
			Ethylbenzene	2021/11/17	<0.010		ug/g	
			Ethylene Dibromide	2021/11/17	<0.040		ug/g	
			Hexane	2021/11/17	<0.040		ug/g	
			Methylene Chloride(Dichloromethane)	2021/11/17	<0.049		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2021/11/17	<0.40		ug/g	
			Methyl Isobutyl Ketone	2021/11/17	<0.40		ug/g	
			Methyl t-butyl ether (MTBE)	2021/11/17	<0.040		ug/g	
			Styrene	2021/11/17	<0.040		ug/g	
			1,1,1,2-Tetrachloroethane	2021/11/17	<0.040		ug/g	
			1,1,2,2-Tetrachloroethane	2021/11/17	<0.040		ug/g	
			Tetrachloroethylene	2021/11/17	<0.040		ug/g	
			Toluene	2021/11/17	<0.020		ug/g	
			1,1,1-Trichloroethane	2021/11/17	<0.040		ug/g	
			1,1,2-Trichloroethane	2021/11/17	<0.040		ug/g	
			Trichloroethylene	2021/11/17	<0.010		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Trichlorofluoromethane (FREON 11)	2021/11/17	<0.040		ug/g	
			Vinyl Chloride	2021/11/17	<0.019		ug/g	
			p+m-Xylene	2021/11/17	<0.020		ug/g	
			o-Xylene	2021/11/17	<0.020		ug/g	
			Total Xylenes	2021/11/17	<0.020		ug/g	
			F1 (C6-C10)	2021/11/17	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/11/17	<10		ug/g	
7705309	JPN	RPD	Acetone (2-Propanone)	2021/11/17	NC		%	50
			Benzene	2021/11/17	NC		%	50
			Bromodichloromethane	2021/11/17	NC		%	50
			Bromoform	2021/11/17	NC		%	50
			Bromomethane	2021/11/17	NC		%	50
			Carbon Tetrachloride	2021/11/17	NC		%	50
			Chlorobenzene	2021/11/17	NC		%	50
			Chloroform	2021/11/17	NC		%	50
			Dibromochloromethane	2021/11/17	NC		%	50
			1,2-Dichlorobenzene	2021/11/17	NC		%	50
			1,3-Dichlorobenzene	2021/11/17	NC		%	50
			1,4-Dichlorobenzene	2021/11/17	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2021/11/17	NC		%	50
			1,1-Dichloroethane	2021/11/17	NC		%	50
			1,2-Dichloroethane	2021/11/17	NC		%	50
			1,1-Dichloroethylene	2021/11/17	NC		%	50
			cis-1,2-Dichloroethylene	2021/11/17	NC		%	50
			trans-1,2-Dichloroethylene	2021/11/17	NC		%	50
			1,2-Dichloropropane	2021/11/17	NC		%	50
			cis-1,3-Dichloropropene	2021/11/17	NC		%	50
			trans-1,3-Dichloropropene	2021/11/17	NC		%	50
			Ethylbenzene	2021/11/17	NC		%	50
			Ethylene Dibromide	2021/11/17	NC		%	50
			Hexane	2021/11/17	NC		%	50
			Methylene Chloride(Dichloromethane)	2021/11/17	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2021/11/17	NC		%	50
			Methyl Isobutyl Ketone	2021/11/17	NC		%	50
			Methyl t-butyl ether (MTBE)	2021/11/17	NC		%	50
			Styrene	2021/11/17	NC		%	50
			1,1,1,2-Tetrachloroethane	2021/11/17	NC		%	50
			1,1,2,2-Tetrachloroethane	2021/11/17	NC		%	50
			Tetrachloroethylene	2021/11/17	NC		%	50
			Toluene	2021/11/17	NC		%	50
			1,1,1-Trichloroethane	2021/11/17	NC		%	50
			1,1,2-Trichloroethane	2021/11/17	NC		%	50
			Trichloroethylene	2021/11/17	NC		%	50
			Trichlorofluoromethane (FREON 11)	2021/11/17	NC		%	50
			Vinyl Chloride	2021/11/17	NC		%	50
			p+m-Xylene	2021/11/17	NC		%	50
			o-Xylene	2021/11/17	NC		%	50
			Total Xylenes	2021/11/17	NC		%	50
			F1 (C6-C10)	2021/11/17	NC		%	30
			F1 (C6-C10) - BTEX	2021/11/17	NC		%	30
7705354	TAK	Spiked Blank	Available (CaCl2) pH	2021/11/17		100	%	97 - 103
7705354	TAK	RPD	Available (CaCl2) pH	2021/11/17	0.91		%	N/A
7705373	DT1	Matrix Spike [RFW715-03]	Acid Extractable Antimony (Sb)	2021/11/17		93	%	75 - 125

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Arsenic (As)	2021/11/17		102	%	75 - 125
			Acid Extractable Barium (Ba)	2021/11/17		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/11/17		102	%	75 - 125
			Acid Extractable Boron (B)	2021/11/17		97	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/11/17		101	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/11/17		NC	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/11/17		102	%	75 - 125
			Acid Extractable Copper (Cu)	2021/11/17		98	%	75 - 125
			Acid Extractable Lead (Pb)	2021/11/17		96	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/11/17		100	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/11/17		104	%	75 - 125
			Acid Extractable Selenium (Se)	2021/11/17		100	%	75 - 125
			Acid Extractable Silver (Ag)	2021/11/17		100	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/11/17		96	%	75 - 125
			Acid Extractable Uranium (U)	2021/11/17		98	%	75 - 125
			Acid Extractable Vanadium (V)	2021/11/17		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/11/17		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/11/17		84	%	75 - 125
7705373	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2021/11/17		104	%	80 - 120
			Acid Extractable Arsenic (As)	2021/11/17		99	%	80 - 120
			Acid Extractable Barium (Ba)	2021/11/17		99	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/11/17		101	%	80 - 120
			Acid Extractable Boron (B)	2021/11/17		101	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/11/17		98	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/11/17		98	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/11/17		98	%	80 - 120
			Acid Extractable Copper (Cu)	2021/11/17		96	%	80 - 120
			Acid Extractable Lead (Pb)	2021/11/17		96	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/11/17		97	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/11/17		100	%	80 - 120
			Acid Extractable Selenium (Se)	2021/11/17		99	%	80 - 120
			Acid Extractable Silver (Ag)	2021/11/17		97	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/11/17		98	%	80 - 120
			Acid Extractable Uranium (U)	2021/11/17		97	%	80 - 120
			Acid Extractable Vanadium (V)	2021/11/17		99	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/11/17		100	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/11/17		85	%	80 - 120
7705373	DT1	Method Blank	Acid Extractable Antimony (Sb)	2021/11/17	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/11/17	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/11/17	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/11/17	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/11/17	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/11/17	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/11/17	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/11/17	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/11/17	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/11/17	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/11/17	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/11/17	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/11/17	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/11/17	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/11/17	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/11/17	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/11/17	<5.0		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Zinc (Zn)	2021/11/17	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/11/17	<0.050		ug/g	
7705373	DT1	RPD [RFW715-03]	Acid Extractable Antimony (Sb)	2021/11/17	NC		%	30
			Acid Extractable Arsenic (As)	2021/11/17	4.9		%	30
			Acid Extractable Barium (Ba)	2021/11/17	3.0		%	30
			Acid Extractable Beryllium (Be)	2021/11/17	3.3		%	30
			Acid Extractable Boron (B)	2021/11/17	5.6		%	30
			Acid Extractable Cadmium (Cd)	2021/11/17	NC		%	30
			Acid Extractable Chromium (Cr)	2021/11/17	1.6		%	30
			Acid Extractable Cobalt (Co)	2021/11/17	0.95		%	30
			Acid Extractable Copper (Cu)	2021/11/17	0.81		%	30
			Acid Extractable Lead (Pb)	2021/11/17	1.4		%	30
			Acid Extractable Molybdenum (Mo)	2021/11/17	1.0		%	30
			Acid Extractable Nickel (Ni)	2021/11/17	0.81		%	30
			Acid Extractable Selenium (Se)	2021/11/17	NC		%	30
			Acid Extractable Silver (Ag)	2021/11/17	NC		%	30
			Acid Extractable Thallium (Tl)	2021/11/17	1.7		%	30
			Acid Extractable Uranium (U)	2021/11/17	4.1		%	30
			Acid Extractable Vanadium (V)	2021/11/17	3.7		%	30
			Acid Extractable Zinc (Zn)	2021/11/17	1.9		%	30
			Acid Extractable Mercury (Hg)	2021/11/17	NC		%	30
7707684	RDU	Matrix Spike	F4G-sg (Grav. Heavy Hydrocarbons)	2021/11/18		86	%	65 - 135
7707684	RDU	Spiked Blank	F4G-sg (Grav. Heavy Hydrocarbons)	2021/11/18		100	%	65 - 135
7707684	RDU	Method Blank	F4G-sg (Grav. Heavy Hydrocarbons)	2021/11/18	<100		ug/g	
7707684	RDU	RPD	F4G-sg (Grav. Heavy Hydrocarbons)	2021/11/18	10		%	50

N/A = Not Applicable

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

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

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

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

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

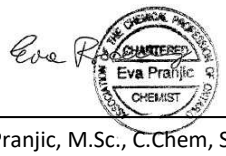
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

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

(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was reanalyzed with the same results

VALIDATION SIGNATURE PAGE

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



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

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

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Page 1 of 2

CHAIN OF CUSTODY RECORD

RUSH!

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#2292 Golder Associates Ltd	Company Name:		Quotation #:	B80683
Attention:	Accounts Payable	Attention:	Daniel Stabile	P.O. #:	
Address:	100 Scotia Crt Whitby ON L1N 8Y6	Address:		Project:	21494078
				Project Name:	
Tel:	(905) 723-2727 Fax: (905) 723-2182	Tel:	Fax:	Site #:	
Email:	CanadaAccountsPayableInvoices@golder.com	Email:	Daniel_Stabile@golder.com	Sampled By:	AB

15-Nov-21 13:20
Ema Gitej
C1X6358

AVV ENV 1592

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

Regulation 153 (2011): ☐ Table 1 ☒ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☒ For RSC ☒ Table 7

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Reg 406 Table ☐ Other

Special Instructions

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

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

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: 48 hrs Time Required:
Rush Confirmation Number: (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	ORP	PHC	BTEX	VOC	Metals	PHC	BTEX	VOC			# of Bottles	Comments
1		~~21-11~~ SA2	Nov 12/21	1230	Soil	/	X	X	X	X	X						4	
2		21-11 SA3	Nov 12/21	1300		/	X										4	
3		21-12 SA2	Nov 11/21	1400		/	X										1	RUSH
4		21-12 SA3	Nov 11/21	1410		/	X	~~X~~				X	X	X			4	
5		21-13 SA2	Nov 11/21	1500		/	X										1	
6		21-13 SA3	Nov 11/21	1510		/	X										1	
7		21-14 SA3	Nov 12/21	10:00		/		X	X	X							3	RECEIVED IN OTTAWA
8		21-15 SA3	Nov 12/21	15:00		/		X	X	X							3	
9		21-15 SA4	Nov 12/21	15:10		/		X	X	X							3	*on Hold*
10		21-16 SA2	Nov 11/21	1600	↓	/		X	X	X							3	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
			Angelica Santiago	21/11/15	13:20	
			AALISHA VAHORA	21/11/16	08:00	

Laboratory Use Only
Time Sensitive
Temperature (°C) on Receipt: 5.9.7 ice
Custody Seal Present: Yes / No
Intact: Yes / No

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

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

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

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

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

6/7/7

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

Page 2 of 2

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#2292 Golder Associates Ltd	Company Name:		Quotation #:	B80683	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Daniel Stabile	P.O. #:			855386
Address:	100 Scotia Crt Whitby ON L1N 8Y6	Address:		Project:	21494078	COC #:	Project Manager:
Tel:	(905) 723-2727 Fax: (905) 723-2182	Tel:	Fax:	Project Name:		C#855386-02-01	Erna Gitej
Email:	CanadaAccountsPayableInvoices@golder.com	Email:	Daniel_Stabile@golder.com	Site #:			
				Sampled By:	ALB		

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

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☐ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☒ Table 7	☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Reg 406 Table ☐ Other	

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC):

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

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: ____ Time Required: ____
Rush Confirmation Number: 48 hrs (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle) Metals / Hg / Cr VI	PHC	BTEX	VOC	# of Bottles	Comments
1		21-17 SA2	Nov 11/21	1700	Soil	/	X	X	X	3	
2		21-18 SA2	Nov 11/21	1800	Soil	/	X	X	X	3	
3											
4											
5											
6											
7											
8											
9											
10											

RUSH

RECEIVED IN OTTAWA

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
			Angelica Sevilleja see page 1	21/11/15	13:20	

Laboratory Use Only
Time Sensitive
Temperature (°C) on Recei: 5, 9, 7 / ice
Custody Seal Present: Yes
Custody Seal Intact: —

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

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

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

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

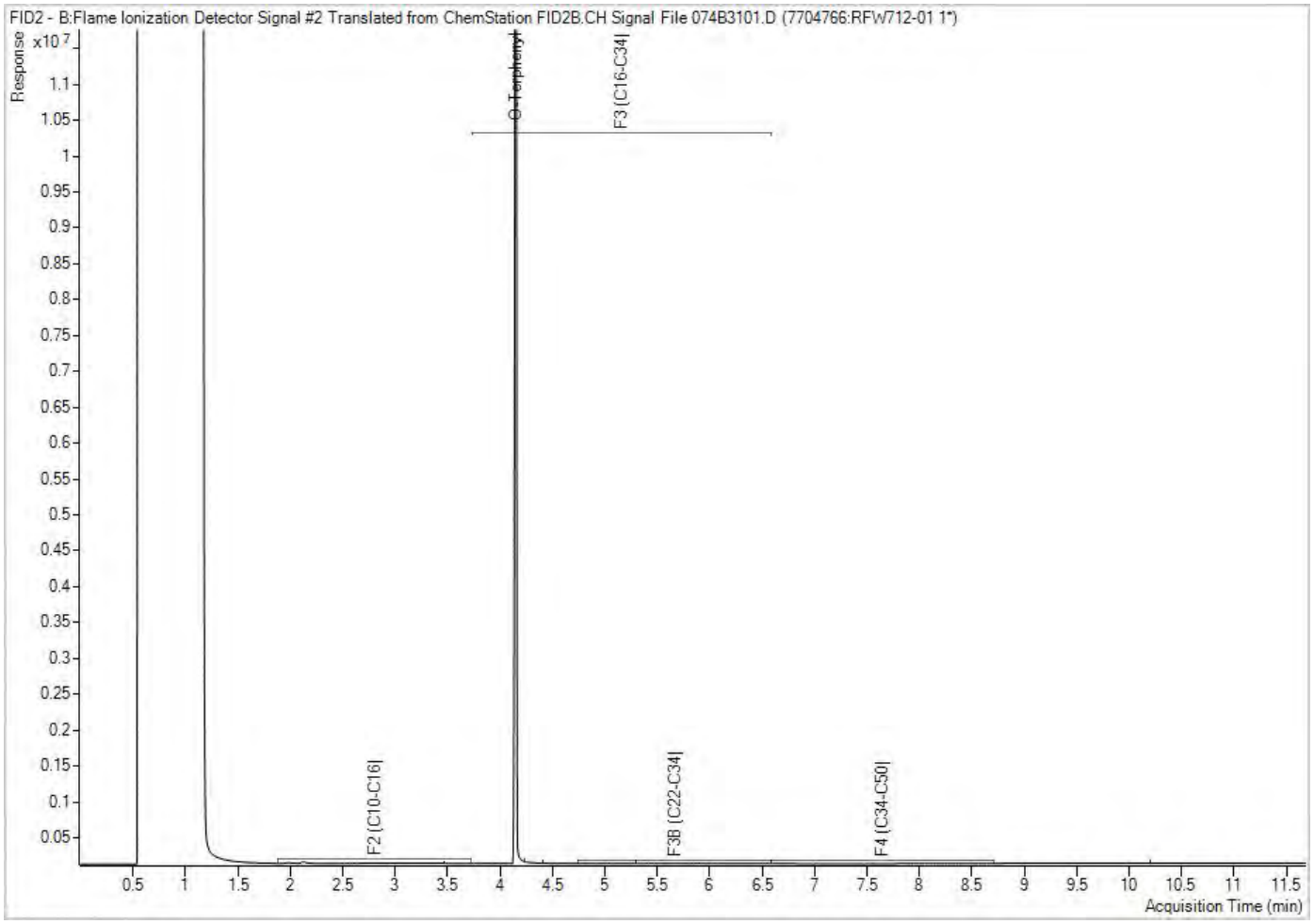
White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW712

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-11 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

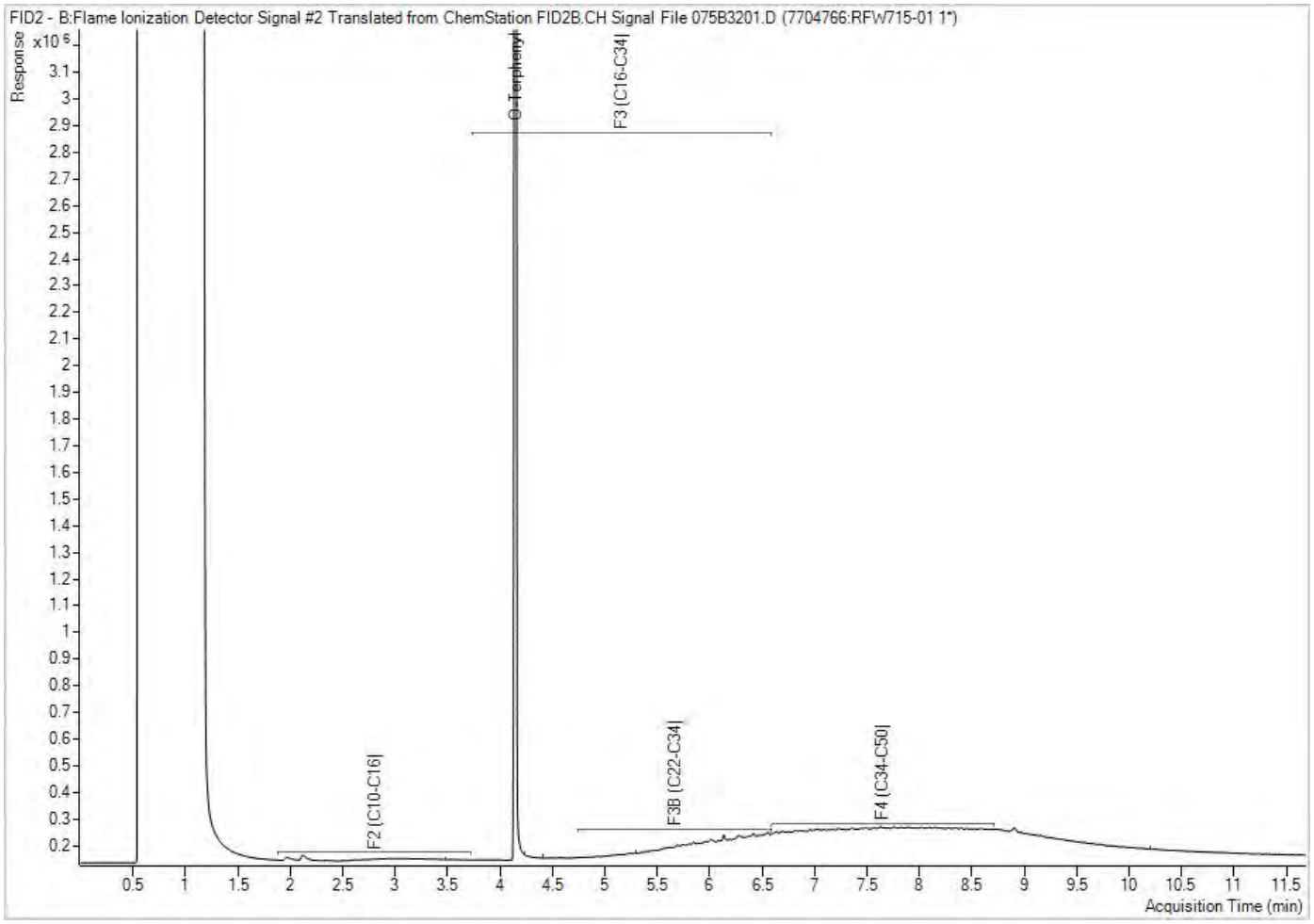


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW715

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-12 SA3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

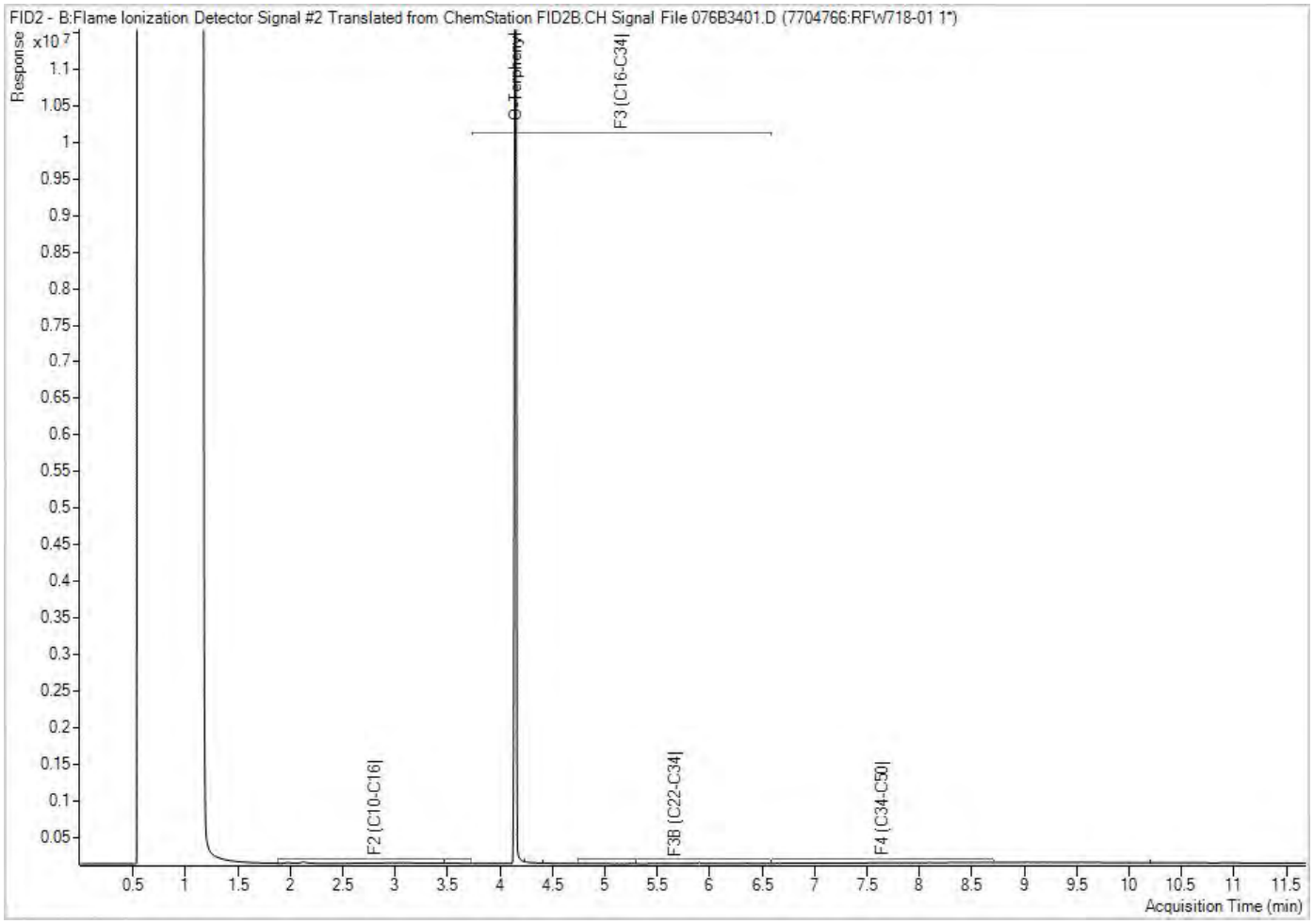


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW718

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-14 SA3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

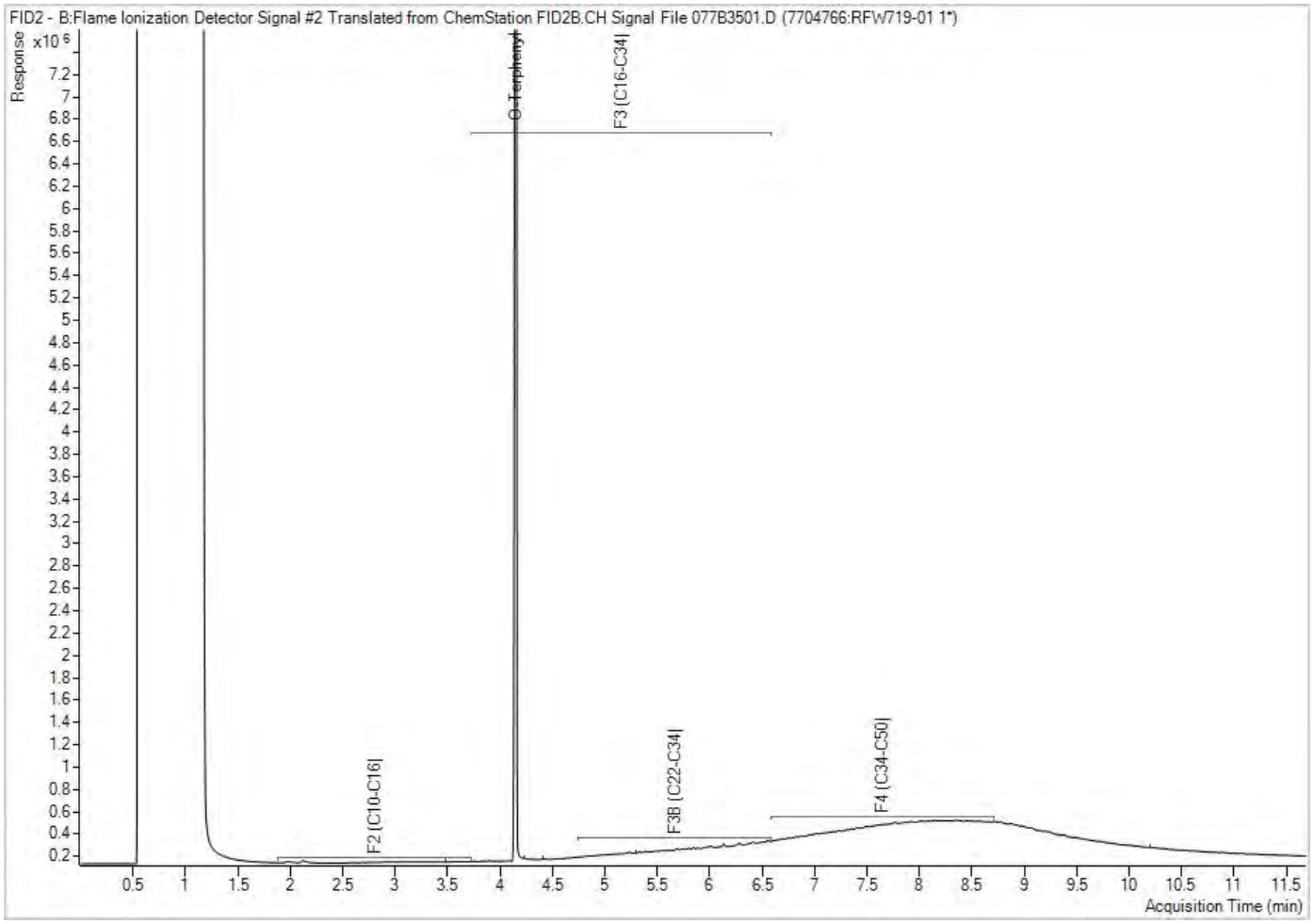


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW719

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-15 SA3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

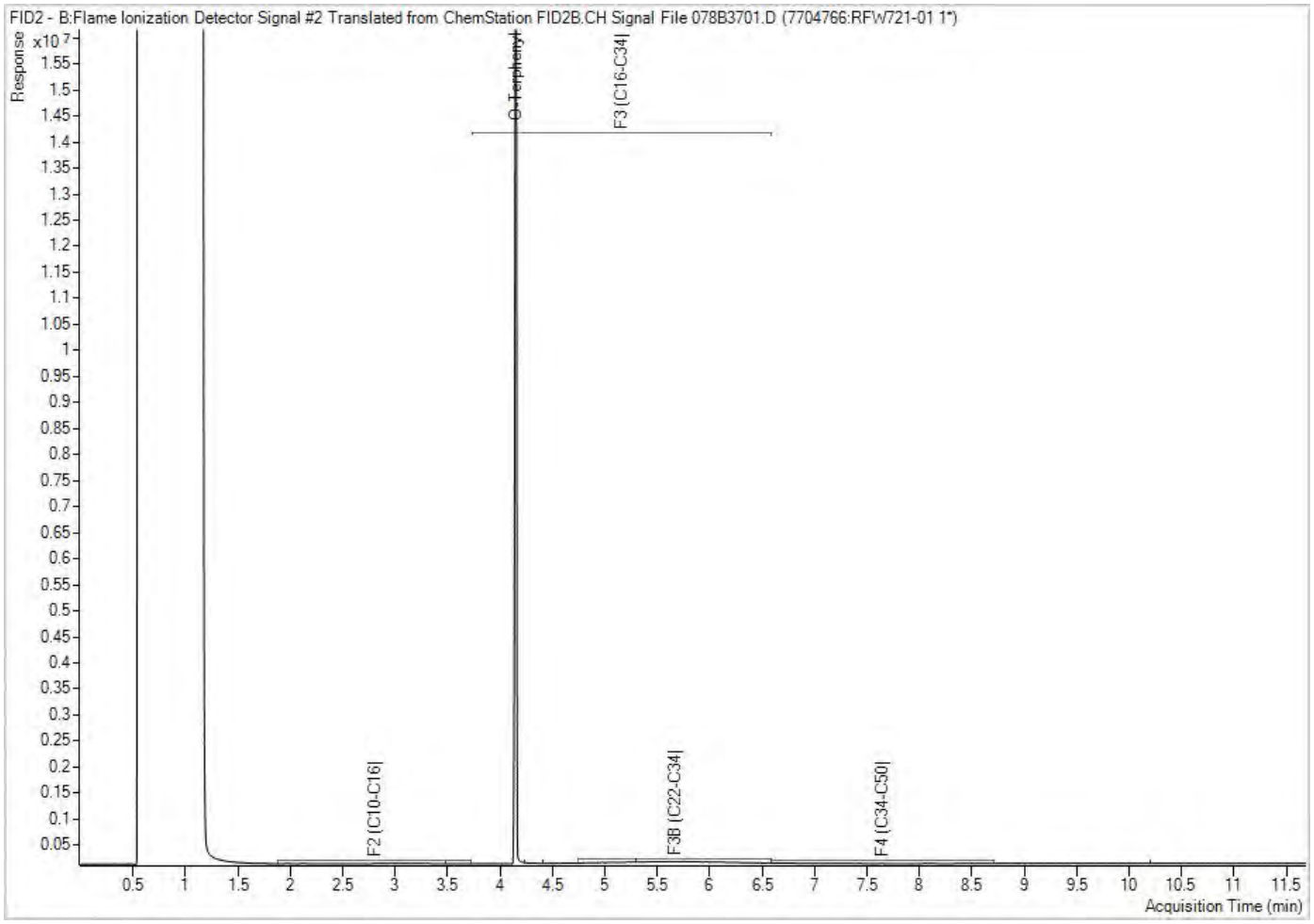


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW721

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-16 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

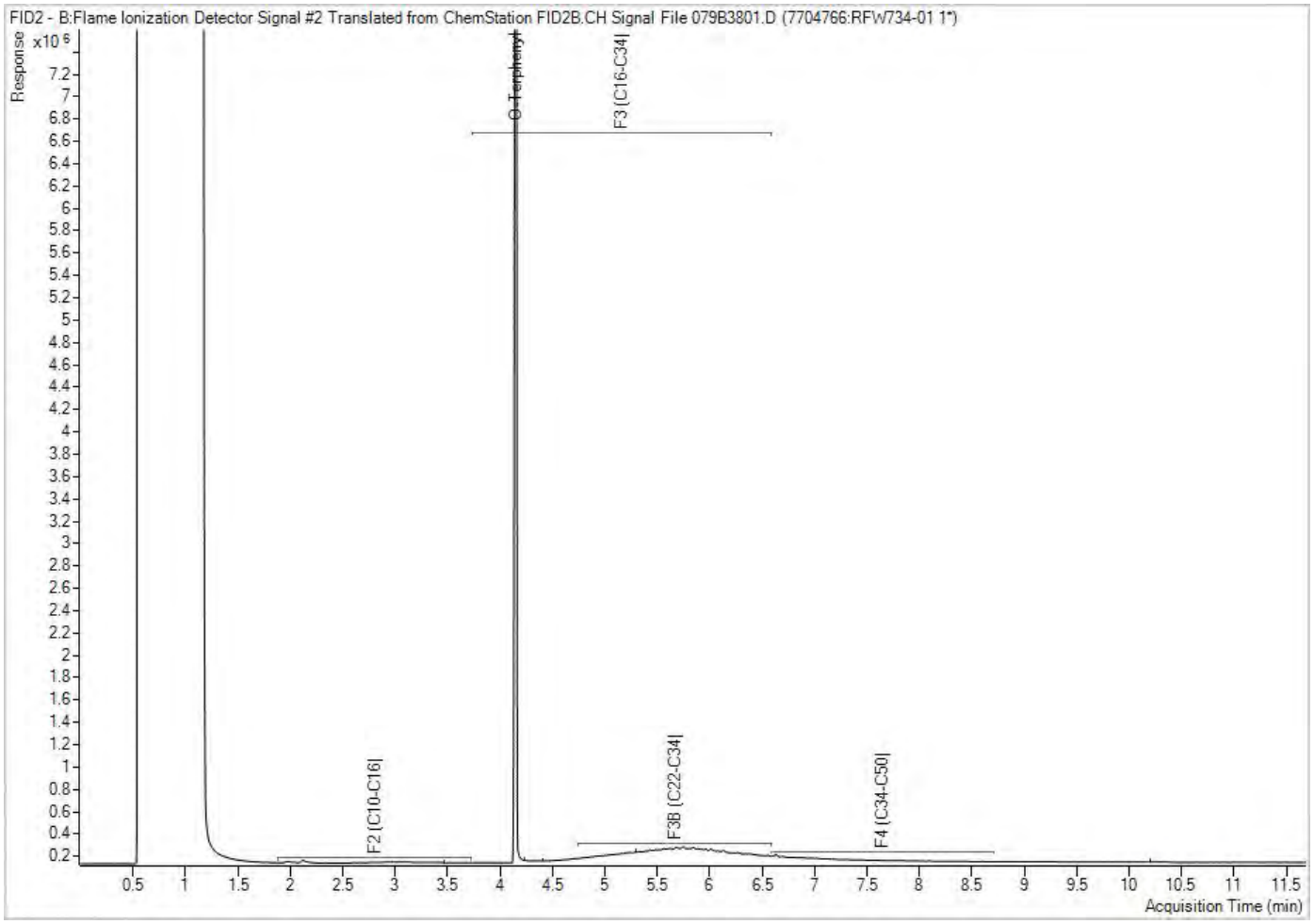


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW734

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-17 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

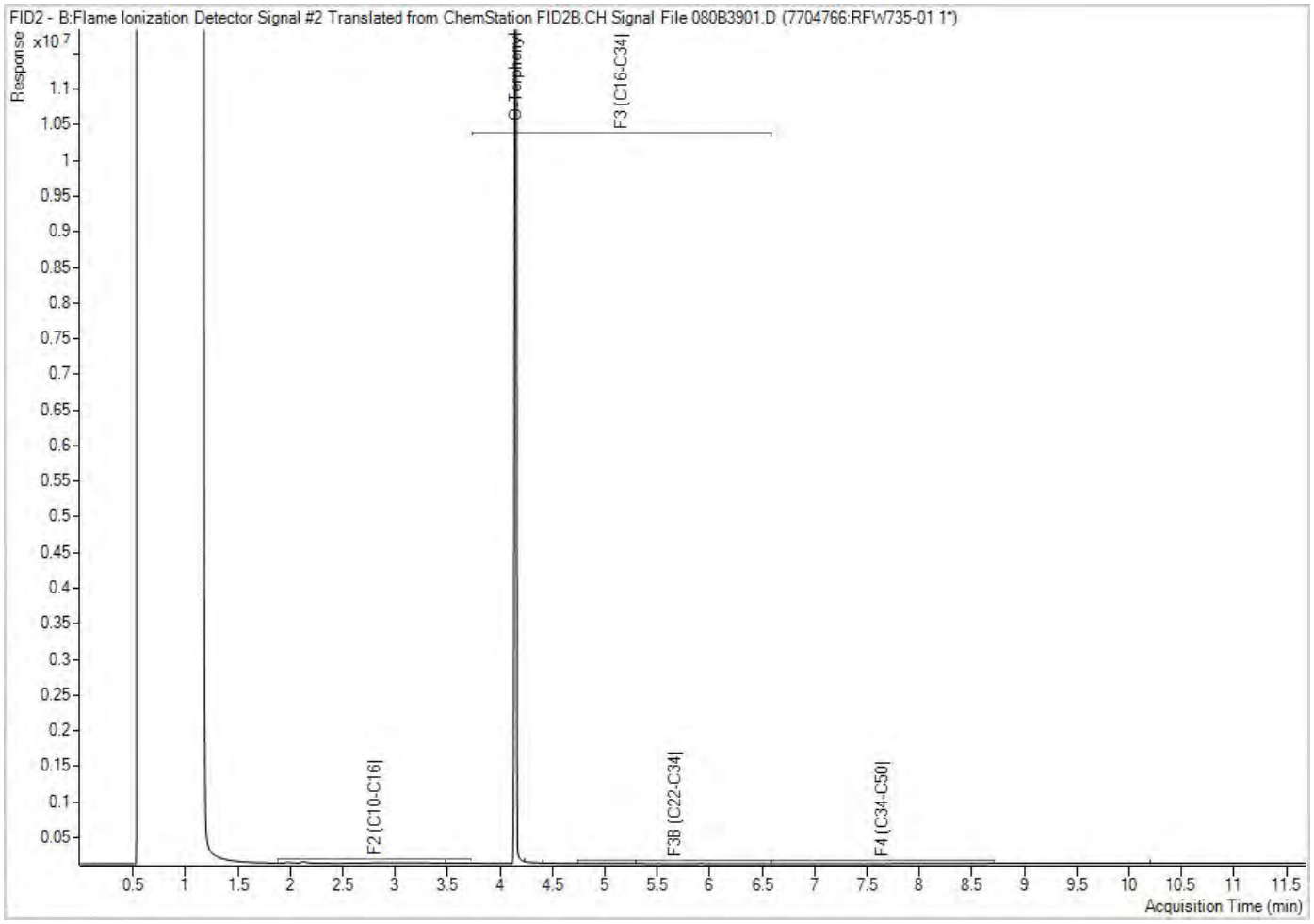


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW735

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-18 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21Z837042

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Road

SAMPLED BY:G.Sharma

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

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-01

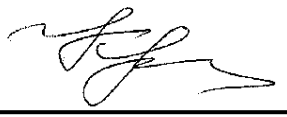
SAMPLE DESCRIPTION:				BH21-19 SA1	BH21-20 SA2	Dup-1 Bh21-20 SA2
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2021-11-22 18:30	2021-11-24 19:30	2021-11-24 19:30
Parameter	Unit	G / S	RDL	3270388	3270410	3270411
F1 (C6 - C10)	µg/g		5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5	<5
F2 (C10 to C16)	µg/g	230	10	<10	<10	<10
F3 (C16 to C34)	µg/g	1700	50	<50	<50	<50
F4 (C34 to C50)	µg/g	3300	50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	3300	50	NA	NA	NA
Moisture Content	%		0.1	11.2	8.2	12.2
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140		88	82	84
Terphenyl	%	60-140		102	88	76

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3270388-3270411 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
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Certificate of Analysis

AGAT WORK ORDER: 21Z837042

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Road

SAMPLED BY:G.Sharma

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

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-01

				SAMPLE DESCRIPTION:	TP21-01
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2021-11-22 18:30
Parameter	Unit	G / S	RDL		3270413
Benzene	µg/g	0.32	0.02		<0.02
Toluene	µg/g	68	0.05		<0.05
Ethylbenzene	µg/g	9.5	0.05		<0.05
m & p-Xylene	µg/g		0.05		<0.05
o-Xylene	µg/g		0.05		<0.05
Xylenes (Total)	µg/g	26	0.05		<0.05
F1 (C6 - C10)	µg/g		5		<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5
F2 (C10 to C16)	µg/g	230	10		<10
F3 (C16 to C34)	µg/g	1700	50		<50
F4 (C34 to C50)	µg/g	3300	50		<50
Gravimetric Heavy Hydrocarbons	µg/g	3300	50		NA
Moisture Content	%		0.1		4.2
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	60-140			84
Terphenyl	%	60-140			82

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 21Z837042

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Road

SAMPLED BY:G.Sharma

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

DATE RECEIVED: 2021-11-29

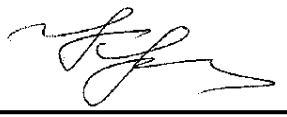
DATE REPORTED: 2021-12-01

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3270413 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21Z837042

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Road

SAMPLED BY:G.Sharma

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

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-01

SAMPLE DESCRIPTION:				BH21-19 SA1	BH21-20 SA2	Dup-1 Bh21-20 SA2
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2021-11-22 18:30	2021-11-24 19:30	2021-11-24 19:30
Parameter	Unit	G / S	RDL	3270388	3270410	3270411
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.032	0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.064	0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	1.6	0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	1.3	0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	11	0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	17	0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	70	0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	55	0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.47	0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	6.1	0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.21	0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.32	0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.16	0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.91	0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	18	0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	31	0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Toluene	ug/g	68	0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	13	0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	4.5	0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.087	0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21Z837042

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Road

SAMPLED BY:G.Sharma

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

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-01

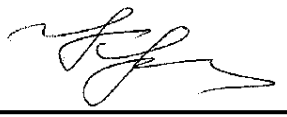
SAMPLE DESCRIPTION:				BH21-19 SA1	BH21-20 SA2	Dup-1 Bh21-20 SA2
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2021-11-22 18:30	2021-11-24 19:30	2021-11-24 19:30
Parameter	Unit	G / S	RDL	3270388	3270410	3270411
Ethylbenzene	ug/g	9.5	0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05
Bromoform	ug/g	0.61	0.05	<0.05	<0.05	<0.05
Styrene	ug/g	34	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
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	9.6	0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.2	0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	6.8	0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	26	0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.18	0.04	<0.04	<0.04	<0.04
n-Hexane	µg/g	46	0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	11.2	8.2	12.2
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140		97	82	101
4-Bromofluorobenzene	% Recovery	50-140		72	90	78

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3270388-3270411 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21Z837042

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Road

SAMPLED BY:G.Sharma

Total PCBs (soil)

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-01

				SAMPLE DESCRIPTION:	TP21-01
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2021-11-22 18:30
Parameter	Unit	G / S	RDL		3270413
Polychlorinated Biphenyls	µg/g	1.1	0.1		<0.1
Moisture Content	%		0.1		4.2
Surrogate	Unit	Acceptable Limits			
Decachlorobiphenyl	%	60-130			76

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3270413 Results are based on the dry weight of soil extracted.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

3 Lg / 1 Lg Med

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

Chain of Custody Record

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

Report Information:

Company: Golder Associates Ltd.
Contact: Daniel Stabile
Address: 1931 Robertson Road, Nepean, ON
K2H 5B7
Phone: 613 592 9600 Fax:
Reports to be sent to:
1. Email: daniel_stabile@golder.com
2. Email:

Regulatory Requirements:

(Please check all applicable boxes)

- ☑ Regulation 153/04 — Table 7 (Indicate One) — ☑ Ind/Com ☐ Res/Park ☐ Agriculture — Soil Texture (Check One): ☑ Coarse ☐ Fine
- ☐ Excess Soils R406 — Table (Indicate One)
- ☐ Regulation 558
- ☐ CCME
- ☐ Sewer Use ☐ Sanitary ☐ Storm — Region
- ☐ Prov. Water Quality Objectives (PWQO)
- ☐ Other — Indicate One

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Laboratory Use Only

Work Order #: 21783704 2.

Cooler Quantity: one - ICE
Arrival Temperatures: 8.7 | 8.6 | 8.5
see attached
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: BV submission

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☑ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 21494078
Site Location: 1047 Richmond Road
Sampled By: G.Sharma
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company:
Contact:
Address:
Email:

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs — Analyze F4G if required ☑ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach — SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
BH21-19 SA1	11/22/2021	6:30 AM/PM	3	Soil	1 Jar 2 vial	N			☑			☑					
BH21-20 SA2	11/~~26~~ 22/2021	7:30 AM/PM	3	Soil	1 Jar 2 vial	N			☑			☑					
Dup-1 BH21-20 SA2	11/24/2021	7:30 AM/PM	3	Soil	1 Jar 2 vial	N			✓			✓					
TP21-01	11/22/2021	4:00 AM/PM	4	Soil	1 bag 2 vial 1 Jar	N			✓		✓						
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Gopesh Sharma	11/29/2021		C. Griffith	Nov. 29/21	15h00
C. Griffith	Nov. 29/21	16h00	Simon Z	21/11/30	844

Page 1 of 1

N°:

Document ID: DIV-726-1513 021

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Date Issued: March 9, 2021

AGAT Laboratories

Sample Temperature Log

Client: _____

COC# or Work Order #: 21283704 2

# of Coolers: 3 LG + 1 LG MED (ICE)

# of Submissions: _____

Arrival Temperatures - Branch/Driver

Cooler #1:	3.6	4.2	4.7
Cooler #2:	6.1	6.3	5.2
Cooler #3:	4.8	3.6	3.1
Cooler #4:	6	5.1	4.8
Cooler #5:			
Cooler #6:			
Cooler #7:			
Cooler #8			
Cooler #9:			
Cooler #10:			

IR Gun ID: _____

Taken By: Simon

Date (yyyy/mm/dd): 21/11/30 Time: 8:44 (AM) / PM

Arrival Temperatures - Laboratory

Cooler #1:			
Cooler #2:			
Cooler #3:			
Cooler #4:			
Cooler #5:			
Cooler #6:			
Cooler #7:			
Cooler #8			
Cooler #9:			
Cooler #10:			

IR Gun ID: _____

Taken By: _____

Date (yyyy/mm/dd): _____ Time: ____:____ AM / PM

Instructions for use of this form: 1) complete all fields of info including total # of coolers and # of submissions rec'd, 2) photocopy and place in each submission prior to giving a WO#, 3) Proceed as normal, write the WO# and scan (please make sure to scan along with the COC)

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21Z837880

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-03

				SAMPLE DESCRIPTION:	21-4	21-11	21-14	21-15A	21-15B	21-19	21-20	DUP-1
				SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water	Water
				DATE SAMPLED:	2021-11-30 09:15	2021-11-30 10:15	2021-11-30 16:55	2021-11-30 20:00	2021-11-30 20:45	2021-11-30 18:00	2021-11-30 18:50	2021-11-30
Parameter	Unit	G / S	RDL		3284498	3284500	3284517	3284518	3284519	3284520	3284521	3284526
F1 (C6 - C10)	µg/L		25		<25	<25	<25	<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25	<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100		<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100		<100	<100	<100	<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100		<100	<100	<100	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA	NA	NA	NA	NA	NA
Sediment					No	No	No	No	No	No	No	No
Surrogate	Unit	Acceptable Limits										
Toluene-d8	% Recovery	50-140			85.2	82.0	93.2	87.2	74.0	78.0	78.2	86.8
Terphenyl	%	60-140			74	94	96	96	105	97	104	103

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3284498-3284526 The C6-C10 fraction is calculated using Toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 21Z837880

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-03

SAMPLE DESCRIPTION:				21-4	21-11	21-14	21-15A	21-15B	21-19	21-20	DUP-1
SAMPLE TYPE:				Water	Water	Water	Water	Water	Water	Water	Water
DATE SAMPLED:				2021-11-30 09:15	2021-11-30 10:15	2021-11-30 16:55	2021-11-30 20:00	2021-11-30 20:45	2021-11-30 18:00	2021-11-30 18:50	2021-11-30
Parameter	Unit	G / S	RDL	3284498	3284500	3284517	3284518	3284519	3284520	3284521	3284526
Dichlorodifluoromethane	µg/L	3500	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	1.66	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	1.86
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.63	0.31	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	9.12	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	8.70
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21Z837880

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-03

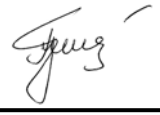
				SAMPLE DESCRIPTION:	21-4	21-11	21-14	21-15A	21-15B	21-19	21-20	DUP-1
				SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water	Water
				DATE SAMPLED:	2021-11-30 09:15	2021-11-30 10:15	2021-11-30 16:55	2021-11-30 20:00	2021-11-30 20:45	2021-11-30 18:00	2021-11-30 18:50	2021-11-30
Parameter	Unit	G / S	RDL		3284498	3284500	3284517	3284518	3284519	3284520	3284521	3284526
m & p-Xylene	µg/L		0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	43	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits										
Toluene-d8	% Recovery	50-140			91	87	84	87	93	89	87	93
4-Bromofluorobenzene	% Recovery	50-140			77	76	78	82	82	85	75	78

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3284498-3284526 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 21Z837880

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

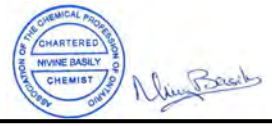
O. Reg. 153(511) - Metals & Inorganics (Water)

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-03

				SAMPLE DESCRIPTION:	21-11	DUP-2
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2021-11-30 10:15	2021-11-30
Parameter	Unit	G / S	RDL		3284500	3284527
Dissolved Antimony	µg/L	16000	1.0		<1.0	<1.0
Dissolved Arsenic	µg/L	1500	1.0		6.0	4.1
Dissolved Barium	µg/L	23000	2.0		47.7	59.7
Dissolved Beryllium	µg/L	53	0.50		<0.50	<0.50
Dissolved Boron	µg/L	36000	10.0		85.0	89.0
Dissolved Cadmium	µg/L	2.1	0.20		<0.20	<0.20
Dissolved Chromium	µg/L	640	2.0		<2.0	<2.0
Dissolved Cobalt	µg/L	52	0.50		0.65	1.24
Dissolved Copper	µg/L	69	1.0		1.2	<1.0
Dissolved Lead	µg/L	20	0.50		<0.50	<0.50
Dissolved Molybdenum	µg/L	7300	0.50		0.63	0.83
Dissolved Nickel	µg/L	390	1.0		2.5	2.9
Dissolved Selenium	µg/L	50	1.0		<1.0	<1.0
Dissolved Silver	µg/L	1.2	0.20		<0.20	<0.20
Dissolved Thallium	µg/L	400	0.30		<0.30	<0.30
Dissolved Uranium	µg/L	330	0.50		0.75	0.84
Dissolved Vanadium	µg/L	200	0.40		0.56	<0.40
Dissolved Zinc	µg/L	890	5.0		<5.0	<5.0
Mercury	µg/L	0.1	0.02		<0.02	<0.02
Chromium VI	µg/L	110	2		<2	<2
Cyanide, Free	µg/L	52	2		3	<2
Dissolved Sodium	µg/L	1800000	100		65500	63100
Chloride	µg/L	1800000	100		121000	124000
Electrical Conductivity	uS/cm	NA	2		1290	1290
pH	pH Units		NA		7.50	7.64

Certified By:



Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21Z837880

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-03

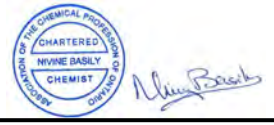
Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3284500-3284527 Metals analysis completed on a filtered sample.

Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Exceedance Summary

AGAT WORK ORDER: 21Z837880

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3284498	21-4	ON T7 NPGW CT	O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)	Benzene	µg/L	0.5	1.66
3284498	21-4	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	Benzene	µg/L	0.5	1.66
3284526	DUP-1	ON T7 NPGW CT	O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)	Benzene	µg/L	0.5	1.86
3284526	DUP-1	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	Benzene	µg/L	0.5	1.86

Results relate only to the items tested. Results apply to samples as received.

WORK ORDER

AGAT Laboratories

RUSH!

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

Chain of Custody Record

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

Report Information:

Company: GOLDER
Contact: DANIEL STABILE
Address:
Phone: Fax:
Reports to be sent to:
1. Email: DANIE_STABILE@GOLDER.COM
2. Email: PAUL_HURST@GOLDER.COM TIM_MULLINGS@GOLDER.COM

Project Information:

Project: 21494078
Site Location: 1047 RICHMOND RD
Sampled By: CLAIRE WOODFIELD
AGAT ID #: MSA AGAT-GOLDER2021
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company:
Contact:
Address:
Email: AP_CUSTOMERSERVICE@GOLDER.COM

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 7 *Indicate One*
☒ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☑ Coarse
☐ Fine

☐ Excess Soils R406
Table _____ *Indicate One*

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
_____ *Region*

☐ Prov. Water Quality Objectives (PWQO)

☑ Other
MOE Forms *Indicate One*

Is this submission for a **Record of Site Condition?** ☐ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Laboratory Use Only

Work Order #: 21783788O

Cooler Quantity: one - ice
Arrival Temperatures: 5.6 | 5.3 | 5.1
6.2 | 6.3 | 6.4
Custody Seal Intact: ☐ Yes ☑ No ☐ N/A
Notes: on ice pack

Turnaround Time (TAT) Required:

Regular TAT (Most Analysis) ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):
SAME DAY

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs, Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: Total PCBs ☐ Arocior	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
21 - 4	30/11/21	915 AM/PM	8	GW					/			/					
21 - 11		1015 AM/PM	4 8 14			Y	/		/			/					
21 - 14		455 AM/PM	8						/			/					
21 - 15A		6 AM/PM	8						/			/					
21 - 15B		845 AM/PM	8						/			/					
21 - 19		6 AM/PM	8						/			/					
21 - 20		650 AM/PM	8						/			/					
		AM/PM	4						/			/					
DUP-1		AM/PM	8 8			Y	/		~								
DUP-2		AM/PM	6														
		AM/PM															

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
CLAIRE WOODFIELD	1/12/21	845		Dec 01/21	08H45
CC to Paul	Dec 01/21	16h00		Dec 02	11:45

Page _____ of _____

№: T 123162

AGAT Laboratories

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CLIENT NAME: GOLDER ASSOCIATES LTD.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727

ATTENTION TO: Daniel Stabile

PROJECT: 21494078

AGAT WORK ORDER: 21Z842764

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

DATE REPORTED: Dec 13, 2021

PAGES (INCLUDING COVER): 9

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 21Z842764

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-10

DATE REPORTED: 2021-12-13

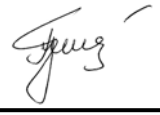
				SAMPLE DESCRIPTION:	BH21-04	BH21-14	DUP
				SAMPLE TYPE:	Water	Water	Water
				DATE SAMPLED:	2021-12-09 16:41	2021-12-09 15:40	2021-12-09 15:40
Parameter	Unit	G / S	RDL		3330747	3330756	3330757
F1 (C6 - C10)	µg/L		25		<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L		25		<25	<25	<25
F2 (C10 to C16)	µg/L		100		<100	<100	<100
F3 (C16 to C34)	µg/L		100		<100	<100	<100
F4 (C34 to C50)	µg/L		100		<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA
Sediment					No	No	No
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140			92.5	74.2	95.2
Terphenyl	%	60-140			70	75	83

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

3330747-3330757 The C6-C10 fraction is calculated using Toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21Z842764

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

Volatile Organic Compounds in Water (ug/L)

DATE RECEIVED: 2021-12-10

DATE REPORTED: 2021-12-13

SAMPLE DESCRIPTION:				BH21-04		BH21-14	DUP
SAMPLE TYPE:				Water		Water	Water
DATE SAMPLED:				2021-12-09 16:41		2021-12-09 15:40	2021-12-09 15:40
Parameter	Unit	G / S	RDL	3330747	RDL	3330756	3330757
Dichlorodifluoromethane	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Chloromethane	µg/L		0.80	<0.80	0.40	<0.40	<0.40
Vinyl Chloride	µg/L		0.34	<0.34	0.17	<0.17	<0.17
Bromomethane	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Chloroethane	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L		0.80	<0.80	0.40	<0.40	<0.40
Acetone	µg/L		2.0	<2.0	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L		0.4	<0.4	0.2	<0.2	<0.2
Methylene Chloride	µg/L		0.60	<0.60	0.30	<0.30	<0.30
trans- 1,2-dichloroethylene	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L		0.40	<0.40	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L		0.60	<0.60	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L		2.0	<2.0	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Chloroform	µg/L		0.40	<0.40	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L		0.40	40.5	0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L		0.60	<0.60	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Benzene	µg/L		0.40	2.81	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Trichloroethylene	µg/L		0.40	4.26	0.20	2.11	1.99
Bromodichloromethane	µg/L		0.40	<0.40	0.20	<0.20	<0.20
cis-1,3-Dichloropropene	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L		2.0	<2.0	1.0	<1.0	<1.0
trans-1,3-Dichloropropene	µg/L		0.60	<0.60	0.30	<0.30	<0.30
1,1,2-Trichloroethane	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Toluene	µg/L		0.40	<0.40	0.20	<0.20	<0.20
2-Hexanone	µg/L		2.0	<2.0	1.0	<1.0	<1.0
Dibromochloromethane	µg/L		0.20	<0.20	0.10	<0.10	<0.10

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21Z842764

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

Volatile Organic Compounds in Water (ug/L)

DATE RECEIVED: 2021-12-10

DATE REPORTED: 2021-12-13

				SAMPLE DESCRIPTION:		BH21-14	DUP
				SAMPLE TYPE:		Water	Water
				DATE SAMPLED:		2021-12-09 15:40	2021-12-09 15:40
Parameter	Unit	G / S	RDL	3330747	RDL	3330756	3330757
Ethylene Dibromide	µg/L		0.20	<0.20	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L		0.40	<0.40	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L		0.20	<0.20	0.10	<0.10	<0.10
Chlorobenzene	µg/L		0.20	<0.20	0.10	<0.10	<0.10
Ethylbenzene	µg/L		0.20	<0.20	0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Bromoform	µg/L		0.20	<0.20	0.10	<0.10	<0.10
Styrene	µg/L		0.20	<0.20	0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L		0.20	<0.20	0.10	<0.10	<0.10
o-Xylene	µg/L		0.20	<0.20	0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L		0.20	<0.20	0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L		0.20	<0.20	0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L		0.20	<0.20	0.10	<0.10	<0.10
1,2,4-Trichlorobenzene	µg/L		0.60	<0.60	0.30	<0.30	<0.30
1,3-Dichloropropene (Cis + Trans)	µg/L		0.30	<0.30	0.30	<0.30	<0.30
Xylenes (Total)	µg/L		0.20	<0.20	0.20	<0.20	<0.20
n-Hexane	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140		76	1	83	72
4-Bromofluorobenzene	% Recovery	50-140		76	1	96	93

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

3330747 Dilution factor=2
The sample was diluted because it was foamy. The reporting detection limit has been corrected for the dilution factor used.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

3330756-3330757 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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http://www.agatlabs.com

Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21Z842764

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Dec 13, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)															
F1 (C6 - C10)	3282665		<25	<25	NA	< 25	104%	60%	140%	112%	60%	140%	111%	60%	140%
F2 (C10 to C16)	3290856		< 100	< 100	NA	< 100	102%	60%	140%	85%	60%	140%	75%	60%	140%
F3 (C16 to C34)	3290856		< 100	< 100	NA	< 100	90%	60%	140%	76%	60%	140%	79%	60%	140%
F4 (C34 to C50)	3290856		< 100	< 100	NA	< 100	93%	60%	140%	86%	60%	140%	71%	60%	140%
Volatile Organic Compounds in Water (ug/L)															
Dichlorodifluoromethane	3290687		<0.20	<0.20	NA	< 0.20	91%	50%	140%	95%	50%	140%	97%	50%	140%
Chloromethane	3290687		<0.40	<0.40	NA	< 0.40	96%	50%	140%	84%	50%	140%	80%	50%	140%
Vinyl Chloride	3290687		<0.17	<0.17	NA	< 0.17	96%	50%	140%	102%	50%	140%	78%	50%	140%
Bromomethane	3290687		<0.20	<0.20	NA	< 0.20	98%	50%	140%	83%	50%	140%	89%	50%	140%
Chloroethane	3290687		<0.20	<0.20	NA	< 0.20	74%	50%	140%	91%	50%	140%	108%	50%	140%
Trichlorofluoromethane	3290687		<0.40	<0.40	NA	< 0.40	87%	50%	140%	79%	50%	140%	109%	50%	140%
Acetone	3290687		<1.0	<1.0	NA	< 1.0	96%	50%	140%	100%	50%	140%	97%	50%	140%
1,1-Dichloroethylene	3290687		<0.2	<0.2	NA	< 0.2	93%	50%	140%	73%	60%	130%	114%	50%	140%
Methylene Chloride	3290687		<0.30	<0.30	NA	< 0.30	120%	50%	140%	120%	60%	130%	106%	50%	140%
trans- 1,2-dichloroethylene	3290687		<0.20	<0.20	NA	< 0.20	97%	50%	140%	120%	60%	130%	97%	50%	140%
Methyl tert-butyl ether	3290687		<0.20	<0.20	NA	< 0.20	95%	50%	140%	117%	60%	130%	85%	50%	140%
1,1-Dichloroethane	3290687		<0.30	<0.30	NA	< 0.30	85%	50%	140%	110%	60%	130%	93%	50%	140%
Methyl Ethyl Ketone	3290687		<1.0	<1.0	NA	< 1.0	98%	50%	140%	101%	50%	140%	103%	50%	140%
cis- 1,2-Dichloroethylene	3290687		<0.20	<0.20	NA	< 0.20	79%	50%	140%	107%	60%	130%	97%	50%	140%
Chloroform	3290687		<0.20	<0.20	NA	< 0.20	98%	50%	140%	101%	60%	130%	113%	50%	140%
1,2-Dichloroethane	3290687		<0.20	<0.20	NA	< 0.20	116%	50%	140%	97%	60%	130%	83%	50%	140%
1,1,1-Trichloroethane	3290687		<0.30	<0.30	NA	< 0.30	111%	50%	140%	85%	60%	130%	84%	50%	140%
Carbon Tetrachloride	3290687		<0.20	<0.20	NA	< 0.20	98%	50%	140%	120%	60%	130%	120%	50%	140%
Benzene	3290687		<0.20	<0.20	NA	< 0.20	87%	50%	140%	106%	60%	130%	86%	50%	140%
1,2-Dichloropropane	3290687		<0.20	<0.20	NA	< 0.20	111%	50%	140%	97%	60%	130%	98%	50%	140%
Trichloroethylene	3290687		<0.20	<0.20	NA	< 0.20	105%	50%	140%	98%	60%	130%	98%	50%	140%
Bromodichloromethane	3290687		<0.20	<0.20	NA	< 0.20	116%	50%	140%	107%	60%	130%	102%	50%	140%
cis-1,3-Dichloropropene	3290687		<0.20	<0.20	NA	< 0.20	119%	50%	140%	89%	60%	130%	77%	50%	140%
Methyl Isobutyl Ketone	3290687		<1.0	<1.0	NA	< 1.0	109%	50%	140%	103%	50%	140%	101%	50%	140%
trans-1,3-Dichloropropene	3290687		<0.30	<0.30	NA	< 0.30	95%	50%	140%	102%	60%	130%	119%	50%	140%
1,1,2-Trichloroethane	3290687		<0.20	<0.20	NA	< 0.20	117%	50%	140%	97%	60%	130%	113%	50%	140%
Toluene	3290687		<0.20	<0.20	NA	< 0.20	100%	50%	140%	75%	60%	130%	91%	50%	140%
2-Hexanone	3290687		<1.0	<1.0	NA	< 1.0	105%	50%	140%	103%	50%	140%	99%	50%	140%
Dibromochloromethane	3290687		<0.10	<0.10	NA	< 0.10	116%	50%	140%	110%	60%	130%	99%	50%	140%
Ethylene Dibromide	3290687		<0.10	<0.10	NA	< 0.10	111%	50%	140%	91%	60%	130%	111%	50%	140%
Tetrachloroethylene	3290687		<0.20	<0.20	NA	< 0.20	104%	50%	140%	91%	60%	130%	107%	50%	140%
1,1,1,2-Tetrachloroethane	3290687		<0.10	<0.10	NA	< 0.10	105%	50%	140%	86%	60%	130%	103%	50%	140%
Chlorobenzene	3290687		<0.10	<0.10	NA	< 0.10	89%	50%	140%	70%	60%	130%	102%	50%	140%
Ethylbenzene	3290687		<0.10	<0.10	NA	< 0.10	74%	50%	140%	87%	60%	130%	86%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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http://www.agatlabs.com

Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21Z842764

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Dec 13, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
m & p-Xylene	3290687		<0.20	<0.20	NA	< 0.20	98%	50%	140%	92%	60%	130%	105%	50%	140%
Bromoform	3290687		<0.10	<0.10	NA	< 0.10	106%	50%	140%	84%	60%	130%	109%	50%	140%
Styrene	3290687		<0.10	<0.10	NA	< 0.10	76%	50%	140%	82%	60%	130%	75%	50%	140%
1,1,2,2-Tetrachloroethane	3290687		<0.10	<0.10	NA	< 0.10	94%	50%	140%	77%	60%	130%	96%	50%	140%
o-Xylene	3290687		<0.10	<0.10	NA	< 0.10	78%	50%	140%	78%	60%	130%	80%	50%	140%
1,3-Dichlorobenzene	3290687		<0.10	<0.10	NA	< 0.10	95%	50%	140%	78%	60%	130%	85%	50%	140%
1,4-Dichlorobenzene	3290687		<0.10	<0.10	NA	< 0.10	101%	50%	140%	78%	60%	130%	92%	50%	140%
1,2-Dichlorobenzene	3290687		<0.10	<0.10	NA	< 0.10	98%	50%	140%	80%	60%	130%	91%	50%	140%
1,2,4-Trichlorobenzene	3290687		<0.30	<0.30	NA	< 0.30	101%	50%	140%	105%	60%	130%	106%	50%	140%
n-Hexane	3290687		<0.20	<0.20	NA	< 0.20	93%	50%	140%	95%	60%	130%	102%	50%	140%

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

Certified By:

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21Z842764

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F1 (C6 - C10)	VOL-91- 5010	modified from MOE PHC E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC E3421	GC / FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC E3421	GC / FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC E3421	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC E3421	BALANCE
Terphenyl	VOL-91-5009	modified from MOE PHC E3421	GC/FID
Sediment			
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21Z842764

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
cis-1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans-1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
2-Hexanone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2,4-Trichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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AGAT Laboratories PUSH!
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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 21Z842764

Cooler Quantity: one - ice pack

Arrival Temperatures: 9.5 | 9.2 | 9.0
3.8 | 4 | 4.3

Custody Seal Intact: ☐Yes ☐No ☐N/A

Notes:

Report Information:

Company: GOLDER
Contact: Daniel Stabile
Address: 100 Scotia Court
Whitby, ON. CAP.
Phone: 905 725 2727 Fax:
Reports to be sent to:
1. Email: daniel_stabile@golder.com
2. Email: paul_hurst@golder.com

Regulatory Requirements:

(Please check all applicable boxes)

☐ Regulation 153/04
Table *Indicate One*
☐ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☐ Fine

☐ Excess Soils R406
Table *Indicate One*

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
Region

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
Indicate One

Is this submission for a **Record of Site Condition?** ☐ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT (Most Analysis) ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☒ Next Business Day

OR Date Required (Rush Surcharges May Apply):
Dec 10, 2021

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

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

Project Information:

Project: 21494078
Site Location:
Sampled By: A. Brunskill
AGAT ID #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact:
Address:
Email:

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 (PHCs) Analyze F4G if required ☐ Yes ☐ No	PAHs	Total PCBs ☐ Arocolor	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
BH21-04	Dec 9/21	16:41 AM/PM	8	GW					X			X					
BH21-14	Dec 9/21	15:40 AM/PM	8	GW					X			X					
DUP	Dec 9/21	15:40 AM/PM	8	GW					X			X					
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															

Samples Relinquished By (Print Name and Sign): A Brunskill	Date: Dec 9/21	Time: 18:00	Samples Received By (Print Name and Sign): C. Griffith	Date: 21/12/10	Time: 08h05
Samples Relinquished By (Print Name and Sign): A Brunskill	Date: Dec 9/21	Time: 18:00	Samples Received By (Print Name and Sign): Sima Z	Date: 21/12/11	Time: 8:49
Samples Relinquished By (Print Name and Sign): CC to Paul	Date: 21/12/10	Time: 16h00	Samples Received By (Print Name and Sign):	Date:	Time:

Page ____ of ____

Nº: T 122801

Document ID: DIV-78-1511.020

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Date Issued: December 9, 2020

AGAT Laboratories

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CLIENT NAME: GOLDER ASSOCIATES LTD.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727

ATTENTION TO: Daniel Stabile

PROJECT: 21494078

AGAT WORK ORDER: 21T848962

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Jan 05, 2022

PAGES (INCLUDING COVER): 22

VERSION*: 2

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

*Notes

VERSION 2:Version 2 supersedes work order 21T848962 , Version 1, issued January, 5, 2022. Complete.

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	BH21- 21 SA3	BH21-22 SA3	DUP1
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2021-12-21 10:30	2021-12-21 12:00	2021-12-21
Parameter	Unit	G / S	RDL		3391187	3391190	3391201
F1 (C6 - C10)	µg/g		5		<5	6	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5	6	<5
F2 (C10 to C16)	µg/g	230	10		<10	<10	<10
F3 (C16 to C34)	µg/g	1700	50		<50	260	<50
F4 (C34 to C50)	µg/g	3300	50		<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	3300	50		NA	NA	NA
Moisture Content	%		0.1		9.1	13.6	10.0
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140			112	112	104
Terphenyl	%	60-140			78	100	89

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391187-3391201 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	BH21-21	BH21-4	BH21-14	BH21-22	DUP1
				SAMPLE TYPE:	Water	Water	Water	Water	Water
				DATE SAMPLED:	2021-12-22 10:45	2021-12-22 11:25	2021-12-22 12:00	2021-12-22 12:35	2021-12-22
Parameter	Unit	G / S	RDL		3391083	3391094	3391095	3391097	3391203
F1 (C6 - C10)	µg/L		25		<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100		<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100		<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100		<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA	NA	NA
Sediment					No	No	No	No	No
Surrogate	Unit	Acceptable Limits							
Toluene-d8	% Recovery	50-140			116	70.0	97.5	104	79.2
Terphenyl	%	60-140			86	98	99	104	90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391083-3391203 The C6-C10 fraction is calculated using Toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	BH21-23 SA4	BH21-24 SA4	BH21-25 SA4
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2021-12-21 13:55	2021-12-21 14:25	2021-12-21 15:00
Parameter	Unit	G / S	RDL		3391191	3391192	3391193
Benzene	µg/g	0.32	0.02		<0.02	<0.02	<0.02
Toluene	µg/g	68	0.05		<0.05	<0.05	<0.05
Ethylbenzene	µg/g	9.5	0.05		<0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05		<0.05	<0.05	<0.05
o-Xylene	µg/g		0.05		<0.05	<0.05	<0.05
Xylenes (Total)	µg/g	26	0.05		<0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g		5		<5	154	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5	154	<5
F2 (C10 to C16)	µg/g	230	10		<10	<10	<10
F3 (C16 to C34)	µg/g	1700	50		<50	1500	<50
F4 (C34 to C50)	µg/g	3300	50		<50	170	<50
Gravimetric Heavy Hydrocarbons	µg/g	3300	50		NA	NA	NA
Moisture Content	%		0.1		9.8	10.4	10.6
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	60-140			117	94	116
Terphenyl	%	60-140			89	91	89

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23 DATE REPORTED: 2022-01-05

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391191-3391193 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	TRIP BLANK	FIELD BALNK
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2021-12-22	2021-12-22 12:00
Parameter	Unit	G / S	RDL		3391202	3391204
Benzene	µg/L	0.5	0.20		<0.20	<0.20
Toluene	µg/L	320	0.20		<0.20	<0.20
Ethylbenzene	µg/L	54	0.10		<0.10	<0.10
m & p-Xylene	µg/L		0.20		<0.20	<0.20
o-Xylene	µg/L		0.10		<0.10	<0.10
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20
F1 (C6-C10)	µg/L		25		<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25	<25
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	60-140			122	78.8

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391202-3391204 The C6-C10 fraction is calculated using Toluene response factor.
Total C6-C10 results are corrected for BTEX contributions.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
Extraction and holding times were met for this sample.
NA = Not Applicable

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

Results relate only to the items tested. Results apply to samples as received.

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AGAT WORK ORDER: 21T848962

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

SAMPLE DESCRIPTION:				BH21- 21 SA3	BH21-22 SA3	DUP1
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2021-12-21 10:30	2021-12-21 12:00	2021-12-21
Parameter	Unit	G / S	RDL	3391187	3391190	3391201
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.032	0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.064	0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	1.6	0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	1.3	0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	11	0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	17	0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	70	0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	55	0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.47	0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	6.1	0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.21	0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.32	0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.16	0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.91	0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	18	0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	31	0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Toluene	ug/g	68	0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	13	0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	4.5	0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.087	0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	9.5	0.05	<0.05	<0.05	<0.05

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	BH21- 21 SA3	BH21-22 SA3	DUP1
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2021-12-21 10:30	2021-12-21 12:00	2021-12-21
Parameter	Unit	G / S	RDL		3391187	3391190	3391201
m & p-Xylene	ug/g		0.05		<0.05	<0.05	<0.05
Bromoform	ug/g	0.61	0.05		<0.05	<0.05	<0.05
Styrene	ug/g	34	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
o-Xylene	ug/g		0.05		<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	9.6	0.05		<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.2	0.05		<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	6.8	0.05		<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	26	0.05		<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.18	0.04		<0.04	<0.04	<0.04
n-Hexane	µg/g	46	0.05		<0.05	<0.05	<0.05
Moisture Content	%		0.1		9.1	13.6	10.0
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140			108	105	109
4-Bromofluorobenzene	% Recovery	50-140			86	97	76

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391187-3391201 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

SAMPLE DESCRIPTION:				BH21-21	BH21-4		BH21-14	BH21-22		TRIP BLANK	DUP1
SAMPLE TYPE:				Water	Water		Water	Water		Water	Water
DATE SAMPLED:				2021-12-22 10:45	2021-12-22 11:25		2021-12-22 12:00	2021-12-22 12:35		2021-12-22	2021-12-22
Parameter	Unit	G / S	RDL	3391083	3391094	RDL	3391095	3391097	RDL	3391202	3391203
Dichlorodifluoromethane	µg/L	3500	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	0.34	<0.34	<0.34	0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	0.80	<0.80	<0.80	0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	2.0	<2.0	<2.0	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	0.50	<0.50	<0.50	0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	0.60	<0.60	<0.60	0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	0.60	<0.60	<0.60	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	2.0	<2.0	<2.0	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	0.50	2.51	0.40	<0.40	<0.40	0.20	<0.20	0.45
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	0.60	<0.60	<0.60	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	0.20	<0.20	<0.20	0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	2.0	<2.0	<2.0	1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10

Certified By: NPopowkoff

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

		SAMPLE DESCRIPTION:		BH21-21	BH21-4		BH21-14	BH21-22		TRIP BLANK	DUP1
		SAMPLE TYPE:		Water	Water		Water	Water		Water	Water
		DATE SAMPLED:		2021-12-22 10:45	2021-12-22 11:25		2021-12-22 12:00	2021-12-22 12:35		2021-12-22	2021-12-22
Parameter	Unit	G / S	RDL	3391083	3391094	RDL	3391095	3391097	RDL	3391202	3391203
m & p-Xylene	µg/L		0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
Styrene	µg/L	43	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	0.30	<0.30	<0.30	0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	0.20	<0.20	<0.20	0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits									
Toluene-d8	% Recovery	50-140		99	101	2	100	102	1	102	102
4-Bromofluorobenzene	% Recovery	50-140		88	95	2	75	83	1	78	72

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

		SAMPLE DESCRIPTION:		FIELD BALNK
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2021-12-22 12:00
Parameter	Unit	G / S	RDL	3391204
Dichlorodifluoromethane	µg/L	3500	0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20
Toluene	µg/L	320	0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	FIELD BALNK
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2021-12-22 12:00
Parameter	Unit	G / S	RDL		3391204
m & p-Xylene	µg/L		0.20		<0.20
Bromoform	µg/L	5	0.10		<0.10
Styrene	µg/L	43	0.10		<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10
o-Xylene	µg/L		0.10		<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20
n-Hexane	µg/L	5	0.20		<0.20
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140			106
4-Bromofluorobenzene	% Recovery	50-140			92

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391083-3391094 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

3391095-3391097 Dilution factor=2
The sample was diluted because it was foamy. The reporting detection limit has been corrected for the dilution factor used.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

3391202-3391204 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

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Exceedance Summary

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3391094	BH21-4	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	2.51
3391192	BH21-24 SA4	ON T7 S ICC CT	O. Reg. 153(511) - PHCs F1 - F4 (Soil)	F1 (C6 to C10) minus BTEX	µg/g	55	154

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 21T848962
ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

Trace Organics Analysis

RPT Date: Jan 05, 2022

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)															
F1 (C6 - C10)	3375873		<25	<25	NA	< 25	93%	60%	140%	104%	60%	140%	113%	60%	140%
F2 (C10 to C16)	3361993		< 100	< 100	NA	< 100	102%	60%	140%	85%	60%	140%	68%	60%	140%
F3 (C16 to C34)	3361993		< 100	< 100	NA	< 100	103%	60%	140%	74%	60%	140%	69%	60%	140%
F4 (C34 to C50)	3361993		< 100	< 100	NA	< 100	105%	60%	140%	75%	60%	140%	72%	60%	140%
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	3330735		<0.20	<0.20	NA	< 0.20	71%	50%	140%	86%	50%	140%	80%	50%	140%
Vinyl Chloride	3330735		<0.17	<0.17	NA	< 0.17	83%	50%	140%	74%	50%	140%	99%	50%	140%
Bromomethane	3330735		<0.20	<0.20	NA	< 0.20	104%	50%	140%	96%	50%	140%	91%	50%	140%
Trichlorofluoromethane	3330735		<0.40	<0.40	NA	< 0.40	74%	50%	140%	87%	50%	140%	108%	50%	140%
Acetone	3330735		<1.0	<1.0	NA	< 1.0	103%	50%	140%	99%	50%	140%	102%	50%	140%
1,1-Dichloroethylene	3330735		<0.30	<0.30	NA	< 0.30	70%	50%	140%	81%	60%	130%	97%	50%	140%
Methylene Chloride	3330735		<0.30	<0.30	NA	< 0.30	107%	50%	140%	100%	60%	130%	107%	50%	140%
trans- 1,2-Dichloroethylene	3330735		<0.20	<0.20	NA	< 0.20	86%	50%	140%	72%	60%	130%	93%	50%	140%
Methyl tert-butyl ether	3330735		<0.20	<0.20	NA	< 0.20	109%	50%	140%	90%	60%	130%	110%	50%	140%
1,1-Dichloroethane	3330735		<0.30	<0.30	NA	< 0.30	90%	50%	140%	79%	60%	130%	114%	50%	140%
Methyl Ethyl Ketone	3330735		<1.0	<1.0	NA	< 1.0	98%	50%	140%	104%	50%	140%	106%	50%	140%
cis- 1,2-Dichloroethylene	3330735		<0.20	<0.20	NA	< 0.20	109%	50%	140%	86%	60%	130%	80%	50%	140%
Chloroform	3330735		<0.20	<0.20	NA	< 0.20	114%	50%	140%	98%	60%	130%	97%	50%	140%
1,2-Dichloroethane	3330735		<0.20	<0.20	NA	< 0.20	83%	50%	140%	99%	60%	130%	98%	50%	140%
1,1,1-Trichloroethane	3330735		<0.30	<0.30	NA	< 0.30	71%	50%	140%	116%	60%	130%	85%	50%	140%
Carbon Tetrachloride	3330735		<0.20	<0.20	NA	< 0.20	75%	50%	140%	80%	60%	130%	92%	50%	140%
Benzene	3330735		<0.20	<0.20	NA	< 0.20	89%	50%	140%	81%	60%	130%	88%	50%	140%
1,2-Dichloropropane	3330735		<0.20	<0.20	NA	< 0.20	82%	50%	140%	82%	60%	130%	109%	50%	140%
Trichloroethylene	3330735		<0.20	<0.20	NA	< 0.20	80%	50%	140%	83%	60%	130%	109%	50%	140%
Bromodichloromethane	3330735		<0.20	<0.20	NA	< 0.20	108%	50%	140%	103%	60%	130%	91%	50%	140%
Methyl Isobutyl Ketone	3330735		<1.0	<1.0	NA	< 1.0	107%	50%	140%	102%	50%	140%	101%	50%	140%
1,1,2-Trichloroethane	3330735		<0.20	<0.20	NA	< 0.20	118%	50%	140%	96%	60%	130%	107%	50%	140%
Toluene	3330735		<0.20	<0.20	NA	< 0.20	109%	50%	140%	105%	60%	130%	79%	50%	140%
Dibromochloromethane	3330735		<0.10	<0.10	NA	< 0.10	81%	50%	140%	105%	60%	130%	100%	50%	140%
Ethylene Dibromide	3330735		<0.10	<0.10	NA	< 0.10	93%	50%	140%	112%	60%	130%	112%	50%	140%
Tetrachloroethylene	3330735		<0.20	<0.20	NA	< 0.20	93%	50%	140%	101%	60%	130%	82%	50%	140%
1,1,1,2-Tetrachloroethane	3330735		<0.10	<0.10	NA	< 0.10	111%	50%	140%	101%	60%	130%	80%	50%	140%
Chlorobenzene	3330735		<0.10	<0.10	NA	< 0.10	100%	50%	140%	101%	60%	130%	92%	50%	140%
Ethylbenzene	3330735		<0.10	<0.10	NA	< 0.10	85%	50%	140%	70%	60%	130%	76%	50%	140%
m & p-Xylene	3330735		<0.20	<0.20	NA	< 0.20	93%	50%	140%	93%	60%	130%	104%	50%	140%
Bromoform	3330735		<0.10	<0.10	NA	< 0.10	99%	50%	140%	110%	60%	130%	101%	50%	140%
Styrene	3330735		<0.10	<0.10	NA	< 0.10	82%	50%	140%	72%	60%	130%	82%	50%	140%
1,1,2,2-Tetrachloroethane	3330735		<0.10	<0.10	NA	< 0.10	105%	50%	140%	85%	60%	130%	116%	50%	140%
o-Xylene	3330735		<0.10	<0.10	NA	< 0.10	83%	50%	140%	94%	60%	130%	73%	50%	140%

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 21T848962
ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

Trace Organics Analysis (Continued)

RPT Date: Jan 05, 2022

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	3330735		<0.10	<0.10	NA	< 0.10	99%	50%	140%	93%	60%	130%	103%	50%	140%
1,4-Dichlorobenzene	3330735		<0.10	<0.10	NA	< 0.10	82%	50%	140%	99%	60%	130%	105%	50%	140%
1,2-Dichlorobenzene	3330735		<0.10	<0.10	NA	< 0.10	97%	50%	140%	83%	60%	130%	97%	50%	140%
n-Hexane	3330735		<0.20	<0.20	NA	< 0.20	94%	50%	140%	107%	60%	130%	110%	50%	140%
O. Reg. 153(511) - PHCs F1/BTEX (Water)															
Benzene	3375873		<0.20	<0.20	NA	< 0.20	101%	60%	140%	99%	60%	140%	88%	60%	140%
Toluene	3375873		<0.20	<0.20	NA	< 0.20	113%	60%	140%	83%	60%	140%	82%	60%	140%
Ethylbenzene	3375873		<0.10	<0.10	NA	< 0.10	86%	60%	140%	91%	60%	140%	82%	60%	140%
m & p-Xylene	3375873		<0.20	<0.20	NA	< 0.20	97%	60%	140%	96%	60%	140%	98%	60%	140%
o-Xylene	3375873		<0.10	<0.10	NA	< 0.10	104%	60%	140%	111%	60%	140%	93%	60%	140%
F1 (C6-C10)	3375873		<25	<25	NA	< 25	93%	60%	140%	104%	60%	140%	113%	60%	140%
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Soil)															
F1 (C6 - C10)	3377182		<5	<5	NA	< 5	113%	60%	140%	97%	60%	140%	107%	60%	140%
F2 (C10 to C16)	3330837		< 10	< 10	NA	< 10	89%	60%	140%	79%	60%	140%	84%	60%	140%
F3 (C16 to C34)	3330837		< 50	< 50	NA	< 50	85%	60%	140%	74%	60%	140%	79%	60%	140%
F4 (C34 to C50)	3330837		< 50	< 50	NA	< 50	79%	60%	140%	76%	60%	140%	86%	60%	140%
O. Reg. 153(511) - VOCs (Soil)															
Dichlorodifluoromethane	3384810		< 0.05	< 0.05	NA	< 0.05	103%	50%	140%	103%	50%	140%	73%	50%	140%
Vinyl Chloride	3384810		< 0.02	< 0.02	NA	< 0.02	104%	50%	140%	94%	50%	140%	78%	50%	140%
Bromomethane	3384810		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	69%	50%	140%	105%	50%	140%
Trichlorofluoromethane	3384810		< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	56%	50%	140%	98%	50%	140%
Acetone	3384810		< 0.50	< 0.50	NA	< 0.50	88%	50%	140%	97%	50%	140%	104%	50%	140%
1,1-Dichloroethylene	3384810		< 0.05	< 0.05	NA	< 0.05	119%	50%	140%	83%	60%	130%	87%	50%	140%
Methylene Chloride	3384810		< 0.05	< 0.05	NA	< 0.05	79%	50%	140%	112%	60%	130%	87%	50%	140%
Trans- 1,2-Dichloroethylene	3384810		< 0.05	< 0.05	NA	< 0.05	115%	50%	140%	82%	60%	130%	90%	50%	140%
Methyl tert-butyl Ether	3384810		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	71%	60%	130%	106%	50%	140%
1,1-Dichloroethane	3384810		< 0.02	< 0.02	NA	< 0.02	72%	50%	140%	112%	60%	130%	95%	50%	140%
Methyl Ethyl Ketone	3384810		< 0.50	< 0.50	NA	< 0.50	102%	50%	140%	98%	50%	140%	101%	50%	140%
Cis- 1,2-Dichloroethylene	3384810		< 0.02	< 0.02	NA	< 0.02	75%	50%	140%	101%	60%	130%	90%	50%	140%
Chloroform	3384810		< 0.04	< 0.04	NA	< 0.04	117%	50%	140%	107%	60%	130%	89%	50%	140%
1,2-Dichloroethane	3384810		< 0.03	< 0.03	NA	< 0.03	111%	50%	140%	101%	60%	130%	90%	50%	140%
1,1,1-Trichloroethane	3384810		< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	86%	60%	130%	86%	50%	140%
Carbon Tetrachloride	3384810		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	98%	60%	130%	78%	50%	140%
Benzene	3384810		< 0.02	< 0.02	NA	< 0.02	110%	50%	140%	112%	60%	130%	120%	50%	140%
1,2-Dichloropropane	3384810		< 0.03	< 0.03	NA	< 0.03	85%	50%	140%	96%	60%	130%	104%	50%	140%
Trichloroethylene	3384810		< 0.03	< 0.03	NA	< 0.03	103%	50%	140%	118%	60%	130%	103%	50%	140%
Bromodichloromethane	3384810		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	96%	60%	130%	94%	50%	140%
Methyl Isobutyl Ketone	3384810		< 0.50	< 0.50	NA	< 0.50	104%	50%	140%	98%	50%	140%	107%	50%	140%

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.
AGAT WORK ORDER: 21T848962
PROJECT: 21494078
ATTENTION TO: Daniel Stabile
SAMPLING SITE:1047 Richmond Rd.
SAMPLED BY:D.Stabile

Trace Organics Analysis (Continued)

RPT Date: Jan 05, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,1,2-Trichloroethane	3384810		< 0.04	< 0.04	NA	< 0.04	96%	50%	140%	112%	60%	130%	97%	50%	140%
Toluene	3384810		2.46	2.79	NA	< 0.05	110%	50%	140%	76%	60%	130%	98%	50%	140%
Dibromochloromethane	3384810		< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	119%	60%	130%	86%	50%	140%
Ethylene Dibromide	3384810		< 0.04	< 0.04	NA	< 0.04	89%	50%	140%	106%	60%	130%	99%	50%	140%
Tetrachloroethylene	3384810		< 0.05	< 0.05	NA	< 0.05	76%	50%	140%	108%	60%	130%	79%	50%	140%
1,1,1,2-Tetrachloroethane	3384810		< 0.04	< 0.04	NA	< 0.04	110%	50%	140%	84%	60%	130%	79%	50%	140%
Chlorobenzene	3384810		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	106%	60%	130%	97%	50%	140%
Ethylbenzene	3384810		< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	97%	60%	130%	97%	50%	140%
m & p-Xylene	3384810		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	94%	60%	130%	95%	50%	140%
Bromoform	3384810		< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	89%	60%	130%	83%	50%	140%
Styrene	3384810		< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	85%	60%	130%	115%	50%	140%
1,1,2,2-Tetrachloroethane	3384810		< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	96%	60%	130%	81%	50%	140%
o-Xylene	3384810		< 0.05	< 0.05	NA	< 0.05	82%	50%	140%	89%	60%	130%	97%	50%	140%
1,3-Dichlorobenzene	3384810		< 0.05	< 0.05	NA	< 0.05	83%	50%	140%	89%	60%	130%	90%	50%	140%
1,4-Dichlorobenzene	3384810		< 0.05	< 0.05	NA	< 0.05	111%	50%	140%	105%	60%	130%	109%	50%	140%
1,2-Dichlorobenzene	3384810		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	102%	60%	130%	117%	50%	140%
n-Hexane	3384810		< 0.05	< 0.05	NA	< 0.05	106%	50%	140%	103%	60%	130%	109%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	3377182		<0.02	<0.02	NA	< 0.02	110%	60%	140%	93%	60%	140%	93%	60%	140%
Toluene	3377182		<0.05	<0.05	NA	< 0.05	96%	60%	140%	101%	60%	140%	96%	60%	140%
Ethylbenzene	3377182		<0.05	<0.05	NA	< 0.05	97%	60%	140%	107%	60%	140%	105%	60%	140%
m & p-Xylene	3377182		<0.05	<0.05	NA	< 0.05	100%	60%	140%	111%	60%	140%	107%	60%	140%
o-Xylene	3377182		<0.05	<0.05	NA	< 0.05	106%	60%	140%	100%	60%	140%	100%	60%	140%
F1 (C6 - C10)	3377182		<5	<5	NA	< 5	113%	60%	140%	97%	60%	140%	107%	60%	140%

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

Certified By: N Popowkolof

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F1 (C6 - C10)	VOL-91- 5010	modified from MOE PHC E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC E3421	GC / FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC E3421	GC / FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC E3421	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC E3421	BALANCE
Terphenyl	VOL-91-5009	modified from MOE PHC E3421	GC/FID
Sediment			
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Benzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Toluene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F1 (C6-C10)	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

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PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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AGAT Laboratories

*WORK ORDER # 129

5835 Coopers Avenue
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Chain of Custody Record

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

Report Information:

Company: GOLDER ASSOCIATES LTD.
Contact: DANIEL STABILE
Address: 100 SCOTIA CRT, WHITBY
L1N 8Y6
Phone: 905-213-4732 Fax:
Reports to be sent to:
1. Email: DSTABILE@GOLDER.COM
2. Email:

Project Information:

Project: 21494078
Site Location: 1047 NICHOLSON Rd. OTT
Sampled By: D. STABILE
AGAT Quote #: MSA GOLDER-AGAT PO: 2020
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 (Indicate One)
☒ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Excess Soils R406
Table (Indicate One)
☐ Regulation 558
☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
(Region)
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
(Indicate One)

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 21T848962
Cooler Quantity:
Arrival Temperatures: 5.1 5.2 5.2 / 5.0 5.1 5.1
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes:

Turnaround Time (TAT) Required:

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - CrVI, Hg, HWSB	O. Reg 153: BTEX, F1-F4 PHCs (Analyze F4G if required ☐ Yes ☐ No)	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	VOC + PHC F1	Potentially Hazardous or High Concentration (Y/N)
BH21-21	12/22/21	1045 AM/PM	4	GW			X		X			X						
BH21-4	↓	1125 AM/PM	↓	↓			↓		↓			↓						
BH21-14		1200 AM/PM																
BH21-22		1235 AM/PM																
BH21-21 SA3	12/21/21	1030 AM/PM	3	SOIL			X		X			X						
BH21-22 SA3	↓	1200 AM/PM	↓	↓			X		X			X						Y
BH21-23 SA4		1355 AM/PM					↓		↓			↓						
BH21-24 SA4		1425 AM/PM																
BH21-25 SA3		1500 AM/PM																
DUP 1	↓	- AM/PM	↓	↓			↓		↓			X						
TRIP BLANK	12/22/21	- AM/PM	4	GW												X		

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
DANIEL STABILE	12/23/21	09:30		2021/12/23	10:10
2021/12/23		1:05			

Page 1 of 2
N°: T 129142

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

AGAT Laboratories

work order #

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

Chain of Custody Record

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

Report Information:

Company: ~~GOLDER~~ GOLDER ASSOCIATES LTD.
Contact:
Address: SAME PAGE #1
Phone: Fax:
Reports to be sent to:
1. Email:
2. Email:

Project Information:

Project: 21494074
Site Location:
Sampled By: SAME PAGE #1
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 2 *Indicate One*
☑ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☑ Coarse
☐ Fine

☐ Excess Soils R406
Table _____ *Indicate One*

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
_____ *Region*

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
_____ *Indicate One*

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Sample Matrix Legend

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

Laboratory Use Only

Work Order #:
Cooler Quantity:
Arrival Temperatures: 5.1 5.2 5.2 / 5.0 5.1 5.1
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes:

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☑ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	VOC + PHC F1	Potentially Hazardous or High Concentration (Y/N)
DUP 1	12/22/21	— AM/PM	4	GW					X				X						
FIELD BLANK	12/22/21	1200 AM/PM	4	GW													X		
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	

Samples Relinquished By (Print Name and Sign): DANIEL STABILE	Date: 12/23/21	Time: 09:30	Samples Received By (Print Name and Sign): 2021/12/23	Date:	Time: 10:10
Samples Relinquished By (Print Name and Sign): 2021/12/23	Date:	Time: 1:05	Samples Received By (Print Name and Sign):	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:

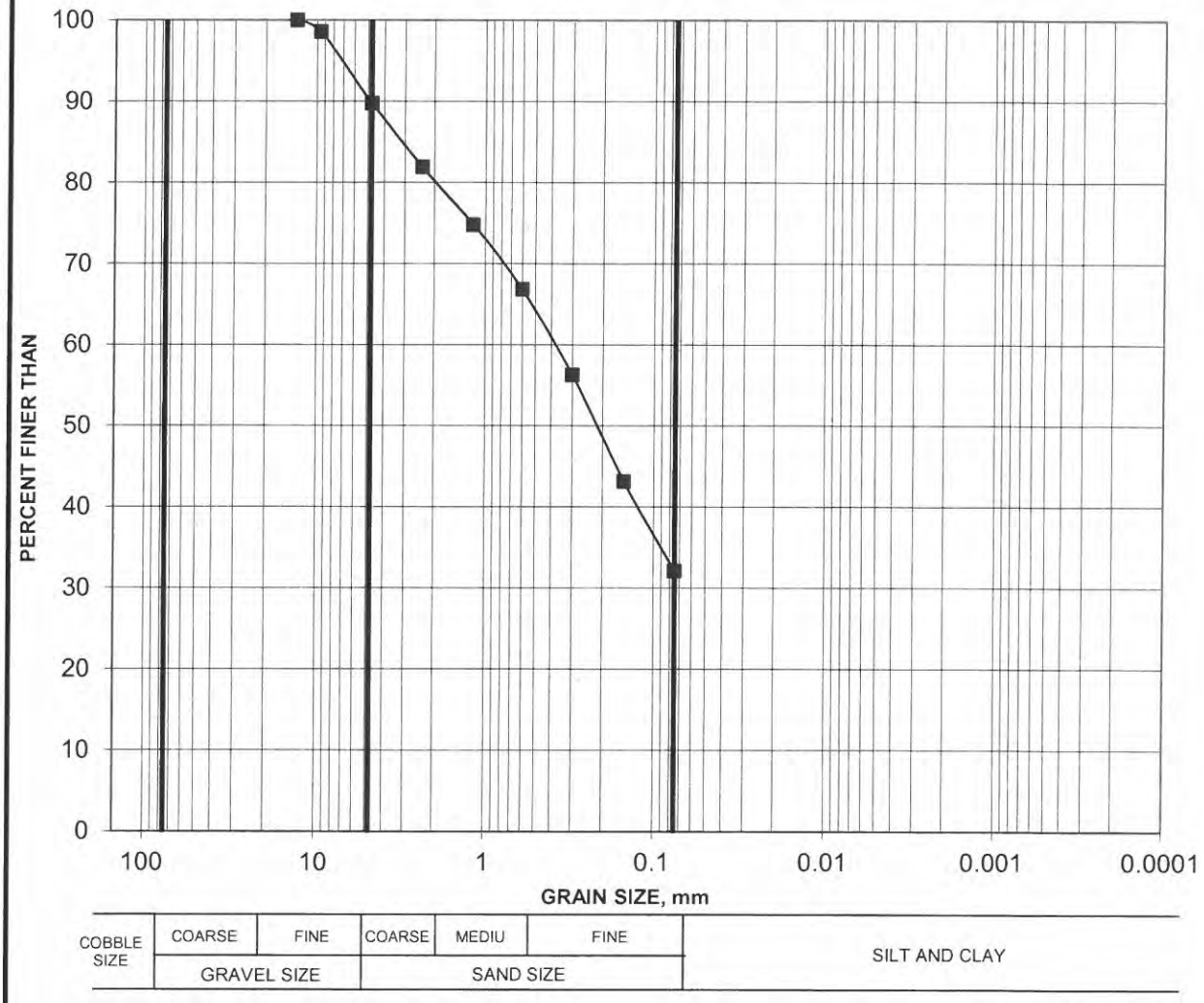
Page 2 of 2

N°: T 126605

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

GRAIN SIZE DISTRIBUTION	FIGURE

ENTER TITLE HERE



	Borehole	Sample	Depth (m)	Constituents (%) Gravel	Sand	Silt	Clay
—■—	21-01	2	0.61-1.22	10	58		32

Project: 21494078/3000

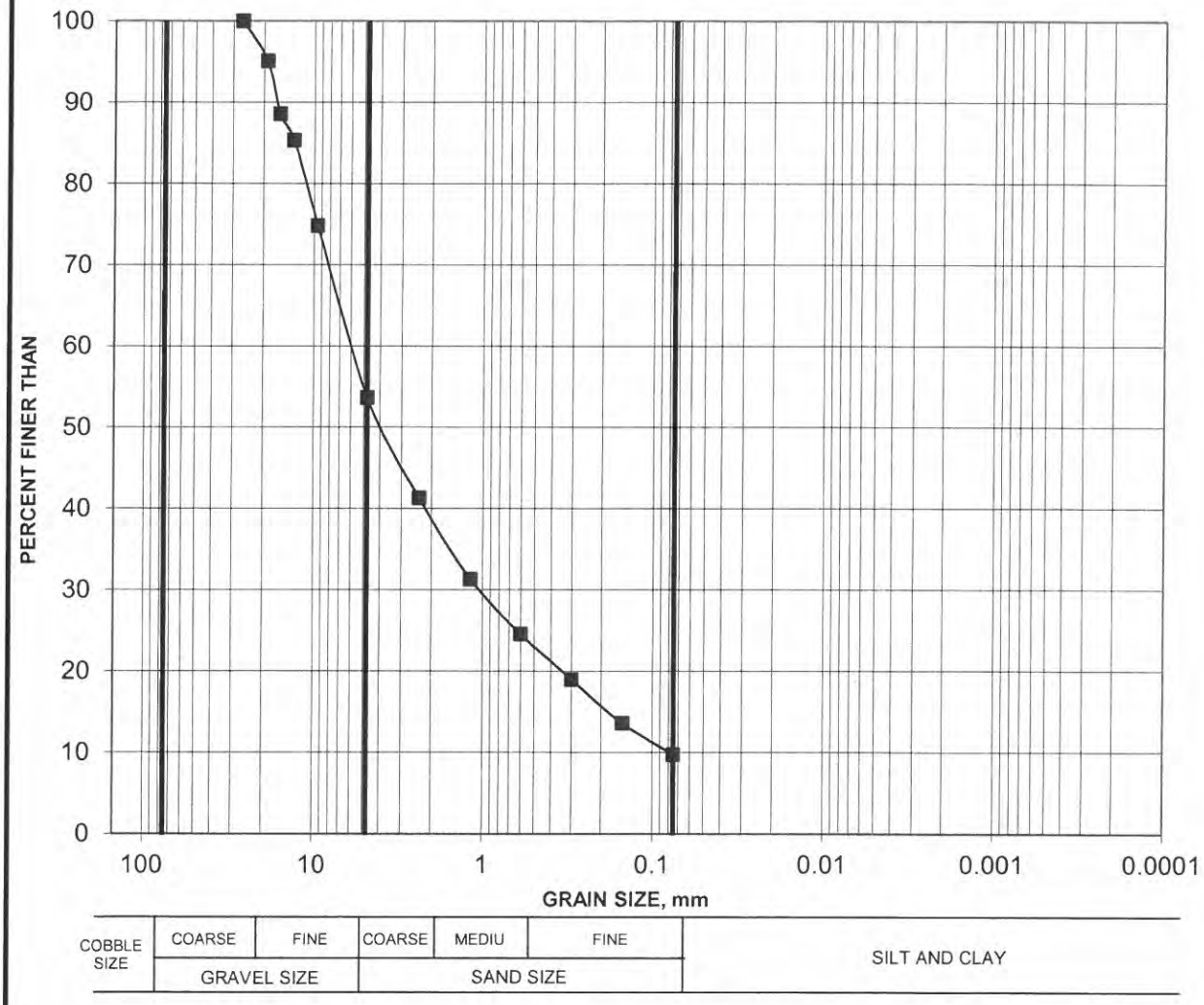
GOLDER
MEMBER OF WSP

Created by:

Checked by: SB

GRAIN SIZE DISTRIBUTION	FIGURE

ENTER TITLE HERE



	Borehole	Sample	Depth (m)	Constituents (%) Gravel	Sand	Silt	Clay
—■—	21-02	3	1.22-1.83	46	44		10

Project: 21494078

GOLDER
MEMBER OF WSP

Created by: CW
Checked by: JB

AGAT Laboratories

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

CLIENT NAME: GOLDER ASSOCIATES LTD
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600

ATTENTION TO: Daniel Stabile

PROJECT: 21494078 - 1047 Richmond fengate

AGAT WORK ORDER: 22Z895974

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: May 24, 2022

PAGES (INCLUDING COVER): 11

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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TEL (905)712-5100
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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

CLIENT NAME: GOLDER ASSOCIATES LTD

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

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

DATE RECEIVED: 2022-05-16

DATE REPORTED: 2022-05-24

		SAMPLE DESCRIPTION:		BH22-05 SA4
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2022-05-11
Parameter	Unit	G / S	RDL	3866975
Benzene	µg/g	0.21	0.02	<0.02
Toluene	µg/g	2.3	0.05	<0.05
Ethylbenzene	µg/g	2	0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05
o-Xylene	µg/g		0.05	<0.05
Xylenes (Total)	µg/g	3.1	0.05	<0.05
F1 (C6 - C10)	µg/g		5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5
F2 (C10 to C16)	µg/g	98	10	<10
F3 (C16 to C34)	µg/g	300	50	<50
F4 (C34 to C50)	µg/g	2800	50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50	NA
Moisture Content	%		0.1	8.7
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	60-140		104
Terphenyl	%	60-140		88

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

CLIENT NAME: GOLDER ASSOCIATES LTD

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

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

DATE RECEIVED: 2022-05-16

DATE REPORTED: 2022-05-24

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3866975 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

CLIENT NAME: GOLDER ASSOCIATES LTD

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

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

DATE RECEIVED: 2022-05-16

DATE REPORTED: 2022-05-24

				SAMPLE DESCRIPTION:	BH22-01 SA2	BH22-02 SA4	BH22-03 SA2	BH22-04 SA1
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2022-05-11	2022-05-09 10:45	2022-05-10	2022-05-09 13:55
Parameter	Unit	G / S	RDL		3866968	3866971	3866973	3866974
F1 (C6 - C10)	µg/g		5		<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5	<5	<5	<5
F2 (C10 to C16)	µg/g	98	10		<10	<10	<10	<10
F3 (C16 to C34)	µg/g	300	50		<50	<50	<50	<50
F4 (C34 to C50)	µg/g	2800	50		<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50		NA	NA	NA	NA
Moisture Content	%		0.1		13.5	8.8	9.6	6.3
Surrogate	Unit	Acceptable Limits						
Toluene-d8	%	50-140			115	112	114	112
Terphenyl	%	60-140			117	100	93	100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3866968-3866974 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

CLIENT NAME: GOLDER ASSOCIATES LTD

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

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

DATE RECEIVED: 2022-05-16

DATE REPORTED: 2022-05-24

		SAMPLE DESCRIPTION:		BH22-01 SA2	BH22-02 SA4	BH22-03 SA2	BH22-04 SA1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2022-05-11	2022-05-09 10:45	2022-05-10	2022-05-09 13:55
Parameter	Unit	G / S	RDL	3866968	3866971	3866973	3866974
Dichlorodifluoromethane	µg/g	16	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
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	3.5	0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	3.4	0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.38	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
Benzene	ug/g	0.21	0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.061	0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	13	0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	1.7	0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	2.3	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
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.28	0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	2	0.05	<0.05	<0.05	<0.05	<0.05

Certified By: N Popowkolof

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

CLIENT NAME: GOLDER ASSOCIATES LTD

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

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

DATE RECEIVED: 2022-05-16

DATE REPORTED: 2022-05-24

				SAMPLE DESCRIPTION:	BH22-01 SA2	BH22-02 SA4	BH22-03 SA2	BH22-04 SA1
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2022-05-11	2022-05-09 10:45	2022-05-10	2022-05-09 13:55
Parameter	Unit	G / S	RDL		3866968	3866971	3866973	3866974
m & p-Xylene	ug/g		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
Styrene	ug/g	0.7	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
o-Xylene	ug/g		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
1,4-Dichlorobenzene	ug/g	0.083	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
Xylenes (Total)	ug/g	3.1	0.05		<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05		<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	2.8	0.05		<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1		13.5	8.8	9.6	6.3
Surrogate	Unit	Acceptable Limits						
Toluene-d8	% Recovery	50-140			115	112	114	112
4-Bromofluorobenzene	% Recovery	50-140			84	80	86	81

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3866968-3866974 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkof

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD
PROJECT: 21494078 - 1047 Richmond fengate
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 22Z895974
ATTENTION TO: Daniel Stabile
SAMPLED BY:DG/KG

Trace Organics Analysis

RPT Date: May 24, 2022

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)															
F1 (C6 - C10)	3866974	3866974	<5	<5	NA	< 5	124%	60%	140%	99%	60%	140%	92%	60%	140%
F2 (C10 to C16)	3866688		< 10	< 10	NA	< 10	111%	60%	140%	95%	60%	140%	67%	60%	140%
F3 (C16 to C34)	3866688		< 50	< 50	NA	< 50	108%	60%	140%	100%	60%	140%	67%	60%	140%
F4 (C34 to C50)	3866688		< 50	< 50	NA	< 50	94%	60%	140%	64%	60%	140%	75%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	114%	50%	140%	109%	50%	140%	83%	50%	140%
Vinyl Chloride	3866974	3866974	<0.02	<0.02	NA	< 0.02	106%	50%	140%	105%	50%	140%	98%	50%	140%
Bromomethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	112%	50%	140%	115%	50%	140%	103%	50%	140%
Trichlorofluoromethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	120%	50%	140%	103%	50%	140%	112%	50%	140%
Acetone	3866974	3866974	<0.50	<0.50	NA	< 0.50	113%	50%	140%	111%	50%	140%	87%	50%	140%
1,1-Dichloroethylene	3866974	3866974	<0.05	<0.05	NA	< 0.05	71%	50%	140%	77%	60%	130%	70%	50%	140%
Methylene Chloride	3866974	3866974	<0.05	<0.05	NA	< 0.05	87%	50%	140%	103%	60%	130%	105%	50%	140%
Trans- 1,2-Dichloroethylene	3866974	3866974	<0.05	<0.05	NA	< 0.05	80%	50%	140%	71%	60%	130%	112%	50%	140%
Methyl tert-butyl Ether	3866974	3866974	<0.05	<0.05	NA	< 0.05	74%	50%	140%	82%	60%	130%	80%	50%	140%
1,1-Dichloroethane	3866974	3866974	<0.02	<0.02	NA	< 0.02	84%	50%	140%	107%	60%	130%	94%	50%	140%
Methyl Ethyl Ketone	3866974	3866974	<0.50	<0.50	NA	< 0.50	113%	50%	140%	94%	50%	140%	86%	50%	140%
Cis- 1,2-Dichloroethylene	3866974	3866974	<0.02	<0.02	NA	< 0.02	78%	50%	140%	86%	60%	130%	88%	50%	140%
Chloroform	3866974	3866974	<0.04	<0.04	NA	< 0.04	77%	50%	140%	80%	60%	130%	80%	50%	140%
1,2-Dichloroethane	3866974	3866974	<0.03	<0.03	NA	< 0.03	80%	50%	140%	82%	60%	130%	84%	50%	140%
1,1,1-Trichloroethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	94%	50%	140%	76%	60%	130%	76%	50%	140%
Carbon Tetrachloride	3866974	3866974	<0.05	<0.05	NA	< 0.05	109%	50%	140%	113%	60%	130%	114%	50%	140%
Benzene	3866974	3866974	<0.02	<0.02	NA	< 0.02	75%	50%	140%	78%	60%	130%	79%	50%	140%
1,2-Dichloropropane	3866974	3866974	<0.03	<0.03	NA	< 0.03	92%	50%	140%	92%	60%	130%	81%	50%	140%
Trichloroethylene	3866974	3866974	<0.03	<0.03	NA	< 0.03	76%	50%	140%	82%	60%	130%	90%	50%	140%
Bromodichloromethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	76%	50%	140%	76%	60%	130%	84%	50%	140%
Methyl Isobutyl Ketone	3866974	3866974	<0.50	<0.50	NA	< 0.50	118%	50%	140%	90%	50%	140%	86%	50%	140%
1,1,2-Trichloroethane	3866974	3866974	<0.04	<0.04	NA	< 0.04	109%	50%	140%	116%	60%	130%	116%	50%	140%
Toluene	3866974	3866974	<0.05	<0.05	NA	< 0.05	100%	50%	140%	108%	60%	130%	107%	50%	140%
Dibromochloromethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	116%	50%	140%	119%	60%	130%	111%	50%	140%
Ethylene Dibromide	3866974	3866974	<0.04	<0.04	NA	< 0.04	99%	50%	140%	111%	60%	130%	106%	50%	140%
Tetrachloroethylene	3866974	3866974	<0.05	<0.05	NA	< 0.05	107%	50%	140%	102%	60%	130%	108%	50%	140%
1,1,1,2-Tetrachloroethane	3866974	3866974	<0.04	<0.04	NA	< 0.04	116%	50%	140%	91%	60%	130%	89%	50%	140%
Chlorobenzene	3866974	3866974	<0.05	<0.05	NA	< 0.05	104%	50%	140%	110%	60%	130%	109%	50%	140%
Ethylbenzene	3866974	3866974	<0.05	<0.05	NA	< 0.05	86%	50%	140%	89%	60%	130%	89%	50%	140%
m & p-Xylene	3866974	3866974	<0.05	<0.05	NA	< 0.05	97%	50%	140%	102%	60%	130%	99%	50%	140%
Bromoform	3866974	3866974	<0.05	<0.05	NA	< 0.05	109%	50%	140%	84%	60%	130%	94%	50%	140%
Styrene	3866974	3866974	<0.05	<0.05	NA	< 0.05	85%	50%	140%	90%	60%	130%	85%	50%	140%
1,1,2,2-Tetrachloroethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	106%	50%	140%	99%	60%	130%	113%	50%	140%
o-Xylene	3866974	3866974	<0.05	<0.05	NA	< 0.05	94%	50%	140%	102%	60%	130%	98%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD
PROJECT: 21494078 - 1047 Richmond fengate
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 22Z895974
ATTENTION TO: Daniel Stabile
SAMPLED BY:DG/KG

Trace Organics Analysis (Continued)

RPT Date: May 24, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	3866974	3866974	<0.05	<0.05	NA	< 0.05	111%	50%	140%	113%	60%	130%	113%	50%	140%
1,4-Dichlorobenzene	3866974	3866974	<0.05	<0.05	NA	< 0.05	104%	50%	140%	113%	60%	130%	105%	50%	140%
1,2-Dichlorobenzene	3866974	3866974	<0.05	<0.05	NA	< 0.05	100%	50%	140%	107%	60%	130%	103%	50%	140%
n-Hexane	3866974	3866974	<0.05	<0.05	NA	< 0.05	95%	50%	140%	79%	60%	130%	91%	50%	140%

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

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)															
Moisture Content	3866971	3866971	8.81	10.00	12.7%	< 0.1	NA			NA			NA		
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	3866067		<0.02	<0.02	NA	< 0.02	96%	60%	140%	137%	60%	140%	121%	60%	140%
Toluene	3866067		<0.05	<0.05	NA	< 0.05	108%	60%	140%	134%	60%	140%	93%	60%	140%
Ethylbenzene	3866067		<0.05	<0.05	NA	< 0.05	134%	60%	140%	120%	60%	140%	130%	60%	140%
m & p-Xylene	3866067		<0.05	<0.05	NA	< 0.05	129%	60%	140%	107%	60%	140%	102%	60%	140%
o-Xylene	3866067		<0.05	<0.05	NA	< 0.05	125%	60%	140%	130%	60%	140%	102%	60%	140%
F1 (C6 - C10)	3866067		<5	<5	NA	< 5	97%	60%	140%	90%	60%	140%	102%	60%	140%

Certified By: N Popowkolof

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

1 Mech.

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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 22Z895974

Cooler Quantity: one - loose ice.

Arrival Temperatures: 7.5 | 7.8 | 7.8
6.3 | 5.7 | 5.4

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: ice

Report Information:

Company: WSP - Golder
Contact: Daniel Stabile, Ben Waechter
Address: 1931 Robertson Rd. Nepean, ON. K2H 5B7
Phone: 905-213-4732 2nd Phone: 613-592-9600
Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email: Ben.Waechter@wsp.com

Project Information:

Project: 21494078 - 1047 Richmond Fengate.
Site Location: 1047 Richmond Rd
Sampled By: Dany Giroux/ Kinjal Gajjar
AGAT ID #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company: WSP-Golder
Contact: Daniel Stabile
Address: 1931 Robertson Rd. Nepean, ON.
Email: daniel.stabile@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☑ Res/Park
☐ Agriculture

Soil Texture (Check One)
☐ Coarse
☐ Fine

☐ Excess Soils R406
Table _____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
_____ (Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
_____ (Indicate One)

Is this submission for a Record of Site Condition? ☑ Yes ☐ No

Report Guideline on Certificate of Analysis ☑ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT (Most Analysis) ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs	Analyze F4G if required ☐ Yes ☐ No	PAHs	Total PCBs ☐ Aroclor	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
BH22-01 SA2	11 May 22	AM/PM	3	S					✓				✓					
BH22-02 SA4	9 May 22	10:45 AM/PM	3	S					✓				✓					
BH22-03 SA2	10 May 22	AM/PM	3	S					✓				✓					
BH22-04 SA7	9 May 22	1:55 AM/PM	3	S					✓				✓					
BH22-05 SA4	11 May 22	AM/PM	3	S					✓				✓					
		AM/PM																
		AM/PM																
		AM/PM																
		AM/PM																
		AM/PM																
		AM/PM																

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Ben Waechter	16 May 22	14:48	C. Guillet MAY 16 2022		14h50
CC to purolator MAY 18 2022	16h00		Simon	17/5/22	9:00

Page _____ of _____

N°: T114985

AGAT Laboratories

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CLIENT NAME: WSP CANADA INC.
600 Cochrane Drive, 2nd Floor
MARKHAM, ON L3R 5K3
(905) 475

ATTENTION TO: Daniel Stabile

PROJECT: 21494078-1047 Richmond Fengate

AGAT WORK ORDER: 22T901122

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Jun 07, 2022

PAGES (INCLUDING COVER): 12

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Certificate of Analysis

AGAT WORK ORDER: 22T901122

PROJECT: 21494078-1047 Richmond Fengate

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond rd

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2022-05-30

DATE REPORTED: 2022-06-07

				SAMPLE DESCRIPTION:	MW 22-01	MW 22-02	MW 22-03	MW 22-04	MW 22-05	MW 21-04	MW 21-14	MW 21-14 dup
				SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water	Water
				DATE SAMPLED:	2022-05-26 15:05	2022-05-26 12:55	2022-05-26 11:08	2022-05-26 13:52	2022-05-26 16:42	2022-05-26 16:02	2022-05-26 14:48	2022-05-26 14:48
Parameter	Unit	G / S	RDL		3911644	3911660	3911661	3911662	3911663	3911664	3911665	3911666
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
F1 (C6 - C10)	µg/L		25		<25	<25	<25	<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25	<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100		<100	<100	120	<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100		<100	<100	300	<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100		<100	<100	<100	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA	NA	NA	NA	NA	NA
Sediment					No	No	No	No	No	No	No	No
Surrogate	Unit	Acceptable Limits										
Toluene-d8	%	50-140			92	104	107	101	106	102	100	98
Terphenyl	% Recovery	60-140			98	80	110	75	108	86	93	103

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3911644-3911666 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 22T901122

PROJECT: 21494078-1047 Richmond Fengate

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond rd

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2022-05-30

DATE REPORTED: 2022-06-07

		SAMPLE DESCRIPTION:		Field Blank	Trip Blank
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2022-05-26 13:19	2022-05-26 13:19
Parameter	Unit	G / S	RDL	3911667	3911747
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10

Certified By: N Popowkolof

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PROJECT: 21494078-1047 Richmond Fengate

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond rd

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2022-05-30

DATE REPORTED: 2022-06-07

				SAMPLE DESCRIPTION:	Field Blank	Trip Blank
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2022-05-26 13:19	2022-05-26 13:19
Parameter	Unit	G / S	RDL		3911667	3911747
m & p-Xylene	µg/L		0.20		<0.20	<0.20
Bromoform	µg/L	5	0.10		<0.10	<0.10
Styrene	µg/L	43	0.10		<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10	<0.10
o-Xylene	µg/L		0.10		<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20
n-Hexane	µg/L	5	0.20		<0.20	<0.20
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140			122	103
4-Bromofluorobenzene	% Recovery	50-140			82	84

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3911667-3911747 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

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AGAT WORK ORDER: 22T901122

PROJECT: 21494078-1047 Richmond Fengate

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond rd

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2022-05-30

DATE REPORTED: 2022-06-07

		SAMPLE DESCRIPTION:		MW 22-01	MW 22-02	MW 22-03	MW 22-04	MW 22-05	MW 21-04	MW 21-14	MW 21-14 dup
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2022-05-26 15:05	2022-05-26 12:55	2022-05-26 11:08	2022-05-26 13:52	2022-05-26 16:42	2022-05-26 16:02	2022-05-26 14:48	2022-05-26 14:48
Parameter	Unit	G / S	RDL	3911644	3911660	3911661	3911662	3911663	3911664	3911665	3911666
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	0.42	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	3.14	<0.20	<0.20	3.99	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	2.39	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	5.88	<0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Certified By: NPopowkolof

Results relate only to the items tested. Results apply to samples as received.

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AGAT WORK ORDER: 22T901122

PROJECT: 21494078-1047 Richmond Fengate

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond rd

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2022-05-30

DATE REPORTED: 2022-06-07

		SAMPLE DESCRIPTION:		MW 22-01	MW 22-02	MW 22-03	MW 22-04	MW 22-05	MW 21-04	MW 21-14	MW 21-14 dup
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2022-05-26 15:05	2022-05-26 12:55	2022-05-26 11:08	2022-05-26 13:52	2022-05-26 16:42	2022-05-26 16:02	2022-05-26 14:48	2022-05-26 14:48
Parameter	Unit	G / S	RDL	3911644	3911660	3911661	3911662	3911663	3911664	3911665	3911666
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	43	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	5.99	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits									
Toluene-d8	% Recovery	50-140		92	104	107	101	106	102	100	98
4-Bromofluorobenzene	% Recovery	50-140		73	93	103	84	112	105	102	112

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3911644-3911666 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

5835 COOPERS AVENUE
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Exceedance Summary

AGAT WORK ORDER: 22T901122

PROJECT: 21494078-1047 Richmond Fengate

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3911661	MW 22-03	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (with PHC) (Water)	1,2-Dichloroethane	µg/L	0.5	3.14
3911664	MW 21-04	ON T7 NPGW CT	O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)	Benzene	µg/L	0.5	2.39
3911664	MW 21-04	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (with PHC) (Water)	1,2-Dichloroethane	µg/L	0.5	3.99
3911664	MW 21-04	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (with PHC) (Water)	Benzene	µg/L	0.5	2.39

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 21494078-1047 Richmond Fengate

SAMPLING SITE:1047 Richmond rd

AGAT WORK ORDER: 22T901122

ATTENTION TO: Daniel Stabile

SAMPLED BY:Ben Waechter

Trace Organics Analysis

RPT Date: Jun 07, 2022

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)															
F1 (C6 - C10)	3915063		87	114	NA	< 25	74%	60%	140%	81%	60%	140%	78%	60%	140%
F2 (C10 to C16)	3911661	3911661	120	110	NA	< 100	114%	60%	140%	82%	60%	140%	81%	60%	140%
F3 (C16 to C34)	3911661	3911661	300	260	NA	< 100	103%	60%	140%	82%	60%	140%	76%	60%	140%
F4 (C34 to C50)	3911661	3911661	< 100	< 100	NA	< 100	94%	60%	140%	91%	60%	140%	88%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	3915063		<0.40	<0.40	NA	< 0.40	77%	50%	140%	83%	50%	140%	89%	50%	140%
Vinyl Chloride	3915063		<0.17	<0.17	NA	< 0.17	89%	50%	140%	101%	50%	140%	88%	50%	140%
Bromomethane	3915063		<0.20	<0.20	NA	< 0.20	119%	50%	140%	94%	50%	140%	115%	50%	140%
Trichlorofluoromethane	3915063		<0.40	<0.40	NA	< 0.40	80%	50%	140%	91%	50%	140%	104%	50%	140%
Acetone	3915063		<1.0	<1.0	NA	< 1.0	95%	50%	140%	106%	50%	140%	109%	50%	140%
1,1-Dichloroethylene	3915063		<0.30	<0.30	NA	< 0.30	72%	50%	140%	76%	60%	130%	91%	50%	140%
Methylene Chloride	3915063		<0.30	<0.30	NA	< 0.30	99%	50%	140%	111%	60%	130%	107%	50%	140%
trans- 1,2-Dichloroethylene	3915063		<0.20	<0.20	NA	< 0.20	80%	50%	140%	80%	60%	130%	97%	50%	140%
Methyl tert-butyl ether	3915063		<0.20	<0.20	NA	< 0.20	92%	50%	140%	114%	60%	130%	94%	50%	140%
1,1-Dichloroethane	3915063		<0.30	<0.30	NA	< 0.30	80%	50%	140%	92%	60%	130%	93%	50%	140%
Methyl Ethyl Ketone	3915063		<1.0	<1.0	NA	< 1.0	94%	50%	140%	103%	50%	140%	118%	50%	140%
cis- 1,2-Dichloroethylene	3915063		<0.20	<0.20	NA	< 0.20	96%	50%	140%	99%	60%	130%	95%	50%	140%
Chloroform	3915063		<0.20	<0.20	NA	< 0.20	107%	50%	140%	98%	60%	130%	103%	50%	140%
1,2-Dichloroethane	3915063		<0.20	<0.20	NA	< 0.20	79%	50%	140%	96%	60%	130%	117%	50%	140%
1,1,1-Trichloroethane	3915063		<0.30	<0.30	NA	< 0.30	75%	50%	140%	80%	60%	130%	97%	50%	140%
Carbon Tetrachloride	3915063		<0.20	<0.20	NA	< 0.20	72%	50%	140%	74%	60%	130%	106%	50%	140%
Benzene	3915063		0.48	0.50	NA	< 0.20	90%	50%	140%	88%	60%	130%	77%	50%	140%
1,2-Dichloropropane	3915063		<0.20	<0.20	NA	< 0.20	90%	50%	140%	76%	60%	130%	80%	50%	140%
Trichloroethylene	3915063		<0.20	<0.20	NA	< 0.20	79%	50%	140%	77%	60%	130%	86%	50%	140%
Bromodichloromethane	3915063		<0.20	<0.20	NA	< 0.20	82%	50%	140%	80%	60%	130%	99%	50%	140%
Methyl Isobutyl Ketone	3915063		<1.0	<1.0	NA	< 1.0	95%	50%	140%	105%	50%	140%	104%	50%	140%
1,1,2-Trichloroethane	3915063		<0.20	<0.20	NA	< 0.20	100%	50%	140%	111%	60%	130%	118%	50%	140%
Toluene	3915063		<0.20	<0.20	NA	< 0.20	88%	50%	140%	87%	60%	130%	75%	50%	140%
Dibromochloromethane	3915063		<0.10	<0.10	NA	< 0.10	119%	50%	140%	118%	60%	130%	114%	50%	140%
Ethylene Dibromide	3915063		<0.10	<0.10	NA	< 0.10	110%	50%	140%	118%	60%	130%	113%	50%	140%
Tetrachloroethylene	3915063		<0.20	<0.20	NA	< 0.20	87%	50%	140%	87%	60%	130%	74%	50%	140%
1,1,1,2-Tetrachloroethane	3915063		<0.10	<0.10	NA	< 0.10	86%	50%	140%	85%	60%	130%	72%	50%	140%
Chlorobenzene	3915063		<0.10	<0.10	NA	< 0.10	90%	50%	140%	90%	60%	130%	79%	50%	140%
Ethylbenzene	3915063		2.86	2.83	1.1%	< 0.10	72%	50%	140%	80%	60%	130%	94%	50%	140%
m & p-Xylene	3915063		<0.20	<0.20	NA	< 0.20	88%	50%	140%	83%	60%	130%	113%	50%	140%
Bromoform	3915063		<0.10	<0.10	NA	< 0.10	102%	50%	140%	110%	60%	130%	98%	50%	140%
Styrene	3915063		<0.10	<0.10	NA	< 0.10	80%	50%	140%	75%	60%	130%	96%	50%	140%
1,1,2,2-Tetrachloroethane	3915063		<0.10	<0.10	NA	< 0.10	93%	50%	140%	97%	60%	130%	88%	50%	140%
o-Xylene	3915063		<0.10	<0.10	NA	< 0.10	93%	50%	140%	89%	60%	130%	77%	50%	140%

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078-1047 Richmond Fengate
SAMPLING SITE:1047 Richmond rd

AGAT WORK ORDER: 22T901122
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ben Waechter

Trace Organics Analysis (Continued)

RPT Date: Jun 07, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	3915063		<0.10	<0.10	NA	< 0.10	115%	50%	140%	108%	60%	130%	104%	50%	140%
1,4-Dichlorobenzene	3915063		<0.10	<0.10	NA	< 0.10	115%	50%	140%	109%	60%	130%	104%	50%	140%
1,2-Dichlorobenzene	3915063		<0.10	<0.10	NA	< 0.10	109%	50%	140%	100%	60%	130%	98%	50%	140%
n-Hexane	3915063		<0.20	<0.20	NA	< 0.20	106%	50%	140%	108%	60%	130%	106%	50%	140%

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

Certified By:

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 22T901122

PROJECT: 21494078-1047 Richmond Fengate

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond rd

SAMPLED BY:Ben Waechter

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Xylenes (Total)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Sediment			
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 22T901122

PROJECT: 21494078-1047 Richmond Fengate

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond rd

SAMPLED BY:Ben Waechter

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Chain of Custody Record

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

Laboratory Use Only 22T901122
Work Order #: ~~22T900946~~

Cooler Quantity: 1 Large
Arrival Temperatures: 2.0 6.3 16.7
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Melted Ice

Report Information:

Company: WSP-Golder
Contact: Daniel Stabile; Ben Waechter
Address: 1931 Robertson Rd. Nepean, ON, K2H 5B7
Phone: 905-213-4752 Fax: 613-592-9600
Reports to be sent to:
1. Email: Daniel.Stabile@WSP.com
2. Email: Ben.Waechter@WSP.com

Project Information:

Project: 21494078- 1047 Richmond Tengate
Site Location: 1047 Richmond Rd
Sampled By: Ben Waechter
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company: WSP-Golder
Contact: Daniel Stabile
Address: 1931 Robertson Rd. Nepean, ON.
Email: daniel.stabile@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com ☑ Res/Park ☐ Agriculture
Soil Texture (Check One): ☐ Coarse ☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)
☐ Regulation 558
☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
____ (Region)
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): ____

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
MW 22-01	26 May 22	13:05 AM/PM	8	GW			✓		✓				✓			✓		
MW 22-02		12:55 AM/PM	8	GW			✓		✓				✓			✓		
MW 22-03		11:08 AM/PM	8	GW			✓		✓				✓			✓		
MW 22-04		1:52 AM/PM	8	GW			✓		✓				✓			✓		
MW 22-05		1:12 AM/PM	8	GW			✓		✓				✓			✓		
MW 21-04		4:02 AM/PM	8	GW			✓		✓				✓			✓		
MW 21-14		2:48 AM/PM	8	GW			✓		✓				✓			✓		
MW 21-14 DUP		2:48 AM/PM	8	GW			✓		✓				✓			✓		
Field Blank	26 May 22	1:14 AM/PM	8	GW	Distilled Water		✓		✓				✓			✓		
Trip Blanks		AM/PM											✓					
		AM/PM																

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Ben Waechter	27 May 22	09:10	Troy Burgins	05/27/22	9:35 AM
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
			Anthony Davis		
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

22MAY30 9:38AM

Page ____ of ____

N°: T 132679

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: GOLDER ASSOCIATES LTD.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727

ATTENTION TO: Daniel Stabile

PROJECT: 21494078

AGAT WORK ORDER: 22Z970560

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Nov 24, 2022

PAGES (INCLUDING COVER): 9

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
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Certificate of Analysis

AGAT WORK ORDER: 22Z970560

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2022-11-16

DATE REPORTED: 2022-11-24

SAMPLE DESCRIPTION:				22-8	21-14	21-4	dup 2	22-1	22-2	22-4	trip blank
SAMPLE TYPE:				Water	Water	Water	Water	Water	Water	Water	Water
DATE SAMPLED:				2022-11-15 13:50	2022-11-15 13:50	2022-11-15 15:40	2022-11-15 15:40	2022-11-16 11:00	2022-11-16 12:45	2022-11-16 13:30	2022-11-15 13:50
Parameter	Unit	G / S	RDL	4531761	4531768	4531770	4531771	4531772	4531773	4531774	4531775
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	1.45	7.67	7.39	<0.20	7.69	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	0.54	3.98	3.98	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 22Z970560

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2022-11-16

DATE REPORTED: 2022-11-24

		SAMPLE DESCRIPTION:		22-8	21-14	21-4	dup 2	22-1	22-2	22-4	trip blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2022-11-15 13:50	2022-11-15 13:50	2022-11-15 15:40	2022-11-15 15:40	2022-11-16 11:00	2022-11-16 12:45	2022-11-16 13:30	2022-11-15 13:50
Parameter	Unit	G / S	RDL	4531761	4531768	4531770	4531771	4531772	4531773	4531774	4531775
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	43	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10	<0.10	1.59	5.13	4.99	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits									
Toluene-d8	% Recovery	50-140		96	99	100	105	128	117	120	101
4-Bromofluorobenzene	% Recovery	50-140		87	83	87	86	86	84	87	84

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

4531761-4531775 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

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Exceedance Summary

AGAT WORK ORDER: 22Z970560

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
4531768	21-14	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	1.45
4531770	21-4	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	7.67
4531771	dup 2	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	7.39
4531773	22-2	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	7.69

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd

AGAT WORK ORDER: 22Z970560
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

Trace Organics Analysis

RPT Date: Nov 24, 2022

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	4535302		<0.40	<0.40	NA	< 0.40	115%	50%	140%	113%	50%	140%	115%	50%	140%
Vinyl Chloride	4535302		<0.17	<0.17	NA	< 0.17	115%	50%	140%	112%	50%	140%	82%	50%	140%
Bromomethane	4535302		<0.20	<0.20	NA	< 0.20	119%	50%	140%	107%	50%	140%	103%	50%	140%
Trichlorofluoromethane	4535302		<0.40	<0.40	NA	< 0.40	106%	50%	140%	101%	50%	140%	117%	50%	140%
Acetone	4535302		<1.0	<1.0	NA	< 1.0	100%	50%	140%	116%	50%	140%	112%	50%	140%
1,1-Dichloroethylene	4535302		<0.30	<0.30	NA	< 0.30	96%	50%	140%	87%	60%	130%	93%	50%	140%
Methylene Chloride	4535302		<0.30	<0.30	NA	< 0.30	77%	50%	140%	115%	60%	130%	104%	50%	140%
trans- 1,2-Dichloroethylene	4535302		<0.20	<0.20	NA	< 0.20	99%	50%	140%	91%	60%	130%	89%	50%	140%
Methyl tert-butyl ether	4535302		<0.20	<0.20	NA	< 0.20	110%	50%	140%	102%	60%	130%	95%	50%	140%
1,1-Dichloroethane	4535302		<0.30	<0.30	NA	< 0.30	111%	50%	140%	101%	60%	130%	94%	50%	140%
Methyl Ethyl Ketone	4535302		<1.0	<1.0	NA	< 1.0	99%	50%	140%	117%	50%	140%	109%	50%	140%
cis- 1,2-Dichloroethylene	4535302		<0.20	<0.20	NA	< 0.20	102%	50%	140%	97%	60%	130%	93%	50%	140%
Chloroform	4535302		<0.20	<0.20	NA	< 0.20	105%	50%	140%	118%	60%	130%	112%	50%	140%
1,2-Dichloroethane	4535302		<0.20	<0.20	NA	< 0.20	115%	50%	140%	109%	60%	130%	101%	50%	140%
1,1,1-Trichloroethane	4535302		<0.30	<0.30	NA	< 0.30	95%	50%	140%	90%	60%	130%	80%	50%	140%
Carbon Tetrachloride	4535302		<0.20	<0.20	NA	< 0.20	85%	50%	140%	80%	60%	130%	79%	50%	140%
Benzene	4535302		<0.20	<0.20	NA	< 0.20	104%	50%	140%	97%	60%	130%	94%	50%	140%
1,2-Dichloropropane	4535302		<0.20	<0.20	NA	< 0.20	105%	50%	140%	104%	60%	130%	84%	50%	140%
Trichloroethylene	4535302		<0.20	<0.20	NA	< 0.20	101%	50%	140%	90%	60%	130%	89%	50%	140%
Bromodichloromethane	4535302		<0.20	<0.20	NA	< 0.20	109%	50%	140%	107%	60%	130%	90%	50%	140%
Methyl Isobutyl Ketone	4535302		<1.0	<1.0	NA	< 1.0	91%	50%	140%	100%	50%	140%	105%	50%	140%
1,1,2-Trichloroethane	4535302		<0.20	<0.20	NA	< 0.20	112%	50%	140%	107%	60%	130%	117%	50%	140%
Toluene	4535302		<0.20	<0.20	NA	< 0.20	109%	50%	140%	87%	60%	130%	109%	50%	140%
Dibromochloromethane	4535302		<0.10	<0.10	NA	< 0.10	109%	50%	140%	97%	60%	130%	110%	50%	140%
Ethylene Dibromide	4535302		<0.10	<0.10	NA	< 0.10	118%	50%	140%	105%	60%	130%	111%	50%	140%
Tetrachloroethylene	4535302		<0.20	<0.20	NA	< 0.20	100%	50%	140%	89%	60%	130%	111%	50%	140%
1,1,1,2-Tetrachloroethane	4535302		<0.10	<0.10	NA	< 0.10	101%	50%	140%	89%	60%	130%	112%	50%	140%
Chlorobenzene	4535302		<0.10	<0.10	NA	< 0.10	107%	50%	140%	93%	60%	130%	113%	50%	140%
Ethylbenzene	4535302		<0.10	<0.10	NA	< 0.10	120%	50%	140%	104%	60%	130%	115%	50%	140%
m & p-Xylene	4535302		<0.20	<0.20	NA	< 0.20	110%	50%	140%	114%	60%	130%	110%	50%	140%
Bromoform	4535302		<0.10	<0.10	NA	< 0.10	101%	50%	140%	101%	60%	130%	118%	50%	140%
Styrene	4535302		<0.10	<0.10	NA	< 0.10	115%	50%	140%	95%	60%	130%	107%	50%	140%
1,1,2,2-Tetrachloroethane	4535302		<0.10	<0.10	NA	< 0.10	113%	50%	140%	108%	60%	130%	114%	50%	140%
o-Xylene	4535302		<0.10	<0.10	NA	< 0.10	109%	50%	140%	103%	60%	130%	102%	50%	140%
1,3-Dichlorobenzene	4535302		<0.10	<0.10	NA	< 0.10	107%	50%	140%	88%	60%	130%	114%	50%	140%
1,4-Dichlorobenzene	4535302		<0.10	<0.10	NA	< 0.10	109%	50%	140%	89%	60%	130%	114%	50%	140%
1,2-Dichlorobenzene	4535302		<0.10	<0.10	NA	< 0.10	113%	50%	140%	90%	60%	130%	119%	50%	140%
n-Hexane	4535302		<0.20	<0.20	NA	< 0.20	108%	50%	140%	94%	60%	130%	77%	50%	140%
Toluene-d8	4535302		100	103	3.2%	< 1	NA			NA			96%		

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Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 22Z970560

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

Trace Organics Analysis (Continued)

RPT Date: Nov 24, 2022			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Certified By:

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 22Z970560

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 22Z970560

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Mississauga, Ontario L4Z 1Y2
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webearth.agatlabs.com

Chain of Custody Record

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

Laboratory Use Only
Work Order #: 22797056O
Cooler Quantity: one - on ice
Arrival Temperatures: 5.8 5.7 5.7 / 2.8 2.3 2.5
Custody Seal Intact: ☐Yes ☐No ☐N/A
Notes: Bagged ice.

Report Information:
Company: Golder
Contact: Daniel Stabile
Address:
Phone: Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email:

Regulatory Requirements:
(Please check all applicable boxes)
☒ Regulation 153/04 — Table 7 (Indicate One) — ☐Ind/Com ☒Res/Park ☐Agriculture
Soil Texture (Check One): ☒Coarse ☐Fine
☐ Excess Soils R406 — Table (Indicate One)
☐ Regulation 558
☐ CCME
☐ Sewer Use ☐Sanitary ☐Storm (Region)
☐ Prov. Water Quality Objectives (PWQO)
☐ Other (Indicate One)

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No
Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

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

Project Information:
Project: 21494078
Site Location: 1047 Richmond Rd.
Sampled By: Ryan Francis
AGAT ID #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:
Bill To Same: Yes ☐ No ☐
Company: Golder
Contact: Daniel Stabile
Address: PO# 21494078
Email: daniel.stabile@wsp.com

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVi, DOC Y/N	O. Reg 153: Metals & Inorganics	Metals - ☐CrVi, ☐Hg, ☐HWSB	BTEX, F1-F4 PHCs Analyze F4G if required ☐Yes ☐No	PAHs	Total PCBs ☐Aroclor	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐M&I ☐VOCs ☐ABNs ☐B(a)P ☐PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐Metals ☐VOCs ☐SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
22-05	Nov 15/22	1:50 PM	3	GW								✓					N
21-14	↓	1:50 PM	3	GW								✓					Y
DUP 1		1:50 PM	3	GW	Please hold							✓					Y
21-4		3:40 PM	3	GW								✓					N
DUP 2	↓	3:40 PM	3	GW								✓					N
22-1	Nov 16/22	11:00 PM	3	GW								✓					N
22-2	↓	12:45 PM	3	GW								✓					N
22-4	↓	1:30 PM	3	GW								✓					Y
Trip Blank			3	GW								✓					
		AM PM															
		AM PM															
		AM PM															

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Ryan Francis	Nov 16/22	3:30	Ben Thelet	22-11-16	15h38
Carlo Pinto	NOV 17 2022	16h00	Sana Qureshi	16 Nov/22	9:10am
	Date	Time	Samples Received By (Print Name and Sign)	Date	Time

Page 1 of 1
N°: T 122894

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CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600
ATTENTION TO: Daniel Stabile
PROJECT: 21494078
AGAT WORK ORDER: 23Z996204
TRACE ORGANICS REVIEWED BY: Radhika Chakraberty, Trace Organics Lab Manager
DATE REPORTED: Feb 15, 2023
PAGES (INCLUDING COVER): 9
VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 23Z996204
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-02-09

DATE REPORTED: 2023-02-15

		SAMPLE DESCRIPTION:		MW22-02	DUP-1
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2023-02-09 13:20	2023-02-09 13:20
Parameter	Unit	G / S	RDL	4762797	4762799
Dichlorodifluoromethane	µg/L	3500	0.80	<0.80	<0.80
Vinyl Chloride	µg/L	0.5	0.34	<0.34	<0.34
Bromomethane	µg/L	0.89	0.40	<0.40	<0.40
Trichlorofluoromethane	µg/L	2000	0.80	<0.80	<0.80
Acetone	µg/L	100000	2.0	<2.0	<2.0
1,1-Dichloroethylene	µg/L	0.5	0.60	<0.60	<0.60
Methylene Chloride	µg/L	26	0.60	<0.60	<0.60
trans- 1,2-Dichloroethylene	µg/L	1.6	0.40	<0.40	<0.40
Methyl tert-butyl ether	µg/L	15	0.40	<0.40	<0.40
1,1-Dichloroethane	µg/L	11	0.60	<0.60	<0.60
Methyl Ethyl Ketone	µg/L	21000	2.0	<2.0	<2.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.40	<0.40	<0.40
Chloroform	µg/L	2	0.40	<0.40	<0.40
1,2-Dichloroethane	µg/L	0.5	0.40	2.48	2.58
1,1,1-Trichloroethane	µg/L	23	0.60	<0.60	<0.60
Carbon Tetrachloride	µg/L	0.2	0.40	<0.40	<0.40
Benzene	µg/L	0.5	0.40	<0.40	<0.40
1,2-Dichloropropane	µg/L	0.58	0.40	<0.40	<0.40
Trichloroethylene	µg/L	0.5	0.40	<0.40	<0.40
Bromodichloromethane	µg/L	67000	0.40	<0.40	<0.40
Methyl Isobutyl Ketone	µg/L	5200	2.0	<2.0	<2.0
1,1,2-Trichloroethane	µg/L	0.5	0.40	<0.40	<0.40
Toluene	µg/L	320	0.40	<0.40	<0.40
Dibromochloromethane	µg/L	65000	0.20	<0.20	<0.20
Ethylene Dibromide	µg/L	0.2	0.20	<0.20	<0.20
Tetrachloroethylene	µg/L	0.5	0.40	<0.40	<0.40
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.20	<0.20	<0.20
Chlorobenzene	µg/L	140	0.20	<0.20	<0.20
Ethylbenzene	µg/L	54	0.20	<0.20	<0.20

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z996204
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-02-09

DATE REPORTED: 2023-02-15

				SAMPLE DESCRIPTION:	MW22-02	DUP-1
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2023-02-09 13:20	2023-02-09 13:20
Parameter	Unit	G / S	RDL		4762797	4762799
m & p-Xylene	µg/L		0.40		<0.40	<0.40
Bromoform	µg/L	5	0.20		<0.20	<0.20
Styrene	µg/L	43	0.20		<0.20	<0.20
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.20		<0.20	<0.20
o-Xylene	µg/L		0.20		<0.20	<0.20
1,3-Dichlorobenzene	µg/L	7600	0.20		<0.20	<0.20
1,4-Dichlorobenzene	µg/L	0.5	0.20		<0.20	<0.20
1,2-Dichlorobenzene	µg/L	150	0.20		<0.20	<0.20
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20
n-Hexane	µg/L	5	0.40		<0.40	<0.40
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140			112	108
4-Bromofluorobenzene	% Recovery	50-140			81	81

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

4762797-4762799 Dilution factor=2
VOC-The sample was diluted because it was foamy. The reporting detection limit has been corrected for the dilution factor used.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

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Exceedance Summary

AGAT WORK ORDER: 23Z996204

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
4762797	MW22-02	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	2.48
4762799	DUP-1	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	2.58

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd

AGAT WORK ORDER: 23Z996204
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

Trace Organics Analysis

RPT Date: Feb 15, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	4765688		<0.40	<0.40	NA	< 0.40	109%	50%	140%	98%	50%	140%	112%	50%	140%
Vinyl Chloride	4765688		<0.17	<0.17	NA	< 0.17	79%	50%	140%	106%	50%	140%	82%	50%	140%
Bromomethane	4765688		<0.20	<0.20	NA	< 0.20	115%	50%	140%	94%	50%	140%	97%	50%	140%
Trichlorofluoromethane	4765688		<0.40	<0.40	NA	< 0.40	103%	50%	140%	105%	50%	140%	90%	50%	140%
Acetone	4765688		<1.0	<1.0	NA	< 1.0	97%	50%	140%	103%	50%	140%	106%	50%	140%
1,1-Dichloroethylene	4765688		<0.30	<0.30	NA	< 0.30	89%	50%	140%	98%	60%	130%	74%	50%	140%
Methylene Chloride	4765688		<0.30	<0.30	NA	< 0.30	97%	50%	140%	95%	60%	130%	80%	50%	140%
trans- 1,2-Dichloroethylene	4765688		<0.20	<0.20	NA	< 0.20	98%	50%	140%	104%	60%	130%	76%	50%	140%
Methyl tert-butyl ether	4765688		<0.20	<0.20	NA	< 0.20	93%	50%	140%	88%	60%	130%	80%	50%	140%
1,1-Dichloroethane	4765688		<0.30	<0.30	NA	< 0.30	97%	50%	140%	105%	60%	130%	80%	50%	140%
Methyl Ethyl Ketone	4765688		<1.0	<1.0	NA	< 1.0	99%	50%	140%	97%	50%	140%	84%	50%	140%
cis- 1,2-Dichloroethylene	4765688		<0.20	<0.20	NA	< 0.20	105%	50%	140%	89%	60%	130%	83%	50%	140%
Chloroform	4765688		<0.20	<0.20	NA	< 0.20	111%	50%	140%	118%	60%	130%	94%	50%	140%
1,2-Dichloroethane	4765688		<0.20	<0.20	NA	< 0.20	114%	50%	140%	117%	60%	130%	91%	50%	140%
1,1,1-Trichloroethane	4765688		<0.30	<0.30	NA	< 0.30	84%	50%	140%	97%	60%	130%	108%	50%	140%
Carbon Tetrachloride	4765688		<0.20	<0.20	NA	< 0.20	88%	50%	140%	79%	60%	130%	75%	50%	140%
Benzene	4765688		<0.20	<0.20	NA	< 0.20	105%	50%	140%	111%	60%	130%	85%	50%	140%
1,2-Dichloropropane	4765688		<0.20	<0.20	NA	< 0.20	109%	50%	140%	114%	60%	130%	84%	50%	140%
Trichloroethylene	4765688		<0.20	<0.20	NA	< 0.20	78%	50%	140%	79%	60%	130%	84%	50%	140%
Bromodichloromethane	4765688		<0.20	<0.20	NA	< 0.20	76%	50%	140%	85%	60%	130%	70%	50%	140%
Methyl Isobutyl Ketone	4765688		<1.0	<1.0	NA	< 1.0	86%	50%	140%	113%	50%	140%	111%	50%	140%
1,1,2-Trichloroethane	4765688		<0.20	<0.20	NA	< 0.20	102%	50%	140%	108%	60%	130%	113%	50%	140%
Toluene	4765688		<0.20	<0.20	NA	< 0.20	86%	50%	140%	100%	60%	130%	100%	50%	140%
Dibromochloromethane	4765688		<0.10	<0.10	NA	< 0.10	72%	50%	140%	76%	60%	130%	94%	50%	140%
Ethylene Dibromide	4765688		<0.10	<0.10	NA	< 0.10	98%	50%	140%	99%	60%	130%	105%	50%	140%
Tetrachloroethylene	4765688		<0.20	<0.20	NA	< 0.20	80%	50%	140%	99%	60%	130%	90%	50%	140%
1,1,1,2-Tetrachloroethane	4765688		<0.10	<0.10	NA	< 0.10	92%	50%	140%	105%	60%	130%	89%	50%	140%
Chlorobenzene	4765688		<0.10	<0.10	NA	< 0.10	90%	50%	140%	101%	60%	130%	102%	50%	140%
Ethylbenzene	4765688		<0.10	<0.10	NA	< 0.10	81%	50%	140%	96%	60%	130%	94%	50%	140%
m & p-Xylene	4765688		<0.20	<0.20	NA	< 0.20	83%	50%	140%	96%	60%	130%	94%	50%	140%
Bromoform	4765688		<0.10	<0.10	NA	< 0.10	75%	50%	140%	75%	60%	130%	75%	50%	140%
Styrene	4765688		<0.10	<0.10	NA	< 0.10	82%	50%	140%	89%	60%	130%	90%	50%	140%
1,1,2,2-Tetrachloroethane	4765688		<0.10	<0.10	NA	< 0.10	106%	50%	140%	102%	60%	130%	115%	50%	140%
o-Xylene	4765688		<0.10	<0.10	NA	< 0.10	86%	50%	140%	99%	60%	130%	99%	50%	140%
1,3-Dichlorobenzene	4765688		<0.10	<0.10	NA	< 0.10	92%	50%	140%	94%	60%	130%	101%	50%	140%
1,4-Dichlorobenzene	4765688		<0.10	<0.10	NA	< 0.10	94%	50%	140%	96%	60%	130%	98%	50%	140%
1,2-Dichlorobenzene	4765688		<0.10	<0.10	NA	< 0.10	96%	50%	140%	97%	60%	130%	100%	50%	140%
n-Hexane	4765688		<0.20	<0.20	NA	< 0.20	87%	50%	140%	92%	60%	130%	81%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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http://www.agatlabs.com

Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 21494078

SAMPLING SITE:1047 Richmond Rd

AGAT WORK ORDER: 23Z996204

ATTENTION TO: Daniel Stabile

SAMPLED BY:Ryan Francis

Trace Organics Analysis (Continued)

RPT Date: Feb 15, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Certified By: R. Chakraberty

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z996204

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z996204

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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AGAT Laboratories

WORK ORDER

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Mississauga, Ontario L4Z 1Y2
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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 2379962O4

Cooler Quantity: one - loose ice.

Arrival Temperatures: 4.1 | 4.0 | 4.1

LT 6.1 | 4.4 | 5.9

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes:

Report Information:

Company: WSP Canada Inc.
Contact: Daniel Stabile
Address: 1931 Robertson Rd.
Ottawa, ON
Phone: 905 723 2727 Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email:

Project Information:

Project: 21494078
Site Location: 1047 Richmond Rd
Sampled By: Ryan Francis
AGAT Quote #: PO: Competitive 2023 quote
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company:
Contact:
Address:
Email: gld-canada_accountspayableinvoices@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 7 (Indicate One)
☑ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture (Check One)
☑ Coarse
☐ Fine

☐ Excess Soils R406
Table (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
(Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
(Indicate One)

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 153: Aroclors	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: Include Moisture ☐ Sulphide ☐	Potentially Hazardous or High Concentration (Y/N)
MW 22-02	Feb 9/23	1:29 AM/PM	3	GW		N							✓						
DUP-1	Feb 9/23	1:20 AM/PM	3	GW		N							✓						
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Ryan Francis	Feb 9/23	2:45	C. Christian	FEB 09 2023	4:56
C. Christian	FEB 09 2023	16:00	M. GRASIC	Feb 10	8:45

Page 1 of 1

N°: T - 139028

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CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600
ATTENTION TO: Daniel Stabile
PROJECT: 21494078
AGAT WORK ORDER: 23Z006506
TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist
DATE REPORTED: Mar 22, 2023
PAGES (INCLUDING COVER): 9
VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z006506

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-03-16

DATE REPORTED: 2023-03-22

		SAMPLE DESCRIPTION:		MW 22-02	DUP-1
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2023-03-16 15:20	2023-03-16 15:20
Parameter	Unit	G / S	RDL	4860658	4860659
Dichlorodifluoromethane	µg/L	3500	0.80	<0.80	<0.80
Vinyl Chloride	µg/L	0.5	0.34	<0.34	<0.34
Bromomethane	µg/L	0.89	0.40	<0.40	<0.40
Trichlorofluoromethane	µg/L	2000	0.80	<0.80	<0.80
Acetone	µg/L	100000	2.0	<2.0	<2.0
1,1-Dichloroethylene	µg/L	0.5	0.60	<0.60	<0.60
Methylene Chloride	µg/L	26	0.60	<0.60	<0.60
trans- 1,2-Dichloroethylene	µg/L	1.6	0.40	<0.40	<0.40
Methyl tert-butyl ether	µg/L	15	0.40	<0.40	<0.40
1,1-Dichloroethane	µg/L	11	0.60	<0.60	<0.60
Methyl Ethyl Ketone	µg/L	21000	2.0	<2.0	<2.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.40	<0.40	<0.40
Chloroform	µg/L	2	0.40	<0.40	<0.40
1,2-Dichloroethane	µg/L	0.5	0.40	5.03	5.17
1,1,1-Trichloroethane	µg/L	23	0.60	<0.60	<0.60
Carbon Tetrachloride	µg/L	0.2	0.40	<0.40	<0.40
Benzene	µg/L	0.5	0.40	<0.40	<0.40
1,2-Dichloropropane	µg/L	0.58	0.40	<0.40	<0.40
Trichloroethylene	µg/L	0.5	0.40	<0.40	<0.40
Bromodichloromethane	µg/L	67000	0.40	<0.40	<0.40
Methyl Isobutyl Ketone	µg/L	5200	2.0	<2.0	<2.0
1,1,2-Trichloroethane	µg/L	0.5	0.40	<0.40	<0.40
Toluene	µg/L	320	0.40	<0.40	<0.40
Dibromochloromethane	µg/L	65000	0.20	<0.20	<0.20
Ethylene Dibromide	µg/L	0.2	0.20	<0.20	<0.20
Tetrachloroethylene	µg/L	0.5	0.40	<0.40	<0.40
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.20	<0.20	<0.20
Chlorobenzene	µg/L	140	0.20	<0.20	<0.20
Ethylbenzene	µg/L	54	0.20	<0.20	<0.20

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z006506

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-03-16

DATE REPORTED: 2023-03-22

				SAMPLE DESCRIPTION:	MW 22-02	DUP-1
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2023-03-16 15:20	2023-03-16 15:20
Parameter	Unit	G / S	RDL		4860658	4860659
m & p-Xylene	µg/L		0.40		<0.40	<0.40
Bromoform	µg/L	5	0.20		<0.20	<0.20
Styrene	µg/L	43	0.20		<0.20	<0.20
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.20		<0.20	<0.20
o-Xylene	µg/L		0.20		<0.20	<0.20
1,3-Dichlorobenzene	µg/L	7600	0.20		<0.20	<0.20
1,4-Dichlorobenzene	µg/L	0.5	0.20		<0.20	<0.20
1,2-Dichlorobenzene	µg/L	150	0.20		<0.20	<0.20
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20
n-Hexane	µg/L	5	0.40		<0.40	<0.40
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140			100	100
4-Bromofluorobenzene	% Recovery	50-140			81	83

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

4860658-4860659 Dilution factor=2
VOC-The sample was diluted because it was foamy. The reporting detection limit has been corrected for the dilution factor used.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

Results relate only to the items tested. Results apply to samples as received.

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Exceedance Summary

AGAT WORK ORDER: 23Z006506

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
4860658	MW 22-02	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	5.03
4860659	DUP-1	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	5.17

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z006506

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:Ryan Francis

Trace Organics Analysis

RPT Date: Mar 22, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	4857271		<0.40	<0.40	NA	< 0.40	72%	50%	140%	73%	50%	140%	90%	50%	140%
Vinyl Chloride	4857271		<0.17	<0.17	NA	< 0.17	90%	50%	140%	99%	50%	140%	107%	50%	140%
Bromomethane	4857271		<0.20	<0.20	NA	< 0.20	70%	50%	140%	72%	50%	140%	99%	50%	140%
Trichlorofluoromethane	4857271		<0.40	<0.40	NA	< 0.40	78%	50%	140%	77%	50%	140%	111%	50%	140%
Acetone	4857271		<1.0	<1.0	NA	< 1.0	90%	50%	140%	95%	50%	140%	106%	50%	140%
1,1-Dichloroethylene	4857271		<0.30	<0.30	NA	< 0.30	72%	50%	140%	76%	60%	130%	91%	50%	140%
Methylene Chloride	4857271		<0.30	<0.30	NA	< 0.30	78%	50%	140%	115%	60%	130%	111%	50%	140%
trans- 1,2-Dichloroethylene	4857271		<0.20	<0.20	NA	< 0.20	112%	50%	140%	73%	60%	130%	72%	50%	140%
Methyl tert-butyl ether	4857271		<0.20	<0.20	NA	< 0.20	77%	50%	140%	78%	60%	130%	89%	50%	140%
1,1-Dichloroethane	4857271		<0.30	<0.30	NA	< 0.30	88%	50%	140%	76%	60%	130%	83%	50%	140%
Methyl Ethyl Ketone	4857271		<1.0	<1.0	NA	< 1.0	88%	50%	140%	83%	50%	140%	100%	50%	140%
cis- 1,2-Dichloroethylene	4857271		1.99	1.89	5.2%	< 0.20	88%	50%	140%	77%	60%	130%	80%	50%	140%
Chloroform	4857271		<0.20	<0.20	NA	< 0.20	108%	50%	140%	91%	60%	130%	79%	50%	140%
1,2-Dichloroethane	4857271		<0.20	<0.20	NA	< 0.20	116%	50%	140%	95%	60%	130%	96%	50%	140%
1,1,1-Trichloroethane	4857271		<0.30	<0.30	NA	< 0.30	75%	50%	140%	105%	60%	130%	104%	50%	140%
Carbon Tetrachloride	4857271		<0.20	<0.20	NA	< 0.20	83%	50%	140%	71%	60%	130%	76%	50%	140%
Benzene	4857271		<0.20	<0.20	NA	< 0.20	92%	50%	140%	76%	60%	130%	76%	50%	140%
1,2-Dichloropropane	4857271		<0.20	<0.20	NA	< 0.20	95%	50%	140%	77%	60%	130%	79%	50%	140%
Trichloroethylene	4857271		3.56	3.45	3.1%	< 0.20	92%	50%	140%	73%	60%	130%	100%	50%	140%
Bromodichloromethane	4857271		<0.20	<0.20	NA	< 0.20	81%	50%	140%	75%	60%	130%	117%	50%	140%
Methyl Isobutyl Ketone	4857271		<1.0	<1.0	NA	< 1.0	94%	50%	140%	86%	50%	140%	86%	50%	140%
1,1,2-Trichloroethane	4857271		<0.20	<0.20	NA	< 0.20	104%	50%	140%	103%	60%	130%	92%	50%	140%
Toluene	4857271		<0.20	<0.20	NA	< 0.20	120%	50%	140%	89%	60%	130%	83%	50%	140%
Dibromochloromethane	4857271		<0.10	<0.10	NA	< 0.10	93%	50%	140%	86%	60%	130%	75%	50%	140%
Ethylene Dibromide	4857271		<0.10	<0.10	NA	< 0.10	118%	50%	140%	92%	60%	130%	83%	50%	140%
Tetrachloroethylene	4857271		23.9	22.8	4.8%	< 0.20	104%	50%	140%	85%	60%	130%	84%	50%	140%
1,1,1,2-Tetrachloroethane	4857271		<0.10	<0.10	NA	< 0.10	119%	50%	140%	93%	60%	130%	80%	50%	140%
Chlorobenzene	4857271		<0.10	<0.10	NA	< 0.10	103%	50%	140%	92%	60%	130%	87%	50%	140%
Ethylbenzene	4857271		<0.10	<0.10	NA	< 0.10	111%	50%	140%	75%	60%	130%	76%	50%	140%
m & p-Xylene	4857271		<0.20	<0.20	NA	< 0.20	108%	50%	140%	118%	60%	130%	101%	50%	140%
Bromoform	4857271		<0.10	<0.10	NA	< 0.10	87%	50%	140%	71%	60%	130%	82%	50%	140%
Styrene	4857271		<0.10	<0.10	NA	< 0.10	100%	50%	140%	84%	60%	130%	82%	50%	140%
1,1,2,2-Tetrachloroethane	4857271		<0.10	<0.10	NA	< 0.10	117%	50%	140%	104%	60%	130%	79%	50%	140%
o-Xylene	4857271		<0.10	<0.10	NA	< 0.10	112%	50%	140%	80%	60%	130%	74%	50%	140%
1,3-Dichlorobenzene	4857271		<0.10	<0.10	NA	< 0.10	119%	50%	140%	92%	60%	130%	89%	50%	140%
1,4-Dichlorobenzene	4857271		<0.10	<0.10	NA	< 0.10	113%	50%	140%	94%	60%	130%	90%	50%	140%
1,2-Dichlorobenzene	4857271		<0.10	<0.10	NA	< 0.10	112%	50%	140%	92%	60%	130%	85%	50%	140%
n-Hexane	4857271		<0.20	<0.20	NA	< 0.20	96%	50%	140%	100%	60%	130%	105%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z006506

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:Ryan Francis

Trace Organics Analysis (Continued)

RPT Date: Mar 22, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Certified By:

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Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z006506

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z006506

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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AGAT Laboratories — Work Order

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
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webearth.agatlabs.com

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 23700650

Cooler Quantity: one - 100se ice.

Arrival Temperatures: 6.4 16.2 16.3 3 7 13.9 14.1

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes:

Report Information:

Company: WSP Canada Inc.
Contact: Daniel Stabile
Address: 1931 Robertson Rd Ottawa, ON. K2H 5B7
Phone: Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email:

Project Information:

Project: 21494078
Site Location:
Sampled By: Ryan Francis
AGAT Quote #: MSA AGAT-WSP.735800-2023 Ottawa PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: WSP Canada Inc.
Contact: Daniel Stabile
Address: Project #: 21494078
Email: daniel.stabile@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture

Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
____ (Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	PAHs	PCBs	VOC	Aroclors	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: Include Moisture ☐ Sulphide ☐	Potentially Hazardous or High Concentration (Y/N)
MW 22-02	March 16/23	3:20 AM PM	3	GW								✓						
DUP-1	March 16/23	3:20 AM PM	3	GW								✓						
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																

Samples Relinquished By (Print Name and Sign): Ryan Francis	Date: March 16/23	Time: 4:30	Samples Received By (Print Name and Sign):	Date: MAR 16 2023 Time: 16h35
Samples Relinquished By (Print Name and Sign):	Date: MAR 17 2023	Time: 16h00	Samples Received By (Print Name and Sign):	Date: Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date: Time:

'23MAR 18 10:38 AM

Page 1 of 1

N°: T-139995

Document ID: DIV-78-1511.022

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600

ATTENTION TO: Brian Henderson

PROJECT: 21494078

AGAT WORK ORDER: 23Z029521

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Jun 02, 2023

PAGES (INCLUDING COVER): 8

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z029521
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Brian Henderson
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-29

DATE REPORTED: 2023-06-02

SAMPLE DESCRIPTION:				Trip Blank	Field Blank	22-10D	22-10S	22-09D	22-09S	DUP2
SAMPLE TYPE:				VOCs	VOCs	Water	Water	Water	Water	Water
DATE SAMPLED:				Water	Water	2023-05-29 09:50	2023-05-29 10:15	2023-05-29 11:48	2023-05-29 12:20	2023-05-29 11:48
Parameter	Unit	G / S	RDL	2023-05-29 5025065	2023-05-29 12:20 5025070	5025071	5025072	5025073	5025074	5025075
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 23Z029521

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Brian Henderson

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-29

DATE REPORTED: 2023-06-02

SAMPLE DESCRIPTION:				Trip Blank VOCs	Field Blank VOCs	22-10D	22-10S	22-09D	22-09S	DUP2
SAMPLE TYPE:				Water	Water	Water	Water	Water	Water	Water
DATE SAMPLED:				2023-05-29	2023-05-29 12:20	2023-05-29 09:50	2023-05-29 10:15	2023-05-29 11:48	2023-05-29 12:20	2023-05-29 11:48
Parameter	Unit	G / S	RDL	5025065	5025070	5025071	5025072	5025073	5025074	5025075
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	43	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits								
Toluene-d8	% Recovery	50-140		103	101	103	100	99	103	104
4-Bromofluorobenzene	% Recovery	50-140		86	86	92	90	87	90	89

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5025065-5025075 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z029521
ATTENTION TO: Brian Henderson
SAMPLED BY:Rob Ireland

Trace Organics Analysis

RPT Date: Jun 02, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	5027165		<0.40	<0.40	NA	< 0.40	108%	50%	140%	80%	50%	140%	100%	50%	140%
Vinyl Chloride	5027165		<0.17	<0.17	NA	< 0.17	111%	50%	140%	105%	50%	140%	111%	50%	140%
Bromomethane	5027165		<0.20	<0.20	NA	< 0.20	112%	50%	140%	115%	50%	140%	97%	50%	140%
Trichlorofluoromethane	5027165		<0.40	<0.40	NA	< 0.40	104%	50%	140%	106%	50%	140%	115%	50%	140%
Acetone	5027165		<1.0	<1.0	NA	< 1.0	103%	50%	140%	98%	50%	140%	90%	50%	140%
1,1-Dichloroethylene	5027165		<0.30	<0.30	NA	< 0.30	81%	50%	140%	78%	60%	130%	101%	50%	140%
Methylene Chloride	5027165		<0.30	<0.30	NA	< 0.30	71%	50%	140%	111%	60%	130%	105%	50%	140%
trans- 1,2-Dichloroethylene	5027165		<0.20	<0.20	NA	< 0.20	104%	50%	140%	119%	60%	130%	102%	50%	140%
Methyl tert-butyl ether	5027165		<0.20	<0.20	NA	< 0.20	106%	50%	140%	82%	60%	130%	93%	50%	140%
1,1-Dichloroethane	5027165		<0.30	<0.30	NA	< 0.30	90%	50%	140%	97%	60%	130%	114%	50%	140%
Methyl Ethyl Ketone	5027165		<1.0	<1.0	NA	< 1.0	98%	50%	140%	101%	50%	140%	84%	50%	140%
cis- 1,2-Dichloroethylene	5027165		<0.20	<0.20	NA	< 0.20	78%	50%	140%	112%	60%	130%	116%	50%	140%
Chloroform	5027165		<0.20	<0.20	NA	< 0.20	80%	50%	140%	104%	60%	130%	114%	50%	140%
1,2-Dichloroethane	5027165		<0.20	<0.20	NA	< 0.20	77%	50%	140%	88%	60%	130%	104%	50%	140%
1,1,1-Trichloroethane	5027165		<0.30	<0.30	NA	< 0.30	82%	50%	140%	88%	60%	130%	104%	50%	140%
Carbon Tetrachloride	5027165		<0.20	<0.20	NA	< 0.20	87%	50%	140%	83%	60%	130%	105%	50%	140%
Benzene	5027165		<0.20	<0.20	NA	< 0.20	86%	50%	140%	119%	60%	130%	103%	50%	140%
1,2-Dichloropropane	5027165		<0.20	<0.20	NA	< 0.20	110%	50%	140%	107%	60%	130%	109%	50%	140%
Trichloroethylene	5027165		<0.20	<0.20	NA	< 0.20	103%	50%	140%	116%	60%	130%	117%	50%	140%
Bromodichloromethane	5027165		<0.20	<0.20	NA	< 0.20	93%	50%	140%	71%	60%	130%	87%	50%	140%
Methyl Isobutyl Ketone	5027165		<1.0	<1.0	NA	< 1.0	84%	50%	140%	80%	50%	140%	83%	50%	140%
1,1,2-Trichloroethane	5027165		<0.20	<0.20	NA	< 0.20	105%	50%	140%	108%	60%	130%	111%	50%	140%
Toluene	5027165		<0.20	<0.20	NA	< 0.20	116%	50%	140%	117%	60%	130%	104%	50%	140%
Dibromochloromethane	5027165		<0.10	<0.10	NA	< 0.10	74%	50%	140%	72%	60%	130%	77%	50%	140%
Ethylene Dibromide	5027165		<0.10	<0.10	NA	< 0.10	89%	50%	140%	98%	60%	130%	106%	50%	140%
Tetrachloroethylene	5027165		<0.20	<0.20	NA	< 0.20	117%	50%	140%	113%	60%	130%	113%	50%	140%
1,1,1,2-Tetrachloroethane	5027165		<0.10	<0.10	NA	< 0.10	90%	50%	140%	96%	60%	130%	110%	50%	140%
Chlorobenzene	5027165		<0.10	<0.10	NA	< 0.10	110%	50%	140%	120%	60%	130%	107%	50%	140%
Ethylbenzene	5027165		<0.10	<0.10	NA	< 0.10	112%	50%	140%	119%	60%	130%	112%	50%	140%
m & p-Xylene	5027165		<0.20	<0.20	NA	< 0.20	115%	50%	140%	109%	60%	130%	100%	50%	140%
Bromoform	5027165		<0.10	<0.10	NA	< 0.10	75%	50%	140%	87%	60%	130%	90%	50%	140%
Styrene	5027165		<0.10	<0.10	NA	< 0.10	99%	50%	140%	108%	60%	130%	108%	50%	140%
1,1,2,2-Tetrachloroethane	5027165		<0.10	<0.10	NA	< 0.10	102%	50%	140%	109%	60%	130%	115%	50%	140%
o-Xylene	5027165		<0.10	<0.10	NA	< 0.10	114%	50%	140%	111%	60%	130%	102%	50%	140%
1,3-Dichlorobenzene	5027165		<0.10	<0.10	NA	< 0.10	119%	50%	140%	114%	60%	130%	108%	50%	140%
1,4-Dichlorobenzene	5027165		<0.10	<0.10	NA	< 0.10	118%	50%	140%	112%	60%	130%	96%	50%	140%
1,2-Dichlorobenzene	5027165		<0.10	<0.10	NA	< 0.10	112%	50%	140%	110%	60%	130%	118%	50%	140%
n-Hexane	5027165		<0.20	<0.20	NA	< 0.20	80%	50%	140%	92%	60%	130%	88%	50%	140%

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 21494078

SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z029521

ATTENTION TO: Brian Henderson

SAMPLED BY:Rob Ireland

Trace Organics Analysis (Continued)

RPT Date: Jun 02, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Certified By: N Popowkolof

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z029521

PROJECT: 21494078

ATTENTION TO: Brian Henderson

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z029521

PROJECT: 21494078

ATTENTION TO: Brian Henderson

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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AGAT Laboratories

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WORK ORDER

Chain of Custody Record

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

Report Information:

Company: WSP
Contact: Daniel Stabile / Paul Hurst
Address: 1931 Robertson Rd
Ottawa, Ont. K2H 5B7
Phone: 613-592-9600 Fax: 613-592-9601
Reports to be sent to:
1. Email: Daniel.Stabile@wsp.com
2. Email: Paul.Hurst@wsp.com

Project Information:

Project: 21494078
Site Location: 1047 Richmond Rd
Sampled By: Rob Ireland
AGAT Quote #: 2023 Golder - AGAT MSA 735000EB
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: WSP
Contact: Daniele Stabile/Paul Hurst
Address:
Email: AP-CustomerService@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

- ☒ Regulation 153/04 — Table 7 (Indicate One) — ☐ Ind/Com ☒ Res/Park ☐ Agriculture
- Soil Texture (Check One): ☐ Coarse ☐ Fine
- ☐ Excess Soils R406 — Table ____ (Indicate One)
- ☐ Regulation 558
- ☐ CCME
- ☐ Sewer Use ☐ Sanitary ☐ Storm — ____ Region
- ☐ Prov. Water Quality Objectives (PWQO)
- ☐ Other ____ Indicate One

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 23T02952|

Cooler Quantity: one-ice,
Arrival Temperatures: 9.8 | 10.2 | 10.5
7.4 | 2.9 | 3.7
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Ice Pack

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply): ____
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg ☐ HWSB	BTEX, F1-F4 PHCs Analyze F4G if required ☐ Yes ☐ No	PAHs	PCBs	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
Trip blank VOC's		AM PM	3		Lab Supplied							✓				
Field Blank VOC's	2023-05-29	17:20 PM	3	DI Water	Lab supplied DI water							✓				
22-101D	2023-05-29	9:50 AM	3	GW								✓				
22-10S	2023-05-29	10:15 AM	3	GW								✓				
22-091D	2023-05-29	11:48 AM	3	GW								✓				
22-09S	2023-05-29	12:20 AM	3	GW								✓				
Dup 2	2023-05-29	11:48 AM	3	GW								✓				
		AM PM														
		AM PM			EQUIS EDD											
		AM PM			Facility #											
		AM PM			2303660930											

'23 MAY 30 8:38 AM

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Rob Ireland	2023-05-29	15:00	Bentheleft/Rob	2023/05/29	15h00
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
CB/RO Hurst	23/05/29	16h00	A. Ferreira	May 30/23	8:36
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1

№: T 129230

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Document ID: DIV 78 1511 021

Date Issued: March 9, 2021

AGAT Laboratories

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

CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600

ATTENTION TO: Daniel Stabile

PROJECT: 21494078

AGAT WORK ORDER: 23Z045388

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Jul 13, 2023

PAGES (INCLUDING COVER): 13

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 23Z045388
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis / Rob Ireland

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

DATE RECEIVED: 2023-07-11

DATE REPORTED: 2023-07-13

SAMPLE DESCRIPTION:				MW22-04	DUP-2	MW22-01		MW22-02		21-14	MW21-04
SAMPLE TYPE:				Water	Water	Water		Water		Water	Water
DATE SAMPLED:				2023-07-07 14:45	2023-07-07 14:45	2023-07-07 13:50		2023-07-07 13:30		2023-07-07 11:53	2023-07-07 14:45
Parameter	Unit	G / S	RDL	5133118	5133134	5133135	RDL	5133136	RDL	5133137	5133138
F1 (C6 - C10)	µg/L		25	<25	<25	<25	25	<25	25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25	<25	25	<25	25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100	100	<100	100	<100	<100
F3 (C16 to C34)	µg/L	500	100	542	569	<100	100	<100	100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	100	<100	100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA	500	NA	500	NA	NA
Sediment				1	1	3		1		1	1
Surrogate	Unit	Acceptable Limits									
Toluene-d8	%	50-140		97	96	97	2	97	1	94	95
Terphenyl	% Recovery	60-140		66	75	72	1	66	1	82	74

SAMPLE DESCRIPTION:				Dup 1	
SAMPLE TYPE:				Water	
DATE SAMPLED:				2023-07-07 14:45	
Parameter	Unit	G / S	RDL	5133139	
F1 (C6 - C10)	µg/L		25	<25	
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	
F2 (C10 to C16)	µg/L	150	100	<100	
F3 (C16 to C34)	µg/L	500	100	<100	
F4 (C34 to C50)	µg/L	500	100	<100	
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	
Sediment				1	
Surrogate	Unit	Acceptable Limits			
Toluene-d8	%	50-140		94	
Terphenyl	% Recovery	60-140		102	

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

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

DATE RECEIVED: 2023-07-11

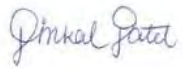
DATE REPORTED: 2023-07-13

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5133118-5133139 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: 

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AGAT WORK ORDER: 23Z045388
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis / Rob Ireland

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

DATE RECEIVED: 2023-07-11

DATE REPORTED: 2023-07-13

SAMPLE DESCRIPTION:				MW22-04	DUP-2	MW22-01		MW22-02		21-14	MW21-04
SAMPLE TYPE:				Water	Water	Water		Water		Water	Water
DATE SAMPLED:				2023-07-07 14:45	2023-07-07 14:45	2023-07-07 13:50		2023-07-07 13:30		2023-07-07 11:53	2023-07-07 14:45
Parameter	Unit	G / S	RDL	5133118	5133134	5133135	RDL	5133136	RDL	5133137	5133138
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40	<0.40	<0.40	0.80	<0.80	0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	0.34	<0.34	0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	<0.40	0.80	<0.80	0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	<1.0	2.0	<2.0	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	0.50	<0.50	0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	<0.30	0.60	<0.60	0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	<0.30	0.60	<0.60	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	<1.0	2.0	<2.0	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	0.40	4.26	0.20	<0.20	4.11
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	<0.30	0.60	<0.60	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20	0.20	<0.20	0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	<1.0	2.0	<2.0	1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10

Certified By: Jinkal Patel

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AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

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

DATE RECEIVED: 2023-07-11

DATE REPORTED: 2023-07-13

		SAMPLE DESCRIPTION:		MW22-04	DUP-2	MW22-01		MW22-02		21-14	MW21-04
		SAMPLE TYPE:		Water	Water	Water		Water		Water	Water
		DATE SAMPLED:		2023-07-07 14:45	2023-07-07 14:45	2023-07-07 13:50		2023-07-07 13:30		2023-07-07 11:53	2023-07-07 14:45
Parameter	Unit	G / S	RDL	5133118	5133134	5133135	RDL	5133136	RDL	5133137	5133138
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
Styrene	µg/L	43	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	0.53	2.50
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	0.30	<0.30	0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20	0.20	<0.20	0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits									
Toluene-d8	% Recovery	50-140		97	96	97	2	97	1	94	95
4-Bromofluorobenzene	% Recovery	50-140		86	92	77	2	83	1	77	81

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AGAT WORK ORDER: 23Z045388

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CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

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

DATE RECEIVED: 2023-07-11

DATE REPORTED: 2023-07-13

				SAMPLE DESCRIPTION:	Dup 1
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-07-07 14:45
Parameter	Unit	G / S	RDL		5133139
Dichlorodifluoromethane	µg/L	3500	0.40		<0.40
Vinyl Chloride	µg/L	0.5	0.17		<0.17
Bromomethane	µg/L	0.89	0.20		<0.20
Trichlorofluoromethane	µg/L	2000	0.40		<0.40
Acetone	µg/L	100000	1.0		<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30		<0.30
Methylene Chloride	µg/L	26	0.30		<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20		<0.20
Methyl tert-butyl ether	µg/L	15	0.20		<0.20
1,1-Dichloroethane	µg/L	11	0.30		<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0		<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20		<0.20
Chloroform	µg/L	2	0.20		<0.20
1,2-Dichloroethane	µg/L	0.5	0.20		<0.20
1,1,1-Trichloroethane	µg/L	23	0.30		<0.30
Carbon Tetrachloride	µg/L	0.2	0.20		<0.20
Benzene	µg/L	0.5	0.20		<0.20
1,2-Dichloropropane	µg/L	0.58	0.20		<0.20
Trichloroethylene	µg/L	0.5	0.20		<0.20
Bromodichloromethane	µg/L	67000	0.20		<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0		<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20		<0.20
Toluene	µg/L	320	0.20		<0.20
Dibromochloromethane	µg/L	65000	0.10		<0.10
Ethylene Dibromide	µg/L	0.2	0.10		<0.10
Tetrachloroethylene	µg/L	0.5	0.20		<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10		<0.10
Chlorobenzene	µg/L	140	0.10		<0.10
Ethylbenzene	µg/L	54	0.10		<0.10

Certified By: Jinkal Patel

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AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

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

DATE RECEIVED: 2023-07-11

DATE REPORTED: 2023-07-13

				SAMPLE DESCRIPTION:	Dup 1
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-07-07 14:45
Parameter	Unit	G / S	RDL		5133139
m & p-Xylene	µg/L		0.20		<0.20
Bromoform	µg/L	5	0.10		<0.10
Styrene	µg/L	43	0.10		<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10
o-Xylene	µg/L		0.10		<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		0.58
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20
n-Hexane	µg/L	5	0.20		<0.20
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140			94
4-Bromofluorobenzene	% Recovery	50-140			89

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5133118-5133135 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

5133136 Dilution factor=2
VOC-The sample was diluted because it was foamy. The reporting detection limit has been corrected for the dilution factor used.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

5133137-5133139 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

Results relate only to the items tested. Results apply to samples as received.

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Exceedance Summary

AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5133118	MW22-04	ON T7 NPGW CT	O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)	F3 (C16 to C34)	µg/L	500	542
5133134	DUP-2	ON T7 NPGW CT	O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)	F3 (C16 to C34)	µg/L	500	569
5133136	MW22-02	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (with PHC) (Water)	1,2-Dichloroethane	µg/L	0.5	4.26
5133138	MW21-04	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (with PHC) (Water)	1,2-Dichloroethane	µg/L	0.5	4.11

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

Trace Organics Analysis

RPT Date: Jul 13, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)															
F1 (C6 - C10)	5128709		<25	<25	NA	< 25	95%	60%	140%	80%	60%	140%	88%	60%	140%
F2 (C10 to C16)	5127761		<100	<100	NA	< 100	86%	60%	140%	80%	60%	140%	77%	60%	140%
F3 (C16 to C34)	5127761		<100	<100	NA	< 100	92%	60%	140%	103%	60%	140%	93%	60%	140%
F4 (C34 to C50)	5127761		<100	<100	NA	< 100	86%	60%	140%	131%	60%	140%	105%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5133138	5133138	<0.40	<0.40	NA	< 0.40	80%	50%	140%	75%	50%	140%	92%	50%	140%
Vinyl Chloride	5133138	5133138	<0.17	<0.17	NA	< 0.17	111%	50%	140%	105%	50%	140%	90%	50%	140%
Bromomethane	5133138	5133138	<0.20	<0.20	NA	< 0.20	104%	50%	140%	90%	50%	140%	82%	50%	140%
Trichlorofluoromethane	5133138	5133138	<0.40	<0.40	NA	< 0.40	89%	50%	140%	80%	50%	140%	83%	50%	140%
Acetone	5133138	5133138	<1.0	<1.0	NA	< 1.0	92%	50%	140%	97%	50%	140%	88%	50%	140%
1,1-Dichloroethylene	5133138	5133138	<0.30	<0.30	NA	< 0.30	76%	50%	140%	113%	60%	130%	94%	50%	140%
Methylene Chloride	5133138	5133138	<0.30	<0.30	NA	< 0.30	92%	50%	140%	113%	60%	130%	104%	50%	140%
trans- 1,2-Dichloroethylene	5133138	5133138	<0.20	<0.20	NA	< 0.20	72%	50%	140%	97%	60%	130%	73%	50%	140%
Methyl tert-butyl ether	5133138	5133138	<0.20	<0.20	NA	< 0.20	83%	50%	140%	83%	60%	130%	72%	50%	140%
1,1-Dichloroethane	5133138	5133138	<0.30	<0.30	NA	< 0.30	83%	50%	140%	96%	60%	130%	75%	50%	140%
Methyl Ethyl Ketone	5133138	5133138	<1.0	<1.0	NA	< 1.0	85%	50%	140%	86%	50%	140%	86%	50%	140%
cis- 1,2-Dichloroethylene	5133138	5133138	<0.20	<0.20	NA	< 0.20	85%	50%	140%	94%	60%	130%	73%	50%	140%
Chloroform	5133138	5133138	<0.20	<0.20	NA	< 0.20	97%	50%	140%	96%	60%	130%	79%	50%	140%
1,2-Dichloroethane	5133138	5133138	4.11	3.78	8.4%	< 0.20	105%	50%	140%	95%	60%	130%	78%	50%	140%
1,1,1-Trichloroethane	5133138	5133138	<0.30	<0.30	NA	< 0.30	87%	50%	140%	98%	60%	130%	78%	50%	140%
Carbon Tetrachloride	5133138	5133138	<0.20	<0.20	NA	< 0.20	80%	50%	140%	90%	60%	130%	72%	50%	140%
Benzene	5133138	5133138	<0.20	<0.20	NA	< 0.20	89%	50%	140%	92%	60%	130%	73%	50%	140%
1,2-Dichloropropane	5133138	5133138	<0.20	<0.20	NA	< 0.20	92%	50%	140%	87%	60%	130%	98%	50%	140%
Trichloroethylene	5133138	5133138	<0.20	<0.20	NA	< 0.20	95%	50%	140%	97%	60%	130%	77%	50%	140%
Bromodichloromethane	5133138	5133138	<0.20	<0.20	NA	< 0.20	95%	50%	140%	90%	60%	130%	80%	50%	140%
Methyl Isobutyl Ketone	5133138	5133138	<1.0	<1.0	NA	< 1.0	104%	50%	140%	82%	50%	140%	75%	50%	140%
1,1,2-Trichloroethane	5133138	5133138	<0.20	<0.20	NA	< 0.20	113%	50%	140%	100%	60%	130%	79%	50%	140%
Toluene	5133138	5133138	<0.20	<0.20	NA	< 0.20	107%	50%	140%	103%	60%	130%	81%	50%	140%
Dibromochloromethane	5133138	5133138	<0.10	<0.10	NA	< 0.10	104%	50%	140%	96%	60%	130%	80%	50%	140%
Ethylene Dibromide	5133138	5133138	<0.10	<0.10	NA	< 0.10	104%	50%	140%	91%	60%	130%	76%	50%	140%
Tetrachloroethylene	5133138	5133138	<0.20	<0.20	NA	< 0.20	105%	50%	140%	109%	60%	130%	88%	50%	140%
1,1,1,2-Tetrachloroethane	5133138	5133138	<0.10	<0.10	NA	< 0.10	105%	50%	140%	97%	60%	130%	80%	50%	140%
Chlorobenzene	5133138	5133138	<0.10	<0.10	NA	< 0.10	113%	50%	140%	100%	60%	130%	78%	50%	140%
Ethylbenzene	5133138	5133138	<0.10	<0.10	NA	< 0.10	106%	50%	140%	100%	60%	130%	75%	50%	140%
m & p-Xylene	5133138	5133138	<0.20	<0.20	NA	< 0.20	105%	50%	140%	101%	60%	130%	78%	50%	140%
Bromoform	5133138	5133138	<0.10	<0.10	NA	< 0.10	111%	50%	140%	89%	60%	130%	79%	50%	140%
Styrene	5133138	5133138	<0.10	<0.10	NA	< 0.10	92%	50%	140%	84%	60%	130%	70%	50%	140%
1,1,2,2-Tetrachloroethane	5133138	5133138	<0.10	<0.10	NA	< 0.10	116%	50%	140%	93%	60%	130%	78%	50%	140%
o-Xylene	5133138	5133138	<0.10	<0.10	NA	< 0.10	109%	50%	140%	99%	60%	130%	78%	50%	140%

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

Trace Organics Analysis (Continued)

RPT Date: Jul 13, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5133138	5133138	<0.10	<0.10	NA	< 0.10	107%	50%	140%	95%	60%	130%	77%	50%	140%
1,4-Dichlorobenzene	5133138	5133138	<0.10	<0.10	NA	< 0.10	110%	50%	140%	101%	60%	130%	81%	50%	140%
1,2-Dichlorobenzene	5133138	5133138	2.50	2.40	4.1%	< 0.10	113%	50%	140%	98%	60%	130%	77%	50%	140%
n-Hexane	5133138	5133138	<0.20	<0.20	NA	< 0.20	98%	50%	140%	76%	60%	130%	74%	50%	140%

Certified By:

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Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 - C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Sediment			N/A
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 23Z045388

Cooler Quantity: One - loose ice packs

Arrival Temperatures: 9.9 | 9.6 | 9.4 / 4.4 | 5.3 | 5.1

Custody Seal Intact: ☐ Yes ☐ No ☒ N/A

Notes: B

Report Information:

Company: WSP Canada Inc.
Contact: Daniel Stabile
Address: 1931 Robertson Rd. Ottawa, ON K2H 5B7
Phone: Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 — Table 7 (Indicate One) — ☐ Ind/Com ☒ Res/Park ☐ Agriculture
Soil Texture (Check One): ☒ Coarse ☐ Fine

☐ Excess Soils R406 — Table ____ (Indicate One)
☐ Regulation 558
☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm — ____ (Region)
☐ Prov. Water Quality Objectives (PWQO)
☐ Other ____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): ____

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

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

Project Information:

Project: 21494078
Site Location: 1047 Richmond Rd
Sampled By: Ryan Francis / Rob Ireland
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company: WSP Canada Inc
Contact: Daniel Stabile
Address:
Email: CA payables invoice@wsp.com

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 153: Aroclors	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach: SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package: pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: Include Moisture ☐ Sulphide ☐	Potentially Hazardous or High Concentration (Y/N)
MW22-04	July 7/23	2:45 PM	5	GW					✓			✓						Y
DUP-2		2:45 PM	5	GW					✓			✓						
MW22-01		1:50 PM	5	GW					✓			✓						
MW22-02		1:30 PM	5	GW					✓			✓						
21-14		11:53 AM	5	GW					✓			✓						
MW21-04		12:35 PM	5	GW					✓			✓						
Dup 1		11:53 AM	5	GW	Extract and Hold				✓			✓						
VOC Trip Blank		AM PM										✓						
		AM PM																
		AM PM																
		AM PM																

Samples Relinquished By (Print Name and Sign): Ryan Francis	Date: July 10/23	Time: 5:15	Samples Received By (Print Name and Sign): C. Griffith	Date: JUL 11 2023	Time: 08h30
Samples Relinquished By (Print Name and Sign): ~~JUL 11 2023~~	Date:	Time: 5:20	Samples Received By (Print Name and Sign): Michael Diotto	Date: Jul 12/23	Time: 8:40am
Samples Relinquished By (Print Name and Sign): CA to Pick	Date: JUL 11 2023	Time: 15h30	Samples Received By (Print Name and Sign):	Date:	Time:

Page 1 of 1

N°: T - 142651

Document ID: DIV-78-3511.022

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Date Issued: April 21, 2022

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600

ATTENTION TO: Daniel Stabile

PROJECT: 21494078

AGAT WORK ORDER: 23Z048562

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Oct 02, 2023

PAGES (INCLUDING COVER): 9

VERSION*: 1

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

*Notes

VERSION 1:Client ID updated as per request. 08/17

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z048562
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd, Ottawa

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-18

DATE REPORTED: 2023-10-02

		SAMPLE DESCRIPTION:		MW22-06
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2023-07-18
Parameter	Unit	G / S	RDL	5155137
F1 (C6 - C10)	µg/L		25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25
F2 (C10 to C16)	µg/L	150	100	<100
F3 (C16 to C34)	µg/L	500	100	<100
F4 (C34 to C50)	µg/L	500	100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA
Sediment				1
Surrogate	Unit	Acceptable Limits		
Toluene-d8	%	50-140		96
Terphenyl	% Recovery	60-140		63

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5155137 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

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AGAT WORK ORDER: 23Z048562
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd, Ottawa

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-18

DATE REPORTED: 2023-10-02

		SAMPLE DESCRIPTION:		MW22-06
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2023-07-18
Parameter	Unit	G / S	RDL	5155137
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20
Toluene	µg/L	320	0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 23Z048562
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd, Ottawa

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-18

DATE REPORTED: 2023-10-02

		SAMPLE DESCRIPTION:		MW22-06
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2023-07-18
Parameter	Unit	G / S	RDL	5155137
Bromoform	µg/L	5	0.10	<0.10
Styrene	µg/L	43	0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10
o-Xylene	µg/L		0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		96
4-Bromofluorobenzene	% Recovery	50-140		92

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5155137 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z048562

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa

SAMPLED BY:Ryan Francis

Trace Organics Analysis

RPT Date: Oct 02, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)															
F1 (C6 - C10)	5152353		<25	<25	NA	< 25	99%	60%	140%	108%	60%	140%	96%	60%	140%
F2 (C10 to C16)	5144964		< 100	< 100	NA	< 100	103%	60%	140%	62%	60%	140%	79%	60%	140%
F3 (C16 to C34)	5144964		< 100	< 100	NA	< 100	96%	60%	140%	62%	60%	140%	62%	60%	140%
F4 (C34 to C50)	5144964		< 100	< 100	NA	< 100	65%	60%	140%	86%	60%	140%	80%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5152353		<0.40	<0.40	NA	< 0.40	98%	50%	140%	110%	50%	140%	80%	50%	140%
Vinyl Chloride	5152353		<0.17	<0.17	NA	< 0.17	86%	50%	140%	101%	50%	140%	99%	50%	140%
Bromomethane	5152353		<0.20	<0.20	NA	< 0.20	76%	50%	140%	102%	50%	140%	82%	50%	140%
Trichlorofluoromethane	5152353		<0.40	<0.40	NA	< 0.40	78%	50%	140%	95%	50%	140%	96%	50%	140%
Acetone	5152353		<1.0	<1.0	NA	< 1.0	96%	50%	140%	84%	50%	140%	89%	50%	140%
1,1-Dichloroethylene	5152353		<0.30	<0.30	NA	< 0.30	103%	50%	140%	84%	60%	130%	80%	50%	140%
Methylene Chloride	5152353		<0.30	<0.30	NA	< 0.30	112%	50%	140%	113%	60%	130%	119%	50%	140%
trans- 1,2-Dichloroethylene	5152353		<0.20	<0.20	NA	< 0.20	114%	50%	140%	99%	60%	130%	84%	50%	140%
Methyl tert-butyl ether	5152353		<0.20	<0.20	NA	< 0.20	75%	50%	140%	82%	60%	130%	91%	50%	140%
1,1-Dichloroethane	5152353		<0.30	<0.30	NA	< 0.30	75%	50%	140%	72%	60%	130%	98%	50%	140%
Methyl Ethyl Ketone	5152353		<1.0	<1.0	NA	< 1.0	94%	50%	140%	80%	50%	140%	91%	50%	140%
cis- 1,2-Dichloroethylene	5152353		<0.20	<0.20	NA	< 0.20	78%	50%	140%	79%	60%	130%	78%	50%	140%
Chloroform	5152353		<0.20	<0.20	NA	< 0.20	83%	50%	140%	77%	60%	130%	74%	50%	140%
1,2-Dichloroethane	5152353		<0.20	<0.20	NA	< 0.20	72%	50%	140%	76%	60%	130%	78%	50%	140%
1,1,1-Trichloroethane	5152353		<0.30	<0.30	NA	< 0.30	73%	50%	140%	71%	60%	130%	75%	50%	140%
Carbon Tetrachloride	5152353		<0.20	<0.20	NA	< 0.20	90%	50%	140%	88%	60%	130%	85%	50%	140%
Benzene	5152353		<0.20	<0.20	NA	< 0.20	82%	50%	140%	79%	60%	130%	83%	50%	140%
1,2-Dichloropropane	5152353		<0.20	<0.20	NA	< 0.20	78%	50%	140%	83%	60%	130%	82%	50%	140%
Trichloroethylene	5152353		<0.20	<0.20	NA	< 0.20	82%	50%	140%	76%	60%	130%	73%	50%	140%
Bromodichloromethane	5152353		<0.20	<0.20	NA	< 0.20	82%	50%	140%	78%	60%	130%	75%	50%	140%
Methyl Isobutyl Ketone	5152353		<1.0	<1.0	NA	< 1.0	76%	50%	140%	83%	50%	140%	90%	50%	140%
1,1,2-Trichloroethane	5152353		<0.20	<0.20	NA	< 0.20	82%	50%	140%	93%	60%	130%	89%	50%	140%
Toluene	5152353		<0.20	<0.20	NA	< 0.20	85%	50%	140%	90%	60%	130%	85%	50%	140%
Dibromochloromethane	5152353		<0.10	<0.10	NA	< 0.10	84%	50%	140%	95%	60%	130%	80%	50%	140%
Ethylene Dibromide	5152353		<0.10	<0.10	NA	< 0.10	84%	50%	140%	95%	60%	130%	90%	50%	140%
Tetrachloroethylene	5152353		<0.20	<0.20	NA	< 0.20	79%	50%	140%	84%	60%	130%	73%	50%	140%
1,1,1,2-Tetrachloroethane	5152353		<0.10	<0.10	NA	< 0.10	78%	50%	140%	86%	60%	130%	76%	50%	140%
Chlorobenzene	5152353		<0.10	<0.10	NA	< 0.10	84%	50%	140%	90%	60%	130%	76%	50%	140%
Ethylbenzene	5152353		<0.10	<0.10	NA	< 0.10	81%	50%	140%	86%	60%	130%	76%	50%	140%
m & p-Xylene	5152353		<0.20	<0.20	NA	< 0.20	77%	50%	140%	83%	60%	130%	79%	50%	140%
Bromoform	5152353		<0.10	<0.10	NA	< 0.10	80%	50%	140%	90%	60%	130%	71%	50%	140%
Styrene	5152353		<0.10	<0.10	NA	< 0.10	81%	50%	140%	76%	60%	130%	81%	50%	140%
1,1,2,2-Tetrachloroethane	5152353		<0.10	<0.10	NA	< 0.10	92%	50%	140%	100%	60%	130%	94%	50%	140%
o-Xylene	5152353		<0.10	<0.10	NA	< 0.10	76%	50%	140%	83%	60%	130%	77%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z048562

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa

SAMPLED BY:Ryan Francis

Trace Organics Analysis (Continued)

RPT Date: Oct 02, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5152353		<0.10	<0.10	NA	< 0.10	75%	50%	140%	80%	60%	130%	73%	50%	140%
1,4-Dichlorobenzene	5152353		<0.10	<0.10	NA	< 0.10	73%	50%	140%	81%	60%	130%	75%	50%	140%
1,2-Dichlorobenzene	5152353		<0.10	<0.10	NA	< 0.10	76%	50%	140%	80%	60%	130%	75%	50%	140%
n-Hexane	5152353		<0.20	<0.20	NA	< 0.20	108%	50%	140%	79%	60%	130%	76%	50%	140%

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

Certified By: NPopowkolof

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z048562

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 - C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Sediment			N/A
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z048562

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

RUSH!

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

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 2320485620

Cooler Quantity: one - loose ice

Arrival Temperatures: 19.9 | 19.8 | 19.8
8.2 | 8.0 | 8.5

Custody Seal Intact: ☐ Yes ☐ No ☒ N/A

Notes: bagged ice

Report Information:

Company: WSP Canada Inc
Contact: Daniel Stabile
Address: 1931 Robertson Rd, Ottawa, ON, K2H 5B7
Phone: Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email:

Project Information:

Project: 21494078
Site Location: 1947 Richmond Rd, Ottawa
Sampled By: Ryan Francis
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company: WSP Canada Inc
Contact: Daniel Stabile
Address:
Email: CAPayableInvoice@WSP.com

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
____ (Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☐ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☒ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs Analyze F4G if required ☐ Yes ☐ No	PHCs	PCBs	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
MW22-08	July 18/23	2:45 AM/PM	5	GW					✓			✓					
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Ryan Francis / [signature]	July 18/23	4:45	C. Griffith	07/18/23	16h50
[signature] to Amo	07/19/23	15h30	[signature]	July 20	9:35 am
	Date	Time	Samples Received By (Print Name and Sign)	Date	Time

Page 1 of 1

N°: T 129258

Document ID: DIV 78 1511 021

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Document Updated: March 9, 2021

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CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600
ATTENTION TO: Daniel Stabile
PROJECT: 21494078
AGAT WORK ORDER: 23Z049375
TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist
DATE REPORTED: Jul 24, 2023
PAGES (INCLUDING COVER): 9
VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 23Z049375

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-20

DATE REPORTED: 2023-07-24

				SAMPLE DESCRIPTION:	MW22-8
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-07-19 16:15
Parameter	Unit	G / S	RDL		5157690
F1 (C6 - C10)	µg/L		25		<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25
F2 (C10 to C16)	µg/L	150	100		<100
F3 (C16 to C34)	µg/L	500	100		<100
F4 (C34 to C50)	µg/L	500	100		<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA
Sediment					1
Surrogate	Unit	Acceptable Limits			
Toluene-d8	%	50-140			106
Terphenyl	% Recovery	60-140			80

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5157690 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkof

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z049375
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-20

DATE REPORTED: 2023-07-24

		SAMPLE DESCRIPTION:		MW22-8
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2023-07-19 16:15
Parameter	Unit	G / S	RDL	5157690
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20
Toluene	µg/L	320	0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10

Certified By: N Popowkolof

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z049375

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-20

DATE REPORTED: 2023-07-24

				SAMPLE DESCRIPTION:	MW22-8
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-07-19 16:15
Parameter	Unit	G / S	RDL	5157690	
m & p-Xylene	µg/L		0.20	<0.20	
Bromoform	µg/L	5	0.10	<0.10	
Styrene	µg/L	43	0.10	<0.10	
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	
o-Xylene	µg/L		0.10	<0.10	
1,3-Dichlorobenzene	µg/L	7600	0.10	<0.10	
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	
1,2-Dichlorobenzene	µg/L	150	0.10	<0.10	
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	
Xylenes (Total)	µg/L	72	0.20	<0.20	
n-Hexane	µg/L	5	0.20	<0.20	
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140		106	
4-Bromofluorobenzene	% Recovery	50-140		88	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5157690 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd

AGAT WORK ORDER: 23Z049375
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

Trace Organics Analysis

RPT Date: Jul 24, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)															
F1 (C6 - C10)	5156928		<25	<25	NA	< 25	96%	60%	140%	81%	60%	140%	101%	60%	140%
F2 (C10 to C16)	5147573		<100	<100	NA	< 100	102%	60%	140%	70%	60%	140%	62%	60%	140%
F3 (C16 to C34)	5147573		<100	<100	NA	< 100	105%	60%	140%	82%	60%	140%	72%	60%	140%
F4 (C34 to C50)	5147573		<100	<100	NA	< 100	76%	60%	140%	87%	60%	140%	68%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5156928		<0.40	<0.40	NA	< 0.40	81%	50%	140%	98%	50%	140%	79%	50%	140%
Vinyl Chloride	5156928		<0.17	<0.17	NA	< 0.17	101%	50%	140%	104%	50%	140%	85%	50%	140%
Bromomethane	5156928		<0.20	<0.20	NA	< 0.20	86%	50%	140%	97%	50%	140%	84%	50%	140%
Trichlorofluoromethane	5156928		<0.40	<0.40	NA	< 0.40	83%	50%	140%	114%	50%	140%	87%	50%	140%
Acetone	5156928		<1.0	<1.0	NA	< 1.0	92%	50%	140%	84%	50%	140%	104%	50%	140%
1,1-Dichloroethylene	5156928		<0.30	<0.30	NA	< 0.30	98%	50%	140%	91%	60%	130%	85%	50%	140%
Methylene Chloride	5156928		<0.30	<0.30	NA	< 0.30	114%	50%	140%	112%	60%	130%	93%	50%	140%
trans- 1,2-Dichloroethylene	5156928		<0.20	<0.20	NA	< 0.20	110%	50%	140%	96%	60%	130%	79%	50%	140%
Methyl tert-butyl ether	5156928		<0.20	<0.20	NA	< 0.20	84%	50%	140%	84%	60%	130%	101%	50%	140%
1,1-Dichloroethane	5156928		<0.30	<0.30	NA	< 0.30	79%	50%	140%	77%	60%	130%	87%	50%	140%
Methyl Ethyl Ketone	5156928		<1.0	<1.0	NA	< 1.0	85%	50%	140%	80%	50%	140%	106%	50%	140%
cis- 1,2-Dichloroethylene	5156928		<0.20	<0.20	NA	< 0.20	85%	50%	140%	82%	60%	130%	89%	50%	140%
Chloroform	5156928		<0.20	<0.20	NA	< 0.20	83%	50%	140%	81%	60%	130%	110%	50%	140%
1,2-Dichloroethane	5156928		<0.20	<0.20	NA	< 0.20	86%	50%	140%	71%	60%	130%	73%	50%	140%
1,1,1-Trichloroethane	5156928		<0.30	<0.30	NA	< 0.30	80%	50%	140%	75%	60%	130%	85%	50%	140%
Carbon Tetrachloride	5156928		<0.20	<0.20	NA	< 0.20	92%	50%	140%	89%	60%	130%	82%	50%	140%
Benzene	5156928		<0.20	<0.20	NA	< 0.20	97%	50%	140%	92%	60%	130%	71%	50%	140%
1,2-Dichloropropane	5156928		<0.20	<0.20	NA	< 0.20	79%	50%	140%	75%	60%	130%	85%	50%	140%
Trichloroethylene	5156928		<0.20	<0.20	NA	< 0.20	89%	50%	140%	79%	60%	130%	95%	50%	140%
Bromodichloromethane	5156928		<0.20	<0.20	NA	< 0.20	81%	50%	140%	77%	60%	130%	92%	50%	140%
Methyl Isobutyl Ketone	5156928		<1.0	<1.0	NA	< 1.0	106%	50%	140%	84%	50%	140%	83%	50%	140%
1,1,2-Trichloroethane	5156928		<0.20	<0.20	NA	< 0.20	96%	50%	140%	97%	60%	130%	89%	50%	140%
Toluene	5156928		<0.20	<0.20	NA	< 0.20	102%	50%	140%	100%	60%	130%	82%	50%	140%
Dibromochloromethane	5156928		<0.10	<0.10	NA	< 0.10	90%	50%	140%	93%	60%	130%	84%	50%	140%
Ethylene Dibromide	5156928		<0.10	<0.10	NA	< 0.10	92%	50%	140%	97%	60%	130%	91%	50%	140%
Tetrachloroethylene	5156928		<0.20	<0.20	NA	< 0.20	95%	50%	140%	88%	60%	130%	79%	50%	140%
1,1,1,2-Tetrachloroethane	5156928		<0.10	<0.10	NA	< 0.10	86%	50%	140%	88%	60%	130%	75%	50%	140%
Chlorobenzene	5156928		<0.10	<0.10	NA	< 0.10	97%	50%	140%	92%	60%	130%	81%	50%	140%
Ethylbenzene	5156928		<0.10	<0.10	NA	< 0.10	94%	50%	140%	91%	60%	130%	75%	50%	140%
m & p-Xylene	5156928		<0.20	<0.20	NA	< 0.20	91%	50%	140%	88%	60%	130%	74%	50%	140%
Bromoform	5156928		<0.10	<0.10	NA	< 0.10	82%	50%	140%	88%	60%	130%	79%	50%	140%
Styrene	5156928		<0.10	<0.10	NA	< 0.10	73%	50%	140%	90%	60%	130%	79%	50%	140%
1,1,2,2-Tetrachloroethane	5156928		<0.10	<0.10	NA	< 0.10	90%	50%	140%	101%	60%	130%	84%	50%	140%
o-Xylene	5156928		<0.10	<0.10	NA	< 0.10	90%	50%	140%	88%	60%	130%	75%	50%	140%

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
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http://www.agatlabs.com

Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z049375

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

Trace Organics Analysis (Continued)

RPT Date: Jul 24, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5156928		<0.10	<0.10	NA	< 0.10	82%	50%	140%	79%	60%	130%	75%	50%	140%
1,4-Dichlorobenzene	5156928		<0.10	<0.10	NA	< 0.10	83%	50%	140%	79%	60%	130%	78%	50%	140%
1,2-Dichlorobenzene	5156928		<0.10	<0.10	NA	< 0.10	83%	50%	140%	81%	60%	130%	77%	50%	140%
n-Hexane	5156928		<0.20	<0.20	NA	< 0.20	93%	50%	140%	76%	60%	130%	84%	50%	140%

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

Certified By: N Popnikolof

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z049375

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 - C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Sediment			N/A
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z049375

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

RUSH!

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

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 23T049375

Cooler Quantity: One - Ice | Packs

Arrival Temperatures: 7.0 | 6.7 | 6.6 | 8.3 | 8.1 | 8.0

Custody Seal Intact: ☐ Yes ☐ No ☒ N/A

Notes: bagged ice

Report Information:

Company: WSP Canada Inc
Contact: Daniel Stabile
Address: 1931 Robertson Rd. Ottawa, ON K2H 5B7
Phone: Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email:

Project Information:

Project: 21494078
Site Location: 1047 Richmond Rd
Sampled By: Ryan Francis
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company: WSP Canada Inc
Contact: Daniel Stabile
Address:
Email: CA.Payables.Invoice@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)
☐ Regulation 558
☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
____ (Region)
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☒ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): _____

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs, Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
MW22-3	July 19/23	4:15 AM/PM	8	GW					✓			✓					
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Ryan Francis / [signature]	July 20/23	2:44	C. Griffiths JUL	JUL 20 2023	14h45
CA to Penco JUL	20 2023	15h30	T-R	July 21	8:40AM

Page 1 of 1

Nº: T 129261

Document ID: DIV 78 1511_021

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Date Issued: March 9, 2021

AGAT Laboratories

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CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600

ATTENTION TO: Daniel Stabile; Kristina Small

PROJECT: 21494078

AGAT WORK ORDER: 23Z058034

TRACE ORGANICS REVIEWED BY: Radhika Chakraberty, Trace Organics Lab Manager

DATE REPORTED: Aug 17, 2023

PAGES (INCLUDING COVER): 9

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 23Z058034
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Robertson Rd

ATTENTION TO: Daniel Stabile; Kristina Small
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-08-15 DATE REPORTED: 2023-08-17

				SAMPLE DESCRIPTION:	Z2-04
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-08-15 14:15
Parameter	Unit	G / S	RDL		5217525
F1 (C6 - C10)	µg/L		25		<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25
F2 (C10 to C16)	µg/L	150	100		<100
F3 (C16 to C34)	µg/L	500	100		<100
F4 (C34 to C50)	µg/L	500	100		<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA
Sediment					1
Surrogate	Unit	Acceptable Limits			
Toluene-d8	%	50-140			101
Terphenyl	% Recovery	60-140			93

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5217525 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 23Z058034

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile; Kristina Small

SAMPLING SITE:1047 Robertson Rd

SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-08-15

DATE REPORTED: 2023-08-17

				SAMPLE DESCRIPTION:	Z2-04
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-08-15 14:15
Parameter	Unit	G / S	RDL		5217525
Dichlorodifluoromethane	µg/L	3500	0.40		<0.40
Vinyl Chloride	µg/L	0.5	0.17		<0.17
Bromomethane	µg/L	0.89	0.20		<0.20
Trichlorofluoromethane	µg/L	2000	0.40		<0.40
Acetone	µg/L	100000	1.0		<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30		<0.30
Methylene Chloride	µg/L	26	0.30		<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20		<0.20
Methyl tert-butyl ether	µg/L	15	0.20		<0.20
1,1-Dichloroethane	µg/L	11	0.30		<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0		<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20		<0.20
Chloroform	µg/L	2	0.20		<0.20
1,2-Dichloroethane	µg/L	0.5	0.20		<0.20
1,1,1-Trichloroethane	µg/L	23	0.30		<0.30
Carbon Tetrachloride	µg/L	0.2	0.20		<0.20
Benzene	µg/L	0.5	0.20		<0.20
1,2-Dichloropropane	µg/L	0.58	0.20		<0.20
Trichloroethylene	µg/L	0.5	0.20		<0.20
Bromodichloromethane	µg/L	67000	0.20		<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0		<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20		<0.20
Toluene	µg/L	320	0.20		<0.20
Dibromochloromethane	µg/L	65000	0.10		<0.10
Ethylene Dibromide	µg/L	0.2	0.10		<0.10
Tetrachloroethylene	µg/L	0.5	0.20		<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10		<0.10
Chlorobenzene	µg/L	140	0.10		<0.10
Ethylbenzene	µg/L	54	0.10		<0.10

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z058034
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Robertson Rd

ATTENTION TO: Daniel Stabile; Kristina Small
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-08-15 DATE REPORTED: 2023-08-17

				SAMPLE DESCRIPTION:	Z2-04
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-08-15 14:15
Parameter	Unit	G / S	RDL		5217525
m & p-Xylene	µg/L		0.20		<0.20
Bromoform	µg/L	5	0.10		<0.10
Styrene	µg/L	43	0.10		<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10
o-Xylene	µg/L		0.10		<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20
n-Hexane	µg/L	5	0.20		<0.20
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140			101
4-Bromofluorobenzene	% Recovery	50-140			92

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5217525 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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MISSISSAUGA, ONTARIO
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TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 21494078

SAMPLING SITE:1047 Robertson Rd

AGAT WORK ORDER: 23Z058034

ATTENTION TO: Daniel Stabile; Kristina Small

SAMPLED BY:Rob Ireland

Trace Organics Analysis

RPT Date: Aug 17, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)															
F1 (C6 - C10)	5206742		<25	<25	NA	< 25	99%	60%	140%	79%	60%	140%	84%	60%	140%
F2 (C10 to C16)	5212514		<100	<100	NA	< 100	88%	60%	140%	63%	60%	140%	62%	60%	140%
F3 (C16 to C34)	5212514		<100	<100	NA	< 100	98%	60%	140%	60%	60%	140%	75%	60%	140%
F4 (C34 to C50)	5212514		<100	<100	NA	< 100	87%	60%	140%	93%	60%	140%	85%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5206742		<0.40	<0.40	NA	< 0.40	96%	50%	140%	91%	50%	140%	84%	50%	140%
Vinyl Chloride	5206742		<0.17	<0.17	NA	< 0.17	97%	50%	140%	96%	50%	140%	101%	50%	140%
Bromomethane	5206742		<0.20	<0.20	NA	< 0.20	105%	50%	140%	95%	50%	140%	85%	50%	140%
Trichlorofluoromethane	5206742		<0.40	<0.40	NA	< 0.40	95%	50%	140%	92%	50%	140%	101%	50%	140%
Acetone	5206742		<1.0	<1.0	NA	< 1.0	100%	50%	140%	118%	50%	140%	97%	50%	140%
1,1-Dichloroethylene	5206742		<0.30	<0.30	NA	< 0.30	99%	50%	140%	110%	60%	130%	108%	50%	140%
Methylene Chloride	5206742		<0.30	<0.30	NA	< 0.30	108%	50%	140%	109%	60%	130%	108%	50%	140%
trans- 1,2-Dichloroethylene	5206742		<0.20	<0.20	NA	< 0.20	97%	50%	140%	106%	60%	130%	99%	50%	140%
Methyl tert-butyl ether	5206742		<0.20	<0.20	NA	< 0.20	106%	50%	140%	100%	60%	130%	101%	50%	140%
1,1-Dichloroethane	5206742		<0.30	<0.30	NA	< 0.30	104%	50%	140%	115%	60%	130%	109%	50%	140%
Methyl Ethyl Ketone	5206742		<1.0	<1.0	NA	< 1.0	86%	50%	140%	98%	50%	140%	89%	50%	140%
cis- 1,2-Dichloroethylene	5206742		1.66	1.49	10.8%	< 0.20	101%	50%	140%	103%	60%	130%	68%	50%	140%
Chloroform	5206742		<0.20	<0.20	NA	< 0.20	103%	50%	140%	93%	60%	130%	102%	50%	140%
1,2-Dichloroethane	5206742		<0.20	<0.20	NA	< 0.20	88%	50%	140%	86%	60%	130%	102%	50%	140%
1,1,1-Trichloroethane	5206742		<0.30	<0.30	NA	< 0.30	105%	50%	140%	114%	60%	130%	94%	50%	140%
Carbon Tetrachloride	5206742		<0.20	<0.20	NA	< 0.20	92%	50%	140%	104%	60%	130%	80%	50%	140%
Benzene	5206742		<0.20	<0.20	NA	< 0.20	100%	50%	140%	103%	60%	130%	99%	50%	140%
1,2-Dichloropropane	5206742		<0.20	<0.20	NA	< 0.20	99%	50%	140%	102%	60%	130%	96%	50%	140%
Trichloroethylene	5206742		<0.20	<0.20	NA	< 0.20	101%	50%	140%	110%	60%	130%	104%	50%	140%
Bromodichloromethane	5206742		<0.20	<0.20	NA	< 0.20	97%	50%	140%	96%	60%	130%	89%	50%	140%
Methyl Isobutyl Ketone	5206742		<1.0	<1.0	NA	< 1.0	90%	50%	140%	101%	50%	140%	100%	50%	140%
1,1,2-Trichloroethane	5206742		<0.20	<0.20	NA	< 0.20	105%	50%	140%	111%	60%	130%	119%	50%	140%
Toluene	5206742		0.44	0.43	NA	< 0.20	107%	50%	140%	118%	60%	130%	107%	50%	140%
Dibromochloromethane	5206742		<0.10	<0.10	NA	< 0.10	108%	50%	140%	116%	60%	130%	108%	50%	140%
Ethylene Dibromide	5206742		<0.10	<0.10	NA	< 0.10	102%	50%	140%	109%	60%	130%	104%	50%	140%
Tetrachloroethylene	5206742		<0.20	<0.20	NA	< 0.20	115%	50%	140%	105%	60%	130%	115%	50%	140%
1,1,1,2-Tetrachloroethane	5206742		<0.10	<0.10	NA	< 0.10	101%	50%	140%	113%	60%	130%	88%	50%	140%
Chlorobenzene	5206742		<0.10	<0.10	NA	< 0.10	95%	50%	140%	113%	60%	130%	102%	50%	140%
Ethylbenzene	5206742		<0.10	<0.10	NA	< 0.10	97%	50%	140%	118%	60%	130%	92%	50%	140%
m & p-Xylene	5206742		<0.20	<0.20	NA	< 0.20	104%	50%	140%	109%	60%	130%	103%	50%	140%
Bromoform	5206742		<0.10	<0.10	NA	< 0.10	101%	50%	140%	105%	60%	130%	93%	50%	140%
Styrene	5206742		<0.10	<0.10	NA	< 0.10	110%	50%	140%	117%	60%	130%	91%	50%	140%
1,1,2,2-Tetrachloroethane	5206742		<0.10	<0.10	NA	< 0.10	97%	50%	140%	106%	60%	130%	100%	50%	140%
o-Xylene	5206742		<0.10	<0.10	NA	< 0.10	95%	50%	140%	111%	60%	130%	98%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 21494078

SAMPLING SITE:1047 Robertson Rd

AGAT WORK ORDER: 23Z058034

ATTENTION TO: Daniel Stabile; Kristina Small

SAMPLED BY:Rob Ireland

Trace Organics Analysis (Continued)

RPT Date: Aug 17, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5206742		<0.10	<0.10	NA	< 0.10	110%	50%	140%	103%	60%	130%	103%	50%	140%
1,4-Dichlorobenzene	5206742		<0.10	<0.10	NA	< 0.10	115%	50%	140%	104%	60%	130%	110%	50%	140%
1,2-Dichlorobenzene	5206742		<0.10	<0.10	NA	< 0.10	114%	50%	140%	104%	60%	130%	107%	50%	140%
n-Hexane	5206742		<0.20	<0.20	NA	< 0.20	101%	50%	140%	103%	60%	130%	77%	50%	140%

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

Certified By: R. Chakraberty

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Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z058034

PROJECT: 21494078

ATTENTION TO: Daniel Stabile; Kristina Small

SAMPLING SITE:1047 Robertson Rd

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 - C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Sediment			N/A
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z058034

PROJECT: 21494078

ATTENTION TO: Daniel Stabile; Kristina Small

SAMPLING SITE:1047 Robertson Rd

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Have feedback? Scan here for a quick survey!

RUSH!

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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 23Z058034

Cooler Quantity: One-Bagged Ice

Arrival Temperatures: 17.0 | 17.4 | 17.1
5.2 | 5.5 | 5.1

Custody Seal Intact: ☐ Yes ☐ No ☒ N/A

Notes: bagged ice

Report Information:

Company: WSP
Contact: Daniel Stabile / Kristina Small
Address: 1931 Robertson Rd
Ottawa, ON K2H 5B7
Phone: 613-592-9600 Fax: 613-592-9601
Reports to be sent to:
1. Email: Daniel.Stabile@wsp.com
2. Email: Kristina.Small@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture (Check One)
☐ Coarse
☐ Fine

☐ Regulation 406
Table ____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
____ (Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☒ Next Business Day

OR Date Required (Rush Surcharges May Apply): ____

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

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

Project Information:

Project: 21494078
Site Location: 1042 Robertson Rd
Sampled By: Rob Ireland
AGAT Quote #: 2023 Golder - AGAT MSA 735906 EB
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: WSP
Contact: Daniel Stabile / Kristina Small
Address:
Email: AP-CustomerService@wsp.com

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. ~~22-04~~	2023-08-15	14:15 AM/PM	8	GW					✓	✓								
2. ~~Dup~~ Dup 1	2023-08-15	14:15 AM/PM	8	GW	HOLD													
3.		AM/PM																
4.		AM/PM																
5.		AM/PM																
6.		AM/PM																
7.		AM/PM																
8.		AM/PM																
9.		AM/PM																
10.		AM/PM																
11.		AM/PM																

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Rob Ireland	2023-08-15	15:25	C. Griffith	08/15/23	15h30
CC to Pam	08/16/23	15h30		Aug 17	8:50

Page 1 of 1

N°: T-146541

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

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CLIENT NAME: WSP CANADA INC.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727

ATTENTION TO: Daniel Stabile

PROJECT: 21404978

AGAT WORK ORDER: 23Z095888

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Nov 27, 2023

PAGES (INCLUDING COVER): 10

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 23Z095888

PROJECT: 21404978

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:B Jelly

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

DATE RECEIVED: 2023-11-21

DATE REPORTED: 2023-11-27

				SAMPLE DESCRIPTION:	MW 22-04	MW 22-08	DUP-GW
				SAMPLE TYPE:	Water	Water	Water
				DATE SAMPLED:	2023-11-21 15:26	2023-11-21 13:45	2023-11-21
Parameter	Unit	G / S	RDL		5485598	5485600	5485601
F1 (C6 to C10)	µg/L		25		<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25	<25	<25
F2 (C10 to C16)	µg/L	150	100		214	<100	<100
F3 (C16 to C34)	µg/L	500	100		2840	<100	<100
F4 (C34 to C50)	µg/L	500	100		<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA
Sediment					1	1	1
Surrogate	Unit	Acceptable Limits					
Toluene-d8	%	50-140			99	93	102
Terphenyl	% Recovery	60-140			67	84	76

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5485598-5485601 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z095888

PROJECT: 21404978

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:B Jelly

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

DATE RECEIVED: 2023-11-21

DATE REPORTED: 2023-11-27

		SAMPLE DESCRIPTION:		MW 22-04	MW 22-08	DUP-GW
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-11-21 15:26	2023-11-21 13:45	2023-11-21
Parameter	Unit	G / S	RDL	5485598	5485600	5485601
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	<0.10

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 23Z095888

PROJECT: 21404978

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:B Jelly

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

DATE RECEIVED: 2023-11-21

DATE REPORTED: 2023-11-27

				SAMPLE DESCRIPTION:	MW 22-04	MW 22-08	DUP-GW
				SAMPLE TYPE:	Water	Water	Water
				DATE SAMPLED:	2023-11-21 15:26	2023-11-21 13:45	2023-11-21
Parameter	Unit	G / S	RDL		5485598	5485600	5485601
m & p-Xylene	µg/L		0.20		<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10		<0.10	<0.10	<0.10
Styrene	µg/L	43	0.10		<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10		<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20		<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140			99	93	102
4-Bromofluorobenzene	% Recovery	50-140			88	83	70

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5485598-5485601 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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Exceedance Summary

AGAT WORK ORDER: 23Z095888

PROJECT: 21404978

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5485598	MW 22-04	ON T7 NPGW CT	O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)	F2 (C10 to C16)	µg/L	150	214
5485598	MW 22-04	ON T7 NPGW CT	O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)	F3 (C16 to C34)	µg/L	500	2840

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21404978
SAMPLING SITE:

AGAT WORK ORDER: 23Z095888
ATTENTION TO: Daniel Stabile
SAMPLED BY:B Jelly

Trace Organics Analysis

RPT Date: Nov 27, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)															
F1 (C6 to C10)	5483060		37	36	NA	< 25	97%	60%	140%	88%	60%	140%	84%	60%	140%
F2 (C10 to C16)	5476835		< 100	< 100	NA	< 100	113%	60%	140%	66%	60%	140%	70%	60%	140%
F3 (C16 to C34)	5476835		< 100	< 100	NA	< 100	107%	60%	140%	64%	60%	140%	68%	60%	140%
F4 (C34 to C50)	5476835		< 100	< 100	NA	< 100	74%	60%	140%	76%	60%	140%	97%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5483060		<0.40	<0.40	NA	< 0.40	87%	50%	140%	101%	50%	140%	89%	50%	140%
Vinyl Chloride	5483060		<0.17	<0.17	NA	< 0.17	102%	50%	140%	101%	50%	140%	88%	50%	140%
Bromomethane	5483060		<0.20	<0.20	NA	< 0.20	107%	50%	140%	104%	50%	140%	94%	50%	140%
Trichlorofluoromethane	5483060		<0.40	<0.40	NA	< 0.40	103%	50%	140%	109%	50%	140%	86%	50%	140%
Acetone	5483060		<1.0	<1.0	NA	< 1.0	96%	50%	140%	81%	50%	140%	112%	50%	140%
1,1-Dichloroethylene	5483060		<0.30	<0.30	NA	< 0.30	93%	50%	140%	98%	60%	130%	105%	50%	140%
Methylene Chloride	5483060		<0.30	<0.30	NA	< 0.30	91%	50%	140%	96%	60%	130%	105%	50%	140%
trans- 1,2-Dichloroethylene	5483060		<0.20	<0.20	NA	< 0.20	102%	50%	140%	107%	60%	130%	109%	50%	140%
Methyl tert-butyl ether	5483060		<0.20	<0.20	NA	< 0.20	107%	50%	140%	112%	60%	130%	72%	50%	140%
1,1-Dichloroethane	5483060		<0.30	<0.30	NA	< 0.30	116%	50%	140%	94%	60%	130%	118%	50%	140%
Methyl Ethyl Ketone	5483060		<1.0	<1.0	NA	< 1.0	98%	50%	140%	106%	50%	140%	111%	50%	140%
cis- 1,2-Dichloroethylene	5483060		<0.20	<0.20	NA	< 0.20	113%	50%	140%	114%	60%	130%	118%	50%	140%
Chloroform	5483060		<0.20	<0.20	NA	< 0.20	106%	50%	140%	108%	60%	130%	102%	50%	140%
1,2-Dichloroethane	5483060		<0.20	<0.20	NA	< 0.20	95%	50%	140%	88%	60%	130%	100%	50%	140%
1,1,1-Trichloroethane	5483060		<0.30	<0.30	NA	< 0.30	108%	50%	140%	107%	60%	130%	111%	50%	140%
Carbon Tetrachloride	5483060		<0.20	<0.20	NA	< 0.20	107%	50%	140%	103%	60%	130%	115%	50%	140%
Benzene	5483060		1.31	1.60	19.9%	< 0.20	103%	50%	140%	85%	60%	130%	115%	50%	140%
1,2-Dichloropropane	5483060		<0.20	<0.20	NA	< 0.20	99%	50%	140%	110%	60%	130%	106%	50%	140%
Trichloroethylene	5483060		<0.20	<0.20	NA	< 0.20	78%	50%	140%	79%	60%	130%	85%	50%	140%
Bromodichloromethane	5483060		<0.20	<0.20	NA	< 0.20	112%	50%	140%	113%	60%	130%	117%	50%	140%
Methyl Isobutyl Ketone	5483060		<1.0	<1.0	NA	< 1.0	101%	50%	140%	94%	50%	140%	88%	50%	140%
1,1,2-Trichloroethane	5483060		<0.20	<0.20	NA	< 0.20	104%	50%	140%	104%	60%	130%	117%	50%	140%
Toluene	5483060		24.1	22.0	9.5%	< 0.20	98%	50%	140%	100%	60%	130%	116%	50%	140%
Dibromochloromethane	5483060		<0.10	<0.10	NA	< 0.10	107%	50%	140%	97%	60%	130%	117%	50%	140%
Ethylene Dibromide	5483060		<0.10	<0.10	NA	< 0.10	114%	50%	140%	116%	60%	130%	96%	50%	140%
Tetrachloroethylene	5483060		<0.20	<0.20	NA	< 0.20	92%	50%	140%	96%	60%	130%	94%	50%	140%
1,1,1,2-Tetrachloroethane	5483060		<0.10	<0.10	NA	< 0.10	110%	50%	140%	106%	60%	130%	117%	50%	140%
Chlorobenzene	5483060		<0.10	<0.10	NA	< 0.10	92%	50%	140%	93%	60%	130%	103%	50%	140%
Ethylbenzene	5483060		1.97	2.20	11.0%	< 0.10	104%	50%	140%	109%	60%	130%	113%	50%	140%
m & p-Xylene	5483060		8.70	9.98	13.7%	< 0.20	103%	50%	140%	109%	60%	130%	108%	50%	140%
Bromoform	5483060		<0.10	<0.10	NA	< 0.10	112%	50%	140%	113%	60%	130%	114%	50%	140%
Styrene	5483060		<0.10	<0.10	NA	< 0.10	107%	50%	140%	120%	60%	130%	104%	50%	140%
1,1,2,2-Tetrachloroethane	5483060		<0.10	<0.10	NA	< 0.10	118%	50%	140%	114%	60%	130%	97%	50%	140%
o-Xylene	5483060		3.61	4.08	12.2%	< 0.10	115%	50%	140%	116%	60%	130%	104%	50%	140%

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z095888

PROJECT: 21404978

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:B Jelly

Trace Organics Analysis (Continued)

RPT Date: Nov 27, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5483060		<0.10	<0.10	NA	< 0.10	95%	50%	140%	93%	60%	130%	102%	50%	140%
1,4-Dichlorobenzene	5483060		<0.10	<0.10	NA	< 0.10	96%	50%	140%	92%	60%	130%	103%	50%	140%
1,2-Dichlorobenzene	5483060		<0.10	<0.10	NA	< 0.10	95%	50%	140%	91%	60%	130%	100%	50%	140%
n-Hexane	5483060		<0.20	<0.20	NA	< 0.20	109%	50%	140%	117%	60%	130%	102%	50%	140%

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

Certified By:

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z095888

PROJECT: 21404978

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:B Jelly

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 to C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Sediment			N/A
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z095888

PROJECT: 21404978

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:B Jelly

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

Have feedback? Scan here for a quick survey!

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

Chain of Custody Record

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

Report Information:

Company: WSP GLOBAL
Contact: DANIEL STABILE
Address: 100 SCOTIA COURT WHITBY ON L1N 8Y8
Phone: 1905 213 4732 Fax:
Reports to be sent to:
1. Email: DANIEL.STABILE@WSP.COM
2. Email:

Project Information:

Project: 21404978
Site Location:
Sampled By: B JELLY
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 *Indicate One*
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☒ Coarse
☐ Fine

☐ Regulation 406
Table _____ *Indicate One*

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
_____ *Region*

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
_____ *Indicate One*

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 23T095888

Cooler Quantity: one - no ice packs
Arrival Temperatures: 1.0 | 1.1 | 1.5
1.5 | 1.1 | 1.2
Custody Seal Intact: ☐Yes ☐No ☐N/A
Notes:

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	VOC	PAHs	PCBs	PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	VOC, PHC F1-F4						Potentially Hazardous or High Concentration (Y/N)
1. MW 22-04	11/21/23	3:26 AM/PM	4	GW														X						
2. MW 22-08	11/21/23	1:45 AM/PM	4	GW														X						
3. DUP-GW	11/21/23	AM/PM	4	GW														X						
4.		AM/PM																						
5.		AM/PM																						
6.		AM/PM																						
7.		AM/PM																						
8.		AM/PM																						
9.		AM/PM																						
10.		AM/PM																						
11.		AM/PM																						

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
BRYNT JELLY	11/21/23			11/21/23	16:17
	11/22/23	15:30		NOV 23	8:55

Page 1 of 1

N°: T-150455

Any and all products and/or services provided by AGAT Labs are pursuant to the terms and conditions as set forth at www.agatlabs.com/termsandconditions unless otherwise agreed in a current written contractual document.

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT
Document ID: DW-78-1511-022

APPENDIX C

Correspondence with the Area Municipality Regarding the Use of Non-potable Groundwater Standards

From: Kearney, Michel <Michel.Kearney@ottawa.ca>
Sent: September 14, 2022 2:31 PM
To: Stabile, Daniel
Cc: Hurst, Paul; 21494078, Fengate Ph One Two RSC Richmond Ottawa
Subject: [INFO: MESSAGE ENCRYPTED - CES]RE: Notice of Non Potable Groundwater Use - 1047 Richmond Road, Ottawa, Ontario
Attachments: 21494078-L-Rev0-1047Richmond NonPotNotification 28Feb2022.pdf; RSC Non-Potable Request 1047 Richmond - Sept 14 2022.pdf

EXTERNAL EMAIL

EXTERNAL EMAIL - We could not verify the authenticity of this message. Please be cautious when clicking on links or opening attachments.

Hi Daniel,

Please find the City's clearance letter attached.

Best Regards,

Michel Kearney, P.Geo.

Senior Hydrogeologist
Asset Management
Infrastructure and Water Services Department

Hydrogéologue principal
Gestion des actifs
Direction générale des services d'infrastructure et d'eau

City of Ottawa | Ville d'Ottawa
Cell: 613-606-5862
ottawa.ca/planning / ottawa.ca/urbanisme

From: Stabile, Daniel <Daniel_Stabile@golder.com>
Sent: February 28, 2022 3:46 PM
To: Kearney, Michel <Michel.Kearney@ottawa.ca>
Cc: Hurst, Paul <Paul_Hurst@golder.com>; 21494078, Fengate Ph One Two RSC Richmond Ottawa <152441@golder.com>
Subject: Notice of Non Potable Groundwater Use - 1047 Richmond Road, Ottawa, Ontario

CAUTION: This email originated from an External Sender. Please do not click links or open attachments unless you recognize the source.

ATTENTION : Ce courriel provient d'un expéditeur externe. Ne cliquez sur aucun lien et n'ouvrez pas de pièce jointe, excepté si vous connaissez l'expéditeur.

Good morning Michel,

Golder intends to submit an RSC for 1047 Richmond Road, Ottawa, Ontario, based on Phase One and Two ESA reports. We've assumed non-potable groundwater standards. The site boundary on a topographic map is attached for your reference, as well as the site plan.

Appreciate it if you kindly confirm the use of non-potable groundwater standards for this property. Please let me know if additional info is required.

Thanks and regards,

Daniel Stabile, B.Sc., MBA, EPt
Project Manager, Contaminated Sites

T+ 1 905 723-2727 x6683
M+ 1 905-213-7432

100 Scotia Court, Whitby, Ontario, Canada L1N 8Y6

wsp.com | **golder.com**

WSP and Golder have joined together to form the premier environmental consultancy in the industry. Together we are 14,000 strong, future ready and delivering innovative solutions to our clients around the globe.

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'

February 28,2022

Project No. 21494078

Michel Kearney, P.Geo., Senior Hydrogeologist - Asset Management
City of Ottawa
Ottawa City Hall
110 Laurier Ave W,
Ottawa, ON K1P 1J1

NOTIFICATION OF INTENT TO USE NON-POTABLE GROUNDWATER SITE CONDITION STANDARDS FOR RECORD OF SITE CONDITION FOR THE PROPERTY LOCATED AT 1047 RICHMOND ROAD, OTTAWA, ONTARIO

Dear Mr. Kearney

Golder Associates Ltd. (Golder) was retained by LPF Development Fund 3 LP to conduct a Phase Two Environmental Site Assessment (ESA) of the property located at located at 1047 Richmond Road (Site or Phase Two Property). The location of the Phase Two Property is shown on **Figure 1 and Figure 2**.

On behalf of LPF Development Fund 3 LP, Golder is submitting this letter to the City of Ottawa as a formal notification of intent to apply non-potable groundwater Site Condition Standards for the above noted site for the purposes of filing a Record of Site Condition under Ontario Regulation 153/04, Records of Site Condition Under Part XV.1 of the *Environmental Protection Act.* Provision of written notice to the municipality is a requirement of Ontario Regulation 153/04.

If you have any questions or comments, please feel free to contact the undersigned.

Yours truly,

Golder Associates Ltd.

Daniel Stabile, B.Sc., MBA, EPt
Project Manager - Contaminated Sites Team Lead

Paul Hurst, PEng
Associate Partner, National Capital Region Contaminated Sites

DS/PH;lb

Attachments: Figure 1 – Key Plan
Figure 2 – Site Plan

https://golderassociates.sharepoint.com/sites/152441/project files/6 deliverables/ph two report/7. phase two esa o.reg report/appendix c - correspondence area mun re use of non-potable gw standards/21494078-l-rev0-1047 richmond rd. nonpotablenotification 28feb2022.docx

Golder Associates Ltd.
100 Scotia Court, Whitby, Ontario, L1N 8Y6, Canada
T: +1 905 723 2727 F: +1 905 723 2182

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golder.com

359000
360000
361000
362000
363000
5028000
5027000
5026000
5025000
5024000
Club de Golf Rivermead
Boulevard de Lucerne
Rue du Faubourg
Rue du Pavillon
Rue des Vétérans
Allée Aspen
Promenade Cresthaven
Rue du Golf
Chemin Robert-Stewart
Rue Jean-Gascon
Chemin Vanier
Rue Deschênes
Deschênes
Rue Houle
Rue Madaire
Rue Lloyd
Rue Osgoode
Rue Lamoureux
Rue Martel
Ottawa River
Ontario
Quebec
Gatineau
Avenue
Eastern Ontario
Britannia Water Purification Plant (Ottawa)
Britannia Yacht Club
Cassels Street
Britannia Conservation Area
Britannia Bay
Britannia Road
Byron Linear Tramway Park
Lincoln Heights
Lincoln Fields Shopping Centre
Britannia Park
Britannia Woods
Britannia Heights
Fairfield Heights
Nepean
Carling Avenue
Greenview Avenue
Granleaf Avenue
Bayshore Drive
Woodroffe North
Woodroffe High School
Whitehaven
Georgina Drive
Woodroffe Avenue
Elmhurst Park
Frank Ryan Park
DC Transpo
Queensview Drive
Moncton Road
Kelly Avenue
Prince Charles Road
Carlingwood
Sherbourne Road
Black Friars Road
Keepawa Avenue
Savile Row
Haymarket Street
Tropicus Road
Ambleside Drive
Richmond Road
Byron Avenue
Sir John A. Macdonald Parkway
Highway 417
Maitland Avenue
Woodroffe Avenue
Highland Park
McKellar Park
McKellar Heights
Dovercourt Avenue
Notre Dame High School
Westboro
Westboro Beach
Richmond Road
Irving Avenue
Lyne Road
St Clair
Iris Street
Fisher Avenue
Merivale Road
Island Park Drive
Woodroffe Avenue
Highway 417
Maitland Avenue
Carling Avenue
Sir John A. Macdonald Parkway
Richmond Road
Byron Avenue
Woodroffe Avenue
Highway 417

LEGEND

ROADWAY

APPROXIMATE SITE BOUNDARY

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 10 20 40

1:750 METRES

CLIENT

FENGATE DEVELOPMENT HOLDINGS LP

PROJECT

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE

SITE PLAN

CONSULTANT

GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-02-15
DESIGNED	----
PREPARED	JEM
REVIEWED	----
APPROVED	----

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0002	A	**2**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm 0

Path: N:\Active\Spatial_IM\Fengate\1047_Richmond_Rd\99_PRO\21494078_Fengate_GeoEnviro\0002_PhaseTwo_ESA\21494078-0002-HR-0002.mxd

14 September 2022

Mr. Daniel Stabile, B.Sc., MBA, EPt
WSP Golder
100 Scotia Court
Whitby, Ontario
L1N 8Y6

Dear Mr. Stabile,

Re: Record of Site Condition – 1047 Richmond Road

As per your letter of February 28, 2022 (attached) requesting to use non-potable standards, this is to advise that the City of Ottawa does not object to the use of non-potable groundwater standards for the property identified as 1047 Richmond Road, Ottawa, ON, as part of the filing of a Record of Site Condition.

Best Regards,

Michel Kearney, P.Geo.

Senior Hydrogeologist
Asset Management
Infrastructure and Water Services Department

Hydrogéologue principal
Gestion des actifs
Direction générale des services d'infrastructure et d'eau

City of Ottawa | Ville d'Ottawa
Cell: 613-606-5862
ottawa.ca/planning / ottawa.ca/urbanisme

APPENDIX D

Sampling and Analysis Plan

SAMPLING AND ANALYSIS PLAN

DATE December 20, 2021 **Project No.** 21494078

TO Field Supervisor
Golder Associates Ltd.

CC Paul Hurst, Project Director, QP

FROM Daniel Stabile, Project Manager **EMAIL Daniel_Stabile@golder.com**

SAMPLING AND ANALYSIS PLAN, 1047 RICHMOND ROAD, OTTAWA, ONTARIO

1.0 OBJECTIVE

The intent of this Phase Two Environmental Site Assessment (ESA) is to investigate the soil and groundwater within the areas of potential environmental concern (APECs) identified in the Phase One ESA at 1047 Richmond Rd., Ottawa, Ontario (the "Site").

The Site is currently an active car dealership, and we need to keep our operations confidential and not disclose any information to the business employees. The Phase Two ESA is required to support a future filing of a Record of Site Condition (RSC) if financing and/or sale of the property is intended in the future.

2.0 SITE BACKGROUND

One round of drilling was performed in September 2021 when the Phase One, Phase Two and Geotechnical assessments were carried out, and two locations presented exceedances of the Table 3 Site ondition Standards, one in soil and one in groundwater. A second mobilization was conducted in November 2021 with the objective to delineate the impacts in soil and in groundwater by adding three additional boreholes around BH21-05 which presented exceedances of PHC F2-F4 and 1,4-dichlorobenzene, and monitoring wells aiming to assess the extent of the exceedances at the BH21-04 and BH21-14 with exceedances of benzene, 1,2-dichloroethane and trichloroethylene. On December 2021, a third drilling program was performed to determine average PHC concentrations at BH21-05 and assess if impacted groundwater was possibly flowing off-site, beyond the property limit.

Golder's Phase One team conducted a site visit in September 2021, and the following APECs were identified. A summary of the APECs identified at the Phase One Property site visit is provided in the following table.

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Area of Potential Environmental Concern[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Groundwater, soil and/or Sediment)
APEC 1 – On-site automotive garage	Centre of the Site	*#10. Commercial Autobody Shops*	On-Site	PHCs F1-F4, BTEX and VOCs	Soil and groundwater
APEC 2A – Former UST location	Northeast portion of the Site building	*#28. Gasoline and Associated Products Storage in Fixed Tanks*	On-Site	PHCs F1-F4 and BTEX	Soil and groundwater
APEC 2B – Former UST location	Southeats portion of the Site building			PHCs F1-F4 and BTEX	Soil
APEC 3 –Presence of an AST for used waste lubricant oil and oil-stained asphalt	Northeast portion of the Site building	*#28. Gasoline and Associated Products Storage in Fixed Tanks*	On-Site	PHCs F1-F4 and BTEX	Soil and groundwater
APEC 4 – Presence of painting operations (paint booth)	Northeast and Northwest of the Site building	*#39. Paints Manufacturing, Processing and Bulk Storage*	On-Site	Metals, Hydride-Forming Metals, ORP, VOCs and PHCs	Soil and groundwater
APEC 5 – Inferred fill materials site-wide	Entire Site	*# 30. Importation of Fill Material of Unknown Quality*	On-Site	Metals, Hydride-Forming Metals, ORP and PHCs	Soil and groundwater
APEC 6 – Pole mounted transformer and fuse box	Four pole-mounted transformers were observed on the driveway of New Orchard Ave.	*#55. Transformer Manufacturing, Processing and Use*	On-Site	PCBs, PHCs	Soil

Notes:

1 Area of potential environmental concern means the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental Site assessment, including through, •(a) identification of past or present uses on, in or under the phase one property, and •(b) identification of potentially contaminating activity

2 Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area

3 Contaminants of potential concern specified using the method groups as identified in the "Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011

4 Metals – Ba (Barium), Beryllium (Be), Boron (B), Cadmium (Cd), Chromium (Cr), Cobalt (Co), Copper (Cu), Lead (Pb), Molybdenum (Mo), Nickel (Ni), Silver (Ag), Thallium (Th), Uranium (U), Vanadium (V), Zinc (Zn); Hydride-Forming Metals – Arsenic (As), Selenium (Se), Antimony (Sb); ORP – Hexavalent Chromium (Cr-VI), Sodium (Na), Mercury (Hg), Hot Water Soluble Boron (B-HWS), Chloride (Cl-), Cyanide (CN-), Sodium Adsorption Ratio (SAR), Electrical Conductivity (EC); PHC – Petroleum Hydrocarbons; BTEX – Benzene, Toluene, Ethylbenzene and Xylenes; VOC – Volatile Organic Compounds; PCB – Polychlorinated Byphenils.

3.0 SITE ACCESS REQUIREMENTS

Table 1: Site Access

Access Concern	Information
Site Contacts	Mr. Peter Pears and Ms. Michele Pears Office: 613-327-5153 michelep@metrochrysler.com
Access	No restrictions.
Hours of Work	■ Within daylight hours (Approx. 7 am to 6 pm) ■ Interior drilling from 06:00pm to 12:00 am ■ Exterior drilling From 08:00am to 05:00pm
Site Check-In/Out Procedures	Daily check-in/out with Daniel Stabile
Photography	No restrictions
H&S	■ Follow the HaSEP and COVID procedures; and conduct tailgate with drilling crew. ■ Not to disclose any information to the site employees. Ask Michele help if this happens

4.0 GENERAL REQUIREMENTS

- Follow standard operating procedures for drilling, soil logging, and soil sampling. All work is to be completed assuming a Record of Site Condition will be required.
- Follow Golder Standard Operating Procedures (SOPs) referenced in this sampling and analysis plan and use Golder standard field forms.
- Complete a Daily Log and Job Safety and Environment Analysis (JSEA) form for every day of fieldwork.
- New disposable Nitrile™ gloves will be used at each sampling location to prevent cross-contamination.
- All non-dedicated sampling equipment (e.g., interface probes) will be decontaminated between sampling locations. Sampling equipment in contact with soil or groundwater will be washed with a laboratory-grade detergent solution (i.e. phosphate-free AlcoNox) and thoroughly rinsed with analyte-free water. Use plastic pales from any hardware store. They can also be used for wastewater storage.

5.0 PRIVATE LOCATES

- Private locates was performed on September 16, 2021, November 2, 2021 and December 16, 2021, with USL-1.
- Bring public locate sheets with you to the Site.
- Ensure the private locator clears each borehole location before leaving the Site and that the radius of 2-3 m clearance is provided by the locator for each location. Adjust locations as applicable. If in doubt/clear a second nearby location as an alternate.

6.0 DRILLING ACTIVITIES

- Borehole drilling and monitoring well installation is booked for September 21-24, 2021, with CCC Group.
- Borehole drilling and monitoring well installation is booked for November 11-12, 2021, with Marathon Underground.
- Borehole drilling and monitoring well installation is booked for November 22, 24-25, 2021, with Marathon Underground.
- Borehole drilling and monitoring well installation is booked for December 22, 2021, with Strata Group.

6.1 Borehole Drilling and Soil Sampling

- Ensure that borehole drilling and soil sampling is carried out in conformance with SOP No. 3: Borehole Drilling and Sampling.
- Confirm that the private locator has cleared every drilling location before penetrating the ground.
- Borehole IDs are found in the proposed BH locations plan.
- Screen overburden soil samples at maximum 0.6 m (2 ft) intervals using a combustible gas and photoionization detector (i.e. RKI Eagle, calibrated for hexane and isobutylene), as per SOP No. 4: Headspace Screening.
- Log overburden soil stratigraphy at maximum 0.6 m (2 ft) intervals, as per SOP No. 6: Soil Logging and SOP No. 14: Soil Classification and Description.
- Bedrock is expected to be encountered from 3 – 4 m bgs. After this depth, the drilling will be performed with rock coring tooling, and no soil samples will be collected. Keep the rock cores in the core box.
- Collect soil samples (including 2 x vials per interval) at a maximum of 0.6 m (2 ft) intervals from the ground surface to borehole refusal (call Daniel Stabile if soil conditions are tight or soil recovery is not satisfactory). Submit soil samples in accordance with Table 2 (below).
- Duplicate *samples to be collected and submitted for analysis at a rate of one duplicate per every ten samples submitted to the laboratory. A summary of duplicates required is included at the end of Table 2.*
- Collect *duplicates at the same intervals of the higher headspace readings and/or according to Table 2. (keep your soil cores until you finalize the headspace headings); and from the inferred capillary fringe/water table interface interval.*
- Soil jar quantities: 2 x 40 ml Methanol Vails for VOC and PHC F1/BTEX analysis; 1 x 120 ml jar for PHC F2-F4 and moisture and 1 x 250 ml jar (up to 1.5 m bgs) for Metals and ORP. At the transformers location, fill 1 x 250 ml jar (up to 15 cm bgs). *For duplicates, double the amount of container for the duplicated interval.*
- Samples are to be stored in coolers with ice after collection (the samples must be below 10°C upon receipt to the lab). Bring ice to the Site in the morning.
- Fill out the chain of custody per the details in Table 5.

- Ask drillers to leave two 200L drums to store purged groundwater for the development and sampling stages and one (as needed) steel drum per BH locations to store drilling cutting.
- The first five boreholes will be used for environmental purposes. See Geotech instructions for the

Table 2: Drilling Program Summary and Soil Sampling Details

ID	Rationale	Proposed Investigation	Laboratory Soil Analysis
BH21-1	Investigate possible impacts at the front of the building, possible off-site impacts, and sewer line (tank present on fire plans from 1976)	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 5 – Inferred fill materials to be present site-wide (*# 30. Importation of Fill Material of Unknown Quality*) - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 5-7 m bgs).	**1 x Sample** *(higher headspace reading/capillary fringe – Keep other samples ON HOLD at Golder warehouse fridge)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)* **1 x Sample** *(1 surface soil – up to 1.5 mbgs)*: - **Metals, Hydride-Forming Metals and ORP** *(based on visual observations)*
BH21-2	Investigate possible impacts at waste oil AST location. Some stains on asphalt are to be assessed	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 3 –Presence of an AST used waste lubricant oil and oil-stained asphalt (*#28. Gasoline and Associated)* - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 5-7 m bgs).	**1 x Samples** *(higher headspace reading/capillary fringe – Keep other samples ON HOLD at Golder warehouse fridge)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)*
BH21-3 and BH21-5	Investigate possible impacts at the paint booth	- APEC 4 – Presence of painting operations - paint booth (*#39 Paints Manufacturing, Processing and Bulk Storage*) - APEC 5 – Inferred fill materials to be present site-wide (*# 30 Importation of Fill Material of Unknown Quality*) - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 5-7 m bgs).	**2 x Sample** *(higher headspace reading/capillary fringe – Keep other samples ON HOLD at Golder warehouse fridge)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)* **2 x Sample** *(2 subsurface soil – > 1.5 mbgs)*: - **Metals, Hydride-Forming Metals and ORP** *(based on visual observations)*

ID	Rationale	Proposed Investigation	Laboratory Soil Analysis
BH21-4	Investigate possible impacts at former UST location at northeast corner of the building	- APEC 2A – Former UST location *(#28. Gasoline and Associated Products Storage in Fixed Tanks*) - APEC 5 – Inferred fill materials to be present site-wide (*# 30. Importation of Fill Material of Unknown Quality*) - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 5 - 7 m bgs).	**1 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)* **1 x Sample** *(1 surface soil – up to 1.5 mbgs)*: - **Metals, Hydride-Forming Metals and ORP** *(based on visual observations)*
BH21-11 and BH21-12	Attempt to delineate SAR exceedances at BH21-03 and to assess potential cross gradient impacts at potential former body shop	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 4 – Presence of painting operations - paint booth (*#39 Paints Manufacturing, Processing and Bulk Storage*) - APEC 5 – Inferred fill materials to be present site-wide (*# 30 Importation of Fill Material of Unknown Quality*) - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 3 - 4 m bgs).	**2 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)* **2 x Sample** *(1 surface soil – up to 1.5 mbgs)*: **Metals, Hydride-Forming Metals and ORP** *(based on visual observations)*
BH21-13	Attempt to delineate SAR exceedances at BH21-03.	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 5 – Inferred fill materials to be present site-wide (*# 30 Importation of Fill Material of Unknown Quality*) - Perform headspace reading every 0.6 m.	**1 x Sample** *(1 surface soil – up to 1.5 mbgs)*: **Metals, Hydride-Forming Metals and ORP** *(based on visual observations)*
BH21-14 and BH21-15	Attempt to provide context on potential magnitude of 1,2-DCA exceedance at BH21-04 in GW. Multilevel well at BH21-15 shalow and deep screened	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 4 – Presence of painting operations - paint booth (*#39 Paints Manufacturing, Processing and Bulk Storage*) - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 3 - 4 m bgs).	**2 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)*

ID	Rationale	Proposed Investigation	Laboratory Soil Analysis
BH21-16 to BH21-18	Attempt to delineate PHC F2-F4 exceedances at BH21-04	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 5 – Inferred fill materials to be present site-wide *(# 30 Importation of Fill Material of Unknown Quality*) - Perform headspace reading every 0.6 m.	**3 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)*
BH21-19 and BH21-20	Investigate possible impacts at at interior, area of hoists and paint booth	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 4 – Presence of painting operations - paint booth (*#39 Paints Manufacturing, Processing and Bulk Storage*) - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 3 - 4 m bgs).	**2 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)*
BH21-21 and BH21-22	Investigate possible impacted groundwater flowing off-site, beyond the property limit	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 4 – Presence of painting operations - paint booth (*#39 Paints Manufacturing, Processing and Bulk Storage*) - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 3 - 4 m bgs).	**2 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **VOC** *(based on headspace and visual/olfactory observations)* **PHC/BTEX** *(based on headspace and visual/olfactory observations)*
BH21-23 and BH21-24	Averaging PHC concentrations at BH21-05	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - Perform headspace reading every 0.6 m.	**2 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **PHC/BTEX** *(based on headspace and visual/olfactory observations)*
BH21-25	Investigate possible impacts at former UST location at southeast corner of the building	- APEC 2A – Former UST location *(#28. Gasoline and Associated Products Storage in Fixed Tanks*) - Perform headspace reading every 0.6 m.	**1 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **PHC/BTEX** *(based on headspace and visual/olfactory observations)*

ID	Rationale	Proposed Investigation	Laboratory Soil Analysis
TP21-1	Investigate possible impacts at pole-mounted transformers at the entrance driveway of New Orchard Ave.	- APEC 6 - Four pole-mounted transformers and fuse box were observed on the driveway of New Orchard Ave. (*#55. Transformer Manufacturing, Processing and Use)*	**1 x Sample** *(1 hand-dug sample from the first 15 cm of soil profile)*: - **PCB** - **PHC/BTEX**
Grain Size: submit **two soil samples** for grain size at or near the anticipated water table (check Geotech sampling plan) **pH**: in conjunction with other parameters - **two soil samples** (two of surface soil (0-1.5 m bgs), two of subsurface soil (> 1.5 m bgs)) for pH **Duplicate Samples**: One duplicate soil sample for each VOC, PHC/BTEX, and M&ORP (Higher VOC/worst case)			

6.2 Monitoring Well Installation

- Refer to SOP No. 1: Monitoring Well Installation. The monitoring wells will consist of 50 mm inner diameter ("ID") Schedule 40 polyvinyl chloride ("PVC") casing and 50 mm ID Schedule 40 PVC well screen (up to 3 metres in length, #10 slot size); sand pack surrounding the screen will be #00 or #0. The annulus will be backfilled using clean silica sand around the screened portion, extending approximately 0.3 to 0.6 m above the screen, followed by bentonite to just below the ground surface. The monitoring wells will be completed with a flush-mounted style protective casing set in concrete and sealed with a PVC j-plug. Label the j-plug with the monitoring well ID during installation. Mark the reference point at the top of well pipe with a small notch. Do NOT use sharpie/marker to mark out reference point.
- Please confirm monitoring well construction with Daniel Stabile prior to installation where any deviation from our typical monitoring well construction is expected.
- Install environmental monitoring wells per the details in Table 3.
- If water table is encountered within overburden, before the last spoon/interval is sampled, take a picture of the BH log and send it to Daniel Stabile for review and definition on the monitoring well design.
- If water table is within the bedrock, well is to be sealed completely on the bedrock to avoid water from the overburden to infiltrate inside the well through the bentonite seal and sand pack.

Table 3: Monitoring Well Construction Details

Location	Screen Depth (m bgs)	Screen Length (ft / m)	Well Diameter (mm/inches)	Protective Casing Type
BH21-01	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-02	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-03	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-04	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-05	Set to straddle the water table	10 / 3	51 / 2	Flush-mount

Location	Screen Depth (m bgs)	Screen Length (ft / m)	Well Diameter (mm/inches)	Protective Casing Type
BH21-11	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-14	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-15S	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-15D	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-19	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-20	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-21	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-22	Set to straddle the water table	10 / 3	51 / 2	Flush-mount

7.0 MONITORING WELL DEVELOPMENT OF NEWLY INSTALLED WELLS

- Monitoring well development to be conductec upon completion of the monitoring well installation.
- Develop each newly installed monitoring well in accordance with SOP No. 5: Monitoring Well Development.
- Develop the monitoring well with Waterra tubing, foot valve, and surge block for two minutes of pumping for each 0.3 m (1 ft) of the screen.
- Following the surging, continue to purge the ten well volumes or until dry three times.
- Contain all purge water in labelled and sealed drums/totes for off-site disposal.
- Please contact Daniel Stabile if you observe or suspect that there is sheen/product in any monitoring well.

8.0 GROUNDWATER MONITORING AND SAMPLE COLLECTION

8.1 Groundwater Monitoring

- Collect water levels using an interface probe from all the monitoring wells at the Site before collecting groundwater samples from any monitoring wells.
- Please contact Daniel Stabile if you observe or suspect that there is free product in any monitoring well.
- If product is detected with the interface probe or product signs are observed during monitoring well development, check for product thickness with a bailer and take photos of the bailer (regardless of whether product is observed). Record product thickness using the interface probe and the bailer.
    - Clean interface probe and dispose of bailer immediately if impacts are observed.

8.2 Groundwater Sample Collection

- Refer to SOP No. 10: Low Flow Sample Collection and SOP No. 12: Measurement of Field Parameters. Use the "Groundwater Sample Collection" form to collect all data during groundwater sampling.

- Use a low-flow pump for purging and sample collection and monitor depth to groundwater and water quality field parameters (i.e., pH, specific conductivity, temperature, dissolved oxygen, and reduction-oxidation potential) in accordance with SOP Nos. 10 and 12. If field water quality parameters do not stabilize during low flow purging, do not purge longer than 30 minutes before collecting a groundwater sample.
- If drawdown in the monitoring well is greater than 0.3 m but remains stable, continue purging. If the drawdown is more significant than 0.3 m and is not stable, then complete purging and sample collection in accordance with SOP No. 9: Conventional Groundwater Sample Collection or use the low-field procedure. Sample with a bailer if using the conventional method.
- For wells that can use the conventional method based on observations during development, complete the purging at the beginning of the day and return to the well at the end of the day for sampling.
- Collect groundwater samples in accordance with Table 4. Collect QA/QC samples as indicated at the end of Table 4. The duplicate groundwater samples should be labelled in a manner that the laboratory cannot readily identify the sample as a duplicate (i.e. DUP1). A trip blank sample is required for every groundwater sample submission and one field blank sample is also required.
- Metals are to be field filtered per lab requirements.
- For the resamapling of BH21-04 on November 30, 2021, sample needs to be collected from the top of the screened section (aprox. 4.5-4.7 m btoc).
- BH21-01 were found dry after installation and did not recovered enough water for sampling, during the first investigation effort. Measure the water level on both wells and if water column is observed to be sampable, please collect sample without purging the well.
- Samples are to be stored in coolers with ice after collection (the samples **must** be below 10°C upon receipt to the lab).
- Fill out the chain of custody per the details in Table 5.

Table 4: Groundwater Sampling Plan (Field Check List)

Location	Sampling Date	Laboratory Groundwater Analysis			Sampled?		OBS.
		VOC	PHC (F1-F4) and BTEX	Metals and ORP	YES	NO	
BH21-1	04-Oct-2021	X	X	X	☐	☒	Dry well
BH21-2	04-Oct-2021	X	X	X	☒	☐	
BH21-3	04-Oct-2021	X	X	X	☒	☐	
BH21-4	04-Oct-2021	X	X	X	☒	☐	
	30-Nov-2021	X	X		☒	☐	DUP-1
	09-Dec-2021	X	X		☒	☐	
	22-Dec-2021	X	X		☒	☐	
BH21-05	04-Oct-2021	X	X	X	☒	☐	DUP-1

Location	Sampling Date	Laboratory Groundwater Analysis			Sampled?		OBS.
		VOC	PHC (F1-F4) and BTEX	Metals and ORP	YES	NO	
BH21-11	30-Nov-2021	X	X	X	☒	☐	DUP-2
BH21-14	30-Nov-2021	X	X		☒	☐	
	09-Dec-2021	X	X		☒	☐	DUP
	22-Dec-2021	X	X		☒	☐	
BH21-15S	30-Nov-2021	X	X		☒	☐	
BH21-15D	30-Nov-2021	X	X		☒	☐	
BH21-19	30-Nov-2021	X	X		☒	☐	
BH21-20	30-Nov-2021	X	X		☒	☐	
BH21-21	22-Dec-2021	X	X		☒	☐	DUP
BH21-22	22-Dec-2021	X	X		☒	☐	
Total Samples		**17**	**17**	**5**			

Duplicate Sample: One duplicate groundwater sample VOC, PHC/BTEX
Trip Blanks: One trip blank per groundwater sample submission for VOC (per cooler)
Field Blank: One field blank for VOC

9.0 CHAIN OF CUSTODY INFORMATION

- Please send a copy of the chain of custody to Daniel Stabile for review prior to submitting the soil and groundwater samples to the laboratory.
- After confirmation/approval, staff can submit samples for analysis.

Table 5: Chain of Custody Details

Chain of Custody Item	Information
Analytical Laboratory	BV Labs and AGAT Laboratory
Generic Site Condition Standards (SCS)	O. Reg 153/05 Table 7, R/P/I and I/C/C (don't report SCS on CofA)
Use Record of Site Condition analytical procedures?	Yes
Turn-around Time	48hs soil and GW TAT
Golder Reporting Contact	Daniel_Stabile@golder.com Paul_Hurst@golder.com
Project-Specific Quote Number	Golder-BV MSA and Golder-AGAT MSA (include *WORK ORDER* on the header of the CoC and provide the MSA signature date of May 18, 2020)
Billing Details	AP_CustomerService@golder.com
Is an EQUIS EDD Required?	Yes -
Lab User Certificate Facility	230360930

10.0 SURVEYING

- Drilling locations will be surveyed after monitoring well installations.
- Northing and easting coordinates are to be collected to a +/- 10 cm accuracy (Phone APP should work).
- Elevations of the ground surface and top of pipe to be measured off of a local benchmark (previous MW's).
- During monitoring events, measure the distance from the top of the pipe to the ground surface/flushmount if top of pipe can not be surveyed.

11.0 INVESTIGATION DERIVED WASTE

- Garbage, such as gloves, bags, etc., is to be taken off-site for disposal.
- Label drums for waste management purposes include the project number, date, site location, drum contents (soil cuttings, purge water).
- Drums should be grouped and placed in an area of the Site for easy access. Confirm with the Property Representative (Peter/Michelle) where the best location on the Site would be. This is needed to be agreed upon between the Site Supervisor, PM and site representee as soon as possible during the first day of fieldwork.
- Record inventory of waste containers in the field notes.

12.0 DOCUMENT MANAGEMENT

- Field staff submits scanned field notes to GTAFieldFile@golder.com and Daniel_Stabile@golder.com. This does not need to be daily but should be weekly for more extensive programs or at the fieldwork's end.
- Put all files in one single pdf, and the file name should be as follows: PROJECT_NUMBER Field Notes COMPLETION_DATE" (for example, "1712345 Field Notes April 27, 2017.pdf).
- Take photos, at least two at each one of the drilling/sampling locations showing: (1) general area of drilling; (2) detailed photo of the drilling or some specific aspect you want to highlight and; (3) H&S photo – optional. Take photo of the drums storage area.

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SAMPLING AND ANALYSIS PLAN

DATE May 5, 2022 **Project No.** 21494078

TO Field Supervisor
Golder Associates Ltd.

CC Paul Hurst, Project Director, QP

FROM Daniel Stabile, Project Manager **EMAIL Daniel_Stabile@golder.com**

SAMPLING AND ANALYSIS PLAN, 1047 RICHMOND ROAD, OTTAWA, ONTARIO

1.0 OBJECTIVE

The intent of this Phase Two Environmental Site Assessment (ESA) is to investigate the soil and groundwater within the areas of potential environmental concern (APECs) identified in the Phase One ESA at 1047 Richmond Rd., Ottawa, Ontario (the Site).

The Site is currently an active car dealership, and we need to keep our operations confidential and not disclose any information to the business employees. The Phase Two ESA is required to support a future filing of a Record of Site Condition (RSC) if financing and/or sale of the property is intended in the future.

Four rounds of drilling were completed, and this stage's objective is to delineate GW impacts at BH21-4 and BH21-14 vertically and horizontally. Telescope drilling will be performed to install multilevel monitoring well pairs at BH21-4 and BH21-14 to achieve horizontal delineation. Since these boreholes will be drilled through an impacted GW zone, telescopic drilling will be required to avoid dragging contamination from upper zones to deeper depths.

2.0 SITE ACCESS REQUIREMENTS

Table 1: Site Access

Access Concern	Information
Site Contacts	Mr. Peter Pears and Ms. Michele Pears Office: 613-327-5153 michelep@metrochrysler.com
Access	No restrictions.
Hours of Work	■ Within daylight hours (Approx. 7 am to 6 pm) ■ Interior drilling from 06:00pm to 12:00 am ■ Exterior drilling From 08:00am to 05:00pm
Site Check-In/Out Procedures	Daily check-in/out with Daniel Stabile
Photography	No restrictions

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Access Concern	Information
H&S	■ Follow the HaSEP and COVID procedures; and conduct tailgate with drilling crew. ■ Not to disclose any information to the site employees. Ask Michele help if this happens

3.0 GENERAL REQUIREMENTS

- Follow standard operating procedures for drilling, soil logging, and soil sampling. All work is to be completed assuming a Record of Site Condition will be required.
- Follow Golder Standard Operating Procedures (SOPs) referenced in this sampling and analysis plan and use Golder standard field forms.
- Complete a Daily Log and Job Safety and Environment Analysis (JSEA) form for every day of fieldwork.
- New disposable Nitrile™ gloves will be used at each sampling location to prevent cross-contamination.
- All non-dedicated sampling equipment (e.g., interface probes) will be decontaminated between sampling locations. Sampling equipment in contact with soil or groundwater will be washed with a laboratory-grade detergent solution (i.e. phosphate-free AlcoNox) and thoroughly rinsed with analyte-free water. Use plastic pales from any hardware store. They can also be used for wastewater storage.

4.0 PRIVATE LOCATES

- Private locates was performed on May 5, 2022, with USL-1.
- Bring public locate sheets with you to the Site.
- Ensure the private locator clears each borehole location before leaving the Site and that the radius of 2-3 m clearance is provided by the locator for each location. Adjust locations as applicable. If in doubt/clear a second nearby location as an alternate.

5.0 DRILLING ACTIVITIES

- Borehole drilling and monitoring well installation is booked for May 9, 2022, with Strata Group.

5.1 Borehole Drilling and Soil Sampling

- Ensure that borehole drilling and soil sampling is carried out in conformance with SOP No. 3: Borehole Drilling and Sampling.
- Confirm that the private locator has cleared every drilling location before penetrating the ground.
- Borehole IDs are found in the proposed BH locations plan.
- Screen overburden soil samples at maximum 0.75 m (2.5 ft) intervals using a combustible gas and photoionization detector (i.e. RKI Eagle, calibrated for hexane and isobutylene), as per SOP No. 4: Headspace Screening.
- Log overburden soil stratigraphy, as per SOP No. 6: Soil Logging and SOP No. 14: Soil Classification and Description.

- Bedrock is expected to be encountered from 3 – 4 m bgs. After this depth, the drilling will be performed with ait hammer tooling, and no soil samples or soil cores will be collected.
- Collect soil samples (including 2 x vials per interval) at a maximum of 0.75 m (2.5 ft) intervals from the ground surface to borehole refusal (call Daniel Stabile if soil conditions are tight or soil recovery is not satisfactory). Submit soil samples in accordance with Table 2 (below).
- Duplicate *samples to be collected and submitted for analysis at a rate of one duplicate per every ten samples submitted to the laboratory. A summary of duplicates required is included at the end of Table 2.*
- Collect *duplicates at the same intervals of the higher headspace readings and/or according to Table 2. (keep your soil cores until you finalize the headspace headings); and from the inferred capillary fringe/water table interface interval.*
- Soil jar quantities: 2 x 40 ml Methanol Vails for VOC and PHC F1/BTEX analysis; 2 x 120 ml jar for PHC F2-F4 and moisture. *For duplicates, double the amount of container for the duplicated interval.*
- Samples are to be stored in coolers with ice after collection (the samples must be below 10°C upon receipt to the lab). Bring ice to the Site in the morning.
- Fill out the chain of custody per the details in Table 5.
- Ask drillers to leave two 200L drums to store purged groundwater for the development and sampling stages and one (as needed) steel drum per BH locations to store drilling cutting.

Table 2: Drilling Program Summary and Soil Sampling Details

Borehole	MW	Analysis	Rationale	OBS
BH22-01	Deep BR: 8 - 9.5 mbgs	Soil: (1) PHC/BTEX/VOC GW: (1) PHC/BTEX /VOC	Telescopic drilling to avoid cross-contamination and access groundwater quality and delineate vertical impact at BH21-04.	BH21-04 is screened from 4.5 – 7.5 mbgs
BH22-02	Upper BR: 4.5-7.5 mbgs	Soil: (1) PHC/BTEX/VOC GW: (1) PHC/BTEX /VOC	Upper bedrock wells to delineate east of BH21-04 area	
BH22-03	Deep BR: 5 - 6.5 mbgs	Soil: (1) PHC/BTEX/VOC GW: (1) PHC/BTEX /VOC	Telescopic drilling to avoid cross-contamination and access groundwater quality and delineate vertical impact at BH21-14.	BH21-14 is screened from 3 – 4.5 mbgs
BH22-04	Upper BR: 5 -8 mbgs	Soil: (1) PHC/BTEX/VOC GW: (1) PHC/BTEX /VOC	Upper bedrock wells to delineate west of BH21-14 area	
BH22-05	OB: 2 - 5 mbgs BR: 8.5 - 11.5 mbgs	Soil: (1) PHC/BTEX GW: (2) PHC/BTEX	Additional bedrock MW at the possible UST nest in the front of the building to confirm no impacts on that APEC in groundwater.	BH21-07 located west of this area presented water at 9.5 m bgs

BH21-04	Existing MW	GW: (1) PHC/BTEX /VOC	Re-sample PHC /BTEX /VOC	-
BH21-14	Existing MW	GW: (1) PHC/BTEX /VOC	Re-sample PHC /BTEX /VOC	-
GW: (2) Field Trip/Field Blank for VOC			QA/QC	-
Soil/GW Duplicates @ 10% ratio: Soil (1), GW (1)			QA/QC	-

5.2 Monitoring Well Installation

- Refer to SOP No. 1: Monitoring Well Installation. The monitoring wells will consist of 50 mm inner diameter ("ID") Schedule 40 polyvinyl chloride ("PVC") casing and 50 mm ID Schedule 40 PVC well screen (up to 3 metres in length, #10 slot size); sand pack surrounding the screen will be #00 or #0. The annulus will be backfilled using clean silica sand around the screened portion, extending approximately 0.3 to 0.6 m above the screen, followed by bentonite to just below the ground surface. The monitoring wells will be completed with a flush-mounted style protective casing set in concrete and sealed with a PVC j-plug. Label the j-plug with the monitoring well ID during installation. Mark the reference point at the top of well pipe with a small notch. Do NOT use sharpie/marker to mark out reference point.
- Please confirm monitoring well construction with Daniel Stabile prior to installation where any deviation from our typical monitoring well construction is expected.
- Install environmental monitoring wells per the details in Table 3.
- If water table is encountered within overburden, before the last spoon/interval is sampled, take a picture of the BH log and send it to Daniel Stabile for review and definition on the monitoring well design.
- If water table is within the bedrock, well is to be sealed completely on the bedrock to avoid water from the overburden to infiltrate inside the well through the bentonite seal and sand pack.

Table 3: Monitoring Well Construction Details

Location	Screen Depth (m bgs)	Screen Length (ft / m)	Well Diameter (mm/inches)	Protective Casing Type
BH22-01	8 - 9.5 mbgs	3 / 1.5	51 / 2	Flush-mount
BH22-02	4.5 - 7.5 mbgs	10 / 3	51 / 2	Flush-mount
BH22-03	5 - 6.5 mbgs	3 / 1.5	51 / 2	Flush-mount
BH22-04	5 - 8 mbgs	10 / 3	51 / 2	Flush-mount
BH22-05	8.5 - 11.5 mbgs	10 / 3	51 / 2	Flush-mount

6.0 MONITORING WELL DEVELOPMENT OF NEWLY INSTALLED WELLS

- Monitoring well development to be conductec upon completion of the monitoring well installation.
- Develop each newly installed monitoring well in accordance with SOP No. 5: Monitoring Well Development.
- Develop the monitoring well with Waterra tubing, foot valve, and surge block for two minutes of pumping for each 0.3 m (1 ft) of the screen.

- Following the surging, continue to purge the ten well volumes or until dry three times.
- Contain all purge water in labelled and sealed drums/totes for off-site disposal.
- Please contact Daniel Stabile if you observe or suspect that there is sheen/product in any monitoring well.

7.0 GROUNDWATER MONITORING AND SAMPLE COLLECTION

7.1 Groundwater Monitoring

- Collect water levels using an interface probe from all the monitoring wells at the Site before collecting groundwater samples from any monitoring wells.
- Please contact Daniel Stabile if you observe or suspect that there is free product in any monitoring well.
- If product is detected with the interface probe or product signs are observed during monitoring well development, check for product thickness with a bailer and take photos of the bailer (regardless of whether product is observed). Record product thickness using the interface probe and the bailer.
    - Clean interface probe and dispose of bailer immediately if impacts are observed.

7.2 Groundwater Sample Collection

- Refer to SOP No. 10: Low Flow Sample Collection and SOP No. 12: Measurement of Field Parameters. Use the "Groundwater Sample Collection" form to collect all data during groundwater sampling.
- Use a low-flow pump for purging and sample collection and monitor the depth to groundwater and water quality field parameters (i.e., pH, specific conductivity, temperature, dissolved oxygen, and reduction-oxidation potential) in accordance with SOP Nos. 10 and 12. If field water quality parameters do not stabilize during low flow purging, do not purge longer than 30 minutes before collecting a groundwater sample.
- If drawdown in the monitoring well is greater than 0.3 m but remains stable, continue purging. If the drawdown is more significant than 0.3 m and is not stable, then complete purging and sample collection in accordance with SOP No. 9: Conventional Groundwater Sample Collection or use the low-field procedure. Sample with a bailer if using the conventional method.
- For wells that can use the conventional method based on observations during development, complete the purging at the beginning of the day and return to the well at the end of the day for sampling.
- Collect groundwater samples in accordance with Table 4. Collect QA/QC samples as indicated at the end of Table 4. The duplicate groundwater samples should be labelled in a manner that the laboratory cannot readily identify the sample as a duplicate (i.e. DUP1). A trip blank sample is required for every groundwater sample submission and one field blank sample is also required.
- For BH21-04, sample needs to be collected from the top of the screened section (aprox. 4.5-4.7 m btoc).
- Samples are to be stored in coolers with ice after collection (the samples **must** be below 10°C upon receipt to the lab).
- Fill out the chain of custody per the details in Table 5.

8.0 CHAIN OF CUSTODY INFORMATION

- Please send a copy of the chain of custody to Daniel Stabile for review prior to submitting the soil and groundwater samples to the laboratory.
- After confirmation/approval, staff can submit samples for analysis.

Table 4: Chain of Custody Details

Chain of Custody Item	Information
Analytical Laboratory	AGAT Laboratory
Generic Site Condition Standards (SCS)	O. Reg 153/05 Table 7, R/P/I and I/C/C (don't report SCS on CofA)
Use Record of Site Condition analytical procedures?	Yes
Turn-around Time	Regular TAT
Golder Reporting Contact	Daniel_Stabile@golder.com Paul_Hurst@golder.com
Project-Specific Quote Number	Golder-BV MSA and Golder-AGAT MSA (include *WORK ORDER* on the header of the CoC and provide the MSA signature date of May 18, 2020)
Billing Details	AP_CustomerService@golder.com
Is an EQUIS EDD Required?	Yes -
Lab User Certificate Facility	230360930

9.0 SURVEYING

- Drilling locations will be surveyed after monitoring well installations.
- Northing and easting coordinates are to be collected to a +/- 10 cm accuracy (Phone APP should work).
- Elevations of the ground surface and top of pipe to be measured off of a local benchmark (previous MW's).
- During monitoring events, measure the distance from the top of the pipe to the ground surface/flushmount if top of pipe can not be surveyed.

10.0 INVESTIGATION DERIVED WASTE

- Garbage, such as gloves, bags, etc., is to be taken off-site for disposal.
- Label drums for waste management purposes include the project number, date, site location, drum contents (soil cuttings, purge water).
- Drums should be grouped and placed in an area of the Site for easy access. Confirm with the Property Representative (Peter/Michele) where the best location on the Site would be. This is needed to be agreed upon between the Site Supervisor, PM and site representee as soon as possible during the first day of fieldwork.
- Record inventory of waste containers in the field notes.

11.0 DOCUMENT MANAGEMENT

- Field staff submits scanned field notes to GTAFieldFile@golder.com and Daniel_Stabile@golder.com. This does not need to be daily but should be weekly for more extensive programs or at the fieldwork's end.
- Put all files in one single pdf, and the file name should be as follows: PROJECT_NUMBER Field Notes COMPLETION_DATE" (for example, "1712345 Field Notes April 27, 2017.pdf).
- Take photos, at least two at each one of the drilling/sampling locations showing: (1) general area of drilling; (2) detailed photo of the drilling or some specific aspect you want to highlight and; (3) H&S photo – optional. Take photo of the drums storage area.

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SAMPLING AND ANALYSIS PLAN

DATE October 2, 2022 **Project No.** 21494078

TO Field Supervisor
Golder Associates Ltd.

CC Paul Hurst, Project Director, QP

FROM Daniel Stabile, Project Manager **EMAIL Daniel_Stabile@golder.com**

SAMPLING AND ANALYSIS PLAN, 1047 RICHMOND ROAD, OTTAWA, ONTARIO

1.0 OBJECTIVE

The intent of this Phase Two Environmental Site Assessment (ESA) is to investigate the soil and groundwater within the areas of potential environmental concern (APECs) identified in the Phase One ESA at 1047 Richmond Rd., Ottawa, Ontario (the Site).

The Site is currently an active car dealership, and we need to keep our operations confidential and not disclose any information to the business employees. The Phase Two ESA is required to support a future filing of a Record of Site Condition (RSC) if financing and/or sale of the property is intended in the future.

Several rounds of drilling were completed, and this stage's objective is to delineate GW impacts at BH21-4 and BH21-14 vertically and horizontally. Telescope drilling will be performed to install multilevel monitoring well pairs at BH21-4 and BH21-14 to achieve horizontal delineation. Since these boreholes will be drilled through an impacted GW zone, telescopic drilling will be required to avoid dragging contamination from upper zones to deeper depths.

2.0 SITE ACCESS REQUIREMENTS

Table 1: Site Access

Access Concern	Information
Site Contacts	Mr. Peter Pears and Ms. Michele Pears Office: 613-327-5153 michelep@metrochrysler.com
Access	No restrictions.
Hours of Work	■ Within daylight hours (Approx. 7 am to 6 pm) ■ Interior drilling from 06:00pm to 12:00 am ■ Exterior drilling From 08:00am to 05:00pm
Site Check-In/Out Procedures	Daily check-in/out with Daniel Stabile
Photography	No restrictions

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Access Concern	Information
H&S	■ Follow the HaSEP and COVID procedures; and conduct tailgate with drilling crew. ■ Not to disclose any information to the site employees. Ask Michele help if this happens

3.0 GENERAL REQUIREMENTS

- Follow standard operating procedures for drilling, soil logging, and soil sampling. All work is to be completed assuming a Record of Site Condition will be required.
- Follow Golder Standard Operating Procedures (SOPs) referenced in this sampling and analysis plan and use Golder standard field forms.
- Complete a Daily Log and Job Safety and Environment Analysis (JSEA) form for every day of fieldwork.
- New disposable Nitrile™ gloves will be used at each sampling location to prevent cross-contamination.
- All non-dedicated sampling equipment (e.g., interface probes) will be decontaminated between sampling locations. Sampling equipment in contact with soil or groundwater will be washed with a laboratory-grade detergent solution (i.e. phosphate-free AlcoNox) and thoroughly rinsed with analyte-free water. Use plastic pales from any hardware store. They can also be used for wastewater storage.

4.0 PRIVATE LOCATES

- Private locates was performed on May 5, 2022, with USL-1.
- Bring public locate sheets with you to the Site.
- Ensure the private locator clears each borehole location before leaving the Site and that the radius of 2-3 m clearance is provided by the locator for each location. Adjust locations as applicable. If in doubt/clear a second nearby location as an alternate.

5.0 DRILLING ACTIVITIES

- Borehole drilling and monitoring well installation is booked for October 3 and October 4 2022, with Strata Group.

5.1 Borehole Drilling and Soil Sampling

- Ensure that borehole drilling and soil sampling is carried out in conformance with SOP No. 3: Borehole Drilling and Sampling.
- Confirm that the private locator has cleared every drilling location before penetrating the ground.
- Borehole IDs are found in the proposed BH locations plan.
- Screen overburden soil samples at maximum 0.75 m (2.5 ft) intervals using a combustible gas and photoionization detector (i.e. RKI Eagle, calibrated for hexane and isobutylene), as per SOP No. 4: Headspace Screening.

- Log overburden soil stratigraphy, as per SOP No. 6: Soil Logging and SOP No. 14: Soil Classification and Description.
- Bedrock is expected to be encountered from 3 – 4 m bgs. After this depth, the drilling will be performed with ait hammer tooling, and no soil samples or soil cores will be collected.
- Collect soil samples (including 2 x vials per interval) at a maximum of 0.75 m (2.5 ft) intervals from the ground surface to borehole refusal (call Daniel Stabile if soil conditions are tight or soil recovery is not satisfactory). Submit soil samples in accordance with Table 2 (below).
- Duplicate *samples to be collected and submitted for analysis at a rate of one duplicate per every ten samples submitted to the laboratory. A summary of duplicates required is included at the end of Table 2.*
- Collect *duplicates at the same intervals of the higher headspace readings and/or according to Table 2. (keep your soil cores until you finalize the headspace headings); and from the inferred capillary fringe/water table interface interval.*
- Soil jar quantities: 2 x 40 ml Methanol Vails for VOC and PHC F1/BTEX analysis; 2 x 120 ml jar for PHC F2-F4 and moisture. *For duplicates, double the amount of container for the duplicated interval.*
- Samples are to be stored in coolers with ice after collection (the samples must be below 10°C upon receipt to the lab). Bring ice to the Site in the morning.
- Fill out the chain of custody per the details in Table 5.
- Ask drillers to leave two 200L drums to store purged groundwater for the development and sampling stages and one (as needed) steel drum per BH locations to store drilling cutting.

Table 2: Drilling Program Summary and Soil Sampling Details

Borehole	MW	Analysis	Rationale	OBS
BH22-06	~7 mbgs	GW: (1) VOC, PHC (F1-F4), BTEX	Telescopic drilling to avoid cross-contamination and access groundwater quality and delineate vertical impact at BH21-04.	BH21-04 is screened from 4.5 – 7.5 mbgs
BH22-07	~7 mbgs	GW: (1) PHC/BTEX /VOC	Upper bedrock wells to delineate east of BH21-04 area	
BH22-08	Deep ~10 mbgs	GW: (1) VOC	Telescopic drilling to avoid cross-contamination and access groundwater quality and delineate vertical impact at BH21-14.	BH21-14 is screened from 3 – 4.5 mbgs
BH21-04	Existing MW	GW: (1) PHC/BTEX /VOC	Re-sample PHC /BTEX /VOC	-
BH21-14	Existing MW	GW: (1) PHC/BTEX /VOC	Re-sample PHC /BTEX /VOC	-
GW: (2) Field Trip/Field Blank for VOC			QA/QC	-

Soil/GW Duplicates @ 10% ratio: Soil (1), GW (1)	QA/QC	-

5.2 Monitoring Well Installation

- Refer to SOP No. 1: Monitoring Well Installation. The monitoring wells will consist of 50 mm inner diameter ("ID") Schedule 40 polyvinyl chloride ("PVC") casing and 50 mm ID Schedule 40 PVC well screen (up to 3 metres in length, #10 slot size); sand pack surrounding the screen will be #00 or #0. The annulus will be backfilled using clean silica sand around the screened portion, extending approximately 0.3 to 0.6 m above the screen, followed by bentonite to just below the ground surface. The monitoring wells will be completed with a flush-mounted style protective casing set in concrete and sealed with a PVC j-plug. Label the j-plug with the monitoring well ID during installation. Mark the reference point at the top of well pipe with a small notch. Do NOT use sharpie/marker to mark out reference point.
- Please confirm monitoring well construction with Daniel Stabile prior to installation where any deviation from our typical monitoring well construction is expected.
- Install environmental monitoring wells per the details in Table 3.
- If water table is encountered within overburden, before the last spoon/interval is sampled, take a picture of the BH log and send it to Daniel Stabile for review and definition on the monitoring well design.
- If water table is within the bedrock, well is to be sealed completely on the bedrock to avoid water from the overburden to infiltrate inside the well through the bentonite seal and sand pack.

Table 3: Monitoring Well Construction Details

Location	Screen Depth (m bgs)	Screen Length (m)	Well Diameter (mm/inches)	Protective Casing Type
BH22-06	6.00 - 7.00 mbgs	1	51 / 2	Flush-mount
BH22-07	6.00 - 7.00 mbgs	1	51 / 2	Flush-mount
BH22-08	9.00 - 10.00 mbgs	1	51 / 2	Flush-mount

6.0 MONITORING WELL DEVELOPMENT OF NEWLY INSTALLED WELLS

- Monitoring well development to be conducted upon completion of the monitoring well installation.
- Develop each newly installed monitoring well in accordance with SOP No. 5: Monitoring Well Development.
- Develop the monitoring well with Waterra tubing, foot valve, and surge block for two minutes of pumping for each 0.3 m (1 ft) of the screen.
- Following the surging, continue to purge the ten well volumes or until dry three times.
- Contain all purge water in labelled and sealed drums/totes for off-site disposal.
- Please contact Daniel Stabile if you observe or suspect that there is sheen/product in any monitoring well.

7.0 GROUNDWATER MONITORING AND SAMPLE COLLECTION

7.1 Groundwater Monitoring

- Collect water levels using an interface probe from all the monitoring wells at the Site before collecting groundwater samples from any monitoring wells.
- Please contact Daniel Stabile if you observe or suspect that there is free product in any monitoring well.
- If product is detected with the interface probe or product signs are observed during monitoring well development, check for product thickness with a bailer and take photos of the bailer (regardless of whether product is observed). Record product thickness using the interface probe and the bailer.
    - Clean interface probe and dispose of bailer immediately if impacts are observed.

7.2 Groundwater Sample Collection

- Refer to SOP No. 10: Low Flow Sample Collection and SOP No. 12: Measurement of Field Parameters. Use the "Groundwater Sample Collection" form to collect all data during groundwater sampling.
- Use a low-flow pump for purging and sample collection and monitor the depth to groundwater and water quality field parameters (i.e., pH, specific conductivity, temperature, dissolved oxygen, and reduction-oxidation potential) in accordance with SOP Nos. 10 and 12. If field water quality parameters do not stabilize during low flow purging, do not purge longer than 30 minutes before collecting a groundwater sample.
- If drawdown in the monitoring well is greater than 0.3 m but remains stable, continue purging. If the drawdown is more significant than 0.3 m and is not stable, then complete purging and sample collection in accordance with SOP No. 9: Conventional Groundwater Sample Collection or use the low-field procedure. Sample with a bailer if using the conventional method.
- For wells that can use the conventional method based on observations during development, complete the purging at the beginning of the day and return to the well at the end of the day for sampling.
- Collect groundwater samples in accordance with Table 4. Collect QA/QC samples as indicated at the end of Table 4. The duplicate groundwater samples should be labelled in a manner that the laboratory cannot readily identify the sample as a duplicate (i.e. DUP1). A trip blank sample is required for every groundwater sample submission and one field blank sample is also required.
- Samples are to be stored in coolers with ice after collection (the samples **must** be below 10°C upon receipt to the lab).
- Fill out the chain of custody per the details in Table 5.

8.0 CHAIN OF CUSTODY INFORMATION

- Please send a copy of the chain of custody to Daniel Stabile for review prior to submitting the soil and groundwater samples to the laboratory.
- After confirmation/approval, staff can submit samples for analysis.

Table 4: Chain of Custody Details

Chain of Custody Item	Information
Analytical Laboratory	AGAT Laboratory
Generic Site Condition Standards (SCS)	O. Reg 153/05 Table 7, R/P/I and I/C/C (don't report SCS on CofA)
Use Record of Site Condition analytical procedures?	Yes
Turn-around Time	Regular TAT
Golder Reporting Contact	Daniel_Stabile@golder.com Paul_Hurst@golder.com
Project-Specific Quote Number	Golder-BV MSA and Golder-AGAT MSA (include *WORK ORDER* on the header of the CoC and provide the MSA signature date of May 18, 2020)
Billing Details	AP_CustomerService@golder.com
Is an EQUIS EDD Required?	Yes -
Lab User Certificate Facility	230360930

9.0 SURVEYING

- Drilling locations will be surveyed after monitoring well installations.
- Northing and easting coordinates are to be collected to a +/- 10 cm accuracy (Phone APP should work).
- Elevations of the ground surface and top of pipe to be measured off of a local benchmark (previous MW's).
- During monitoring events, measure the distance from the top of the pipe to the ground surface/flushmount if top of pipe can not be surveyed.

10.0 INVESTIGATION DERIVED WASTE

- Garbage, such as gloves, bags, etc., is to be taken off-site for disposal.
- Label drums for waste management purposes include the project number, date, site location, drum contents (soil cuttings, purge water).
- Drums should be grouped and placed in an area of the Site for easy access. Confirm with the Property Representative (Peter/Michele) where the best location on the Site would be. This is needed to be agreed upon between the Site Supervisor, PM and site representee as soon as possible during the first day of fieldwork.
- Record inventory of waste containers in the field notes.

11.0 DOCUMENT MANAGEMENT

- Field staff submits scanned field notes to GTAFieldFile@golder.com and Daniel_Stabile@golder.com. This does not need to be daily but should be weekly for more extensive programs or at the fieldwork's end.
- Put all files in one single pdf, and the file name should be as follows: PROJECT_NUMBER Field Notes COMPLETION_DATE" (for example, "1712345 Field Notes April 27, 2017.pdf).

- Take photos, at least two at each one of the drilling/sampling locations showing: (1) general area of drilling; (2) detailed photo of the drilling or some specific aspect you want to highlight and; (3) H&S photo – optional. Take photo of the drums storage area.

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SAMPLING AND ANALYSIS PLAN

DATE May 10, 2023 **Project No.** 21494078

TO Field Supervisor
Golder Associates Ltd.

CC Paul Hurst, Project Director, QP;

FROM Daniel Stabile, Project Manager **EMAIL Daniel_Stabile@golder.com**

SAMPLING AND ANALYSIS PLAN, 1047 RICHMOND ROAD, OTTAWA, ONTARIO

1.0 OBJECTIVE

The intent of this Phase Two Environmental Site Assessment (ESA) is to investigate the soil and groundwater within the areas of potential environmental concern (APECs) identified in the Phase One ESA at 1047 Richmond Rd., Ottawa, Ontario (the Site).

The Site is currently an inactive car dealership and the Phase Two ESA is required to support a future filing of a Record of Site Condition (RSC) in the future.

2.0 SITE BACKGROUND

Several rounds of drilling were performed in 2021 and 2022. Two locations presented exceedances of the Table 7 in groundwater (BH21-4 and 21-14) with exceedances of benzene, 1,2-dichloroethane and trichloroethylene. The present delineation attempt is to delineate impacts at BH22-2, discovered on the last delineation round, to north and east of this BH location to install shallow and deep monitoring wells and assess if impacted groundwater is possibly flowing off-site, beyond the property limit.

3.0 SITE ACCESS REQUIREMENTS

Table 1: Site Access

Access Concern	Information
Site Contacts	Corina Sajewski Director, Development C: +1-(647)-895-7245 corina.sajewski@fengate.com
Access	No restrictions.
Hours of Work	Within daylight hours (Approx. 7 am to 6 pm)
Site Check-In/Out Procedures	Daily check-in/out with Daniel Stabile
Photography	No restrictions.

Access Concern	Information
H&S	Follow the HaSEP and COVID procedure Conduct tailgate with drilling crew.

4.0 GENERAL REQUIREMENTS

- Follow standard operating procedures for drilling, soil logging, and soil sampling. All work is to be completed assuming a Record of Site Condition will be required.
- Follow Golder Standard Operating Procedures (SOPs) referenced in this sampling and analysis plan and use Golder standard field forms.
- Complete a Daily Log and Job Safety and Environment Analysis (JSEA) form for every day of fieldwork.
- New disposable Nitrile™ gloves will be used at each sampling location to prevent cross-contamination.
- All non-dedicated sampling equipment (e.g., interface probes) will be decontaminated between sampling locations. Sampling equipment in contact with soil or groundwater will be washed with a laboratory-grade detergent solution (i.e. phosphate-free AlcoNox) and thoroughly rinsed with analyte-free water. Use plastic pales from any hardware store. They can also be used for wastewater storage.

5.0 PRIVATE LOCATES

- Private locates was completed in May 8, 2023, with USL-1.
- Bring public and private locate sheets with you to the Site.
- Ensure the private locator clears each borehole location before leaving the Site and that the radius of 2-3 m clearance is provided by the locator for each location. Adjust locations as applicable. If in doubt/clear a second nearby location as an alternate.

6.0 DRILLING ACTIVITIES

- Borehole drilling and monitoring well installation is booked for May 15-17, 2023, with Strata Drilling Group at 8 am.

6.1 Borehole Drilling and Soil Sampling

- Ensure that borehole drilling and soil sampling is carried out in conformance with SOP No. 3: Borehole Drilling and Sampling.
- Confirm that the private locator has cleared every drilling location before penetrating the ground.
- Borehole IDs are found in the proposed BH locations plan.
- Screen overburden soil samples at maximum 0.6 m (2 ft) intervals using a combustible gas and photoionization detector (i.e. RKI Eagle, calibrated for hexane and isobutylene), as per SOP No. 4: Headspace Screening.
- Log overburden soil stratigraphy at maximum 0.6 m (2 ft) intervals, as per SOP No. 6: Soil Logging and SOP No. 14: Soil Classification and Description.
- Bedrock is expected to be encountered from 2 – 4 m bgs. After this depth, the drilling will be performed with rock coring tooling or air hammer, and no soil samples will be collected.
- No soil samples will be collected. The borehole is exclusively for headspace screening of the overburden soil, bedrock drilling and for monitoring well installation

- Ask drillers to leave two 200L drums to store purged groundwater for the development and sampling stages and one (as needed) steel drum per BH locations to store drilling cutting.

Table 2: Drilling Program Summary and Soil Sampling Details

ID	Rationale	Proposed Investigation	Laboratory GW Analysis
BH22-9S/D	Horizontal and vertical delineation from BH22-2	Shallow screen: 3-6 m (3 m of screened section) Deep screen: 9-10 m (1m of screened section)	**2 x VOC** Samples (one each monitoring well)
BH22-10S/D	Horizontal and vertical delineation from BH22-2	Shallow screen: 3-6 m (3 m of screened section) Deep screen: 9-10 m (1m of screened section)	**2 x VOC** Samples (one each monitoring well)
Duplicate Samples: One duplicate GW sample for each VOC **QA/QC samples:** One trip blank (VOC) and one field blank (VOC)			

6.2 Monitoring Well Installation

- Refer to SOP No. 1: Monitoring Well Installation. The monitoring wells will consist of 50 mm inner diameter ("ID") Schedule 40 polyvinyl chloride ("PVC") casing and 50 mm ID Schedule 40 PVC well screen (up to 3 metres in length, #10 slot size); sand pack surrounding the screen will be #00 or #0. The annulus will be backfilled using clean silica sand around the screened portion, extending approximately 0.3 to 0.6 m above the screen, followed by bentonite to just below the ground surface. The monitoring wells will be completed with a flush-mounted style protective casing set in concrete and sealed with a PVC j-plug. Label the j-plug with the monitoring well ID during installation. Mark the reference point at the top of well pipe with a small notch. Do NOT use sharpie/marker to mark out reference point.
- Please confirm monitoring well construction with Daniel Stabile prior to installation where any deviation from our typical monitoring well construction is expected.
- Install environmental monitoring wells per the details in Table 3.
- If water table is encountered within overburden before the last interval is sampled, take a picture of the BH log and send it to Daniel Stabile for review and definition on the monitoring well design.
- If water table is within the bedrock, the well is to be sealed completely on the bedrock to avoid water from the overburden to infiltrate inside the well through the bentonite seal and sand pack.

Table 3: Monitoring Well Construction Details

Location	Well Screen (m bgs)	Screen Length (ft / m)	Well Diameter (mm/inches)	Protective Casing Type
BH22-9S	3.0 – 6.0 m bgs	10 / 3	50 / 2	Flush mount
BH22-9D	9.0 – 10.0 m bgs	3.2 / 1		
BH22-10S	3.0 – 6.0 m bgs	10 / 3		
BH22-10D	9.0 – 10.0 m bgs	3.2 / 1		

7.0 MONITORING WELL DEVELOPMENT OF NEWLY INSTALLED WELLS

- Monitoring well development to be conducted upon completion of the monitoring well installation.
- Develop each newly installed monitoring well in accordance with SOP No. 5: Monitoring Well Development.
- Develop the monitoring well with Waterra tubing, foot valve, and surge block for two minutes of pumping for each 0.3 m (1 ft) of the screen.
- Following the surging, continue to purge the ten well volumes or until dry three times.
- Contain all purge water in labelled and sealed drums/totes for off-site disposal.
- Please contact Daniel Stabile if you observe or suspect that there is sheen/product in any monitoring well.

8.0 GROUNDWATER MONITORING AND SAMPLE COLLECTION

8.1 Groundwater Monitoring

- Collect water levels using a water tape from all the monitoring wells at the Site before collecting groundwater samples from any monitoring wells.
- Please contact Daniel Stabile if you observe or suspect that there is free product in any monitoring well.
- If product is detected or product signs are observed during monitoring well development, check for product thickness with a bailer and take photos of the bailer (regardless of whether product is observed). Record product thickness using the interface probe and the bailer.
    - Clean interface probe and dispose of bailer immediately if impacts are observed.

8.2 Groundwater Sample Collection

- Refer to SOP No. 10: Low Flow Sample Collection and SOP No. 12: Measurement of Field Parameters. Use the "Groundwater Sample Collection" form to collect all data during groundwater sampling.
- Use a low-flow pump for purging and sample collection and monitor depth to groundwater and water quality field parameters (i.e., pH, specific conductivity, temperature, dissolved oxygen, and reduction-oxidation potential) in accordance with SOP Nos. 10 and 12. If field water quality parameters do not stabilize during low flow purging, do not purge longer than 30 minutes before collecting a groundwater sample.
- If drawdown in the monitoring well is greater than 0.3 m but remains stable, continue purging. If the drawdown is more significant than 0.3 m and is not stable, then complete purging and sample collection in accordance with SOP No. 9: Conventional Groundwater Sample Collection or use the low-field procedure. Sample with a bailer if using the conventional method.
- For wells that can use the conventional method based on observations during development, complete the purging at the beginning of the day and return to the well at the end of the day for sampling.
- Collect groundwater samples in accordance with Table 4. Collect QA/QC samples as indicated at the end of Table 4. The duplicate groundwater samples should be labelled in a manner that the laboratory cannot readily identify the sample as a duplicate (i.e. DUP1). A trip blank sample is required for every groundwater sample submission and one field blank sample is also required.
- Samples are to be stored in coolers with ice after collection (the samples must be below 10°C upon receipt to the lab). Bring ice to the Site in the morning.
- Fill out the chain of custody per the details in Table 5.

Table 4: Groundwater Sampling Plan (Field Check List)

Location	Laboratory GW Analysis	Sampled?	
	VOC	YES	NO
BH21-9S	1	☐	☐
BH21-9D	1	☐	☐
BH21-10S	1	☐	☐
BH21-10D	1	☐	☐
Duplicate Sample: One duplicate groundwater sample VOC **Trip Blanks:** One trip blank for VOC **Field Blank:** One field blank for VOC			

9.0 CHAIN OF CUSTODY INFORMATION

- Please send a copy of the chain of custody to Daniel Stabile for review prior to submitting the groundwater samples to the laboratory.
- After confirmation/approval, staff can submit samples for analysis.

Table 5: Chain of Custody Details

Chain of Custody Item	Information
Analytical Laboratory	AGAT Labs
Generic Site Condition Standards (SCS)	O. Reg 153/05 Table 7, Residential/Parkland/Institutional (don't report SCS on CofA)
Use Record of Site Condition analytical procedures?	Yes
Turn-around Time	Regular TAT
Golder Reporting Contact	Daniel.Stabile@wsp.com Paul.Hurst@wsp.com
Project-Specific Quote Number	2023 Golder-AGAT MSA 735000EB (include *WORK ORDER* on the header of the CoC and provide a signature on the bottom)
Billing Details	AP_CustomerService@wsp.com
Is an EQUIS EDD Required?	YES - Facility # 230360930

10.0 SURVEYING

- Drilling locations will be surveyed after monitoring well installations.
- Northing and easting coordinates are to be collected to a +/- 10 cm accuracy (Phone APP should work).

- Elevations of the ground surface and top of pipe are to be measured off of a local benchmark (previous MW's).
- During monitoring events, measure the distance from the top of the pipe to the ground surface/flushmount if top of pipe can not be surveyed.

11.0 INVESTIGATION DERIVED WASTE

- Garbage, such as gloves, bags, etc., must be disposed of off-site.
- Label drums for waste management purposes, including the project number, date, site location, and drum contents (soil cuttings, purge water).
- Drums should be grouped and placed in an area of the Site for easy access. Confirm with the Property Representative (Peter/Michelle) where the best location on the Site would be. This is needed to be agreed upon between the Site Supervisor, PM and site representative as soon as possible during the first day of fieldwork.
- Record inventory of waste containers in the field notes.

12.0 DOCUMENT MANAGEMENT

- Field staff submits scanned field notes to Daniel.Stabile@wsp.com. This does not need to be daily but should be weekly for more extensive programs or at the fieldwork's end.
- Put all files in one single pdf, and the file name should be as follows: PROJECT_NUMBER Field Notes COMPLETION_DATE" (for example, "1712345 Field Notes April 27, 2017.pdf).
- Take photos, at least two at each one of the drilling/sampling locations showing: (1) general area of drilling; (2) a detailed photo of the drilling or some specific aspect you want to highlight and; (3) H&S photo – optional. Take a photo of the drum's storage area.

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Project Manager - Contaminated Sites *Associate, National Capital Region Contaminated Sites Team Lead*

DS/PH/ds;lb

https://golderassociates.sharepoint.com/sites/152441/project files/6 deliverables/ph two report/1. sampling and analysis plan/21494078-reva-1047 richmond rd bh22-2 delin. sap-8may2023 .docx

APPENDIX E

Record of Borehole Sheets

PROJECT: 21494078

RECORD OF BOREHOLE: 21-01

SHEET 1 OF 1

LOCATION: N 5026314.5 ;E 361326.2

BORING DATE: September 24, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected) 100 200 300 400	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected) 100 200 300 400	HYDRAULIC CONDUCTIVITY, k, cm/s 10^{-6} 10^{-5} 10^{-4} 10^{-3}	WATER CONTENT PERCENT Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.73									
0	Power Auger 200 mm Diam. (Hollow Stem)	ASPHALT		0.00									
		FILL - (SW) gravelly SAND, angular; brown (PAVEMENT STRUCTURE); non-cohesive, moist		0.10 65.43									
		FILL - (SM) gravelly SILTY SAND; grey to dark brown, trace sand (SP); non-coohesive, moist, compact to very loose		0.30	1	SS	19	ND			Metals	Flush Mount Casing
1					2	SS	4	ND				
					3	SS	2	ND			PHCs, VOCs	
				63.90								
2	Air Hammer H Bit	BEDROCK (Auger Refusal) (Air hammer from 1.83 m to 7.62 m)		1.83									Bentonite Seal
3													
4													Sllica Sand
5													
6													50 mm Diam. PVC #10 Slot Screen
7				58.11									
		End of Borehole		7.62									
8		Note(s): 1. Water level at BH21-01 measured at a depth of 7.68 m (Elev. 58.04 m) on October 4, 2021 2. Record of borehole log not prepared for geotechnical engineering purposes											
9													
10													

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DG

CHECKED: AG

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-02

SHEET 1 OF 1

LOCATION: N 5026359.3 ;E 361297.8

BORING DATE: September 21, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.46						
0	Power Auger 200 mm Diam. (Hollow Stem)	ASPHALT		0.08						Flush Mount Casing
		FILL - (SW) gravellyl SAND, angular; grey (PAVEMENT STRUCTURE); non-cohesive, moist		65.16						
		FILL - (SP) SAND, fine to medium, trace silt; brown; non-cohesive, moist, compact to dense		0.30	1	SS	22	ND		
1					2	SS	31	ND	Metals	
				64.24						
		FILL - (SM/GP) SILTY SAND and GRAVEL; dark brown, contains brick fragments and rootlets; non-cohesive, moist, compact		1.22	3	SS	10	ND		
				63.63						
2		Highly weathered BEDROCK		1.83	4	SS	>84	ND		Bentonite Seal
					5	SS	>50	ND	PHCs, VOCs	
3				62.41						
	Air Hammer H Bit	BEDROCK (Auger Refusal) (Air hammer from 3.05 M TO 7.62 M)		3.05						
4										Sllica Sand
5										
6										50 mm Diam. PVC #10 Slot Screen
7				57.84						
		End of Borehole		7.62						
8		Note(s):								
		1. Water level at BH21-03 measured at a depth of 3.17 m (Elev. 62.28 m) on October 4, 2021								
		2. Record of borehole log not prepared for geotechnical engineering purposes								
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DG

CHECKED: AG

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-03

SHEET 1 OF 1

LOCATION: N 5026355.1 ;E 361289.2

BORING DATE: September 21 & 22, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.24						
0	Power Auger 200 mm Diam. (Hollow Stem)	ASPHALT		0.08						Flush Mount Casing
		FILL - (SW) gravelly SAND, angular; grey (PAVEMENT STRUCTURE); non-cohesive, moist		64.63	1	SS	43	ND	VOCs	
		FILL - (SP) SAND, fine to medium, trace silt; brown; non-cohesive, moist, dense		0.61	2	SS	31	ND	PHCs	
1				64.02						
		FILL - (SM) SILTY SAND, some topsoil, trace gravel; dark brown, contains shale fragments; non-cohesive, moist, compact		1.22	3	SS	12	ND	Metals	
				63.41						
2		Highly weathered BEDROCK		1.83	4	SS	>94	ND		Bentonite Seal
					5	SS	52/ 6"			
				62.19						
3	Air Hammer H Bit	BEDROCK (Auger Refusal) (Air hammer from 3.05 m to 7.62 m)		3.05						
4										
5										Sllica Sand
6										50 mm Diam. PVC #10 Slot Screen
7				57.62						
		End of Borehole		7.62						
8		Note(s):								
		1. Water level at BH21-03 measured at a depth of 3.56 m (Elev. 61.68 m) on October 4, 2021								
		2. Record of borehole log not prepared for geotechnical engineering purposes								
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DG

CHECKED: AG

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-04

SHEET 1 OF 1

LOCATION: N 5026369.7 ;E 361313.7

BORING DATE: September 21, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.09							
0	Power Auger 200 mm Diam. (Hollow Stem)	ASPHALT		0.05							Flush Mount Casing
		FILL - (SM) SILTY SAND, trace gravel; brown to grey brown, contains wood fragments; non-cohesive, moist, loose to compact			1	SS	9	ND		VOCs	
1					2	SS	10	ND			
					3	SS	7	ND			
2					4	SS	14	ND			Bentonite Seal
				62.65							
		(SM) gravelly SILTY SAND; grey brown, contains cobbles and boulders (GLACIAL TILL); non-cohesive, wet, dense		2.44	5	SS	49	ND			
3					6	SS	55/4"	ND		PHCs	
				61.43							
	Air Hammer H Bit	BEDROCK (Auger Refusal) (Air hammer from 3.66 m to 7.62 m)		3.66							
4											Sllica Sand
5											
6											50 mm Diam. PVC #10 Slot Screen
7				57.47							
		End of Borehole		7.62							
8		Note(s):									
		1. Water level at BH21-01 measured at a depth of 2.50 m (Elev. 62.59 m) on October 4, 2021									
		2. Record of borehole log not prepared for geotechnical engineering purposes									
9											
10											

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DG

CHECKED: AG

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-05

SHEET 1 OF 1

LOCATION: N 5026358.2 ;E 361327.9

BORING DATE: September 22/24, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected) 100 200 300 400	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected) 100 200 300 400	HYDRAULIC CONDUCTIVITY, k, cm/s 10^{-6} 10^{-5} 10^{-4} 10^{-3}	WATER CONTENT PERCENT Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.47									
0	Power Auger 200 mm Diam. (Hollow Stem)	ASPHALT		0.08									Flush Mount Casing
		FILL - (SP) SAND, fine to coarse, some gravel, trace silt; brown; non-cohesive, moist, compact		64.86	1	SS	15	ND				
1		FILL - (SM/GW) SILTY SAND and GRAVEL; dark brown, contains wood fragments; non-cohesive, moist, compact		0.61	2	SS	20	ND				PHCs, VOCs
				64.02	3	SS	52/0"	ND				PHCs, VOCs
2		Possible FILL - (SP) SILTY SAND, fine to coarse, trace silt, trace gravel; grey brown; non-cohesive, moist, compact to dense		1.45	4	SS	20	ND				Bentonite Seal
					5	SS	39	ND				
				62.73								
3		(SM) gravelly SILTY SAND, non-plastic fines; grey brown, contains cobbles (GLACIAL TILL); non-cohesive, moist, dense		2.74	6	SS	46	ND				
					7	SS	34/10"	ND				
				61.82								
4	Air Hammer H Bit	BEDROCK (Auger Refusal) (Air hammer from 3.65 m to 7.62 m)		3.65									Sllica Sand
5													
6													50 mm Diam. PVC #10 Slot Screen
7				57.85									
		End of Borehole		7.62									
8		Note(s):											
		1. Water level at BH21-01 measured at a depth of 3.85 m (Elev 61.62 m) on October 4, 2021											
9		2. Record of borehole log not prepared for geotechnical engineering purposes											
10													

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DG

CHECKED: AG

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-11

SHEET 1 OF 1

LOCATION: N 5026332.1 ;E 361283.0

BORING DATE: November 12, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.26						
0	Power Auger, Geoprobe	GRAVEL		0.00 / 64.96						Flush Mount Casing
		(SP) SAND; brown; non-cohesive, dry		0.30 / 64.50	1	SS		ND		
1		(SM) SILTY SAND; grey-brown; non-cohesive, dry		0.76 / 63.74	2	SS		ND	Metals, PHCs, VOCs	Bentonite Seal
		Soft, broken, LIMESTONE		1.52	3	SS		ND	Metals	
2										Sllica Sand
3										
4										50 mm Diam. PVC #10 Slot Screen
5				59.72						
6		End of Borehole Upon Refusal Note(s): 1. Water level at BH21-11 measured at a depth of 2.96 m (Elev. 62.30 m) on November 30, 2021 2. Record of borehole log not prepared for geotechnical engineering purposes		5.54						
7										
8										
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: AB

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-12

SHEET 1 OF 1

LOCATION: N 5026352.5 ;E 361280.2

BORING DATE: November 11, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		64.88						
0	Power Auger Geoprobe	GRAVEL		0.00						
				64.58	1	SS		⊕ ND		
		(SP) SAND; brown; non-cohesive, dry		0.30						
1					2	SS		⊕ ND		Metals
					3	SS		□ ND		Metals, PHCs, VOCs
2		Soft, crushed, LIMESTONE		1.98						
				62.34	4	SS		⊕		
		End of Borehole Upon Refusal		2.54						
3		Note(s): 1. Record of borehole log not prepared for geotechnical engineering purposes								
4										
5										
6										
7										
8										
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: AB

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-13

SHEET 1 OF 1

LOCATION: N 5026364.0 ;E 361291.0

BORING DATE: November 11, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ *ND = Not Detected* (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ *ND = Not Detected* (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		64.86						
0	Power Auger Geoprobe	GRAVEL		0.00						
				64.56	1	SS		ND		
		(SP) SAND; brown; non-cohesive, dry		0.30						
1					2	SS		ND		Metals
				63.18						
		Soft, crushed, LIMESTONE		1.68	3	SS		ND		Metals
2				62.73						
		End of Borehole Upon Refusal		2.13						
		Note(s): 1. Record of borehole log not prepared for geotechnical engineering purposes								
3										
4										
5										
6										
7										
8										
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: AB

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-14

SHEET 1 OF 1

LOCATION: N 5026375.7 ;E 361302.2

BORING DATE: November 12, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected) 100 200 300 400 / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected) 100 200 300 400	HYDRAULIC CONDUCTIVITY, k, cm/s 10^{-6} 10^{-5} 10^{-4} 10^{-3} / WATER CONTENT PERCENT Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		64.84						
0	Power Auger Geoprobe	GRAVEL		0.00	1	SS		⊕ ND		Flush Mount Casing
		(SP) SAND; brown; non-cohesive, dry		0.15						
		(SM) SILTY SAND; grey-brown; non-cohesive, dry		64.08						
1					2	SS		⊕ ND		Bentonite Seal
				63.16						
		Soft, crushed, LIMESTONE		1.68	3	SS		⊕ ND	PHCs, VOCs	
2										
3										Sllica Sand
4										50 mm Diam. PVC #10 Slot Screen
				60.27						
		End of Borehole Upon Refusal		4.57						
5		Note(s):								
		1. Water level at BH21-14 measured at a depth of 2.48 m (Elev. 62.36 m) on November 30, 2021								
		2. Record of borehole log not prepared for geotechnical engineering purposes								
6										
7										
8										
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: AB

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-15

SHEET 1 OF 2

LOCATION: N 5026380.1 ;E 361312.4

BORING DATE: November 12, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		64.84							A B
0	Power Auger Geoprobe	GRAVEL		0.00							
		(SP) SAND; brown; non-cohesive, dry		0.15	1	SS		⊕ ND			
				64.08							
1		(SM) SILTY SAND; grey-brown; non-cohesive, moist		0.76	2	SS		⊕ ND			
				63.01	3	SS		□ ND		PHCs, VOCs	
2		(SP) SAND; grey; non-cohesive, wet		1.83				⊕			
					4	SS		□⊕ ND			
3				61.69	5	SS					
		Soft, crushed, LIMESTONE		3.15							
				61.05							
		Borehole continued on RECORD OF DRILLHOLE 21-15		3.79							
4											
5											
6											
7											
8											
9											
10											

DEPTH SCALE

1 : 50

GOLDER

LOGGED: AB

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF DRILLHOLE: 21-15

SHEET 2 OF 2

LOCATION: N 5026380.1 ;E 361312.4

DRILLING DATE: November 12, 2021

DATUM: Geodetic

INCLINATION: -90° AZIMUTH: ---

DRILL RIG: Geoprobe

DRILLING CONTRACTOR: Marathon

JN - Joint; FLT - Fault; SHR- Shear; VN - Vein; CJ - Conjugate
BD - Bedding; FO- Foliation; CO- Contact; OR- Orthogonal; CL - Cleavage
PL - Planar; CU- Curved; UN- Undulating; ST - Stepped; IR - Irregular
PO- Polished; K - Slickensided; SM- Smooth; Ro - Rough; MB- Mechanical Break
BR - Broken Rock
NOTE: For additional abbreviations refer to list of abbreviations & symbols.

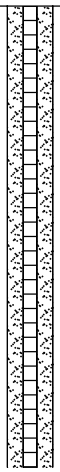
DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. / DEPTH (m)	RUN No.	COLOUR % RETURN / FLUSH	RECOVERY: TOTAL CORE %	RECOVERY: SOLID CORE %	R.Q.D. %	FRACT. INDEX PER 0.25 m	DISCONTINUITY DATA: DIP w.r.t. CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	Jcon	Jr	Ja	HYDRAULIC CONDUCTIVITY K, cm/sec	Diametral Point Load Index (MPa)	RMC -Q' AVG.
		BEDROCK SURFACE		60.88														
4	Rotary Drill HQ3 Core	Thin-medium bedded, grey, LIMESTONE		3.96	1	100												
5				59.48														
6		Thin-medium bedded, grey, LIMESTONE		5.36	2	100												
7				57.83														
		End of Drillhole		7.01														

Note(s):

1. Water level at BH21-15A measured at a depth of 2.74 m (Elev. 62.10 m) on November 30, 2021

2. Water level at BH21-15B measured at a depth of 2.59 m (Elev. 62.25 m) on November 30, 2021

3. Record of borehole log not prepared for geotechnical engineering purposes



DEPTH SCALE

1 : 50

GOLDER

LOGGED: AB

CHECKED: DS

MIS-RCK 004 21494078.GPJ GAL-MISS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-16

SHEET 1 OF 1

LOCATION: N 5026367.9 ;E 361324.2

BORING DATE: November 11, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.27							
0	Power Auger / Geoprobe	GRAVEL		0.00							
		(SM) SILTY SAND; grey-brown; non-cohesive, dry		0.15	1	SS		ND			
1					2	SS				PHCs, VOCs	
					3	SS					
				63.34							
2		End of Borehole Upon Refusal		1.93							
		Note(s): 1. Record of borehole log not prepared for geotechnical engineering purposes									
3											
4											
5											
6											
7											
8											
9											
10											

DEPTH SCALE
1 : 50

GOLDER

LOGGED: AB
CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-17

SHEET 1 OF 1

LOCATION: N 5026361.4 ;E 361337.9

BORING DATE: November 11, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected) 100 200 300 400	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected) 100 200 300 400	HYDRAULIC CONDUCTIVITY, k, cm/s 10^{-6} 10^{-5} 10^{-4} 10^{-3}	WATER CONTENT PERCENT Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.64									
0	Power Auger Geoprobe	GRAVEL		0.00									
		(SM) SILTY SAND; grey-brown; non-cohesive, dry		0.15	1	SS		ND					
1					2	SS		ND				PHCs, VOCs	
2					3	SS		ND					
				63.15									
		End of Borehole Upon Refusal		2.49									
3		Note(s): 1. Record of borehole log not prepared for geotechnical engineering purposes											
4													
5													
6													
7													
8													
9													
10													

DEPTH SCALE
1 : 50

GOLDER

LOGGED: AB
CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-18

SHEET 1 OF 1

LOCATION: N 5026348.5 ;E 361331.5

BORING DATE: November 11, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.70							
0	Power Auger Geoprobe	GRAVEL		0.00							
		(SP) SAND; brown; non-cohesive, dry		0.15	1	SS		ND			
1					2	SS		ND		PHCs, VOCs	
				64.18							
		(SM) SILTY SAND; grey-brown; non-cohesive, moist to wet		1.52	3	SS		ND			
2					4	SS		ND			
				62.96							
		End of Borehole Upon Refusal		2.74							
3		Note(s): 1. Record of borehole log not prepared for geotechnical engineering purposes									
4											
5											
6											
7											
8											
9											
10											

DEPTH SCALE
1 : 50

GOLDER

LOGGED: AB
CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-19

SHEET 1 OF 1

LOCATION: N 5026348.9 ;E 361305.7

BORING DATE: November 25, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.95							
0	Hilti TE 3000 AVR Hammer Drill	CONCRETE pad		0.00 65.75							Flush Mount Casing
		FILL - (SP) SAND, fine, trace silt; light brown; non-cohesive, dry, loose		0.20	1	SS		ND		PHCs, VOCs	
1					2	SS		ND			
					3	SS		ND			Bentonite Seal
				64.32							
		(CL) SILTY CLAY, trace sand; dark grey; non-cohesive, dry, compact		1.63							
2				63.92	4	SS		ND			
		BEDROCK		2.03							
		- Fractured zone from 2.4 m to 3.1 m depth									Silica Sand
3	Power Auger Geoprobe										
4											52 mm Diam. PVC #10 Slot Screen
5				60.82							
		End of Borehole		5.13							
		Note(s): 1. Water level at BH21-19 measured at a depth of 3.44 m (Elev. 62.51 m) on November 30, 2021 2. Record of borehole log not prepared for geotechnical engineering purposes									
6											
7											
8											
9											
10											

DEPTH SCALE

1 : 50

GOLDER

LOGGED: GS

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-20

SHEET 1 OF 1

LOCATION: N 5026328.5 ;E 361313.9

BORING DATE: November 24, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.93						
0	Power Auger Geoprobe	CONCRETE pad		0.00						Flush Mount Casing
		FILL - (SP) SAND, fine, trace silt, trace clay, trace gravel; light to dark brown, cobbles; non-cohesive; dry		0.13	1	SS		ND		
1					2	SS		ND		PHCs, VOCs
				64.41						
		(CL) SILTY CLAY, trace sand, trace gravel; dark grey; non-cohesive, dry		1.52	3	SS		ND		Bentonite Seal
2				63.64						
		BEDROCK		2.29	4	SS		ND		
3										Silica Sand
4										52 mm Diam. PVC #10 Slot Screen
5				60.75						
		End of Borehole		5.18						
6		Note(s): 1. Water level at BH21-20 measured at a depth of 3.82 m (Elev. 62.11 m) on November 30, 2021 2. Record of borehole log not prepared for geotechnical engineering purposes								
7										
8										
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: GS

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-21

SHEET 1 OF 1

LOCATION: N 5026393.6 ;E 361305.9

BORING DATE: December 21, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected) 100 200 300 400	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected) 100 200 300 400	HYDRAULIC CONDUCTIVITY, k, cm/s 10^{-6} 10^{-5} 10^{-4} 10^{-3}	WATER CONTENT PERCENT Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		64.41									
0	Power Auger / Geoprobe	ASPHALT		0.00									
		SAND; brown; non-cohesive, moist		0.15	1	SS		ND					Bentonite
				63.60									
1		SILT, trace sand; grey; cohesive, moidy		0.81	2	SS		ND					Silica Sand
				62.89									
		SAND, trace gravel; brown; non-cohesive		1.52	3	SS							
2					4	SS		ND					
3				61.36									#10 Slot Screen
		SAND, trace gravel; brown; non-cohesive, wet		3.05	5	SS							
				60.90									
		BEDROCK		3.51	6	SS		ND					
				60.45									
4		End of Borehole		3.96									
		Note(s):											
		1. Water level at BH21-21 measured at a depth of 2.43 m (Elev. 61.98 m) on December 22, 2021											
		2. Record of borehole log not prepared for geotechnical engineering purposes											
5													
6													
7													
8													
9													
10													

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DS

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-22

SHEET 1 OF 1

LOCATION: N 5026381.4 ;E 361298.9

BORING DATE: December 21, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		64.62							
0	Power Auger / Geoprobe	ASPHALT		0.00							
		SAND; brown; non-cohesive, moist		0.15	1	SS		ND			Bentonite
1											Silica Sand
				63.10							
		SAND; brown; non-cohesive, moist		1.52	2	SS		ND			
2				62.18							
		SILT, trace sand; grey brown; non-cohesive, moist		2.44	3	SS		ND			PVC #10 Slot Screen
				61.88							
		BEDROCK		2.74							
3											
4				60.35							
		End of Borehole		4.27							

Note(s):

1. Water level at BH21-22 measured at a depth of 2.72 m (Elev. 61.90 m) on December 22, 2021

2. Record of borehole log not prepared for geotechnical engineering purposes

5 6 7 8 9 10

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DS

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-23

SHEET 1 OF 1

LOCATION: N 5026359.1 ;E 361327.6

BORING DATE: December 21, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.50						
0	Power Auger / Geoprobe	ASPHALT		0.00						
		SAND; brown; non-cohesive, moist		0.15	1	SS		ND		
1				63.98						
		SILTY SAND, some coarse sand; brown; non-cohesive, moist		1.52	2	SS		ND		
2					3	SS		ND		
3				62.15	4	SS		□ ⊕		
		BEDROCK		3.35						
				61.84						
		End of Borehole		3.66						
4		Note(s):								
		1. Borehole log not for geotechnical purposes.								
5										
6										
7										
8										
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DS

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-24

SHEET 1 OF 1

LOCATION: N 5026357.1 ;E 361328.2

BORING DATE: December 21, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ *ND = Not Detected* 100 200 300 400 / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ *ND = Not Detected* 100 200 300 400	HYDRAULIC CONDUCTIVITY, k, cm/s 10^{-6} 10^{-5} 10^{-4} 10^{-3} / WATER CONTENT PERCENT Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.51						
0	Power Auger / Geoprobe	ASPHALTIC CONCRETE		0.00						
		SAND; dark brown, contains rootlets; non-cohesive, moist		0.15	1	SS				
1					2	SS		⊕ □		
				63.99						
		SILTY SAND; grey; non-cohesive, moist		1.52	3	SS				
2					4	SS		⊕ □		
3					5	SS		□ ⊕		
				61.85						
		End of Borehole		3.66						
4		Note(s):								
		1. Borehole log not for geotechnical purposes.								
5										
6										
7										
8										
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DS

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-25

SHEET 1 OF 1

LOCATION: N 5026315.8 ;E 361338.3

BORING DATE: December 21, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		66.01						
0	Power Auger / Geoprobe	ASPHALT		0.00						
		SAND		0.15	1	SS		ND		
1										
					2	SS		ND		
2				63.93						
		SILTY SAND, trace gravel; grey; non-cohesive, moist		2.08	3	SS				
3				62.96						
		BEDROCK		3.05	4	SS		ND		
				62.66						
		End of Borehole		3.35						
		Note(s):								
4		1. Borehole log not for geotechnical purposes.								
5										
6										
7										
8										
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DS

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: BH22-01

SHEET 1 OF 2

LOCATION: N 5026373.18; E 361314.80

BORING DATE: May 11, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: Geoprobe

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected) 100 200 300 400	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected) 100 200 300 400	HYDRAULIC CONDUCTIVITY, k, cm/s 10^{-6} 10^{-5} 10^{-4} 10^{-3}	WATER CONTENT PERCENT Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.02									
0	Power Auger / Geoprobe	FILL - (SW) SAND and GRAVEL, with asphalt fragments; non-cohesive, dry		0.00 / 64.77									Flush Mount Casing
		FILL - (SP) SAND, medium to coarse, trace silt and gravel; brown; non-cohesive, moist		0.25 / 63.50	1	DP	-	ND					
1					2	DP	-	ND					
		FILL - (SM) SILTY SAND, medium to coarse, gravelly; grey brown; non-cohesive, moist to wet		1.52 / 61.62	3	DP	-	ND					
2					4	DP	-	ND					
					5	DP	-	ND					
3		BEDROCK		3.40									
4	Air Hammer												Bentonite Seal
5													
6													
7													D
8													Silica Sand
		CONTINUED NEXT PAGE											

DEPTH SCALE

1 : 40

LOGGED: DG

CHECKED:

GTA-BHS 001 S:\CLIENTS\FENGATE\1047_RICHMOND_RD\02_DATA\GINT\21494078.GPJ GAL-MIS.GDT 10/2/23 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: BH22-01

SHEET 2 OF 2

LOCATION: N 5026373.18; E 361314.80

BORING DATE: May 11, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: Geoprobe

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ *ND = Not Detected* 100 200 300 400 / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ *ND = Not Detected* 100 200 300 400	HYDRAULIC CONDUCTIVITY, k, cm/s 10^{-6} 10^{-5} 10^{-4} 10^{-3} / WATER CONTENT PERCENT Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*								
8	Air Hammer	BEDROCK		55.42						52 mm Diam. PVC #10 Slot Screen
9		END OF BOREHOLE		9.60						
10		Notes: 1. Water level at BH22-01 measured at a depth of 8.20 m (Elev. 56.82 m) on May 26, 2022. 2. Borehole log not prepared for geotechnical engineering purposes.								
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 : 40

LOGGED: DG

CHECKED:

GTA-BHS 001 S:\CLIENTS\FENGATE\1047_RICHMOND_RD\02_DATA\GINT\21494078.GPJ GAL-MIS.GDT 10/2/23 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: BH22-02

SHEET 1 OF 2

LOCATION: N 5026383.15; E 361318.50

BORING DATE: May 9, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: Geoprobe

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] (ND = Not Detected) 100 200 300 400 / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] (ND = Not Detected) 100 200 300 400	HYDRAULIC CONDUCTIVITY, k, cm/s 10^{-6} 10^{-5} 10^{-4} 10^{-3} / WATER CONTENT PERCENT Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0		GROUND SURFACE		64.90						
	Direct Push, 130 mm Diam. Casing	FILL - (SP) gravelly SAND, with asphalt fragments; grey brown; moist, non-cohesive, moist		0.00 / 64.60						Silica Sand
		FILL - (SP) SAND, medium to coarse, some fines; brown; non-cohesive, moist		0.30	1	DP	-	ND		
1					2	DP	-	ND		
		FILL - (SP/SC) SAND to CLAYEY SAND, low to high plastic fines; grey to dark brown; non-cohesive, moist		63.61 / 1.29 / 63.38						
		GLACIAL TILL to WEATHERED BEDROCK		1.52						
2					3	DP	-	ND		Bentonite Seal
					4	DP	-	ND		
		BEDROCK		62.00 / 2.90						
3	Air Hammer									
4										Silica Sand
5										
6										52 mm Diam. PVC #10 Slot Screen
7				57.44						
		END OF BOREHOLE		7.46						
		Notes:								
		1. Water level at BH22-02 measured at a								
8		*CONTINUED NEXT PAGE*								

DEPTH SCALE

1 : 40

LOGGED: KG

CHECKED:

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PROJECT: 21494078

RECORD OF BOREHOLE: BH22-02

SHEET 2 OF 2

LOCATION: N 5026383.15; E 361318.50

BORING DATE: May 9, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: Geoprobe

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA PLOT	SOIL PROFILE: ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected 100 200 300 400 / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected 100 200 300 400	HYDRAULIC CONDUCTIVITY, k, cm/s 10^{-6} 10^{-5} 10^{-4} 10^{-3} / WATER CONTENT PERCENT Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*									
		depth of 2.98 m (Elev. 61.92 m) on May 26, 2022. 2. Borehole log not prepared for geotechnical engineering purposes.									
9											
10											
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16											

DEPTH SCALE

1 : 40

LOGGED: KG

CHECKED:

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PROJECT: 21494078

LOCATION: N 5026373.77; E 361301.53

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

RECORD OF BOREHOLE: BH22-03

BORING DATE: May 10, 2022

DRILL RIG: Geoprobe

SHEET 1 OF 1

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		64.85						
0	Power Auger Geoprobe	FILL - (SW) gravelly SAND, asphalt, fragments; grey brown; non-cohesive, dry		0.00 / 64.55						Flush Mount Casing
		FILL - (SM) SILTY SAND, medium to coarse, gravelly; brown; non-cohesive, moist		0.30	1	DP	-	ND		
1					2	DP	-	ND		
					3	DP	-	ND		
2					4	DP	-	ND		Bentonite Seal
	Air Hammer	BEDROCK		62.11 / 2.74						
3										
4										
5										Silica Sand
6										52 mm Diam. PVC #10 Slot Screen
				58.15						
		END OF BOREHOLE		6.70						
7		Notes: 1. Water level at BH22-03 measured at a depth of 7.38 m (Elev. 57.47 m) on May 26, 2022. 2. Borehole log not prepared for geotechnical engineering purposes.								▽ S
8										

DEPTH SCALE

1 : 40

LOGGED: DG

CHECKED:

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PROJECT: 21494078

RECORD OF BOREHOLE: BH22-04

SHEET 1 OF 2

LOCATION: N 5026371.34; E 361293.22

BORING DATE: May 9, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: Geoprobe

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80) / SHEAR STRENGTH Cu, kPa (nat V. + Q - ● rem V. ⊕ U - ○)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0		GROUND SURFACE		64.75							
	Direct Push, 130 mm Diam. Casing	FILL - (SP) gravelly SAND, with asphalt fragments; grey brown; non-cohesive, moist		0.00 / 64.45							
		FILL - (SP) SAND, medium to coarse, some fines; brown; non-cohesive, moist		0.30	1	DP	-				Silica Sand
1					2	DP	-				
		FILL - (SP/SC) SAND to CLAYEY SAND, low plastic fines; brown; non-cohesive, moist		63.46 / 1.29 / 63.23							
		GLACIAL TILL to WEATHERED CRUST		1.52	3	DP	-				
2				62.46							Bentonite Seal
		BEDROCK		2.29							
3											
4											
	Air Hammer										Silica Sand
5											
6											52 mm Diam. PVC #10 Slot Screen
7											▽ S
				56.83							
8				7.92							
		CONTINUED NEXT PAGE									

DEPTH SCALE

1 : 40

LOGGED: DG

CHECKED:

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PROJECT: 21494078

RECORD OF BOREHOLE: BH22-04

SHEET 2 OF 2

LOCATION: N 5026371.34; E 361293.22

BORING DATE: May 9, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: Geoprobe

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA PLOT	SOIL PROFILE: ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80) / SHEAR STRENGTH Cu, kPa (nat V. +, rem V. ⊕, Q - ●, U - ○) (20 40 60 80)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp, W, Wl) (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*									
		END OF BOREHOLE Notes: 1. Water level at BH22-04 measured at a depth of 7.09 m (Elev. 57.66 m) on May 26, 2022. 2. Borehole log not prepared for geotechnical engineering purposes.									
9											
10											
11											
12											
13											
14											
15											
16											

DEPTH SCALE

1 : 40

LOGGED: DG

CHECKED:

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PROJECT: 21494078

LOCATION: N 5026323.15; E 361338.38

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

RECORD OF BOREHOLE: BH22-05

BORING DATE: May 11, 2022

DRILL RIG: Geoprobe

SHEET 1 OF 2

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.94						
0	Power Auger / Geoprobe	FILL - (SW) gravelly SAND, angular; grey, with asphalt fragments; non-cohesive, dry		0.00 / 65.64						Flush Mount Casing
		FILL - (SP) SAND, medium to coarse, gravelly; brown; non-cohesive, moist		0.30	1	DP	-	ND		
1					2	DP	-	ND		
		FILL - (SM) SILTY SAND, medium to coarse, gravelly; grey brown; non-cohesie, moist		64.42 / 1.52	3	DP	-	ND		
2					4	DP	-	ND		
3				62.59	5	DP	-	ND		
	Air Hammer	BEDROCK		3.35						Bentonite Seal
4										
5										
6										
7										Silica Sand
										52 mm Diam. PVC #10 Slot Screen
8		*CONTINUED NEXT PAGE*								

DEPTH SCALE

1 : 40

LOGGED: DG

CHECKED:

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PROJECT: 21494078

RECORD OF BOREHOLE: BH22-05

SHEET 2 OF 2

LOCATION: N 5026323.15; E 361338.38

BORING DATE: May 11, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: Geoprobe

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected; HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected	HYDRAULIC CONDUCTIVITY, k, cm/s; WATER CONTENT PERCENT Wp W Wl	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*						100 200 300 400	10^{-6} 10^{-5} 10^{-4} 10^{-3}		
		BEDROCK						100 200 300 400	20 40 60 80		
9	Air Hammer										52 mm Diam. PVC #10 Slot Screen
10				55.28							
		END OF BOREHOLE		10.66							
11		Notes:									
		1. Water level at BH22-05 measured at a depth of 7.79 m (Elev. 58.15 m) on May 26, 2022.									
12		2. Borehole log not prepared for geotechnical engineering purposes.									
13											
14											
15											
16											

DEPTH SCALE

1 : 40

LOGGED: DG

CHECKED:

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PROJECT: 21494078

RECORD OF BOREHOLE: BH22-06

SHEET 1 OF 2

LOCATION: N 5026374.80; E 361302.66

BORING DATE: October 3, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG:

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80) / SHEAR STRENGTH Cu, kPa (nat V. + Q - ● / rem V. ⊕ U - ○)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0		GROUND SURFACE		64.90							
		ASPHALT (50 mm)		0.00							
		FILL - (SP/GP) SAND and GRAVEL		0.05							
		FILL - (SP) SAND, trace gravel; brown; non-cohesive, moist		64.65 0.25							Flush Mount Casing
1											
2				62.85							
		(SM) SILTY SAND, some fines, trace gravel; brown-grey; non-cohesive, moist		2.05							
		BEDROCK (Limestone)		62.40 2.50							Bentonite Seal
3											
4											
5											
6											Sllica Sand
											50 mm Diam. PVC #10 Slot Screen
7				57.90							
		END OF BOREHOLE		7.00							
		Notes:									
		1. Water level at BH22-06 measured at a depth of 6.08 m (Elev. 58.82 m) on May 26, 2022.									
		2. Borehole log not prepared for geotechnical engineering purposes.									
8											
		CONTINUED NEXT PAGE									

DEPTH SCALE

1 : 40

LOGGED: JB

CHECKED: DS

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PROJECT: 21494078

RECORD OF BOREHOLE: BH22-06

SHEET 2 OF 2

LOCATION: N 5026374.80; E 361302.66

BORING DATE: October 3, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG:

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA PLOT	SOIL PROFILE: ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80) / SHEAR STRENGTH Cu, kPa (nat V. + Q - ● / rem V. ⊕ U - ○) (20 40 60 80)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl) (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*									S
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10											
11											
12											
13											
14											
15											
16											

DEPTH SCALE

1 : 40

LOGGED: JB

CHECKED: DS

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PROJECT: 21494078

RECORD OF BOREHOLE: BH22-07

SHEET 1 OF 1

LOCATION: N 5026370.88; E 361313.48

BORING DATE: October 3, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG:

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80)	SHEAR STRENGTH Cu, kPa (nat V. +, rem V. ⊕; Q - ●, U - ○) (20 40 60 80)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3})	WATER CONTENT PERCENT (Wp, W, Wl) (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.11									
0		ASPHALT (50 mm)		0.00 / 0.05									
		FILL - (SP/GP) SAND and GRAVEL		64.91									
		FILL - (SM) SILTY SAND, trace gravel; brown; non-cohesive, moist		0.20									Flush Mount Casing
1													
2				63.06									
		(SM) Gravelly SILTY SAND, trace cobbles and crushed boulders; brown-grey; non-cohesive, moist		2.05									
3				61.91									Bentonite Seal
		BEDROCK (Limestone)		3.20									
4													
5													
6													Silica Sand
													50 mm Diam. PVC #10 Slot Screen
7				58.11									
		END OF BOREHOLE		7.00									
8													

Notes:

1. Water level at BH22-07 measured at a depth of 6.91 m (Elev. 58.20 m) on May 26, 2022.

2. Borehole log not prepared for geotechnical engineering purposes.

DEPTH SCALE

1 : 40

LOGGED: JB

CHECKED: DS

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PROJECT: 21494078

RECORD OF BOREHOLE: BH22-08

SHEET 1 OF 2

LOCATION: N 5026375.62; E 361303.08

BORING DATE: October 3, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG:

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80) / SHEAR STRENGTH Cu, kPa (nat V. + Q - ● / rem V. ⊕ U - ○)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0		GROUND SURFACE		64.87							
		ASPHALT (50 mm)		0.00							
		FILL - (SP/GP) SAND and GRAVEL		0.05							
				64.57							Flush Mount Casing
		FILL - (SP) SAND, trace gravel; brown; non-cohesive, moist		0.30							
1											
2				62.69							
		(SM) SILTY SAND, some fines, trace gravel; brown-grey; non-cohesive, moist		2.18							
				62.22							Bentonite Seal
		BEDROCK (Limestone)		2.65							
3											
4											
5											
6											
7											▽ D
8		*CONTINUED NEXT PAGE*									

DEPTH SCALE

1 : 40

LOGGED: JB

CHECKED: DS

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PROJECT: 21494078

RECORD OF BOREHOLE: BH22-08

SHEET 2 OF 2

LOCATION: N 5026375.62; E 361303.08

BORING DATE: October 3, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG:

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80) / SHEAR STRENGTH Cu, kPa (nat V. + Q - ● / rem V. ⊕ U - ○) (20 40 60 80)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl) (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*									
8		BEDROCK (Limestone)									Bentonite Seal
9											Silica Sand
10				54.87							50 mm Diam. PVC #10 Slot Screen
10		END OF BOREHOLE		10.00							
11		Notes:									
12		1. Water level at BH22-08 measured at a depth of 8.11 m (Elev. 56.76 m) on May 26, 2022.									
13		2. Borehole log not prepared for geotechnical engineering purposes.									
14											
15											
16											

DEPTH SCALE

1 : 40

LOGGED: JB

CHECKED: DS

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PROJECT: 21494078

LOCATION: N 5026404.46; E 361315.65

RECORD OF BOREHOLE: BH22-09

BORING DATE: May 15 - 16, 2023

DRILL RIG: Massenza MI3

SHEET 1 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected) 100 200 300 400	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected) 100 200 300 400	HYDRAULIC CONDUCTIVITY, k, cm/s 10^{-6} 10^{-5} 10^{-4} 10^{-3}	WATER CONTENT PERCENT Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		64.23									
0	Air Rotary 140 mm Casing	ASPHALTIC CONCRETE		0.00 / 0.05									
		FILL - (SW) gravelly SAND, angular; grey; (Pavement Structure)		64.03 / 0.20									
		FILL - (SM) SILTY SAND, trace gravel, organic matter; dark brown; non-cohesive, moist		0.30	1			ND					Flushmount
1		FILL - (SW) gravelly SAND, fine to coarse, trace silt; brown; non-cohesive, moist			2			ND					
		(SM) gravelly SILTY SAND, thin to thick laminations, fine to coarse, contains cobbles and boulders; brown to grey-brown (TILL); non-cohesive, moist to wet		63.16 / 1.07	3			ND					
2					4			ND					Bentonite Seal
3					5			ND					
					6			ND					
4				60.12									
	Air Rotary 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey, fine grained, non-porous to faintly porous, medium strong, Dolostone interbedded with shale, limestone and sandstone		4.11									Sand #2
5													
6													Screen
7													
8													Bentonite Seal
		CONTINUED NEXT PAGE											

DEPTH SCALE

1 : 40

LOGGED:

CHECKED: DS

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PROJECT: 21494078

LOCATION: N 5026404.46; E 361315.65

RECORD OF BOREHOLE: BH22-09

BORING DATE: May 15 - 16, 2023

DRILL RIG: Massenza MI3

SHEET 2 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*								
8	Air Rotary, 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey, fine grained, non-porous to faintly porous, medium strong, Dolostone interbedded with shale, limestone and sandstone								Bentonite Seal; D; Sand #2; Screen
10				54.17						
10		END OF BOREHOLE		10.06						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 : 40

LOGGED:

CHECKED: DS

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PROJECT: 21494078

LOCATION: N 5026390.88; E 361333.63

RECORD OF BOREHOLE: BH22-10

BORING DATE: May 15 - 16, 2023

DRILL RIG: Massenza MI3

SHEET 1 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0		GROUND SURFACE		64.81						
	Air Rotary, 140 mm Casing	ASPHALTIC CONCRETE		0.00						
		FILL - (SW) gravelly SAND, angular; grey; (Pavement Structure)		0.08						
		FILL - (SP) SAND, fine to medium, some gravel to gravelly, trace silt; brown; non-cohesive, moist		0.15 64.35	1			ND		Flushmount
				0.46						
1		(SM) gravelly SILTY SAND, trace plastic fines, contains cobbles and boulders; grey-brown (TILL); non-cohesive, moist			2			ND		
				63.29	3			ND		
		(SW) gravelly SAND, fine to coarse, trace silt; brown; non-cohesive, moist		1.52						
2					4			ND		
				62.52						
		(SM) gravelly SILTY SAND, contains cobbles and boulders, thin laminations of sand, fine to coarse; grey-brown (TILL); non-cohesive, wet		2.29						Bentonite Seal
3					5			ND		
					6			ND		
					7			ND		
				60.85						
4	Air Rotary, 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey, fine grained, non-porous to faintly porous, medium strong, Dolostone, interbeddded witth shale, limestone and sandstone		3.96						Sand #2
5										
6										Screen
7										SP
8										Bentonite Seal
		CONTINUED NEXT PAGE								

DEPTH SCALE

1 : 40

LOGGED:

CHECKED: DS

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PROJECT: 21494078

LOCATION: N 5026390.88; E 361333.63

RECORD OF BOREHOLE: BH22-10

BORING DATE: May 15 - 16, 2023

DRILL RIG: Massenza MI3

SHEET 2 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*								
8	Air Rotary, 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey, fine grained, non-porous to faintly porous, medium strong, Dolostone, interbeddded witth shale, limestone and sandstone								Bentonite Seal; Sand #2; D; Screen; Sand #2
9										
10				54.45						
		END OF BOREHOLE		10.36						
11										
12										
13										
14										
15										
16										

DEPTH SCALE

1 : 40

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APPENDIX F

Soil Excavation and Confirmatory Sampling Report

September 4, 2024 Project No. 21494078

Corina Sajewski – Director, Development
1047 Richmond Nominee Inc.
2275 Upper Middle Road East
Oakville ON L6H 0C3

CONFIRMATORY SOIL SAMPLING PROGRAM FOLLOWING SOIL EXCEEDANCES EXCAVATION AT 1047 RICHMOND ROAD, OTTAWA, ONTARIO

Ms. Sajewski,

WSP Canada Inc. (WSP) was retained by 1047 Richmond Nominee Inc. (the Client) to complete confirmatory soil sampling following the excavation and removal of soil exceedances in the area of BH21-05 and BH21-24 located at 1047 Richmond Road, Ottawa, Ontario (the Site). The soil excavation was executed on July 25 and 26, 2023. The excavated soil was segregated into separate stockpiles based on the inferred presence of potential residues, odours and stained soil impacts.

This letter provides the results of soil sampling to characterize the environmental quality of the soil in the immediate vicinity of the soil excavation area for evidence of petroleum hydrocarbon (PHC), benzene, toluene, ethylbenzene and xylenes (BTEX), and polycyclic aromatic hydrocarbons (PAH) impacts and assess the quality of the soil generated to determine disposal options. The excavation area was approximately 135 m^2, and the volume of soil excavated was approximately 220 m^3.

SCOPE OF WORK

The scope of work included:

- Collection of eleven soil samples from the sidewalls of the excavation for field screening of combustible vapour concentrations using a portable gas detector (RKI Eagle II). The detector was calibrated with isobutylene and hexane gas according to the manufacturer's specifications and methods. The excavation was advanced to the bedrock surface, therefore no soil samples were collected from the base of the excavation.
- Submission of four sidewall samples soil samples for laboratory analysis of PHC, BTEX and PAH. Soil samples were selected based on the results of field screening.
- Submission of one duplicate soil sample for PHC, BTEX, and PAH analysis for quality assurance and quality control purposes.
- Collection of one composite soil sample for analysis by Toxicity Characteristic Leaching Procedure (TCLP) to determine if the excavated soil was considered hazardous or non-hazardous under Ontario regulation (O.Reg), 558/00 (Schedule 4).
- Provision of a report summarizing the soil testing results.

SAMPLE COLLECTION AND ANALYSIS

A WSP field technician was present on Site on July 25 and 26, 2023 to supervise the excavation of soil in the vicinity of exceedances that were detected at BH21-05 and BH21-24 in 2021. The excavator and operator were provided by Inflector Environmental Services (the Contractor). The area of excavation at the Site is shown in Figure 1.

During excavation, soil samples were collected for field screening consisting of visual examination, soil classification, and headspace screening using a portable combustible gas detector (RKI Eagle II). The excavated soil was segregated into separate stockpiles based on the presence of potential impact as determined by field screening. The stockpile of material with evidence of potential impact was placed on an impermeable tarp. Potentially clean material that had no evidence of potential impact was placed in a separate stockpile located adjacent to the excavation.

The bedrock surface was reached at approximately 3.0 m below ground surface (mbgs) in the area where BH21-05 and BH21-24 were located. The excavation area was delimited to a 5 x 5 m square centered at BH21-05. Due to the soil properties encountered in the area, benching and sloping were used to stabilize the walls of the excavation, slope factor of 1:1 (H:V) was used. Two additional test pits were advanced 3.0 and 6.0 m north of the main excavation to achieve delineation of the soil impacts observed on the north wall of the main excavation. The test pits also had a slope factor of 1:1 (H:V).

A total of eleven soil samples were collected for field screening from the sidewalls. No floor samples were collected, as the excavation reached the top of the bedrock. The location of the field screening and final confirmatory samples is shown in Figure 19. Each soil sample was split in the field into two components. One component was placed into a laboratory-prepared container with minimal headspace for potential laboratory analysis. The second component was placed inside a plastic bag for field screening, and noting the presence of any staining, odour and/or debris. Soil headspace concentrations of bagged samples were measured using a photoionization detector and a combustible gas detector, calibrated using isobutylene and hexane, respectively, to determine total organic vapour and combustible gas concentrations in the headspace in the sealed plastic bag. Soil samples were submitted to AGAT Laboratories (AGAT) for PHC, BTEX, and PAH analysis. No samples were submitted from the north wall of the excavation as visual impacts were observed in this area and the decision was made in the field to discontinue the excavation in this direction and instead to advance two test pits to the north of the excavation to delineate the impacted area.

Table 1: Summary of Screening Soil Samples and Samples Submitted for Laboratory Analysis

Sample ID	Sample Location	Sample Depth (mbgs)	Analyses	Headspace		Field Observations
				Combustible gas (ppm)	Total Organic Vapour (ppm)	
NW-SA1	North wall	1.4	PHC, BTEX and PAH	30	43	Black stained soil, strong PHC-like odour
NW-SA2	North wall	3.4	PHC, BTEX and PAH	180	217	Dark grey greasy soil, strong PHC-like odour
SW-SA3	South wall	1.5	PHC, BTEX and PAH	0	0	No stains/grease or strong odour
SW-SA4*	South wall	3.7	PHC, BTEX and PAH	0	0	No stains/grease or strong odour
EW-SA5*	East wall	1.0	PHC, BTEX and PAH	0	0	No stains/grease, slight PHC-like odour
EW-SA6	East wall	3.0	PHC, BTEX and PAH	0	0	No stains/grease or strong odour
WW-SA7*	West wall	1.5	PHC, BTEX and PAH	0	0	No stains/grease, slight PHC-like odour
WW-SA8	West wall	3.7	PHC, BTEX and PAH	0	0	No stains/grease or strong odour
NW-SA9	West wall	2.5	PHC, BTEX and PAH	0	9	Grey soil, strong PHC-like odour
NW-SA10	North wall	3.0	PHC, BTEX and PAH	155	127	Grey soil, strong PHC-like odour
TP-SA11*	South wall of Test Pit 2	3.5	PHC, BTEX and PAH	0	0	Grey soil, slight PHC-like odour

Notes:
(mbgs) meters below ground surface; (ppm) parts per million by volume ; (*) Samples selected for laboratory analysis

Quality Assurance and Quality Control Measures

WSP's quality assurance program for environmental investigations was implemented to ensure that analytical data obtained by the investigation were valid and representative. The quality assurance program included the following measures:

- The use of standard operating procedures for all field investigation activities;
- All monitoring wells were developed following installation to remove fine particles from the filter pack and any water introduced during drilling;
- Monitoring wells were appropriately purged prior to groundwater sample collection to remove stagnant water from the well bore and improve sample representativeness, minimizing sample agitation and aeration to the extent practicable; and
- The collection of field duplicate samples at a minimum frequency of one duplicate for every ten samples.

One soil duplicate sample was analyzed for the six overall soil samples analyzed. Overall 7 samples were analyzed:

- Initial calibration of field equipment was performed at the start of each field day, with daily checks of calibration, as needed, using a standard of known concentration.
- Soil samples were handled and stored in accordance with the sample collection and preservation requirement of the Ministry of the Environment (MOE) *Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.I of the Environmental Protection Act*, July 1, 2011. Samples were collected directly into pre-cleaned, laboratory-supplied sample containers with the appropriate preservative for the analyte group. Upon collection, samples were placed in insulated coolers with ice for storage and transport to the analytical laboratory under chain-of-custody.
- Dedicated sampling equipment and clean disposable Nitrile™ gloves were used at each sampling location to prevent cross-contamination. All non-dedicated sampling equipment was decontaminated between sampling locations.
- Detailed field records documenting the methods and circumstances of collection for each field sample were prepared at the time of sample collection. Each sample was assigned a unique sample identification number recorded in the field notes, along with the date and time of sample collection, the sample matrix, and the requested analyses.
- The submission of samples to the analytical laboratory in accordance with standard chain of custody procedures.

RESULTS

The soil excavated consisted of a layer of fill underlain by native soil predominantly described as sand and silty sand, followed by bedrock described as limestone. The fill materials predominantly consisted of surficial granular gravel with sand, silty sand and trace gravel below. Native soil below the fill consisted of sand and silty sand with isolated grey glacial till (silt and silty clay). Bedrock was encountered at depths ranging from 3.0 m to 3.7 m bgs at the northern test pits.

Headspace readings obtained as part of the excavation ranged from 0 ppm to 180 ppm for the hexane sensor (Gastech) and ranged from 0 ppm to 217 ppm for the isobutylene sensor (PID). Olfactory evidence of environmental impact including staining, soil that was greasy to the touch, and the presence of old oil cans, oil filters and some weathered garbage was noted at the north wall of the excavation, at depths ranging from 2.0 m to 3.7 m bgs. No samples were analysed from the north wall given the obvious presence of impacts based on observations.

Two additional test pits were excavated to delineate the extent of the impacts to the north. The first test pit was excavated 3.0 m north of the north wall of the main excavation. Similar impacts to those observed at the north wall of the excavation were observed in the first test pit. A second test pit was excavated 6.0 m north of the first test pit. No observable evidence of potential impacts was observed in the second test pit and a soil sample submitted from the south wall of this test pit confirmed that impacts were delineated to the north. Note that during development construction, all overburdened soils will be excavated for the construction of the parking levels and will be disposed of at a licensed facility.

The analytical results for confirmatory soil samples were compared to the Table 7 site condition standards (SCS) residential/parkland/institutional (RPI) listed in the Ontario Ministry of Environment, Conservation and Parks (MECP) document "*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*", dated April 15, 2011. All analytical results met the Table 7 SCS. The laboratory certificates of analysis are provided in Attachment A. The reported concentrations for the confirmatory soil samples are summarized in Table 2 following the text of this report.

The TCLP analytical results were compared to the O.Reg. 558/00 (Schedule 4). Based on the analytical results, the reported concentrations were below the Schedule 4 criteria for the parameters tested and the potentially impacted soil is considered a non-hazardous waste.

Soil Management

The contractor for 1047 Richmond Nominee managed the hauling of impacted soil from the excavation on-Site. The impacted soil was transported to Centre FilloGreen at 152 Chemin de L'industrie Nord in Litchfield, Quebec, on September 8, 2023. According to the waste manifests, 412.26 tonnes of impacted soil were transported to the landfill. WSP was not on-site during soil waste hauling activities. The waste manifests are provided in Attachment B.

CONCLUSIONS

The reported concentrations of all final confirmatory samples analysed met the Table 7 RPI SCS. The excavated soil is considered non-hazardous waste for the purposes of disposal. According to waste manifests provided by 1047 Richmond Road, 412.26 tonnes of impacted soil resulting from the excavation activities were disposed of at Centre FilloGreen in Litchfield, Québec, on September 8, 2023.

LIMITATIONS

It should be noted that the results of the chemical analysis refer only to the soil samples analyzed which were obtained from specific sampling locations and sampling depths; soil chemistry may vary between and beyond the locations and depths of the samples analyzed.

This report was prepared for the exclusive use of 1047 Richmond Nominee Inc. No third parties may rely upon this report. 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 party. This report is based on data and information collected during this investigation by WSP Canada Inc. in accordance with our proposal and is based solely on on-Site conditions encountered at the time.

Only limited chemical analyses of soil samples were carried out. Regulatory criteria are used for comparison purposes only and are not necessarily enforceable on the Site owner. It should be noted that the results of an investigation of this nature should, in no way, be construed as a warranty that the site is free from any and all contamination from past or current practices. If additional information is obtained during future work at the Site, including excavations, borings, or other studies, and/or if conditions exposed during construction are different from those encountered in this assessment, WSP should be requested to re-evaluate the conclusions presented in this report and provide amendments as required.

CLOSING

We trust this letter is sufficient for your current needs. If you have any questions, please do not hesitate to contact the undersigned.

WSP Canada Inc.

Paul Hurst, MSc, PEng, QP(ESA)
Principal, Senior Environmental Engineer

Kristina Small, MSc, PGeo (ON), QP(ESA)
Senior Contaminant Hydrogeologist

CP/KS/sg
https://wsponline.sharepoint.com/sites/gld-152441/project files/6 deliverables/ph two report(s)/7. phase two esa october 2023/final/app f_remedial excavation letter/21494078-l-rev0-phc excavation letter-4sept2024.docx

Attachments: Table 2 – Summary of Soil Analytical Results
Figure 1 – Site Plan – Remedial Excavation Area and Sampling Locations
Attachment A – Certificates of Analysis
Attachment B – Waste Manifests

Tables

Table 2
Soil Results Summary - Petroleum Hydrocarbons, Polycyclic Aromatic Hydrocarbons and Benzene, Toluene, Ethylbenzene and Xylenes
1047 Richmond Road, Ottawa, Ontario

			Location	East Wall	South Wall	West Wall	TP-SA11	TP-SA11
			Sample Name	EW-SA5	SW-SA4	WW-SA7	TP-SA11	DUP-3
			Sample Date	25-07-2023	25-07-2023	25-07-2023	26-07-2023	26-07-2023
			Sample Depth	1 m	3.5-3.7 m	1-1.8 m	3.2-3.5 m	3.2-3.5 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**						
Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	55	ug/g	< 5	< 5	< 5	< 5	< 5	
Petroleum Hydrocarbons - F2 (C10-C16)	98	ug/g	< 10	< 10	< 10	< 10	< 10	
Petroleum Hydrocarbons - F3 (C16-C34)	300	ug/g	51	< 50	< 50	< 50	< 50	
Petroleum Hydrocarbons - F4 (C34-C50)	2800	ug/g	< 50	< 50	< 50	< 50	< 50	
Petroleum Hydrocarbons - F1 (C6-C10)-BTEX	55	ug/g	< 5	< 5	< 5	< 5	< 5	
Petroleum Hydrocarbons - F2 (C10-C16) less Naphthalene	98	ug/g	< 10	< 10	< 10	< 10	< 10	
Petroleum Hydrocarbons - F3 (C16-C34) less PAHs	300	ug/g	50	< 50	< 50	< 50	< 50	
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	7.9	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo[g,h,i]perylene	6.6	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Indeno[1,2,3-cd]pyrene	0.38	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Acenaphthylene	0.15	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo[k]fluoranthene	0.78	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Anthracene	0.67	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Chrysene	7	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Naphthalene	0.6	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo[a]anthracene	0.5	ug/g	0.06	< 0.05	< 0.05	< 0.05	< 0.05	
Dibenzo[a,h]anthracene	0.1	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Phenanthrene	6.2	ug/g	0.08	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo[a]pyrene	0.3	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Fluoranthene	0.69	ug/g	0.24	< 0.05	< 0.05	< 0.05	< 0.05	
Pyrene	78	ug/g	0.16	< 0.05	< 0.05	< 0.05	< 0.05	
Benzo[b]fluoranthene	0.78	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Fluorene	62	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
BTEX								
Benzene	0.21	ug/g	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	
Ethylbenzene	2	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Toluene	2.3	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Xylenes, Total	3.1	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
m,p-Xylenes	NV	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
o-Xylene	NV	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Ungrouped Analytes								
Dimethylnaphthalene	NV	ug/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Moisture, Percent	NV	%	12.8	10.6	14.8	15.3	13.6	

Notes:
Bold: Value exceeding Table 7 standards
ug/g: micrograms per gram
%: percentage
NV: No Value
<: Indicates parameter not detected above laboratory method detection limit.

REG153 (11) T7-R/P/I SOIL COARSE	Table 7 = Ontario Ministry of the Environment, Conservation and Parks (MECP), "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", April 2011. Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition

Figures

LEGEND

- APPROXIMATE SAMPLE LOCATION
- LOCATIONS WHERE ALL SAMPLES MEET APPLICABLE STANDARDS
- SLOPE 2:1
- EXCAVATION AREA

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE
2. O.REG 153 (2011) TABLE STANDARDS FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL (R/P/I) PROPERTY USE FOR COARSE TEXTURED SOIL IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION.

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2020
2. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 1.5 3 6
1:125 METRES

CLIENT
1047 RICHMOND NOMINEE INC.

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
SITE EXCAVATION AREA AND CONFIRMATORY SAMPLE LOCATION

CONSULTANT

YYYY-MM-DD	9/27/2023
DESIGNED	RF
PREPARED	JT
REVIEWED	DS
APPROVED	KS

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0008	0	**19**

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm

Path: S:\Clients\Fengate\1047_Richmond_Rd\99_PROJ\21494078_Fengate_GeoEnviro\0008_Excavation\21494078-0008-HS-0001.mxd

ATTACHMENT A

Certificates of Analysis

AGAT Laboratories

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

CLIENT NAME: WSP CANADA INC.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727

ATTENTION TO: Daniel Stabile

PROJECT: 21494078

AGAT WORK ORDER: 23Z051494

SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

TRACE ORGANICS REVIEWED BY: Radhika Chakraberty, Trace Organics Lab Manager

DATE REPORTED: Aug 03, 2023

PAGES (INCLUDING COVER): 14

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.

AGAT Laboratories

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TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

O. Reg. 558 Metals and Inorganics

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		TCLP
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2023-07-26
Parameter	Unit	G / S	RDL	5169651
Arsenic Leachate	mg/L	2.5	0.010	<0.010
Barium Leachate	mg/L	100	0.020	2.32
Boron Leachate	mg/L	500	0.050	0.066
Cadmium Leachate	mg/L	0.5	0.010	<0.010
Chromium Leachate	mg/L	5	0.050	<0.050
Lead Leachate	mg/L	5	0.010	0.134
Mercury Leachate	mg/L	0.1	0.01	<0.01
Selenium Leachate	mg/L	1	0.020	<0.020
Silver Leachate	mg/L	5	0.010	<0.010
Uranium Leachate	mg/L	10	0.050	<0.050
Fluoride Leachate	mg/L	150	0.10	0.11
Cyanide Leachate	mg/L	20	0.05	<0.05
(Nitrate + Nitrite) as N Leachate	mg/L	1000	0.70	<0.70

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg. 558 - Schedule IV Leachate Quality Criteria
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		EW-SA5	WW-SA7	SW-SA4	TP-SA11	DUP-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-25	2023-07-25	2023-07-25	2023-07-26	2023-07-26
Parameter	Unit	G / S	RDL	5169635	5169637	5169638	5169639	5169649
Naphthalene	µg/g	0.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	7.9	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	6.2	0.05	0.08	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	0.24	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	78	0.05	0.16	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.5	0.05	0.06	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1 and 2 Methlynaphthalene	µg/g	0.99	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	12.8	14.8	10.6	15.3	13.6
Surrogate	Unit	Acceptable Limits						
Naphthalene-d8	%	50-140		90	90	95	90	85
Acridine-d9	%	50-140		115	115	115	90	90
Terphenyl-d14	%	50-140		80	90	70	115	75

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5169635-5169649 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

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Certificate of Analysis

AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		EW-SA5	WW-SA7	SW-SA4	TP-SA11	DUP-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-25	2023-07-25	2023-07-25	2023-07-26	2023-07-26
Parameter	Unit	G / S	RDL	5169635	5169637	5169638	5169639	5169649
Benzene	µg/g	0.21	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	µg/g	3.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g		5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	98	10	<10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	300	50	51	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	2800	50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50	NA	NA	NA	NA	NA
Moisture Content	%		0.1	12.8	14.8	10.6	15.3	13.6
Surrogate	Unit	Acceptable Limits						
Toluene-d8	% Recovery	60-140		114	103	94	79	84
Terphenyl	%	60-140		71	81	84	84	88

Certified By: R. Chakraberty

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Certificate of Analysis

AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-08-03

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5169635-5169649 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

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AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

O. Reg. 558 - Benzo(a) pyrene

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		TCLP
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2023-07-26
Parameter	Unit	G / S	RDL	5169651
Benzo(a)pyrene Leachate	mg/L	0.001	0.001	<0.001
Surrogate	Unit	Acceptable Limits		
Acridine-d9	%	50-140		95
Naphthalene-d8	%	50-140		75
Terphenyl-d14	%	50-140		81

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg. 558 - Schedule IV Leachate Quality Criteria
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5169651 The sample was leached according to Regulation 558 protocol. Analysis was performed on the leachate.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z051494
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

O. Reg. 558 - VOCs

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		TCLP
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2023-07-26
Parameter	Unit	G / S	RDL	5169651
Vinyl Chloride Leachate	mg/L	0.2	0.030	<0.030
1,1 Dichloroethene Leachate	mg/L	1.4	0.020	<0.020
Dichloromethane Leachate	mg/L	5.0	0.030	<0.030
Methyl Ethyl Ketone Leachate	mg/L	200	0.090	<0.090
Chloroform Leachate	mg/L	10.0	0.020	<0.020
1,2-Dichloroethane Leachate	mg/L	0.5	0.020	<0.020
Carbon Tetrachloride Leachate	mg/L	0.5	0.020	<0.020
Benzene Leachate	mg/L	0.5	0.020	<0.020
Trichloroethene Leachate	mg/L	5.0	0.020	<0.020
Tetrachloroethene Leachate	mg/L	3.0	0.050	<0.050
Chlorobenzene Leachate	mg/L	8.0	0.010	<0.010
1,2-Dichlorobenzene Leachate	mg/L	20.0	0.010	<0.010
1,4-Dichlorobenzene Leachate	mg/L	0.5	0.010	<0.010
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		117
4-Bromofluorobenzene	% Recovery	50-140		84

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg. 558 - Schedule IV Leachate Quality Criteria
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5169651 Sample was prepared using Regulation 558 protocol and a zero headspace extractor.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

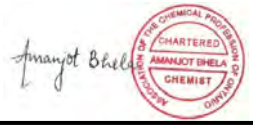
SAMPLED BY:Ryan Francis

Soil Analysis

RPT Date: Aug 03, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 558 Metals and Inorganics															
Arsenic Leachate	5165829		<0.010	<0.010	NA	< 0.010	89%	70%	130%	95%	80%	120%	129%	70%	130%
Barium Leachate	5165829		0.479	0.471	1.7%	< 0.020	99%	70%	130%	100%	80%	120%	108%	70%	130%
Boron Leachate	5165829		0.063	0.057	NA	< 0.050	101%	70%	130%	98%	80%	120%	79%	70%	130%
Cadmium Leachate	5165829		<0.010	<0.010	NA	< 0.010	100%	70%	130%	107%	80%	120%	98%	70%	130%
Chromium Leachate	5165829		<0.050	<0.050	NA	< 0.050	100%	70%	130%	105%	80%	120%	99%	70%	130%
Lead Leachate	5165829		0.012	0.012	NA	< 0.010	98%	70%	130%	103%	80%	120%	101%	70%	130%
Mercury Leachate	5165829		<0.01	<0.01	NA	< 0.01	98%	70%	130%	98%	80%	120%	85%	70%	130%
Selenium Leachate	5165829		<0.020	<0.020	NA	< 0.020	101%	70%	130%	112%	80%	120%	111%	70%	130%
Silver Leachate	5165829		<0.010	<0.010	NA	< 0.010	96%	70%	130%	114%	80%	120%	104%	70%	130%
Uranium Leachate	5165829		<0.050	<0.050	NA	< 0.050	97%	70%	130%	104%	80%	120%	113%	70%	130%
Fluoride Leachate	5165829		0.13	0.14	NA	< 0.10	107%	90%	110%	103%	90%	110%	115%	70%	130%
Cyanide Leachate	5165829		<0.05	<0.05	NA	< 0.05	92%	70%	130%	103%	80%	120%	103%	70%	130%
(Nitrate + Nitrite) as N Leachate	5165829		<0.70	<0.70	NA	< 0.70	102%	80%	120%	99%	80%	120%	96%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By:



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Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd

AGAT WORK ORDER: 23Z051494
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

Trace Organics Analysis

RPT Date: Aug 03, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	5159475		<0.05	<0.05	NA	< 0.05	109%	50%	140%	83%	50%	140%	83%	50%	140%
Acenaphthylene	5159475		<0.05	<0.05	NA	< 0.05	79%	50%	140%	78%	50%	140%	80%	50%	140%
Acenaphthene	5159475		<0.05	<0.05	NA	< 0.05	95%	50%	140%	98%	50%	140%	85%	50%	140%
Fluorene	5159475		<0.05	<0.05	NA	< 0.05	104%	50%	140%	88%	50%	140%	83%	50%	140%
Phenanthrene	5159475		<0.05	<0.05	NA	< 0.05	100%	50%	140%	110%	50%	140%	78%	50%	140%
Anthracene	5159475		<0.05	<0.05	NA	< 0.05	102%	50%	140%	88%	50%	140%	83%	50%	140%
Fluoranthene	5159475		0.10	0.11	NA	< 0.05	113%	50%	140%	75%	50%	140%	65%	50%	140%
Pyrene	5159475		0.08	0.10	NA	< 0.05	105%	50%	140%	85%	50%	140%	73%	50%	140%
Benz(a)anthracene	5159475		<0.05	<0.05	NA	< 0.05	78%	50%	140%	103%	50%	140%	105%	50%	140%
Chrysene	5159475		<0.05	<0.05	NA	< 0.05	98%	50%	140%	113%	50%	140%	113%	50%	140%
Benzo(b)fluoranthene	5159475		<0.05	<0.05	NA	< 0.05	95%	50%	140%	85%	50%	140%	90%	50%	140%
Benzo(k)fluoranthene	5159475		<0.05	<0.05	NA	< 0.05	110%	50%	140%	80%	50%	140%	85%	50%	140%
Benzo(a)pyrene	5159475		<0.05	<0.05	NA	< 0.05	78%	50%	140%	90%	50%	140%	88%	50%	140%
Indeno(1,2,3-cd)pyrene	5159475		<0.05	<0.05	NA	< 0.05	71%	50%	140%	110%	50%	140%	100%	50%	140%
Dibenz(a,h)anthracene	5159475		<0.05	<0.05	NA	< 0.05	66%	50%	140%	83%	50%	140%	83%	50%	140%
Benzo(g,h,i)perylene	5159475		<0.05	<0.05	NA	< 0.05	71%	50%	140%	80%	50%	140%	78%	50%	140%
O. Reg. 558 - VOCs															
Vinyl Chloride Leachate	5178215		< 0.030	< 0.030	NA	< 0.030	97%	50%	140%	97%	50%	140%	107%	50%	140%
1,1 Dichloroethene Leachate	5178215		< 0.020	< 0.020	NA	< 0.020	76%	50%	140%	98%	60%	130%	75%	50%	140%
Dichloromethane Leachate	5178215		< 0.030	< 0.030	NA	< 0.030	82%	50%	140%	91%	60%	130%	77%	50%	140%
Methyl Ethyl Ketone Leachate	5178215		< 0.090	< 0.090	NA	< 0.090	90%	50%	140%	81%	50%	140%	90%	50%	140%
Chloroform Leachate	5178215		< 0.020	< 0.020	NA	< 0.020	95%	50%	140%	83%	60%	130%	99%	50%	140%
1,2-Dichloroethane Leachate	5178215		< 0.020	< 0.020	NA	< 0.020	108%	50%	140%	93%	60%	130%	90%	50%	140%
Carbon Tetrachloride Leachate	5178215		< 0.020	< 0.020	NA	< 0.020	102%	50%	140%	99%	60%	130%	101%	50%	140%
Benzene Leachate	5178215		< 0.020	< 0.020	NA	< 0.020	76%	50%	140%	99%	60%	130%	74%	50%	140%
Trichloroethene Leachate	5178215		< 0.020	< 0.020	NA	< 0.020	88%	50%	140%	101%	60%	130%	94%	50%	140%
Tetrachloroethene Leachate	5178215		< 0.050	< 0.050	NA	< 0.050	83%	50%	140%	119%	60%	130%	69%	50%	140%
Chlorobenzene Leachate	5178215		< 0.010	< 0.010	NA	< 0.010	88%	50%	140%	106%	60%	130%	77%	50%	140%
1,2-Dichlorobenzene Leachate	5178215		< 0.010	< 0.010	NA	< 0.010	93%	50%	140%	98%	60%	130%	82%	50%	140%
1,4-Dichlorobenzene Leachate	5178215		< 0.010	< 0.010	NA	< 0.010	94%	50%	140%	103%	60%	130%	83%	50%	140%
O. Reg. 558 - Benzo(a) pyrene															
Benzo(a)pyrene Leachate	5137581		< 0.001	< 0.001	NA	< 0.001	76%	50%	140%	90%	50%	140%	84%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)															
Benzene	5168927		< 0.02	< 0.02	NA	< 0.02	74%	60%	140%	84%	60%	140%	74%	60%	140%
Toluene	5168927		< 0.05	< 0.05	NA	< 0.05	93%	60%	140%	68%	60%	140%	96%	60%	140%
Ethylbenzene	5168927		< 0.05	< 0.05	NA	< 0.05	95%	60%	140%	78%	60%	140%	100%	60%	140%
m & p-Xylene	5168927		< 0.05	< 0.05	NA	< 0.05	106%	60%	140%	108%	60%	140%	96%	60%	140%

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

Trace Organics Analysis (Continued)

RPT Date: Aug 03, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
o-Xylene	5168927		< 0.05	< 0.05	NA	< 0.05	106%	60%	140%	75%	60%	140%	118%	60%	140%
F1 (C6 - C10)	5168927		< 5	< 5	NA	< 5	110%	60%	140%	112%	60%	140%	100%	60%	140%
F2 (C10 to C16)	5165429		<10	<10	NA	< 10	101%	60%	140%	120%	60%	140%	92%	60%	140%
F3 (C16 to C34)	5165429		<50	<50	NA	< 50	98%	60%	140%	109%	60%	140%	90%	60%	140%
F4 (C34 to C50)	5165429		<50	<50	NA	< 50	84%	60%	140%	113%	60%	140%	103%	60%	140%

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

Certified By: R. Chakraberty

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Arsenic Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Barium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Boron Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Cadmium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Chromium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Lead Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Mercury Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Selenium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Silver Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Uranium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Fluoride Leachate	INOR-93-6000	EPA SW 846-1311; SM 4500F-C	ION SELECTIVE ELECTRODE
Cyanide Leachate	INOR-93-6052	EPA 1311 modified from MOE 3015 SM 4500 CN-I,G387	SEGMENTED FLOW ANALYSIS
(Nitrate + Nitrite) as N Leachate	INOR-93-6053	EPA SW 846-1311 & modified from SM 4500 - NO3- I	LACHAT FIA

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID

Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Benzo(a)pyrene Leachate	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Vinyl Chloride Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
1,1 Dichloroethene Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Dichloromethane Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Chloroform Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Benzene Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Trichloroethene Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Tetrachloroethene Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Chlorobenzene Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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AGAT Laboratories

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905 712 5100 Fax: 905 712 5122
webearth.agatlabs.com

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 2320514 94

Cooler Quantity: one - melteeze

Arrival Temperatures: 24.5 | 24.4 | 24.5
3.4 | 3.7 | 4.0

Custody Seal Intact: ☐ Yes ☐ No ☒ N/A

Notes: baggedice

Report Information:

Company: WSP Canada Inc
Contact: Daniel Stabile
Address: 1931 Robertson Rd. Ottawa, ON, K2H 5B7
Phone: (905) 213-4732 Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
Region

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
Indicate One

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☒ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 21494078
Site Location: 1047 Richmond Rd
Sampled By: Ryan Francis
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company: WSP Canada Inc
Contact: Daniel Stabile
Address:
Email: CAPayablesInvoice@WSP.com

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs, Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	TCLP							Potentially Hazardous or High Concentration (Y/N)
EW-SA5	July 25/23	12:55 AM/PM	2	S					✓															
WW-SA7	July 25/23	1:35 AM/PM	2	S					✓															
SW-SA4	July 25/23	1:55 AM/PM	2	S					✓															
TP-SA11	July 26/23	11:35 AM/PM	2	S					✓															
DUP-3	July 26/23	11:35 AM/PM	2	S													✓							
TCLP	July 26/23	2:40 AM/PM	3	S																				Y
EW-SA12	July 27/23	2:30 AM/PM	2	S					✓															
WW-SA13	July 27/23	2:35 AM/PM	2	S					✓															
		AM/PM																						
		AM/PM																						
		AM/PM																						

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Ryan Francis	July 26, 2023		C. Griffiths	July 26 2023	15h00
CA to Pam	JUL 26 2023	15h30	T. K	July 27	8:40am

Page 1 of 1

Nº: T 129276

Document ID: DIV-78-1511-021

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Date Issued: March 9, 2021

ATTACHMENT B

Waste Manifests

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016905
Date : 2023-09-08
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	30.54 t GROSS : 51740 kg TARE : 21200 kg NET : 30540 kg				FO	

Commentaires :

WO# 197-013 Job# 23-197 PO# 23240-02
Ticket# 49433

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA66364/S4471P
Transporteur : Demolition Plus
Chauffeur : Marcel St-Denis

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016908
Date : 2023-09-08
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	30.36 t GROSS : 50570 kg TARE : 20210 kg NET : 30360 kg				FO	

Commentaires :

WO# 197-014 Job# 23-197 PO# 23240-02
Ticket# 49434

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA14740/S2704S
Transporteur : Ray A. Thompson Truckin
Chauffeur : Chris Thompson

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016915
Date : 2023-09-08
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	22.98 t GROSS : 35700 kg TARE : 12720 kg NET : 22980 kg				FO	

Commentaires :

WO# 197-015 Job# 23-197 PO# 23240-02
Ticket# 49436

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA27041
Transporteur : Demolition Plus
Chauffeur : Zachary Roy

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016916
Date : 2023-09-08
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	33.75 t GROSS : 52780 kg TARE : 19030 kg NET : 33750 kg				FO	

Commentaires :

WO# 197-016 Job# 23-197 PO# 23240-02
Ticket# 49438

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : L988506/RL9261
Transporteur : Ray A. Thompson Truckin
Chauffeur : Derek Ardies

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016917
Date : 2023-09-08
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	46.36 t GROSS : 66870 kg TARE : 20510 kg NET : 46360 kg				FO	

Commentaires :

WO# 197-017 Job# 23-197 PO# 23240-02
Ticket# 49437

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : L846779/RJ4390R
Transporteur : Ray A. Thompson Truckin
Chauffeur : Mathieu Lafrenière

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016919
Date : 2023-09-08
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	40.85 t GROSS : 60160 kg TARE : 19310 kg NET : 40850 kg				FO	

Commentaires :

WO# 197-018 Job# 23-197 PO# 23240-02
Ticket# 49443

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : L759043/RM0523L
Transporteur : Ray A. Thompson Truckin
Chauffeur : Olivier Leblanc

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016922
Date : 2023-09-08
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	31 t GROSS : 52200 kg TARE : 21200 kg NET : 31000 kg				FO	

Commentaires :

WO# 197-019 Job# 23-197 PO# 23240-02
Ticket# 49439

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA66364/S4471P
Transporteur : Demolition Plus
Chauffeur : Marcel St-Denis

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016923
Date : 2023-09-08
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	30.97 t GROSS : 51180 kg TARE : 20210 kg NET : 30970 kg				FO	

Commentaires :

WO# 197-020 Job# 23-197 PO# 23240-02
Ticket# 49440

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA14740/S2704S
Transporteur : Demolition Plus
Chauffeur : Chris Thompson

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016924
Date : 2023-09-08
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	23.95 t GROSS : 36670 kg TARE : 12720 kg NET : 23950 kg				FO	

Commentaires :

WO# 197-021 Job# 23-197 PO# 23240-02
Ticket# 49435

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA27041
Transporteur : Demolition Plus
Chauffeur : Zachary Roy

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016925
Date : 2023-09-08
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	46.53 t GROSS : 66580 kg TARE : 20050 kg NET : 46530 kg				FO	

Commentaires :

WO# 197-022 Job# 23-197 PO# 23240-02
Ticket# 49444

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : L741539/RL9670N
Transporteur : Ray A. Thompson Truckin
Chauffeur : Marc Gervais

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016927
Date : 2023-09-08
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	36.67 t GROSS : 55700 kg TARE : 19030 kg NET : 36670 kg				FO	

Commentaires :

WO# 197-023 Job# 23-197 PO# 23240-02
Ticket# 49442

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : L988506/RL9261
Transporteur : Ray A. Thompson Truckin
Chauffeur : Derek Ardies

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016929
Date : 2023-09-08
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	38.3 t GROSS : 57610 kg TARE : 19310 kg NET : 38300 kg				FO	

Commentaires :

WO# 197-024 Job# 23-197 PO# 23240-02
Ticket# 49441

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : L759043/RM0523L
Transporteur : Ray A. Thompson Truckin
Chauffeur : Olivier Leblanc

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre
FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016776
Date : 2023-09-06
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	29.03 t GROSS : 49240 kg TARE : 20210 kg NET : 29030 kg				FO	

Commentaires :

WO#197-001 Job# 23-197 PO# 23240-02
Ticket 49427

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA14740/S2704S
Transporteur : Demolition Plus
Chauffeur : Chris Thompson

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

07/09/2023

Propulsé par OTO Nom-i

Centre
FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL RÉGIONAL/REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016777
Date : 2023-09-06
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	27.81 t GROSS : 49010 kg TARE : 21200 kg NET : 27810 kg				FO	

Commentaires :

WO# 197-002 Job# 23-197 PO# 23240-02
Ticket# 49428

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA66364/S4471P
Transporteur : Demolition Plus
Chauffeur : Marcel St-Denis

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

07/09/2023

Propulsé par OTO Nom-i

Centre
FilloGreen
VALORISATION DE MATERIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL/INDUSTRIAL PARK

Réception

 # Livr. : 0016783
Date : 2023-09-06
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	19.7 t GROSS : 32420 kg TARE : 12720 kg NET : 19700 kg				FO	

Commentaires :

WO# 197-003 Job# 23-197 PO# 23240-02
Ticket# 49429

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA27041
Transporteur : Demolition Plus
Chauffeur : Zachary Roy

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

07/09/2023

Propulsé par OTO Nom-i

Centre
FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL RÉGIONAL/INDUSTRIAL PARK

Réception

 # Livr. : 0016806
Date : 2023-09-06
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	28.52 t GROSS : 48730 kg TARE : 20210 kg NET : 28520 kg				FO	

Commentaires :

WO# 197-006 Job# 23-197 PO# 23240-02
Ticket# 49430

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA14740/S2704S
Transporteur : Demolition Plus
Chauffeur : Chris Thompson

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre
FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL RÉGIONAL/INDUSTRIAL PARK

Réception

 # Livr. : 0016794
Date : 2023-09-06
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	27.73 t GROSS : 48930 kg TARE : 21200 kg NET : 27730 kg				FO	

Commentaires :

WO# 197-004 Job# 23-197 PO# 23240-02
Ticket # 49431

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA66364/S4471P
Transporteur : Demolition Plus
Chauffeur : Marcel St-Denis

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

07/09/2023

Propulsé par OTO Nom-i

Centre
FilloGreen
VALORISATION DE MATERIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016798
Date : 2023-09-06
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	21.81 t GROSS : 34530 kg TARE : 12720 kg NET : 21810 kg				FO	

Commentaires :

WO# 197-005 Job# 23-197 PO# 23240-02
Ticket# 49432

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA27041
Transporteur : Demolition Plus
Chauffeur : Zachary Roy

Sommaire des taxes :
831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016810
Date : 2023-09-07
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	29.79 t GROSS : 50990 kg TARE : 21200 kg NET : 29790 kg				FO	

Commentaires :

WO# 197-007 Job# 23-197 PO# 23240-02
Ticket# 35359

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA66364/S4471P
Transporteur : Demolition Plus
Chauffeur : Marcel St-Denis

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016811
Date : 2023-09-07
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	24.77 t GROSS : 37490 kg TARE : 12720 kg NET : 24770 kg				FO	

Commentaires :

WO# 197-008 Job# 23-197 PO# 23240-02
Ticket# 35358

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA27041
Transporteur : Demolition Plus
Chauffeur : Zachary Roy

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016831
Date : 2023-09-07
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	34.45 t GROSS : 55650 kg TARE : 21200 kg NET : 34450 kg				FO	

Commentaires :

WO# 197-009 Job# 23-197 PO# 23240-02
Ticket# 35360

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA66364/S4471P
Transporteur : Demolition Plus
Chauffeur : Marcel St-Denis

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016832
Date : 2023-09-07
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	23.15 t GROSS : 35870 kg TARE : 12720 kg NET : 23150 kg				FO	

Commentaires :

WO# 197-010 Job# 23-197 PO# 23240-02
Ticket# 35361

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA27041
Transporteur : Demolition Plus
Chauffeur : Zachary Roy

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016842
Date : 2023-09-07
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	31.51 t GROSS : 52710 kg TARE : 21200 kg NET : 31510 kg				FO	

Commentaires :

WO# 197-011 Job# 23-197 PO# 23240-02
Ticket# 35362

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA66364/S4471P
Transporteur : Demolition Plus
Chauffeur : Marcel St-Denis

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

Centre FilloGreen
VALORISATION DE MATÉRIAUX SECS/RECOVERY OF DRY MATERIALS
PARC INDUSTRIEL REGIONAL INDUSTRIAL PARK

Réception

 # Livr. : 0016855
Date : 2023-09-07
 # Réf. : Job# 23-197

9231-6082 Québec Inc./Centre

Site
152 chemin de l'Industrie Nord
Litchfield (Québec)
J0X 1K0

Facturation : Amor Construction (ON) [BC0000130]
134 St-Paul, Unit 1
Ottawa (Ontario)
K1L 6A3

Livraison : Demolition Plus
1047 Richmond Road
Ottawa (Ontario)

# Produit	Description	Qté	Prix/Unité	Prix Fixe	Rabais	Taxation	Montant
081	Sol A&B	24.03 t GROSS : 36750 kg TARE : 12720 kg NET : 24030 kg				FO	

Commentaires :

WO# 197-012 Job# 23-197 PO# 23240-02
Ticket# 35363

Terms: Invoices are payable in 30 days. 2% per month (24% per year) are charged on unpaid bills.
Please pay to: 9231-6082 Québec Inc./FilloGreen, 14 ch Richard, La Pêche (Québec) J0X 2W0

P.-S.: Pricing may vary without notice.

Véhicule : PA27041
Transporteur : Demolition Plus
Chauffeur : Zachary Roy

Sommaire des taxes :

831684519 RT0001 (13%) : 0,00 $

Transport :
Sous-Total :
Taxes :
Total :

Signature : _____

														25.00	1,170,080.00	461,058.00	21,200.00	734,560.00	977.02
Demo Ticket	Date	Job No.	Job name	From	To	Carrier / Truck #	Demo Driver Name	Waste / Salvage / Material	Waste / Scrap Scale Ticket #	Run #	Destination Name	Type	Weight out	# of Loads	Gross LB	Tare LB	Wgt Adj SMR	Net LB	Converted to MT
Demo Ticket	Date	Job No.	Job name	From	To	Carrier / Truck #	Demo Driver Name	Waste / Salvage / Material	Waste / Scrap Scale Ticket #	Run #	Destination Name	Type	Weight out	# of Loads	Gross LB	Tare LB	Wgt Adj SMR	Net LB	Converted to MT
49427	September 6, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 726		W	0016806		Fillo Green	Contaminated Soil		1	48,730.00	20,210.00		28,520.00	28.52
49429	September 6, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 746	Zach	W	0016798		Fillo Green	Contaminated Soil		1	34,530.00	12,720.00		21,810.00	21.81
49431	September 6, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 842	Marcel	W	0016794		Fillo Green	Contaminated Soil		1	48,930.00	21,200.00		27,730.00	27.73
49432	September 6, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 746	Zach	W	0016783		Fillo Green	Contaminated Soil		1	32,420.00	12,720.00		19,700.00	19.70
49428	September 6, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 842	Marcel	W	0016777		Fillo Green	Contaminated Soil		1	49,010.00	21,200.00		27,810.00	27.81
49430	September 6, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 726		W	0016776		Fillo Green	Contaminated Soil		1	49,240.00	20,210.00		29,030.00	29.03
35358	September 7, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 746	Zach	W	0016855		Fillo Green	Contaminated Soil		1	36,750.00	12,720.00		24,030.00	24.03
35362	September 7, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 842	Marcel	W	0016842		Fillo Green	Contaminated Soil		1	52,710.00	21,200.00		31,510.00	31.51
35361	September 7, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 746	Zach	W	0016832		Fillo Green	Contaminated Soil		1	35,870.00	12,720.00		23,150.00	23.15
35360	September 7, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 842	Marcel	W	0016831		Fillo Green	Contaminated Soil		1	55,650.00	21,200.00		34,450.00	34.45
35363	September 7, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 746	Zach	W	0016811		Fillo Green	Contaminated Soil		1	37,490.00	12,720.00		24,770.00	24.77
35359	September 7, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 842	Marcel	W	0016810		Fillo Green	Contaminated Soil		1	50,990.00	21,200.00		29,790.00	29.79
49435	September 8, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 746	Zack	W	0016924		Fillo Green	Contaminated Soil		1	36,670.00	12,720.00		23,950.00	23.95
No Ticket	September 8, 2023	23240	1050 Richmond Rd.	Ottawa	Ottawa	Ray A. Thompson		W	0016923		Fillo Green	Contaminated Soil		1	51,180.00	20,210.00		30,970.00	30.97
49439	September 8, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 842	Marcel	W	0016922		Fillo Green	Contaminated Soil		1	52,200.00	21,200.00		31,000.00	14.06
49438	September 8, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Ray A. Thompson		W	0016917		Fillo Green	Contaminated Soil		1	66,870.00	20,510.00		46,360.00	46.36
49437	September 8, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Ray A. Thompson		W	0016916		Fillo Green	Contaminated Soil		1	52,780.00	19,030.00		33,750.00	33.75
49436	September 8, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 746	Zack	W	0016915		Fillo Green	Contaminated Soil		1	35,700.00	12,720.00		22,980.00	22.98
49434	September 8, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 726	Chris	W	0016908		Fillo Green	Contaminated Soil		1	50,570.00	20,210.00		30,360.00	30.36
49433	September 8, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Demo / 842	Marcel	W	0016905		Fillo Green	Contaminated Soil		1	51,740.00	46,738.00	21,200.00	30,540.00	30.54
49440	September 9, 2023	23240	1048 Richmond Rd.	Ottawa	Ottawa	Demo / 726	Chris	W			Fillo Green	Contaminated Soil		1					259.40
49441	September 10, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Ray A. Thompson		W	0016919		Fillo Green	Contaminated Soil		1	60,160.00	19,310.00		40,850.00	40.85
49442	September 11, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Ray A. Thompson		W	0016925		Fillo Green	Contaminated Soil		1	66,580.00	20,050.00		46,530.00	46.53
49443	September 12, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Ray A. Thompson		W	0016927		Fillo Green	Contaminated Soil		1	55,700.00	19,030.00		36,670.00	36.67
49444	September 13, 2023	23240	1047 Richmond Rd.	Ottawa	Ottawa	Ray A. Thompson		W	0016929		Fillo Green	Contaminated Soil		1	57,610.00	19,310.00		38,300.00	38.30

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REPORT

Phase Two Environmental Site Assessment

Parkland Area - 1047 Richmond Rd, Ottawa, Ontario

Submitted to:

1047 Richmond Nominee Inc.

2275 Upper Middle Road East
Suite 700
Oakville, ON
L6H 0C3

Submitted by:

WSP Canada Inc.
1931 Robertson Road, Ottawa, Ontario, K2H 5B7

21494078

May 2024

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Distribution List

E-Copy - 1047 Richmond Nominee Inc.

E-Copy - WSP Canada Inc.

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Record of Issue

Version	Date Issued	Notes
Rev A	May29, 2024	Draft for client review

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1.0 EXECUTIVE SUMMARY

WSP Canada Inc. (WSP) was retained by 1047 Richmond Nominee Inc. (the Client) to conduct a Phase Two Environmental Site Assessment (Phase Two ESA) of a 0.101 hectare section of the property located at 1047 Richmond Road, in Ottawa (the "Phase Two Property" or "Site"). The Site location and plan are provided on Figures 1 and 2, respectively.

WSP previously completed a Phase One ESA for the Site, the results of which were documented in the report titled "*Phase One Environmental Site Assessment, Parkland Area, 1047 Richmond Road, Ottawa, Ontario"* (dated February 2024). According to the findings of the 2024 Phase One ESA report, a Phase Two ESA is required to support the submission of a Record of Site Condition (RSC). Based on the results of the 2024 Phase One ESA, three APECs were identified:

- **APEC 1**: Entire Site - The inferred presence of fill materials
- **APEC 2**: Entire Site - The application of de-icing salt for the purposes of vehicular and pedestrian safety.
- **APEC 3**: North and east portions of the Site - Off-site automotive dealership and garage.

WSP completed a Phase Two ESA investigation between April and December 2023, to investigate the potential presence of contamination within the APECs and to support the filing of an RSC. The investigation included sampling and analysis of soil and groundwater. The analytical results were compared to the Table 7 Site Condition Standards, parkland/residential/institutional property use, coarse-textured soil as presented in the Ministry of the Environment, Conservation and Parks (MECP) document "*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*", dated April 15, 2011.

The reported concentrations of all contaminants of potential concern were below the applicable site condition standards in soil with the exception of cobalt in a soil sample collected from borehole location BH23-03 at a depth of 0.61 - 0.91 meter below ground surface (m bgs). No exceedances of the MECP Table 7 Standards were identified in groundwater samples collected as part of the Phase Two ESA. There is no sediment present on the Site.

Remediation of the identified cobalt exceedance was undertaken in November 2023. Soils were excavated from the area of the identified exceedance and were transported off site for disposal at an appropriate facility. No contaminants of concern at concentrations exceeding the MECP Table 7 Standards were identified in the confirmatory samples collected from the final extents of the remedial excavation. Remedial and confirmatory sampling activities are summarized in Appendix F.

Based on the results of the Phase Two ESA, remediation, and confirmatory sampling, no additional work is required prior to filing an RSC.

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2.0 INTRODUCTION

2.1 Site Description

WSP was retained by the Client to conduct a Phase Two ESA of the following property:

Municipal Address	1047 Richmond Rd, Ottawa, Ontario
Property Identification Number	03970-0109 (LT)
Legal Description	Part Lots 24 & 25, Concession 1 (OF) Nepean as in N545545, Except Part 1 5R-3653
Size of the Phase Two Property	0.101 hectare

The location of the Phase Two Property is provided in Figure 1. The above referenced Plan of Survey is provided in Appendix A, an updated Plan of Survey will be provided by the Client at a later time. The boundaries of the Phase Two Property as provided by the Client, which are the same as the RSC property boundaries, is shown in Figure 2. The Site consists of a 0.101-hectare irregularly-shaped area of commercial land located on the south corner of the larger parcel with municipal address 1047 Richmond Road.

2.2 Property Ownership

Authorization to proceed with this investigation was received from the Client on December 3, 2020. The contact information for the Client and the Phase One Property owner is:

Site Owner / Client	Address	Contact Name
Phase Two Property Owner / Client: 1047 Richmond Nominee Inc.	2275 Upper Middle Road East Suite 700, Oakville, Ontario L6H 0C3	Ms. Corina Sajewski Office: (647) 895-7245 Email: corina.sajewski@fengate.com

2.3 Current and Proposed Future Uses

The Site (shown in Figure 2) consists of a 0.101-hectare irregularly-shaped area of commercial land located on the south corner of the larger parcel with municipal address 1047 Richmond Road. The Site is an asphalt-paved parking lot that is related to a former Chrysler car dealership building situated immediately north of the Site that operated at 1047 Richmond Road. It is understood that the Phase One Property will be conveyed to the City of Ottawa and will be redeveloped as a small municipal park.

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2.4 Applicable Site Condition Standards

The analytical results of soil and groundwater samples collected for this Phase Two ESA were compared to the MECP[1] Table 7 Generic Site Conditions Standards for Shallow Soils in a Non-Potable Ground Water Condition, residential/parkland/institutional property use, coarse soil texture (MECP Table 7 Standards). The applicable site condition standards were selected based on the following rationale:

- The Phase Two Property is not located in an area designated in a municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of groundwater.
- No water bodies were identified on the Phase Two Property.
- Based on field observations and grain size analysis results (refer to Appendix B) from soil samples collected from boreholes, the soil present at the Site is estimated to consist of soil having a grain size distribution with 50 percent or more by mass of particles that are greater than 75 µm mesh. Under the definition presented in O. Reg. 153/04, the soil at the Site is therefore considered to be coarse textured.
- The Site and surrounding properties located in whole or in part within 250 metres of the Site are within an area that is municipally serviced by a water supply that does not rely on potable groundwater as its source. No wells were identified that are used or intended for use as a source of water.
- The closest water body is the Ottawa River located approximately 310 m northwest of the Site at its closest point.
- There are no features on the Phase Two Property that would meet the conditions of an environmentally sensitive Site, as described in Section 41 of O.Reg 153/04.
- In general, the pH range of surface soil is greater than 5 and less than 9 and the pH range of sub-surface soil is greater than 5 and less than 11. For the purposes of this Phase Two ESA investigation, the pH of surface and sub-surface soil is considered not environmentally sensitive.
- The current land use is industrial/commercial, and the proposed future use of the Site is parkland;
- The overburden thickness is less than 2 metres at the Phase Two Property.
- The average depth to groundwater at the Site is more than 3.00 metres below ground surface (mbgs), ranging from 11.76 – 12.75 mbgs.

Based on the above, the 2011 Table 7 Standards, which includes quality standards for soil and groundwater, were used to assess the environmental conditions at the Site.

A letter was sent to the City of Ottawa to confirm all residences within 250 m of the Site are supplied by the municipality on February 28, 2022. A response from the City was received on September 14, 2022, consenting to the use of non-potable groundwater standards for the Site for the purpose of filing an RSC (Appendix C).

[1] MECP – Ministry of Environment, Conservation and Parks. Document titled "*Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, April 15, 2011*"

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3.0 BACKGROUND INFORMATION

This section presents the background conditions of the Phase Two Property including a description of the physical setting and a summary of past investigations conducted.

The objectives of the Phase Two ESA were to obtain information about environmental conditions in the soil and groundwater on, in or under the Site, and to develop the information necessary to complete a Record of Site Condition (RSC) for the property. The objectives of this Phase Two ESA were achieved by:

- Developing an understanding of the geological and hydrogeological conditions at the Site; and
- Conducting field sampling for all contaminants of concern (COCs) associated with each area of potential environmental concern (APEC) identified in the Phase One ESA.

3.1 Physical Setting

The Site consists of an irregular polygon shaped parcel of land located on the north side of Richmond Road in Ottawa. The nearest water body is the Ottawa River which is located approximately 310 m northwest of the Site at tis closest point. The Ottawa River flows northeast through Ottawa, eventually connecting with the St. Lawence River around Montreal, Quebec. Land uses surrounding the Site are commercial and residential.

The topography of the Site and surrounding areas is generally flat. The Site has a shallow downward slope to the north towards Ottawa River. There are no surface water drainage features on the Site.

3.2 Past Investigations

3.2.1 Phase One ESA

WSP conducted a Phase One ESA entitled "*Phase One Environmental Site Assessment, Parkland Area, 1047 Richmond Road, Ottawa, Ontario*", dated February 2024, to assess the likelihood of soil and/or groundwater contamination resulting from historic or present activities at the Site and surrounding area. This included a review of available historical information on the Site and surrounding area, interviews with persons familiar with the Site and a Site reconnaissance. The location of Potentially Contaminating Activities (PCAs) identified via the Phase One ESA are shown on Figure 3. The location of APECs identified based on the Phase One ESA are shown on Figure 4 and summarized below:

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Area of Potential Environmental Concern[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Groundwater, soil and/or Sediment)
APEC 1 – Inferred presence of fill materials site-wide	Entire Site	# 30. Importation of Fill Material of Unknown Quality	On-Site	Metals, Hydride-Forming Metals, ORP, PAHs and PHCs	Soil
APEC 2 – The application of de-icing salt for the purposes of vehicular and pedestrian safety across the entire site. No testing is required as per section 49.1 in O. Reg. 153/04.	Entire Site	# Other	On-Site	SAR, EC, sodium, chloride	Soil and groundwater
APEC 3 – Off-site automotive garage	North and east	#10. Commercial Autobody Shops	Off-Site	PHCs F1-F4, BTEX and VOCs	Soil and groundwater

Notes:

1 Area of potential environmental concern means the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental Site assessment, including through, •(a) identification of past or present uses on, in or under the phase one property, and •(b) identification of potentially contaminating activity.

2 Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area.

3 Contaminants of potential concern specified using the method groups as identified in the "Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011.

4 Metals – Ba (Barium), Beryllium (Be), Boron (B), Cadmium (Cd), Chromium (Cr), Cobalt (Co), Copper (Cu), Lead (Pb), Molybdenum (Mo), Nickel (Ni), Silver (Ag), Thallium (Th), Uranium (U), Vanadium (V), Zinc (Zn); Hydride-Forming Metals – Arsenic (As), Selenium (Se), Antimony (Sb); ORP – Hexavalent Chromium (Cr-VI), Sodium (Na), Mercury (Hg), Hot Water Soluble Boron (B-HWS), Chloride (Cl-), Cyanide (CN-), Sodium Adsorption Ratio (SAR), Electrical Conductivity (EC); PHC – Petroleum Hydrocarbons; BTEX – Benzene, Toluene, Ethylbenzene and Xylenes; VOC – Volatile Organic Compounds.

3.2.2 Previous Environmental Investigations

The following environmental reports (ordered from oldest to most recent) related to the Phase One Property were provided to WSP. WSP consulted these reports to develop an understanding of the environmental conditions at the Phase One Property and surrounding properties.

- "Phase One Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario (project number 21494078", prepared for 1047 Richmond Nominee Inc. by Golder Associates Ltd., and dated November 2021 (the "2021 Phase One ESA" report);
- "Phase Two Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario (project number 21494078", prepared for 1047 Richmond Nominee Inc. by Golder Associates Ltd., and dated March 2022 (the "2022 Phase Two ESA" report);

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3.2.2.3 2021 Phase One ESA

The 2021 Phase One ESA Report was completed in accordance with O.Reg. 153/04 for the larger 1047 Richmond Road parcel (the "Subject Site) that includes the current Phase Two Property (conveyance area). The Subject Site was 1.0 hectare in size at the time of the of the 2021 Phase One ESA it was operated as a Chrysler dealership with one building situated in the middle of the parcel. The following findings are of note based on a review of the 2021 Phase One ESA Report:

- Based on the Chain of Title, the Subject Site was originally transferred from the Crown to a private individual in 1804. Between 1804 to present various private owners or entities have owned the Subject Site. Based on Fire Insurance Plans, Chain of Title and the Site Representative Interview, the Subject Site was residential and/or recreational until 1959 at which point a car dealership was developed. Accordingly, the first developed use was as a residential/recreational (tourist cabins) prior to 1959.
- Based on the aerial photographs, the Subject Site was first developed with structures along the west property boundary prior to 1958 and the car dealership was constructed between 1959 and 1965. The properties surrounding the Subject Site were developed from at least 1976 with commercial and residential buildings being constructed.
- Regional groundwater flow in the underlying aquifers is typically to the north toward the Ottawa River. Local groundwater flow was also inferred to be to the north given that the Ottawa River is located 250 m northwest of the Phase Subject Site and that it flows in a northeast direction. Based on the topography of the Subject Site, the inferred direction of shallow groundwater flow was to the north.
- Topography of the Subject Site and the surrounding areas was observed to be generally flat.
- Properties within a 250 m radius of the Subject Site were generally comprised of commercial and residential land uses.
- Six PCAs were identified on the Subject Site and seven PCAs were identified within the surrounding 250 m radius. The following APECs were identified in the 2021 Phase One ESA:
  - APEC 1 – On-site automotive garage.
  - APEC 2A – Former underground storage tank (UST) location.
  - APEC 2B – Former UST location.
  - APEC 3 – Presence of an above ground storage tank (AST) for used waste lubricant oil and oil-stained asphalt.
  - APEC 4 – Presence of painting operations (paint booth).
  - APEC 5 – Inferred fill materials to be present site-wide.
  - APEC 6 – Pole mounted transformer and fuse box.

Accordingly, a Phase Two ESA of the Subject Site was required for the submission of an RSC.

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Of the APECs identified on the Subject Site, only APEC 5 was identified as overlapping the current Phase Two Property (conveyance area). The remaining APECs are associated with the former automotive dealership that operated in areas adjacent to the Site.

3.2.2.3 2022 Phase Two ESA

Golder completed a Phase Two ESA of the 1.0 hectare parcel that was assessed in the 2021 Phase One ESA (the "Subject Site"). The Subject Site includes the current Phase Two Property (conveyance area). The 2022 Phase Two ESA investigation was completed to meet the requirements of O.Reg 153/04. The objective of the investigation was to assess the potential presence of subsurface contamination in the APECs identified in the 2021 Phase One ESA Report. The following findings are of note based on a review of the 2022 Phase II ESA Report:

- At the time of the report, the Subject Site was owned by 505432 Ontario Limited (Marinter Ontario Ltd.) and Metro Chrysler Dodge Jeep Ram operated an automotive dealership.
- The Phase Two ESA investigation consisted of the advancement of 20 boreholes and one test pit on the Subject Site with 12 of the boreholes being completed as monitoring wells. All boreholes that were completed as monitoring wells were advanced into the underlying bedrock. The maximum depth of investigation was 7.62 m below ground surface (mbgs). None of the boreholes or the test pit were advanced on the portion of the Subject Site that makes up the current Phase Two Property (conveyance area).
- In general, the subsurface soil conditions encountered in the boreholes consisted of a layer of fill (present at several test locations) underlain by native soil and bedrock. The fill consisted of sand / silty sand and trace gravel that extend to depths ranging from approximately 0.08 m to 2.74 mbgs. In general, the native soil below the fill consisted of silty sand with trace gravel and extended to a maximum depth of 4.26 mbgs. The bedrock surface was encountered during drilling from depths ranging from 1.52 to 4.26 mbgs.
- Soil samples were collected from each borehole for analysis of the relevant contaminants of potential concern (COPC) based on the APEC being investigated. COPCs included: metals and hydride forming metals, PHC F1-F4, BTEX, VOC, ORP, polychlorinated biphenyls (PCB), and sodium adsorption ratio (SAR).
- The newly installed monitoring wells were considered low yield monitoring wells, due to the slow recovery of the water level inside the well after completion of the drilling and well installation.
- Groundwater levels in the monitoring wells were measured on October 4, November 22 and December 22, 2021. No evidence of non-aqueous phase liquids (NAPL) was observed. Groundwater samples were collected from all 12 of the monitoring wells that were installed on the Subject Site and submitted for analysis of relevant COPCs including, metals and hydride forming metals, PHC F1-F4, BTEX, VOC, and ORP.
- The analytical results of soil and groundwater samples collected for the 2022 Phase Two ESA were compared to the MECP[2] Table 7 Generic Site Conditions Standards for Shallow Soils in a Non-Potable Ground Water Condition, residential/parkland/institutional property use, coarse soil texture (MECP Table 7 Standards).

[2] MECP – Ministry of Environment, Conservation and Parks. Document titled "*Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, April 15, 2011*"

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The following table provides a summary of the COPC parameters identified in each APEC at concentrations exceeding the MECP Table 7 Standards during the 2022 Phase Two ESA investigation:

APEC	Parameter Groups Exceeding the Applicable Site Conditions Standards in Soil	Parameter Groups Exceeding the Applicable Site Conditions Standards in Groundwater
APEC 1 – On-site automotive garage	SAR, PHC and 1,4-Dichlorobenzene	1,2-DCA, TCE and benzene
APEC 2A – Former UST location (north of the Site building)	None	1,2-DCA, TCE and benzene
APEC 2B – Former UST location (southeast of the Site building)	None	N/A – insufficient water to sample
APEC 3 – Presence of an AST used waste lubricant oil and oil-stained asphalt	SAR	None
APEC 4 – Presence of painting operations (paint booth)	SAR, PHC and 1,4-Dichlorobenzene	1,2-DCA, TCE and benzene
APEC 5 – Inferred fill materials to be present site-wide	SAR, PHC and 1,4-Dichlorobenzene	None
APEC 6 – Pole mounted transformer and fuse box	None	N/A – no monitoring well installed

- It was noted that dewatering associated with the construction of the Light Rail Transit (LRT) line along Richmond Road, directly adjacent to the Subject Site, could have lowered groundwater levels along the southern half of the Subject Site, causing insufficient groundwater to be present in APEC 2B to facilitate sample collection.
- The lateral extents of soil and groundwater impacts were well defined by the Phase Two investigation; however, the vertical extent of the identified groundwater impacts was not defined in any of the APECs.
- Based on the presence of the parking areas surrounding the building on the Subject Site, Golder inferred that the source of SAR impacts identified in soil was likely winter salting activities. The SAR exceedances were therefore not considered to represent exceedances of the MECP Table 7 SCS under Ontario Regulation 153/04.
- PHC and 1,4-dichlorobenzene impacts identified in soil were inferred to be generated on the Subject Site through operation of the automotive garage.
- Benzene, 1,2-DCA, and TCE impacts identified in groundwater were also inferred to be generated on the Subject Site through operation of the automotive garage.
- Given the identification of multiple exceedances of the MECP Table 7 Standards, Golder concluded that additional work would be required at the Subject Site prior to an RSC being filed.

As none of the boreholes or the test pit installed as part of the 2022 Phase Two ESA were located on the current Phase Two Property, none of the identified exceedances of the MECP Table 7 Standards are on the Site.

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4.0 SCOPE OF THE PHASE TWO ESA INVESTIGATION

The objective of this Phase Two ESA was to assess the presence or absence of impact associated with the APECs as identified in the Phase One ESA, to assess the vertical extent of soil and groundwater contaminants identified at the Site, and to support the filing of an RSC for the Site, if needed.

4.1 Overview of Site Investigation

The Phase Two ESA was carried out between May 8 and November 17, 2023, and included the following tasks:

- **Health and Safety Plan:** A Health and Safety Plan for internal and subcontractor use was prepared prior to initiating fieldwork at the Site.
- **Subsurface utilities in the areas of investigation:** Prior to drilling, WSP contacted local public utilities and retained the services of a private contractor to locate and identify potential buried services within the general areas of the proposed test locations before commencing intrusive investigations at the Site.
- **Sampling and analysis plan:** WSP prepared a sampling and analysis plan prior to conducting the field investigation (refer to Appendix D).
- **Borehole drilling and monitoring well installation:** The borehole drilling program was conducted between May 15 to 17, 2023. The program included the drilling of three boreholes, of which three were completed as groundwater monitoring wells. The location of the boreholes and monitoring wells are provided on Figure 5. The monitoring well construction details and water level information are presented in Tables 1 and 2.
- **Soil sampling:** Selected soil samples were collected during drilling. Soil samples were submitted for chemical analysis of one or more of the following: petroleum hydrocarbons (PHCs) plus benzene, toluene, ethylbenzene and xylenes (BTEX), volatile organic compounds (VOCs), polycyclic aromatic compounds (PAHs), metals and inorganics, hydride-forming metals, and other regulated parameters (ORP). A summary of the soil samples submitted for analysis is presented in Table 3.
- **Well development, groundwater monitoring and sampling:** WSP developed the newly installed monitoring wells on May 18, 2023. WSP collected groundwater samples on May 25 and 26, 2023, from all three groundwater monitoring wells (BH23-1 to BH23-3). The groundwater samples were submitted for analysis of one or more of VOCs, PHCs, BTEX, PAHs, metals and inorganics, hydride-forming metals, and/or ORP. A summary of the groundwater samples submitted for analysis is presented in Table 4.
- **Surveying:** An elevation survey for the boreholes and monitoring wells used in conjunction with this Phase Two ESA was completed by WSP on May 23, 2023.
- **Remedial Excavation and Confirmatory Sampling:** Cobalt at a concentration exceeding the MECP Table 7 Standards was identified at BH23-03 (sample SA2 at 0.61 - 0.91 m) during the Phase Two investigation. A remedial excavation centred on BH23-03 was advanced on November 17, 2023. The excavation extended to the bedrock surface. Confirmatory soil samples were collected from all four walls of the excavation. The results of this confirmatory sampling program are presented in a separate letter report, the Remedial Excavation Report, presented in Appendix F.
- **Reporting:** WSP compiled and assessed the field and laboratory results from the above noted activities into this report.

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The Phase Two ESA investigation was carried out in general accordance with WSP's standard operating procedures which conform to the requirements of O. Reg. 153/04. The Sampling and Analysis Plan for this Phase Two ESA is provided in Appendix D. The data from this Phase Two ESA investigation completed by WSP at the Site were incorporated into a single Phase Two ESA report following the Phase Two ESA report format and content required by O. Reg. 153/04.

There were no impediments or access limitations that would affect the conclusions of the Phase Two ESA report.

4.2 Media Investigated

To address the potential environmental issues identified in the Phase One ESA, the Phase Two ESA field program included sampling of soil from boreholes, and groundwater from monitoring wells screened within the bedrock at the Site. No sediment was present at the Site and therefore no sediment sampling was completed. Details of the parameters analysed in soil and groundwater samples are presented in Tables 3 and 4. The sampling and analysis plan (refer to Appendix D) outlines the rationale for the field investigation activities carried out at the Site and the associated methodologies used to meet the objectives of this Phase Two ESA.

4.3 Phase One Conceptual Site Model (CSM)

The following key Site features (as required by O.Reg. 153/04) are presented on Figures 3, and 4 where applicable:

- Existing buildings and structures;
- Water bodies and areas of natural significance located in the Phase One Study Area;
- Drinking water wells on the Phase One Property;
- Roads (including names) within the Phase One Study Area;
- Uses of properties adjacent to the Phase One Property; and,
- Location of identified PCAs in the Phase One Study Area.

The following describes the Phase One ESA CSM based on the information obtained and reviewed as part of the Phase One ESA:

- The Phase One property consisted of a 0.101-hectare parcel of land developed with a asphalt-paved parking lot for a commercial building. The Phase One property will be severed from the larger parcel of land where the former Chrysler dealership was installed, for the future development of a small municipal park.
- No water bodies or areas of natural significance were identified on or within 30 m of the Phase One Property. Ottawa River is located approximately 310 m northwest of the Phase One Property.
- Potable water in the vicinity of the Phase One Property is provided by the City of Ottawa and is obtained from Ottawa River. No potable water wells were identified on the Phase One Property.
- The Phase One Property and Phase One Study Area are not considered part of a well-head protection area.

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- Historically, the Phase One Property was originally transferred from the crown to a private individual in 1804. Between 1804 to present various private owners or entities have owned the land. The site use was residential until 1959 at which point a car dealership was developed in the adjacent area to the north and east and the Phase One Property was developed as a parking lot. The operations at the adjacent car dealership included a commercial auto body shop where storage, maintenance, fuelling, and repair of vehicles was conducted. No buildings, ASTs or USTs associated with the car dealership were ever present on the Phase One Property based on available information.
- At the time of the Phase One ESA, the Phase One Property was occupied by a parking lot.
- At the time of the Phase One ESA, the neighbouring properties within the Phase One Study Area consisted of commercial and residential uses (see Figure 2).
- The following PCAs were identified on the Phase One Property and in the Phase One Study Area which result in APECs to the Site:
  - *#30 Importation of Fill Material of Unknown Quality* – Due to the age of the Site, inferred fill materials to be present site-wide.
  - #Other The application of de-icing salt for vehicular and pedestrian safety has occurred at the Phase One Property.
  - *#10 Commercial Autobody Shops* – The adjacent property was used as a car dealership and had an automotive garage and associated equipment present.
- Underground utilities are present at the Site, which include natural gas, hydro, and sewer/sanitary mains and a sewer trunk located at the back of the site.
- Based on the Surficial Geology of Southern Ontario map, the surficial geology at the Phase One Property is comprised of sandy silt to silty sand textured till on Paleozoic terrain. The stratigraphy at the Site is comprised of silt till with pockets of sand and gravel. Inferred fill materials were present at various sampling locations on the areas adjacent to the Phase One Property, consisting of loose brown to grey sand / silty sand and trace gravel under asphalt surface ranging from approximately 0.08 to 2.74 mbgs.
- Bedrock at the Site consists of Rockcliffe Formation (Sandstone, Shale, Limestone and Dolostone). Bedrock was encountered at depths generally less than 3 mbgs on the adjacent property.
- Local and regional groundwater flow in the underlying aquifers is typically to the north to northeast. The Ottawa River is located 310 m northwest of the Site at its closest point. A review of the water table mapping data available suggests that the inferred groundwater flow is interpretated to be to the north-northeast.

4.4 Deviations from Sampling and Analysis Plan

The soil and groundwater sampling were carried out in general accordance with the Phase Two ESA work program documented in the sampling and analysis plan (Appendix D). The sampling and analysis plan outlines the rationale for the field investigation activities carried out at the Site and the associated methodologies used to meet the objectives of this Phase Two ESA. This plan, dated May 2023, covers the activities undertaken during the Phase Two ESA. The procedures described in the Sampling and Analysis Plan were generally followed without modifications.

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4.5 Impediments

No physical impediments to the Phase Two ESA investigation were encountered. Access to the Phase Two Property was not denied or restricted.

5.0 INVESTIGATION METHOD

5.1 General

The following sections describe the field investigation methods employed during the Phase Two ESA. The fieldwork was carried out between April and November, 2023.

Prior to the commencement of field activities, WSP developed a Site-specific health and safety plan. The plan identified potential health and safety concerns anticipated for the work to be done at the Site, prescribed work procedures to mitigate these concerns, specified personal protective equipment requirements for Site work and established procedures to be followed by WSP staff in the event of an emergency. The document was reviewed and signed on-Site by field personnel prior to commencing work. Additionally, prior to the commencement of intrusive investigations, WSP contacted public underground utilities locators to co-ordinate clearances of potential underground services (e.g., telephone, sewers, water lines, and gas lines). WSP also retained the services of a private local underground utilities' locator, to scan the general investigation areas.

5.2 Drilling

Three boreholes were drilled by Strata Drilling Group (Strata). The boreholes were drilled to document soil and bedrock information and to facilitate soil sampling. The three boreholes were equipped as monitoring wells. The borehole and monitoring well locations are shown on Figure 5. The Record of Borehole Logs are provided in Appendix E.

Strata is licensed as a well contractor by the MECP. All field activities were carried out by or under the supervision of a WSP field technician. Borehole drilling and monitoring well installations were completed between May 15 and 17, 2023, by Strata using a Massenza MI3 drill rig.

During drilling, the samplers were cleaned and decontaminated between each soil sampling interval by washing with an Alconox detergent solution and rinsing with potable water to reduce the potential for cross contamination between soil sampling intervals.

5.3 Remedial Excavation

A small remedial excavation was advanced in the vicinity of BH23-03 using an excavator supplied and operated by the Client on November 17, 2023, under the direction of WSP. A letter report related to the remediation and confirmatory sampling program is presented Appendix F.

5.4 Soil: Sampling

All boreholes were advanced through the overburden and into the underlying bedrock to facilitate monitoring well installation. Bedrock was encountered at depths of 0.91 mbgs at BH23-03 and 1.22 mbgs at BH23-01 and BH23-02. The boreholes were advanced to depths of 13.87 m, 15.54 m, and 14.63 m into the bedrock using pneumatic hammer rock drilling. The borehole locations are presented on Figure 5.

Soil samples were retrieved from the boreholes using a continuous soil sampler for field screening (including visual inspection and field measurement of headspace concentration), soil sample collection and stratigraphic logging at regular intervals by a WSP field supervisor up to the final depth. A portion of each soil sample was

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placed in a sealed plastic bag, as well as a pre-cleaned laboratory-supplied sample container for potential laboratory analysis. Soil headspace concentrations of bagged samples were measured using a photoionization detector (PID) and a combustible gas detector, calibrated using isobutylene gas and hexane gas, respectively, to determine total organic vapour and combustible gas concentrations. Headspace readings were taken after sample collection.

Soil samples were stored on ice in a cooler until delivered to the laboratory for analysis under chain of custody. Selection of soil samples for laboratory analysis was based on the APEC being investigated, results of the headspace screening and conditions encountered at each test location including visual (e.g., staining, discolouration) and olfactory observations (if any). A summary of the soil samples submitted for analysis is provided in Table 3.

Geologic descriptions, visual and olfactory observations and results of the field headspace screening are presented on the Record of Borehole Sheets in Appendix E.

5.5 Soil: Field Screening Measurements

Soil headspace vapour measurements were conducted on the soil samples collected for combustible gas and organic vapour concentrations using the equipment described in the following table.

Equipment	Make and Model	Parameters Detected	Detection Limits	Precision	Accuracy	Calibration Standard	Calibration Procedure
Photo-ionization Detector	RKI Eagle 2	Organic vapour	0 – 2,000 parts per million (ppm)	± 1 ppm	Varies by specific VOC.	Isobutylene	In the warehouse prior to fieldwork
Combustible gas meter		Combustible gas	0 – 11,000 parts per million (ppm)	0-200: ±5 ppm 200–1,000:± 10 ppm 1000–11000: ± 50 ppm	± 50 ppm or ± 10% of reading	Hexane	In the warehouse prior to fieldwork

The results of soil headspace measurements are presented on the Record of Borehole Sheets included in Appendix E.

5.6 Groundwater: Monitoring Well Installation

WSP personnel supervised the completion of three monitoring wells (BH23-1 to BH23-3).

Monitoring wells were constructed of 38 mm [1.5 inch] and 50 mm [2 inch] inside diameter (ID) Schedule 40 polyvinyl chloride (PVC) casing and 38 and 50 mm ID Schedule 40 PVC well screens (3.0 metres in length [5-10 ft], #10 slot size). The annulus surrounding the screened portion of each monitoring well and an approximate 0.3 m portion of riser pipe above the screened section was filled with silica filter sand grade #2.

A seal consisting of bentonite solids (e.g., Holeplug™) was placed above the filter pack with a minimum thickness of 0.6 m. The remainder of the annulus was sealed with hole-plug and bentonite grout to a depth of approximately 0.3 mbgs to minimize the potential for infiltration of surface water or shallower groundwater into the screened interval.

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Each monitoring well was completed with a flushmount protective casing set in concrete and sealed with a PVC J-plug. Monitoring well construction details are provided on the respective Record of Borehole sheets provided in Appendix E. The monitoring well locations are shown on Figure 5.

5.7 Groundwater: Field Measurements for Water Quality Parameters

Groundwater quality parameters, including temperature, pH, electrical conductivity (EC), dissolved oxygen (DO), and redox potential were measured prior to sampling to ensure adequate well development and purging. A multi-parameter meter was used to measure groundwater quality during monitoring well development and groundwater sampling.

The instruments were calibrated by the supplier and/or using factory supplied solutions for electrical conductivity (1413 micro-Siemens per centimetre (µS/cm)) and pH (4.01 pH and 7.01 pH) parameters. Specifications for the water quality metre are summarized in the following table:

Parameter	Measurement Range	Precision	Accuracy
pH	0.00 to 14.00 pH	0.01 pH	±0.2 pH
Electrical Conductivity	0.00 to 3999 µS/cm	0.01 mS/cm	± 0.5%
Temperature	-5 to 45 ºC	0.1 ºC	± 0.15 ºC
Dissolved Oxygen	0 to 50 mg/L	0.021 mg/L	± 2.0%
Redox Potential	± 1999 mV	1 mV	± 15 mV

5.8 Groundwater: Development, Purging and Sampling

WSP measured groundwater levels in monitoring wells on May 23, 2023. After monitoring well installation an electric oil-water interface probe was used to measure the depths to groundwater. WSP did not detect the presence of NAPL in any of the monitoring wells. Groundwater monitoring details are summarized in Table 2.

Development of each monitoring well at the Site was conducted by WSP personnel, at least 24 hours prior sampling, to remove fine-grained material and stabilize the sand filter pack. Development was completed by removing a total volume of approximately 3 to 10 volumes of the standing water volume from the well, using dedicated Waterra® tubing equipped with a surge block and a foot valve to pump groundwater. During monitoring well development, water quality parameters were measured using a calibrated multi-parameter meter (Section 5.7). Development water was collected into plastic drums and left on-Site pending future disposal.

Groundwater samples were collected between May 25 and 26, 2023, from all three monitoring wells installed on the Site. Prior to groundwater sampling, depth to water was determined using an electric oil-water interface probe, then each monitoring well was purged using a low-flow bladder pump with disposable bladder. Field measurements of water quality parameters including temperature, pH, EC, DO and redox potential were recorded from the produced groundwater using an in-line flow-through cell connected to a calibrated multi-parameter meter (section 5.7).

The portions of the samples to be analyzed for dissolved metals were field filtered at the time of collection using a 0.45 µm high-capacity inline filter. Groundwater sampling was completed by collecting groundwater samples into pre-cleaned laboratory-supplied sample containers and stored on ice in a cooler until delivered to the analytical laboratory under chain of custody. A summary of the groundwater samples submitted for analysis is provided in Table 4.

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5.9 Sediment: Sampling

Sediment was not present at the Site therefore no sediment samples were collected as part of this investigation.

5.10 Analytical Testing

The contact information for the analytical laboratory is included below.

AGAT Laboratories
5835 Coopers Ave.
Mississauga, ON, L4Z1Y2Laboratory
Contact: Travis Judd
905-712-5130

AGAT is accredited in accordance with the International Standard ISO/IEC 17025 (CALA) (General Requirement for the Competence of Testing and Calibration Laboratories, May 5, 2005, as amended) and the standards for proficiency testing developed by the Standards Council of Canada, the Canadian Association for Laboratory Accreditation or another accreditation body accepted by the MECP.

5.11 Residue Management Procedures

Investigation derived waste generated during the fieldwork efforts (e.g., soil cuttings from drilling, groundwater from well development and sampling, and wash water from equipment decontamination) were placed in sealed drums/totes and stored at the Phase Two Property for subsequently off-Site disposal.

5.12 Elevation Surveying

Elevations collected from ground surface and top of pipe of the newly installed monitoring wells were determined using Trimble R10 Model 2 GPS receiver. The collected coordinates are provided UTM (Universal Transverse Mercator), with coordinates measured as northings and eastings meters. The coordinate system used was Canada/NAD 1983, datum NAD (Canada), modified TM Zone 09, geoid East Canada.

5.13 Quality Assurance and Quality Control Measures

WSP's quality assurance program for environmental investigations was implemented to ensure that analytical data obtained by the investigation were valid and representative. The quality assurance program included the following measures:

- The use of standard operating procedures for all field investigation activities.
- All monitoring wells were developed following installation to remove fine particles from the filter pack and any water introduced during drilling.
- Monitoring wells were appropriately purged prior to groundwater sample collection to remove stagnant water from the well bore and improve sample representativeness, minimizing sample agitation and aeration to the extent practicable.
- The collection of field duplicate samples at a minimum frequency of one duplicate for every ten samples:
  - One soil duplicate sample and one groundwater duplicate sample were collected and submitted analysis. Overall, eight samples (soil and groundwater) were analyzed as part of the field program.
- The analysis of a field and trip blank associated with groundwater sampling events.

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- Initial calibration of field equipment was performed at the start of each field day, with daily checks of calibration, as needed, using a standard of known concentration.
- Soil and groundwater samples were handled and stored in accordance with the sample collection and preservation requirement of the Ministry of the Environment (MOE) *Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.I of the Environmental Protection Act*, July 1, 2011. Samples were collected directly into pre-cleaned, laboratory-supplied sample containers with the appropriate preservative for the analyte group. Upon collection, samples were placed in insulated coolers with ice for storage and transport to the analytical laboratory under chain-of-custody.
- Dedicated sampling equipment (tubing and footvalves) and clean disposable Nitrile™ gloves were used at each sampling location to prevent cross-contamination. All non-dedicated sampling equipment (e.g., water level meters, split spoons) was decontaminated between sampling locations. Sampling equipment in contact with soil, groundwater, or sediment was: cleaned by mechanical means; washed with a phosphate-free, laboratory-grade detergent (e.g., LiquiNox) and, if necessary, an appropriate desorbing wash solution; and thoroughly rinsed with analyte-free water.
- Detailed field records documenting the methods and circumstances of collection for each field sample were prepared at the time of sample collection. Each sample was assigned a unique sample identification number recorded in the field notes, along with the date and time of sample collection, the sample matrix, and the requested analyses.
- The submission of samples to the analytical laboratory in accordance with standard chain of custody procedures.

Below is a summary of the primary and duplicate samples collected during the Phase Two ESA investigation and post-remedial confirmatory sampling:

Media	Date	Borehole/Test Pit ID	Primary Sample ID	Duplicate ID	Analysis Completed
Soil	17-May-23	BH23-01	23-1 SA1	23-1 SA11 (DUP)	VOCs, PHC (F1-F4), BTEX, PAHs, Metals, Hydride-forming metals and ORPs
	17-Nov-2023	TP23-BH23-03	SA1A	SA1A Dup	Metals, Hydride-forming metals and ORPs
	26-May-23	BH23-02	23-2	DUP1	VOCs, PHC (F1-F4), BTEX, PAHs, Metals, Hydride-forming metals and ORPs

6.0 REVIEW AND EVALUATION

This section of the report presents a review and evaluation of the results of the borehole and monitoring well drilling and installation, monitoring and sampling activities conducted as part of the Phase Two ESA described herein.

6.1 Geology

The soil conditions encountered during the borehole drilling are presented in the Record of Borehole sheets and provided in Appendix E as well as in the cross sections presented in Figures 7 and 8. It should be noted that the logs presented have been inferred from recovered samples and that geologic contacts noted on the logs

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represent a transition from one soil type to another rather than an exact plane of geologic change. Subsurface conditions encountered are likely to vary between and beyond the borehole sampling locations as well as between borehole locations.

Fill material comprised of gravelly sand to silty sand was present at all three borehole locations under the asphalt surface. At BH23-03, the fill material extended to the bedrock surface. At BH23-01 and BH23-02, a layer of gravelly silty-sand intermixed with weathered bedrock was present between the fill and the underlying bedrock. The bedrock surface was encountered at 0.91 to 1.22 mbgs.

No obvious odour, staining, discoloration, or free product indicative of environmental contamination were observed at the borehole locations advanced.

6.2 Groundwater: Elevations and Flow Direction

All monitoring wells drilled during the 2023 program were monitored and water levels were used in the interpretation of groundwater flow direction. Any temporary fluctuation in water levels on the Phase Two Property is not anticipated to affect the conclusions of the Phase Two ESA.

The location and depth of the screens for the monitoring wells were selected based on the issues being investigated, and conditions observed during drilling. Screens were installed to straddle the anticipated water table. The base of the well screens monitored as part of this assessment range from approximately 10.21 to 14.94 mbgs. A summary of the monitoring well construction details are presented in Table 1. No evidence of free phase product or sheen in groundwater was observed.

The groundwater elevations at each monitoring well are summarized in Table 2. Groundwater elevations in monitoring wells ranged from 53.15 m to 53.73 m on May 23, 2023. Based on the interpreted groundwater elevation contours presented in Figure 6, the inferred groundwater flow is interpretated to be to the southeast. Considering that the Ottawa River is northwest of the Site, it is to be noted that at the time of this investigation, excavations were taking place for the construction of the Light Rail Transit (LRT) in the area directly east and south of the Site. Dewatering for the excavation is the most likely cause of the inferred flow direction. Groundwater flow conditions in the absence of dewatering activities are likely to the north toward the Ottawa River.

Seasonal fluctuation in water levels on the Site should be expected. Given the limited number of monitoring events, seasonal trends could not be identified; however, shallow groundwater water levels are typically highest following the spring recharge and decline throughout the summer and fall months into the winter. Any temporary fluctuation in water levels at the Phase Two Property is not anticipated to affect the conclusion of the Phase Two ESA. At the time of groundwater monitoring, the measured water levels were within the screen interval.

6.3 Groundwater: Hydraulic Gradients

The average horizontal hydraulic gradient was estimated for shallow groundwater conditions based on water levels collected on May 23, 2023, and the inferred groundwater contours are presented in Figure 6. The average horizontal hydraulic gradient was 0.021 m/m to the southeast.

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6.4 Soil: Coarse Soil Texture

Based on the 2022 Phase Two ESA Report for the larger parcel (Section 3.2.2), samples were previously collected from native overburden materials and submitted for grain size distribution analysis using a 75 µm sieve mesh. Based on grain size analysis results, the overburden in the subsurface of the larger parcel contains more than 50% particles (by mass) in the soil which were equal or greater than 75 µm in mean diameter. Per the definitions in O. Reg. 153/04, the soil on the larger parcel is therefore considered to be coarse textured. Overburden conditions encountered on the Site are generally consistent with those encountered on the larger parcel and are therefore assumed to be coarse-grained.

6.5 Soil: Field Screening

Headspace vapour measurements were conducted on the soil samples collected from the boreholes drilled as part of the Phase Two ESA. Combustible gas vapour ranged from non-detect to 45 ppm and organic vapour measurements were not detectable.

The results of headspace vapour measurements are presented on the Record of Borehole sheets in Appendix E.

6.6 Soil: Quality

For the purpose of assessing soil quality data, sample locations across the Site were evaluated relative to the applicable MECP Table 7 SCS. Table 3 provides a summary of the soil samples submitted for analysis and the associated test parameters. The analytical results of soil samples are presented in Tables 5A through 5D and the laboratory certificates of analyses, provided in Appendix B.

A summary of the number of soil samples analysed and the number of soil samples exceeding the MECP Table 7 Standards is provided below:

Parameter	Number of Soil Samples Analysed (including duplicates)	Number Soil Samples Exceeding the Table 7 Standards (including duplicates)
VOCs	4	None
Metals, Hydride-Forming Metals & ORP	4	Cobalt – 1 sample
SAR (only)	4	None
PHC (F1-F4) + BTEX	4	None
PAHs	4	None

The soil analytical results for the soil samples submitted for laboratory analysis per the Sampling and Analysis Plans were below the Table 7 Standards with the exception of BH23-03 sample SA2 (0.61 – 0.91 mbgs) which presented a cobalt exceedance above the MECP Table 7 (25.5 µg/g compared to a standard of 22 µg/g for parkland use).

6.7 Groundwater: Quality

For the purpose of assessing groundwater chemistry data, sample locations across the Site were evaluated relative to the applicable site condition standards. Monitoring well construction details are summarized in Table 1 and a list of groundwater samples submitted for laboratory analysis is provided in Table 4. The analytical results

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for groundwater samples are presented in Tables 6A through 6D and the laboratory certificates of analyses are provided in Appendix B.

A summary of the number of groundwater samples analysed and number of samples exceeding the MECP Table 7 Standards is provided below:

Parameter	Number of Groundwater Samples Analysed (including duplicates)	Number of Groundwater Samples Exceeding the Table 3 Standards (including duplicates)
VOCs	4	None
Metals, Hydride-Forming Metals & ORP	4	None
PHC F1-F4/BTEX	4	None
PAHs	4	None

Based upon the comparison of the groundwater analytical results from the 2023 investigation program to the Table 7 Standards, the detected concentrations were below the standards.

6.8 Sediment Quality

Sediment was not present at the Site; therefore, no sediment samples were collected as part of this investigation.

6.9 Quality Assurance and Quality Control Results

A certificate of analysis was received for each sample submitted for analysis. The results for QA/QC samples are presented in full in the laboratory certificates of analysis (Appendix B). QA/QC including calculation of relative percent differences (RPD) of the reported results was conducted in accordance with the MECP document: *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act,* April 15, 2011.

To determine the precision of the analytical methods and field sampling procedures, parent and blind duplicate samples were collected during soil and groundwater sampling and were submitted for analysis of metals, hydride-forming metals and ORP, VOC, PHC and BTEX parameters. Precision is determined by the RPD between the duplicate and original samples and was calculated as follows:

$$RPD = \frac{|x_1 - x_2|}{x_m}$$

Where:

x_1 initial sample results

x_2 duplicate sample results

x_m mean of x_1, x_2

As outlined in the MECP Analytical Protocol, the calculated relative percent difference (RPD) for soil and groundwater samples should be <30% for PHC (F1-F4) and BTEX; <30% in soil and <20% in groundwater for metals, hydride-forming metals and ORP (conductivity in groundwater is <10%), and <50% in soil and <30% in groundwater for VOC. These values have been used as the acceptance criteria, when RPDs was be calculated. To permit reliable calculations, an RPD is only calculated when the original and duplicate sample concentrations are at least 5 times the report detection limit (RDL).

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Based on the analytical results of the field duplicate and its parent sample, the RPD are within acceptable control limits.

Trip blank and equipment blank data for VOC/PHC F1 analysis indicated acceptable results with no detectable concentrations. The quality of the analytical results is further supported by analytical laboratory's internal quality assurance program that includes laboratory blanks, spikes, surrogates, and duplicate samples.

All certificates of analysis or analytical reports received pursuant to clause 47 (2) (b) of the regulation comply with subsection 47(3). A certificate of analysis or analytical report has been received for each sample submitted for analysis and is provided in Appendix B. The analytical laboratory did not qualify any of the analytical results.

The field work was conducted in accordance with WSP's Standard Operating Procedures and there were no quality issues of note identified. Accordingly, the analytical data generated during the investigation are valid and representative and may be used in this Phase Two ESA without further qualification.

6.10 Phase Two Conceptual Site Model

This section summarizes Conceptual Site Model (CSM) for the 0.101-hectare parcel located on the southwest corner of the property with municipal address 1047 Richmond Road, Ottawa (i.e., the "Site"). As per Section 43 of O.Reg. 153/04, this CSM establishes the current condition of the Site. The location and plan of the Phase One Property, Phase Two Property, and RSC Property is provided in Figures 1 and 2 respectively. The Phase Two conceptual site model is presented in the following sections.

6.10.1 Phase One ESA Information

The Site consists of an approximately 0.101-hectare parcel of land. At the time of the Phase One ESA, the Site was developed as a parking lot for a commercial Chrysler dealership situated in the parcel immediately north of the Phase One Property. The Site included asphalt-paved parking (entire site) and driveway areas. It is understood that the Site will be conveyed to the City of Ottawa for eventual use as a small municipal park. Adjacent land uses included commercial and residential. Figure 2 indicates the Site location and Figure 3 show the Phase Two Property and Phase Two Study Area.

Based on information reviewed as part of the Phase One ESA, the Phase Two Property was originally transferred from the Crown to a private individual in 1804. Between 1804 to present various private owners or entities have owned the land. Based on Fire Insurance Plans, Chain of Title and the Site Representative Interview, the site use was residential/recreational from sometime before 1946 until at least 1959, after which a car dealership was developed. Accordingly, the first developed use was residential/recreational.

6.10.2 Potentially Contaminating Activities

Based on the information obtained as part of the Phase One ESA, the following potentially contaminating activities (PCAs) were identified in association with the Site and surrounding area. The relevant PCAs and areas of potential environmental concern (APECs) are provided in the following table. The PCA locations are presented in Figure 3.

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Location	Potentially Contaminating Activity	Information Source	Rationale for Potential Contribution of the PCA to an APEC
Phase One Property	PCA A: Other – The application of de-icing salt for the purposes of vehicular and pedestrian safety has occurred at the Phase One Property.	Site observations	The PCA is located on the Phase One Property and must be identified as an APEC.
	PCA B: #30 Importation of Fill Material of Unknown Quality – Due to the age of the Site, inferred fill materials are expected to be present site-wide.	Site observations	The PCA is located on the Phase One Property and must be identified as an APEC.
Phase One Study Area (excluding the Phase One Property)	PCA C: #10 Commercial Autobody Shops – The Site immediately north of the Phase One Property is currently used as a car dealership and has an automotive garage and associated equipment present	Site observations	Based on the proximity of this PCA to the Site, this PCA is identified as an APEC .
	PCA D: #28 Gasoline and Associated Products Storage in Fixed Tanks – Former UST areas identified on the building immediately north of the Site.	Site observations, Site representative and building drawings	Based on the down gradient location of this PCA to the Site, this PCA is unlikely to impact the Phase one Property.
	PCA E: #28 Gasoline and Associated Products Storage in Fixed Tanks – Presence of one AST used waste lubricant oil, three motor lubricant oil ASTs and oil-stained asphalt at the Site immediately north of the Phase One Property.	Site observations	Based on the down gradient location of this PCA to the Site, this PCA is unlikely to impact the Phase one Property.
	PCA F: #39 Paints Manufacturing, Processing and Bulk Storage – Presence of painting operations (paint booth) at the Site immediately north of the Phase One Property.	Site observations	Based on the down gradient location of this PCA to the Site, this PCA is unlikely to impact the Phase one Property.
	PCA G: #46 Railyards, Tracks and Spurs – A Canadian National Railway corridor was located 140 m north of the Phase One Property	Aerial photographs 1946, 1959 and 1965	The nature of impacts associated with this PCA typically do not migrate through groundwater and are not anticipated to impact the Phase One Property. The tracks are also located downstream of the Phase One Property.
	PCA H: #28 Gasoline and Associated Products Storage in Fixed Tanks – A former gas station was reported at 1051 Richmond Road (130 m southwest)	HLUI – 1956 FIPs – 1956	Based on the cross-gradient location of this PCA to the Site and the distance from the Site, the presence of this PCA is unlikely to impact the Phase One Property

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Location	Potentially Contaminating Activity	Information Source	Rationale for Potential Contribution of the PCA to an APEC
Phase One Property	PCA A: Other – The application of de-icing salt for the purposes of vehicular and pedestrian safety has occurred at the Phase One Property.	Site observations	The PCA is located on the Phase One Property and must be identified as an APEC.
	PCA B: #30 Importation of Fill Material of Unknown Quality – Due to the age of the Site, inferred fill materials are expected to be present site-wide.	Site observations	The PCA is located on the Phase One Property and must be identified as an APEC.
	PCA I: #37 Operation of Dry-Cleaning Equipment (where chemicals are used) – A former Laundry cleaning facility was reported at 993 Richmond Road, 210 m northeast of the Phase one Property	HLUI – 1980's	Based on the cross-gradient location of this PCA to the Site, the distance from the Site, and the nature of the impacts associated with this PCA, the presence of this PCA is unlikely to impact the Phase One Property
	PCA J: #10 Commercial Autobody Shops – A automotive repair shop is located at 1075 Richmond Road, 116 m southwest of the Phase One Property	HLUI – Since at least 1998	Based on the cross-gradient location of this PCA to the Site, the distance from the Site, and the nature of the impacts associated with this PCA, the presence of this PCA is unlikely to impact the Phase One Property
	PCA K: #28 Gasoline and Associated Products Storage in Fixed Tanks – Extendicare, located at 99 New Orchard Ave 80 m northwest of the Phase One Property, was a waste generator in 2006 and 2010 for light fuels & inorganic laboratory chemicals, waste oils & lubricants and oil skimmings & sludges.	EcoLog ERIS report	Based on the cross-gradient location of this PCA to the Site, and the nature of the impacts associated with this PCA, the presence of this PCA is unlikely to impact the Phase One Property
	PCA L: #55 Transformer Manufacturing, Processing and Use – Transformer located approximately 225 m northwest of the Phase One Property, along New Orchard Ave.	FIPs, 1956	Based on the down gradient location of this PCA to the Site and the distance from the Site, this PCA is unlikely to impact the Phase one Property
	PCA M: #10 Commercial Autobody Shops – Tops Car Wash Co. Limited is located at 979 Richmond Road, 235 m northeast of the Phase One Property. It was listed as a motor vehicle repair shop in 2005, had a UST associated with it till at least 1992 and was a	EcoLog ERIS report	Based on the cross-gradient location of this PCA to the Site, the distance from the Site and the nature of the impacts associated with this PCA, the presence of this PCA is unlikely to impact the Phase One Property

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Location	Potentially Contaminating Activity	Information Source	Rationale for Potential Contribution of the PCA to an APEC
Phase One Property	PCA A: Other – The application of de-icing salt for the purposes of vehicular and pedestrian safety has occurred at the Phase One Property.	Site observations	The PCA is located on the Phase One Property and must be identified as an APEC.
	PCA B: #30 Importation of Fill Material of Unknown Quality – Due to the age of the Site, inferred fill materials are expected to be present site-wide.	Site observations	The PCA is located on the Phase One Property and must be identified as an APEC.
	waste generator for light fuels from 2002-2004.		
	PCA N: (No PCA #) Multiple spills associated with LRT construction on the adjacent Property to the north between 2019 and 2022. Spilled products include diesel fuel (50 L in 2020), raw sewage (180 L in 2021), and hydraulic oil (various small volume spills 2019-2022).	EcoLog ERIS report	Based on the downgradient location of this PCA to the Site and current dewatering activities during ongoing subsurface LRT work, the presence of this PCA is unlikely to impact the Phase One Property. PCA does not contribute to APEC.

6.10.3 Areas of Potential Environmental Concern

As per the above, several PCAs were identified as APECs given their location on or in close proximity to the Site and the associated potential for these activities to have contributed to contamination at the Site. A summary of the APECs identified at the Phase Two Property based on the findings of the Phase One ESA is provided below along with a summary of the associated Phase Two ESA testing and findings. The location of each APEC is shown on Figure 4. The Phase Two ESA test locations are shown along with the APEC locations on Figure 5.

Area of Potential Environmental Concern1	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity2	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern3	Media Potentially Impacted (Groundwater, soil and/or Sediment)
APEC 1 – Inferred fill materials to be present site-wide	Entire Site	# 30. Importation of Fill Material of Unknown Quality	On-Site	Metals, Hydride-Forming Metals, ORP and PHCs	Soil
APEC 2 – The application of de-icing salt for the purposes of vehicular and pedestrian safety	Entire Site	#Other	On-Site	SAR, EC, sodium, chloride	Soil and groundwater

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Area of Potential Environmental Concern1	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity2	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern3	Media Potentially Impacted (Groundwater, soil and/or Sediment)
has occurred at the Phase One Property. No testing is required as per section 49.1 in O. Reg. 153/04.					
APEC 3 – Off-site automotive garage	North and east	*#10. Commercial Autobody Shops* (PCA C)	Off-Site	PHCs F1-F4, BTEX and VOCs	Soil and groundwater

Notes:
1. Area of potential environmental concern means the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental site assessment, including through, •(a) identification of past or present uses on, in or under the phase one property, and •(b) identification of potentially contaminating activity.
2. Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area.
3. Contaminants of potential concern specified using the method groups as identified in the "Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011.

The location of the soil and groundwater samples collected as part of the Phase Two investigation are presented in Figure 5. The analytical results were compared to the Table 7 site condition standards (residential, coarse soil texture). The investigation of each APEC is summarized in the following:

APEC 1 (Fill) – The investigation of APEC 1 included the collection of three soil samples representing potential fill from boreholes BH23-1, BH23-2 and BH23-3, for analysis of the contaminants of potential concern (Figures 12A to 12C). The reported concentrations of all contaminants of potential concern met the applicable site condition standards, except for one sample collected from BH23-3 (0.60 to 0.91 mbgs, for cobalt). This exceedance was delineated and removed through a remedial excavation and verification samples were collected to confirm that no exceedances remained on the Phase Two Property. The remediation effort will be presented in the following sections.

Sample Location	Sample Depth (mbgs)	Contaminants of Concern
BH23-3	0.60 to 0.91	Cobalt

APEC 2 (application of de-icing salt) – The investigation of APEC 2 included the collection of three soil samples from boreholes BH23-1, BH23-2 and BH23-3, and three groundwater samples from the same borehole equipped with monitoring wells for analysis of the contaminants of potential concern (Figures 12A to 12C). All samples met the applicable site condition standards.

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APEC 3 (Car dealership - auto garage/shop) – The investigation of APEC 3 included the collection of two soil samples from boreholes BH23-1 and BH23-3, and two groundwater samples from the same borehole equipped with monitoring wells for analysis of the contaminants of potential concern (Figures 9A to 16C). All samples met the applicable site condition standards.

6.10.4 Subsurface Structures and Utilities

Other than an electrical line servicing a traffic light, no buried utilities were identified on the Site. Multiple buried utilities including additional electrical lines, cable/phone, and sewer/sanitary pipes are present along New Orchard Avenue and Richmond Road which border the Site to the west and south, respectively.

WSP retained the services of USL-1 Locates, a local, private underground utilities locator, to scan the general investigation areas as part of the Phase Two ESA investigation. USL-1 Locates cleared drilling and excavation locations and no buried services were located in the vicinity of the test locations. Based on WSP's review of previous environmental reports and discussions with the Client, no underground utility drawings were available for the Phase Two Property. Based on the above and the findings of the Phase Two ESA, the absence of buried utility drawings is not considered to have impacted this assessment or the findings.

6.10.5 Physical Setting

6.10.5.1 Topography

The topography of the Site and surrounding areas was generally flat. The Site appeared to have a slight downward slope to the north. The Site appears at grade with respect to adjacent properties.

6.10.5.2 Stratigraphy

Representative geologic cross-sections of the Site are presented in Figure 7 and 8. The soil conditions encountered during the 2023 borehole drilling program are presented in the Record of Borehole Logs provided in Appendix E. The following presents a summary of the subsurface soil conditions encountered during the investigation.

Fill material comprised of gravelly sand to silty sand was present at all three borehole locations under the asphalt surface. At BH23-03, the fill material extended to the bedrock surface. At BH23-01 and BH23-02, a layer of gravelly silty-sand intermixed with weathered bedrock was present between the fill and the underlying bedrock. The bedrock surface was encountered at 0.91 to 1.22 mbgs.

6.10.5.3 Depth to Bedrock

Section 43.1(a) of Ontario Regulation 153/04 applies at the Site, as all of the Phase Two property consists of soil less than 2 m in depth beneath the soil surface. Given that the average thickness of overburden at the Site is less than 2 m, the Site is considered to be a shallow soil property as defined by O.Reg. 153/04 (as amended).

6.10.5.4 Hydrogeological Characteristics

6.10.5.4.1 Groundwater Elevations and Flow Direction

Groundwater elevations in monitoring wells ranged from 53.73 m asl to 53.15 m asl (corresponding to water table depths of 11.76 mbgs [BH23-01] to 12.75 mbgs [BH23-03]) on May 23, 2023. Based on the interpreted groundwater elevation contours presented in Figure 5, the inferred groundwater flow is interpretated to be towards the southeast direction. Considering that the Ottawa River is northwest of the Site, it is to be noted that at the time of this investigation, excavations were taking place for the construction of the Light Rail Transit (LRT) east and

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south of the Site (Figure 6). Dewatering for the excavation is the most likely cause of the flow direction. Groundwater flow conditions in the absence of dewatering activities are likely to the north toward the Ottawa River

Seasonal fluctuation in water levels on the Site should be expected. Given the limited number of monitoring events, seasonal trends could not be identified; however, shallow groundwater water levels are typically highest following the spring recharge and decline throughout the summer and fall months into the winter. Any temporary fluctuation in water levels at the Phase Two Property is not anticipated to affect the conclusion of the Phase Two ESA. At the time of groundwater monitoring, the measured water levels were generally within the screen interval.

6.10.5.4.2 Groundwater Hydraulic Gradients

The average horizontal hydraulic gradient was estimated for shallow groundwater conditions based on water levels collected on May 23, 2023, and the inferred groundwater contours is presented in Figure 5. The average horizontal hydraulic gradient was 0.021 m/m toward the southeast.

6.10.6 Applicable Site Condition Standards

The analytical results of soil and groundwater samples collected for this Phase Two ESA were compared to the Table 7 generic site conditions standards (residential/parkland/institutional property use, coarse soil texture) presented in "*Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, April 15, 2011*". The applicable site condition standards were selected based on the following rationale:

- The Phase Two Property is not located in an area designated in a municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of ground water.
- No water bodies were identified on the Phase Two Property.
- Based on field observations and grain size analysis results (refer to Appendix B) from soil samples collected from boreholes, the soil present at the Site is estimated to consist of soil having a grain size distribution with 50 percent or more by mass of particles that are greater than 75 µm mesh. Under the definition presented in O. Reg. 153/04, the soil at the Site is therefore considered to be coarse textured.
- The Site and surrounding properties located in whole or in part within 250 metres of the Site are within an area that is municipally serviced by a water supply that does not rely on potable groundwater as its source. No wells were identified that are used or intended for use as a source of water.
- The closest water body is the Ottawa River located approximately 250 m northwest of the Site at its closest point.
- There are no features on the Phase Two Property that would meet the conditions of an environmentally sensitive site, as described in Section 41.
- In general, the pH range of surface soil is greater than 5 and less than 9 and the pH range of sub-surface soil is greater than 5 and less than 11. For the purposes of this Phase Two ESA investigation, the pH of surface and sub-surface soil is considered not environmentally sensitive.
- The use of the Site is commercial and the proposed future use of the Site is parkland.
- The overburden thickness is less than 2 m on the Phase Two Property. Therefore, Section 43.1(a) and 43.1(b) of the Regulation applies to the Phase Two Property.

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- The average depth to groundwater at the Site is approximately 12.31 mbgs, ranging from 11.76 – 12.75 mbgs.

Based on the above, the 2011 Table 7 Standards, which includes quality standards for soil and groundwater, were used to assess the environmental conditions at the Site.

6.10.6.1.1 Environmentally Sensitive Areas

Based on the information reviewed, the QP is not aware of any circumstance in which Section 41 of the Regulation applies to the Phase Two Property. The Phase Two Property is not located in an area designated in a city official plan as a well-head protection area or other designation identified by the city for the protection of ground water. Selected soil samples were tested for pH and were noted to be within a normal range with readings between 7.15 to 7.37.

6.10.6.1.2 Shallow Soils or Water Body on the Property

Overburden thickness at the Phase Two Property extends to a maximum depth of1.22 m. The bedrock surface was encountered during drilling from depths ranging from 0.91 to 1.22 mbgs. The Phase Two Property is a shallow soil property.

The property does not include all or part of a water body and is not adjacent to a water body or include land that is within 30 meters of a water body. Therefore, Section 43.1(a) and 43.1(b) of the Regulation do not apply to the Phase Two Property. The closest water body is the Ottawa River, which is located approximately 310 m northwest of the Site.

6.10.6.1.3 Non-Potable Site Condition Standards

Section 35 of the Regulation does not apply to the Phase Two Property based on the following reasons:

- The Site, and all other properties, in whole or in part, within 250 metres of the boundaries of the Phase Two Property, are supplied by a municipal drinking water system, as defined in the *Safe Drinking Water Act*, 2002.
- The record of site condition does not specify agricultural or other use as the type of property use for which the record of site condition is filed.
- The Site is not located in an area designated in the municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of groundwater.
- No wells were found at the Site or within the Phase One Study Area that were in use or intended for use as a source of water for human consumption or agriculture.
- The Qualified Person has given the clerk of the municipality a written notice of intention to apply the non potable standards in preparing a record of site condition for the Site. This written notice was be submitted on February 28, 2022, prior the filling of the RSC for the Site and a response was received on September 14, 2022, which advises that the City of Ottawa does not object to the use of non-potable groundwater standards for the Site, as part of the filling of the RSC.

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6.10.6.1.4 Soil Placed On, In or Under the Phase Two Property

No soil has been brought from another property and placed on, in or under the Phase Two Property as part of the Phase Two ESA. Fill material, inferred to have been placed at the time of Site development, was identified throughout the Phase Two Property to a maximum depth of 1.22 mbgs. The remedial excavation was backfilled with overburden material from the Site and no other soil has been imported or finally placed on the RSC Property.

6.10.6.1.5 Proposed Buildings and Other Structures

The Phase Two Property is currently developed with asphalt-paved parking. There is an intention to use the Phase Two Property for institutional/parkland purposes in the future, with the Site redevelopment plan consisting of a parkland area.

6.10.6.1.6 Standards Deemed to be Met as Per O.Reg. 153/04 Section 49.1

With regards to Section 49.1 of O.Reg. 153/04, the following are of note:

- Salt has only been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. Therefore, as per Section 49.1 of O. Reg. 153/04, it is the Qualified Person's opinion that the site condition standards for electrical conductivity and sodium adsorption ratio are not exceeded.
- Excess soil, as defined by O.Reg. 406/19, has not been placed at the Site.
- There has been no discharge of drinking water to the Site.

6.10.7 Delineation of Contaminant Impacts

6.10.7.1.1 APEC Where Contaminants are Present at a Concentration Above the Applicable Site Condition Standard

COCs were identified in soil at concentrations above the applicable site condition standards during the Phase Two ESA investigation. The lateral and vertical extent of the COCs above the applicable standards was accomplished both during the Phase Two investigation itself and during the management of soils determined to be impacted during the Phase Two investigation. No COCs were identified in groundwater at concentrations above the applicable COCs.

COCs were identified at a concentration above the applicable site condition standard in the following APECs:

APEC	Parameter Groups Exceeding the Applicable Site Conditions Standards in Soil	Parameter Groups Exceeding the Applicable Site Conditions Standards in Groundwater
APEC 1 – Inferred fill materials to be present site-wide	Metals	Cobalt – 1 soil sample

Following an additional remedial excavation, all final confirmatory samples met applicable Table 7 Standards.

6.10.7.1.2 Contaminated Media

The Phase Two ESA identified the presence of exceedances the applicable site condition standards for metals (cobalt) in the fill/overburdened material at one location (refer to Figures 12A, 12B and 12C).

In relation to groundwater, based upon the comparison of the groundwater analytical results to the Table 7 Standards, the detected concentrations were below the standards.

Sediment is not present at the Site.

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6.10.8 Contaminants Exceeding Applicable Standards at the Site

As noted above, exceedances of the applicable site condition standards for metals (cobalt) were detected in soil at one location at the Site. The cobalt exceedance was delineated by means of a remedial test pit and the contaminated portion was excavated and removed off-site.

In relation to groundwater, based upon the comparison of the groundwater analytical results to the Table 7 Standards, the detected concentrations were below the standards.

6.10.9 Remediation

The approach to remediation of the identified area of the RSC Property where the concentration of cobalt in soil was identified to be greater than the MECP Table 7 Standard included excavation, and verification sampling. No exceedances of the applicable site condition standards were identified in groundwater at the RSC Property, and no sediment is present at the RSC Property.

The following remedial strategy was implemented:

- Initial excavation of a test pit with approximate dimensions of 3 m x 3 m, centered on BH23-03 where a cobalt exceedance was identified during the Phase Two ESA investigation. The test pit was advanced to the top of bedrock at a depth of 0.91 m.
- Collection of delineation/confirmation samples from the four walls of the excavated test pit. No floor sample was taken due to the excavation being terminated on bedrock. Samples were submitted for analysis of metals.

The remedial plan was to conduct a supplemental excavation (expansion of the delineation test pit) if one or more of the confirmatory sample results had exceedances of the MECP Table 7 Standards.

However, the initial confirmatory samples provided horizontal delineation (vertical delineation was provided by the top of the bedrock) and confirmation that cobalt exceedances had been removed by the excavation as all four samples collected from the excavation walls met the MECP Table 7 Standards. Soil excavated as part of the remediation was taken off site for disposal. The Remedial Excavation Report is provided in Appendix F.

6.10.10 Description of Areas of Contamination on the Property

There are no areas of contamination present on the Phase Two Property following the remediation.

6.10.11 Potential Influence of Utilities on Contaminant Migration

Other than an electrical line servicing a traffic light, no buried utilities were identified on the Site. Multiple buried utilities including additional electrical lines, cable/phone, and sewer/sanitary pipes are present along New Orchard Avenue and Richmond Road which border the Site. The presence of underground utilities at the Site and in the adjacent area is not interpreted to have influenced the migration of contamination.

6.10.12 Description of Contaminants

Cobalt is a trace metal that can be found naturally in soil in relatively low abundance. Cobalt can also be released to the environment through vehicle exhausts, disposal of cobalt-containing wastes (e.g. pigments and dyes, paint driers, alloys, batteries), application of fertilizers derived from phosphate rocks, and industrial pollution from smelting and refining of metals and other sources. Cobalt is non-volatile and is released to the atmosphere in particulate form and can settle to the ground by wet or dry deposition. Cobalt deposited in soil is often strongly attached to soil particles and therefore would not travel very far into the ground. However, the form of the cobalt

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and nature of the soil will affect how far cobalt will penetrate into the soil; the amount of cobalt that is mobile will increase under more acidic conditions.

6.10.13 Migration of Contaminants

Contaminants were found to be limited to fill/overburden material. No contaminants were present in groundwater samples at a concentration greater than the applicable site condition standards and therefore contaminant migration in groundwater is not relevant.

Cobalt is non-volatile and no potentially volatile contaminants of concern (COC) were identified at the Phase Two Property. Migration of COCs through soil vapour is therefore not relevant.

6.10.14 Meteorological and Climatic Considerations

Seasonal fluctuation in water levels on the Site should be expected. Given the limited number of monitoring events, seasonal trends could not be identified, however shallow groundwater water levels are typically highest following the spring recharge and decline throughout the summer and fall months into the winter. Fluctuating groundwater levels are not anticipated to impact potential contaminant migration in the overburden as the water table at the Site is several meters below the bedrock surface and not within the zone where impacts were identified prior to the remediation.

6.10.15 Potential for Soil Vapour Intrusion

No buildings or indoor spaces are currently present on the Phase Two property and no buildings are planned to be constructed on the Site as part of the future redevelopment as a park. Cobalt is non-volatile and no potentially volatile COCs were identified at the Site at concentrations above the relevant site condition standards. Soil vapour intrusion is therefore not anticipated to be an issue at the Phase Two Property.

6.10.16 Potential Exposure Pathways and Receptors

The site redevelopment plan proposes a change in land use from commercial to parkland (i.e., the Site is to be conveyed to the City of Ottawa and will be re-developed as a municipal park). Based on the Site characterization data collected and the current/future use of the Site, no potential exposure pathways have been identified. All soil with concentrations of COCs exceeding the relevant site condition standards have been remediated.

7.0 CONCLUSIONS

The Phase Two ESA investigated three APECs identified in the Phase One ESA. Based on the results of the soil and groundwater samples submitted as part of this Phase Two ESA, and following remedial excavation as detailed in Appendix F, the reported concentrations of the contaminants of potential concern were below the applicable Site Condition standards in soil and groundwater at tested locations. Based on the above and in support of the filing of a Record of Site Condition (RSC), no additional work is required at the Site as all impacted soil was removed and disposed off-Site.

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8.0 REFERENCES

Phase One Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario, dated August 2023.

Golder Associates (Golder), 2021. Phase One Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario. Prepared for LPF Development Fund 3 LP, dated November 2021.

Golder, 2022. Phase Two Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario. Prepared for LPF Development Fund 3 LP, dated February 2022.

Ontario Ministry of Development and Mines, 1991. Quaternary Geology of Ontario, Southern Sheet, Map 2556. (Map No. 2556, Quaternary Geology of Ontario, Southern Sheet, 1991).

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WSP Canada Inc., 2024. Phase One Environmental Site Assessment, Parkland Area, 1047 Richmond Road, Ottawa, Ontario. Prepared for 1047 Richmond Nominee Inc. Dated February 2024.

9.0 LIMITATIONS

This report was prepared for the exclusive use of 1047 Richmond Nominee Inc. The report, which specifically includes all tables, figures and appendices, is based on data and information, collected during conducting the Phase Two ESA, and is based solely on the conditions of the property at the time of conducting investigations, supplemented by historical information and data obtained by WSP Canada Inc. as described in this report.

The assessment of environmental conditions at this Site has been made using the results of field screening techniques and chemical analysis of soil and groundwater samples at a limited number of locations. The Site conditions between sampling locations have been inferred based on conditions observed at the sampling locations. Conditions may vary from these sample locations. Additional study, including further investigation, can reduce the inherent uncertainties associated with this type of study. However, it is never possible, even with exhaustive sampling and testing, to dismiss the possibility that part of a Site may be contaminated and remain undetected.

The services performed as described in this report were conducted in a manner consistent with that level of care and skill normally exercised by other members of the engineering and science professions currently practicing under similar conditions, subject to the time limits and financial and physical constraints applicable to the services.

Any use which a third party makes of this report, or any reliance on, or decisions to be made based on it, are the responsibilities of such third parties. WSP Canada Inc. accepts no responsibility for damages, if any, suffered by any third party (other than as noted above) as a result of decisions made or actions based on this report.

The content of this report is based on information collected during the drilling, soil and groundwater sampling activities, our present understanding of the Site conditions, and our professional judgement in light of such information at the time of this report. This report provides a professional opinion and therefore no warranty is expressed, implied, or made as to the conclusions, advice and recommendations offered in this report. This report does not provide a legal opinion regarding compliance with applicable laws. With respect to regulatory compliance issues, it should be noted that regulatory statutes and the interpretation of regulatory statutes are subject to change.

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The findings and conclusions of this report are valid only as of the date of this report. If new information is discovered in future work, including excavations, borings or other studies, WSP Canada Inc. should be requested to re-evaluate the conclusions of this report, and to provide amendments as required.

The monitoring wells installed as part of this project have been constructed using licensed drilling/well contractors employing licensed well technicians. It is owner's responsibility to have a licensed well technician properly abandon all monitoring wells, if required.

10.0 CLOSURE

We trust that this report meets your current requirements. Should any clarification or further information be required, please contact the undersigned.

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Signature Page

WSP Canada Inc.

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Tables

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Table 1
Borehole and Monitoring Wells Construction Details
1047 Richmond Road (Parkland), Ottawa, Ontario

BH ID	Coordinates (m)		Date Installed	Installed by	Borehole Depth (mbgs)	Monitoring Well Depth (mbgs)	Well Diameter (mm)	Screen Length (m)	Screen Interval (mbgs)	Soil Lithology Description at Screened Section
	East	North								
23-01	439018.53	5024805.49	17-May-23	WSP	13.87	13.26	52	3.05	10.21 - 13.26	Dolostone interbedded with shale, limestone and sandstone
23-02	439024.15	5024790.06	17-May-23	WSP	15.55	14.94	52	3.05	11.89 - 14.94	Dolostone interbedded with shale, limestone and sandstone
23-03	439043.53	5024814.30	15-May-23	WSP	14.63	14.63	52	3.05	11.54 - 14.63	Dolostone interbedded with shale, limestone and sandstone

Notes:

mm = millimetres
m = metres
mbgs = metres below ground surface

Table to be read in conjunction with accompanying report

Completed by: LO
Reviewed by: SH

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Table 2
Groundwater Elevations and Monitoring Details
1047 Richmond Road (Parkland), Ottawa, Ontario

Monitoring Well ID	Ground Surface Elevation (m)	Top of Pipe Elevation (m)	Depth to Water May 23, 2023 (mbtop)	Groundwater Elevation May 23, 2023 (m)	Free Phase Product Observation
23-01	65.64	65.49	11.76	53.73	None
23-02	65.98	65.86	12.43	53.43	None
23-03	66.00	65.90	12.75	53.15	None

Notes:

mbtop	= metres below top of pipe
mbgs	= metres below ground surface
NI	= not installed
NM	= not measured

Table to be read in conjunction with accompanying report

Completed by: LO
Reviewed by: SH

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Table 3
Summary of the Soil Samples Submitted for Analysis
1047 Richmond Road (Parkland), Ottawa, Ontario

Sample Locations	Sample ID	Sample Depth (mbgs)	Sampling Date	Soil Lithology Sample Description	Headspace Readings		Parameters Analyzed
					Gastech (ppm)	PID (ppm)	
23-01	23-1 SA1	0.05 - 0.61	17-May-23	Fill - gravelly SAND	45	0	VOCs, PHC (F1-F4), BTEX, PAHs, Metals and Inorganics and Hydride-forming metals
	23-1 SA11 (DUP)	0.05 - 0.61	17-May-23	Fill - SAND	45	0	VOCs, PHC (F1-F4), BTEX, PAHs, Metals and Inorganics and Hydride-forming metals
23-02	23-2 SA2	0.61 - 1.22	17-May-23	Fill - gravelly SILTY SAND	45	0	VOCs, PHC (F1-F4), BTEX, PAHs, Metals and Inorganics and Hydride-forming metals
23-03	23-3 SA2	0.61 - 0.91	15-May-23	Fill - SILTY SAND	20	0	VOCs, PHC (F1-F4), BTEX, PAHs, Metals and Inorganics and Hydride-forming metals

Notes:

m bgs = metres below ground surface
ORP = other regulated parameters
BTEX = benzene, toluene, ethylbenzene, xylene
VOC = volatile organic compounds
PHC = petroleum hydrocarbons
ppm = parts per million
Table to be read in conjunction with accompanying report

Completed by: LO
Reviewed by: SH

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Table 4
Summary of Groundwater Samples Submitted for Laboratory Analysis
1047 Richmond Road (Parkland), Ottawa, Ontario

Well ID	Sample ID	Sampling Date	Well Depth (mbgs)	Screen Interval (mbgs)	Lithology Description at Screened Section	Parameters Analyzed
23-01	23-1	25-May-23	13.26	10.21 - 13.26	Dolostone interbedded with shale, limestone and sandstone	VOCs, PHC (F1-F4), BTEX, PAHs, Metals and Inorganics and Hydride-forming metals
23-02	23-2	26-May-23	14.94	11.89 - 14.94	Dolostone interbedded with shale, limestone and sandstone	VOCs, PHC (F1-F4), BTEX, PAHs, Metals and Inorganics and Hydride-forming metals
	DUP1	26-May-23		11.89 - 14.94	Dolostone interbedded with shale, limestone and sandstone	VOCs, PHC (F1-F4), BTEX, PAHs, Metals and Inorganics and Hydride-forming metals
23-03	23-3	26-May-23	14.63	11.54 - 14.63	Dolostone interbedded with shale, limestone and sandstone	VOCs, PHC (F1-F4), BTEX, PAHs, Metals and Inorganics and Hydride-forming metals

Notes:

mbgs = metres below ground surface
ORP = other regulated parameters
BTEX = benzene, toluene, ethylbenzene, xylene
VOC = volatile organic compounds
PHC = petroleum hydrocarbons
PAH = polycyclic aromatic hydrocarbons
PCB = polychlorinated biphenils

Table to be read in conjunction with accompanying report

Completed by: LO
Reviewed by: SH

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Table 5A
Soil Analytical Results - Volatile Organic Compounds
1047 Richmond Road (Parkland), Ottawa, Ontario

	Sample Location		BH23-1		BH23-2	BH23-3
	Sample Name		23-1 SA1	23-1 SA11	23-2 SA2	23-3 SA2
	Sample Date		17-05-2023	17-05-2023	17-05-2023	15-05-2023
	Sample Depth		0.05 - 0.61 m	0.05 - 0.61 m	0.61 - 1.21 m	0.61 - 0.91 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**		Field Duplicate		
Volatile Organic Compounds						
Acetone	16	ug/g	< 0.50	< 0.50	< 0.50	< 0.50
Bromomethane	0.05	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dibromoethane	0.05	ug/g	< 0.04	< 0.04	< 0.04	< 0.04
Carbon Tetrachloride	0.05	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
n-Hexane	2.8	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Chlorobenzene	2.4	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
2-Butanone	16	ug/g	< 0.50	< 0.50	< 0.50	< 0.50
Chloroform	0.05	ug/g	< 0.04	< 0.04	< 0.04	< 0.04
4-Methyl-2-pentanone	1.7	ug/g	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	3.4	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Methyl tert-Butyl Ether	0.75	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	4.8	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Methylene Chloride	0.1	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	0.083	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Styrene	0.7	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Dichlorodifluoromethane	16	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Tetrachloroethene	0.28	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloroethane	3.5	ug/g	< 0.02	< 0.02	< 0.02	< 0.02
1,1,1,2-Tetrachloroethane	0.058	ug/g	< 0.04	< 0.04	< 0.04	< 0.04
1,2-Dichloroethane	0.05	ug/g	< 0.03	< 0.03	< 0.03	< 0.03
1,1,2,2-Tetrachloroethane	0.05	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloroethene	0.05	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1-Trichloroethane	0.38	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
trans-1,2-Dichloroethene	0.084	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2-Trichloroethane	0.05	ug/g	< 0.04	< 0.04	< 0.04	< 0.04
cis-1,2-Dichloroethene	3.4	ug/g	< 0.02	< 0.02	< 0.02	< 0.02
Trichloroethene	0.061	ug/g	< 0.03	< 0.03	< 0.03	< 0.03
1,2-Dichloropropane	0.05	ug/g	< 0.03	< 0.03	< 0.03	< 0.03
Trichlorofluoromethane	4	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Vinyl Chloride	0.02	ug/g	< 0.02	< 0.02	< 0.02	< 0.02
1,3-Dichloropropene, Total	0.05	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Trihalomethanes						
Bromodichloromethane	13	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Bromoform	0.27	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Dibromochloromethane	9.4	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Ungrouped Analytes						
Dimethylnaphthalene	NV	ug/g	< 0.05	< 0.05	< 0.05	< 0.05

Notes:
Bold: Value exceeding Table 7 standards

REG153 (11) T7-R/P/I SOIL COARSE — Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition

ug/g: micrograms per gram
NV: No Value
<: Indicates parameter not detected above laboratory method detection limit.

Completed by: LO
Reviewed by: SH

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Table 5B
Soil Analytical Results - Petroleum Hydrocarbons F1 to F4, Benzene, Toluene, Ethylbenzene and Xylenes
1047 Richmond Road (Parkland), Ottawa, Ontario

		Sample Location	BH23-1		BH23-2	BH23-3
		Sample Name	23-1 SA1	23-1 SA11	23-2 SA2	23-3 SA2
		Sample Date	17-05-2023	17-05-2023	17-05-2023	15-05-2023
		Sample Depth	0.05 - 0.61 m	0.05 - 0.61 m	0.61 - 1.21 m	0.61 - 0.91 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**		Field Duplicate		
BTEX						
Benzene	0.21	ug/g	< 0.02	< 0.02	< 0.02	< 0.02
Toluene	2.3	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	2	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Xylenes, Total	3.1	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
m,p-Xylenes	NV	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
o-Xylene	NV	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Petroleum Hydrocarbons						
Petroleum Hydrocarbons - F1 (C6-C10)	55	ug/g	< 5	< 5	< 5	< 5
Petroleum Hydrocarbons - F1 (C6-C10)-BTEX	55	ug/g	< 5	< 5	< 5	< 5
Petroleum Hydrocarbons - F2 (C10-C16)	98	ug/g	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F2 (C10-C16) less Naphth	98	ug/g	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons - F3 (C16-C34)	300	ug/g	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F3 (C16-C34) less PAHs	300	ug/g	< 50	< 50	< 50	< 50
Petroleum Hydrocarbons - F4 (C34-C50)	2800	ug/g	< 50	< 50	< 50	< 50

Notes:
Bold: Value exceeding Table 7 standards

REG153 (11) T7-R/P/I SOIL COARSE

Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition

ug/g: micrograms per gram
NV: No Value
<: Indicates parameter not detected above laboratory method detection limit.

Completed by: LO
Reviewed by: SH

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Table 5C
Soil Analytical Results - Polycyclic Aromatic Hydrocarbons
1047 Richmond Road (Parkland), Ottawa, Ontario

		Sample Location	BH23-1		BH23-2	BH23-3
		Sample Name	23-1 SA1	23-1 SA11	23-2 SA2	23-3 SA2
		Sample Date	17-05-2023	17-05-2023	17-05-2023	15-05-2023
		Sample Depth	0.05 - 0.61 m	0.05 - 0.61 m	0.61 - 1.21 m	0.61 - 0.91 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**		Field Duplicate		
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	7.9	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Benzo[g,h,i]perylene	6.6	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Indeno[1,2,3-cd]pyrene	0.38	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	0.15	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Benzo[k]fluoranthene	0.78	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	0.67	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	7	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	0.6	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Benzo[a]anthracene	0.5	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzo[a,h]anthracene	0.1	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	6.2	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Benzo[a]pyrene	0.3	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	0.69	ug/g	< 0.05	< 0.05	< 0.05	0.1
Pyrene	78	ug/g	< 0.05	< 0.05	< 0.05	0.09
Benzo[b]fluoranthene	0.78	ug/g	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	62	ug/g	< 0.05	< 0.05	< 0.05	< 0.05

Notes:
Bold: Value exceeding Table 7 standards

REG153 (11) T7-R/P/I SOIL COARSE

Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition

ug/g: micrograms per gram
<: Indicates parameter not detected above laboratory method detection limit.

Completed by: LO
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Table 5D
Soil Analytical Results - Metals and Other Regulated Parameters
1047 Richmond Road (Parkland), Ottawa, Ontario

		Sample Location	BH23-1		BH23-2	BH23-3
		Sample Name	23-1 SA1	23-1 SA11	23-2 SA2	23-3 SA2
		Sample Date	17-05-2023	17-05-2023	17-05-2023	15-05-2023
		Sample Depth	0.05 - 0.61 m	0.05 - 0.61 m	0.61 - 1.21 m	0.61 - 0.91 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**		Field Duplicate		
Metals						
Barium	390	ug/g	25.6	27.8	288	153
Beryllium	4	ug/g	< 0.5	< 0.5	0.5	0.7
Boron	120	ug/g	< 5	< 5	17	20
Cadmium	1.2	ug/g	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	160	ug/g	10	10	36	42
Cobalt	22	ug/g	3.2	3.4	18.8	**25.5**
Copper	140	ug/g	8.2	9	15.8	27.4
Lead	120	ug/g	3	3	10	34
Molybdenum	6.9	ug/g	< 0.5	< 0.5	< 0.5	< 0.5
Nickel	100	ug/g	5	6	35	32
Silver	20	ug/g	< 0.5	< 0.5	< 0.5	3.3
Thallium	1	ug/g	< 0.5	< 0.5	< 0.5	< 0.5
Uranium	23	ug/g	0.51	0.56	< 0.50	< 0.50
Vanadium	86	ug/g	20.9	19.8	34.7	33.7
Zinc	340	ug/g	16	17	54	60
Metals, Hydride-Forming						
Antimony	7.5	ug/g	< 0.8	< 0.8	< 0.8	< 0.8
Selenium	2.4	ug/g	< 0.8	< 0.8	< 0.8	< 0.8
Arsenic	18	ug/g	< 1	< 1	2	< 1
Other Regulated Parameters						
Boron, Hot Water Soluble	1.5	ug/g	< 0.10	< 0.10	0.4	0.77
Hexavalent Chromium	8	ug/g	< 0.2	< 0.2	< 0.2	< 0.2
Cyanide (WAD)	0.051	ug/g	< 0.040	< 0.040	< 0.040	< 0.040
Conductivity	0.7	ms/cm	0.116	0.121	0.154	0.266
Mercury	0.27	ug/g	< 0.10	< 0.10	< 0.10	< 0.10
Sodium Adsorption Ratio	5	none	0.18	0.827	0.699	0.663
pH	5 - 9	pH units	7.37	7.34	7.32	7.15
Moisture, Percent	NV	%	5.3	5.7	16	20.8

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Notes:
Bold: Value exceeding Table 7 standards

REG153 (11) T7-R/P/I SOIL COARSE

Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition

ug/g: micrograms per gram
ms/cm: microsiemens per centimeter
%: percentage
NV: No Value
<: Indicates parameter not detected above laboratory method detection limit.

Completed by: LO
Reviewed by: SH

Table 6A
Groundwater Analytical Results - Volatile Organic Compounds
1047 Richmond Road (Parkland), Ottawa, Ontario

		Sample Location	BH23-1	BH23-2		BH23-3	FIELD BLANK	TRIP BLANK
		Sample Name	23-1	23-2	DUP 1	23-3	VOC Field Blank	VOC Trip Blank
		Sample Date	25-05-2023	26-05-2023	26-05-2023	26-05-2023	26-05-2023	26-05-2023
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**			Field Duplicate			
RSC-Volatile Organic Compounds I								
Acetone	100000	ug/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	0.89	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,2-Dibromoethane	0.2	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Carbon Tetrachloride	0.2	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
n-Hexane	5	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Chlorobenzene	140	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
2-Butanone	21000	ug/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroform	2	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
4-Methyl-2-pentanone	5200	ug/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	150	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Methyl tert-Butyl Ether	15	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,3-Dichlorobenzene	7600	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Methylene Chloride	26	ug/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
1,4-Dichlorobenzene	0.5	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Styrene	43	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dichlorodifluoromethane	3500	ug/L	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Tetrachloroethene	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethane	11	ug/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
1,1,1,2-Tetrachloroethane	1.1	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
1,2-Dichloroethane	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1,2,2-Tetrachloroethane	0.5	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
1,1-Dichloroethene	0.5	ug/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
1,1,1-Trichloroethane	23	ug/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
trans-1,2-Dichloroethene	1.6	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1,2-Trichloroethane	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
cis-1,2-Dichloroethene	1.6	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Trichloroethene	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,2-Dichloropropane	0.58	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Trichlorofluoromethane	2000	ug/L	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Vinyl Chloride	0.5	ug/L	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17
1,3-Dichloropropene, Total	0.5	ug/L	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
RSC-Trihalomethanes								
Bromodichloromethane	67000	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Bromoform	5	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibromochloromethane	65000	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

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Notes:
Bold: Value exceeding Table 7 standards
ug/L: micrograms per liter
uS/cm: microsiemens per centimeter
NV: No value
REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards for all types of property use for groundwater in coarse textured soil in generic site condition for shallow soils in a non-potable ground water conditior
<: Indicates parameter not detected above laboratory method detection limit.

Completed by: LO
Reviewed by: SH

Created By: NB
Reviewed By: LO

Table 6B

Groundwater Analytical Results - Petroleum Hydrocarbons F1 to F4, Benzene, Toluene, Ethylbenzene and Xylenes
1047 Richmond Road (Parkland), Ottawa, Ontario

		Sample Location	BH23-1	BH23-2		BH23-3	FIELD BLANK	TRIP BLANK
		Sample Name	23-1	23-2	DUP 1	23-3	VOC Field Blank	VOC Trip Blank
		Sample Date	25-05-2023	26-05-2023	26-05-2023	26-05-2023	26-05-2023	26-05-2023
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**			Field Duplicate			
BTEX								
Benzene	0.5	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Ethylbenzene	54	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Toluene	320	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Xylenes, Total	72	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
m,p-Xylenes	NV	ug/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
o-Xylene	NV	ug/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
RSC-Petroleum Hydrocarbons								
Petroleum Hydrocarbons - F1 (C6-C10)	420	ug/L	< 25	< 25	< 25	< 25	-	-
Petroleum Hydrocarbons - F1 (C6-C10)-BTEX	420	ug/L	< 25	< 25	< 25	< 25	-	-
Petroleum Hydrocarbons - F2 (C10-C16)	150	ug/L	< 100	< 100	< 100	< 100	-	-
Petroleum Hydrocarbons - F2 (C10-C16) less Nap	150	ug/L	< 100	< 100	< 100	< 100	-	-
Petroleum Hydrocarbons - F3 (C16-C34)	500	ug/L	< 100	< 100	< 100	< 100	-	-
Petroleum Hydrocarbons - F3 (C16-C34) less PAH	500	ug/L	< 100	< 100	< 100	< 100	-	-
Petroleum Hydrocarbons - F4 (C34-C50)	500	ug/L	< 100	< 100	< 100	< 100	-	-

Notes:
Bold: Value exceeding Table 7 standards
ug/L: microgarms per liter
NV: No value
REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards for all types of property use for groundwater in coarse textured soil in generic site condition for shallow soils in a non-potable ground water condition

<: Indicates parameter not detected above laboratory method detection limit.

Completed by: LO
Reviewed by: SH

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Table 6C
Groundwater Analytical Results - Polycyclic Aromatic Hydrocarbons
1047 Richmond Road (Parkland), Ottawa, Ontario

			Sample Location	BH23-1	BH23-2		BH23-3
			Sample Name	23-1	23-2	DUP 1	23-3
			Sample Date	25-05-2023	26-05-2023	26-05-2023	26-05-2023
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**				Field Duplicate	
RSC-Polycyclic Aromatic Hydrocarbons							
Acenaphthene	17	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
Benzo[g,h,i]perylene	0.2	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
Indeno[1,2,3-cd]pyrene	0.2	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
Acenaphthylene	1	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
Benzo[k]fluoranthene	0.4	ug/L	< 0.10	< 0.10	< 0.10	< 0.10
1- & 2-Methylnaphthalene	1500	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
Anthracene	1	ug/L	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	0.7	ug/L	< 0.10	< 0.10	< 0.10	< 0.10
Naphthalene	7	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
Benzo[a]anthracene	1.8	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
Dibenzo[a,h]anthracene	0.4	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
Phenanthrene	380	ug/L	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	0.81	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	44	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
Pyrene	5.7	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
Benzo[b]fluoranthene	0.75	ug/L	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	290	ug/L	< 0.20	< 0.20	< 0.20	< 0.20

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Notes:

Bold: Value exceeding Table 7 standards

ug/L: micrograms per liter

uS/cm: microsiemens per centimeter

NV: No value

REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards for all types of property use for groundwater in coarse textured soil in generic site condition for shallow soils in a non-potable ground water condition

<: Indicates parameter not detected above laboratory method detection limit.

Completed by: LO

Reviewed by: SH

Created By: NB
Reviewed By: LO

Table 6D
Groundwater Analytical Results - Metals and Other Regulated Parameters
1047 Richmond Road (Parkland), Ottawa, Ontario

			Sample Location	BH23-1	BH23-2		BH23-3
			Sample Name	23-1	23-2	DUP 1	23-3
			Sample Date	25-05-2023	26-05-2023	26-05-2023	26-05-2023
Parameter	**REG153 (11) T7-GW COARSE**	**Unit**			Field Duplicate		
RSC-Metals							
Barium	23000	ug/L	162	168	165	152
Beryllium	53	ug/L	< 0.50	< 0.50	< 0.50	< 0.50
Boron	36000	ug/L	337	582	558	308
Cadmium	2.1	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
Chromium	640	ug/L	< 2.0	< 2.0	< 2.0	3.4
Cobalt	52	ug/L	1.8	2.19	2.22	2.68
Copper	69	ug/L	1	< 1.0	1.1	1.1
Lead	20	ug/L	< 0.50	< 0.50	< 0.50	< 0.50
Molybdenum	7300	ug/L	< 0.50	0.75	0.57	< 0.50
Nickel	390	ug/L	3.6	4.1	4.6	3.1
Silver	1.2	ug/L	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	400	ug/L	< 0.30	< 0.30	< 0.30	< 0.30
Uranium	330	ug/L	1.07	1.52	1.53	0.76
Vanadium	200	ug/L	< 0.40	< 0.40	< 0.40	< 0.40
Zinc	890	ug/L	< 5.0	< 5.0	< 5.0	< 5.0
RSC-Metals, Hydride-Forming							
Antimony	16000	ug/L	< 1.0	< 1.0	< 1.0	< 1.0
Selenium	50	ug/L	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	1500	ug/L	< 1.0	< 1.0	< 1.0	< 1.0
RSC-Other Regulated Parameters							
Hexavalent Chromium	110	ug/L	< 2.000	< 2.000	< 2.000	< 2.000
Cyanide (WAD)	52	ug/L	< 2	< 2	< 2	< 2
Mercury	0.1	ug/L	< 0.02	< 0.02	< 0.02	< 0.02
Sodium	1800000	ug/L	444000	488000	477000	381000
Chloride	1800000	ug/L	972000	1110000	1110000	832000
pH	NV	pH units	7.65	7.59	7.62	7.68
Conductivity	NV	uS/cm	3740	4220	4230	3300

Notes:
Bold: Value exceeding Table 7 standards
ug/L: microgarms per liter
NV: No value
REG153 (11) T7-GW COARSE: O.Reg 153 (2011) Table 7 Standards for all types of property use for groundwater in coarse textured soil in generic site condition for shallow soils in a non-potable ground water condition
<: Indicates parameter not detected above laboratory method detection limit.

Completed by: LO
Reviewed by: SH

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Figures

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APPENDIX A

Site Plan

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APPENDIX B

Laboratory Certificates of Analysis

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AGAT Laboratories

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CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600
ATTENTION TO: Daniel Stabile; Paul Hurst
PROJECT: 21494078
AGAT WORK ORDER: 23Z026646
SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer
TRACE ORGANICS REVIEWED BY: Radhika Chakraberty, Trace Organics Lab Manager
DATE REPORTED: Jun 28, 2023
PAGES (INCLUDING COVER): 20
VERSION*: 1

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

*Notes

VERSION 1:Revised report with Metals scan reported as per request. 06/28

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Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
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Certificate of Analysis

AGAT WORK ORDER: 23Z026646
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-19

DATE REPORTED: 2023-06-28

SAMPLE DESCRIPTION:				23-1 SA1	23-1 SA11	23-2 SA2	23-3 SA2
SAMPLE TYPE:				Soil	Soil	Soil	Soil
DATE SAMPLED:				2023-05-17 11:50	2023-05-17 11:50	2023-05-17 15:10	2023-05-15 10:15
Parameter	Unit	G / S	RDL	5003726	5003727	5003728	5003729
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	<1	<1	2	<1
Barium	µg/g	390	2.0	25.6	27.8	288	153
Beryllium	µg/g	4	0.5	<0.5	<0.5	0.5	0.7
Boron	µg/g	120	5	<5	<5	17	20
Boron (Hot Water Soluble)	µg/g	1.5	0.10	<0.10	<0.10	0.40	0.77
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	10	10	36	42
Cobalt	µg/g	22	0.8	3.2	3.4	18.8	25.5
Copper	µg/g	140	1.0	8.2	9.0	15.8	27.4
Lead	µg/g	120	1	3	3	10	34
Molybdenum	µg/g	6.9	0.5	<0.5	<0.5	<0.5	<0.5
Nickel	µg/g	100	1	5	6	35	32
Selenium	µg/g	2.4	0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	20	0.5	<0.5	<0.5	<0.5	3.3
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	0.51	0.56	<0.50	<0.50
Vanadium	µg/g	86	2.0	20.9	19.8	34.7	33.7
Zinc	µg/g	340	5	16	17	54	60
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.116	0.121	0.154	0.266
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.180	0.827	0.699	0.663
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.37	7.34	7.32	7.15

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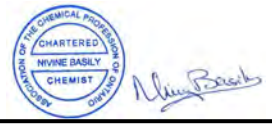

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z026646
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-19 DATE REPORTED: 2023-06-28

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5003726-5003729 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

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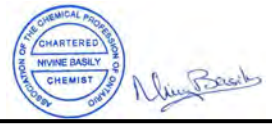

Results relate only to the items tested. Results apply to samples as received.

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AGAT WORK ORDER: 23Z026646
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2023-05-19

DATE REPORTED: 2023-06-28

				SAMPLE DESCRIPTION:	23-3 SA2
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2023-05-15 10:15
Parameter	Unit	G / S	RDL	5003729	
Antimony	µg/g	7.5	0.8	<0.8	
Arsenic	µg/g	18	1	1	
Barium	µg/g	390	2.0	151	
Beryllium	µg/g	4	0.5	0.9	
Boron	µg/g	120	5	18	
Cadmium	µg/g	1.2	0.5	<0.5	
Chromium	µg/g	160	5	42	
Cobalt	µg/g	22	0.8	29.5	
Copper	µg/g	140	1.0	27.7	
Lead	µg/g	120	1	62	
Molybdenum	µg/g	6.9	0.5	<0.5	
Nickel	µg/g	100	1	33	
Selenium	µg/g	2.4	0.8	<0.8	
Silver	µg/g	20	0.5	4.9	
Thallium	µg/g	1	0.5	<0.5	
Uranium	µg/g	23	0.50	0.53	
Vanadium	µg/g	86	2.0	31.8	
Zinc	µg/g	340	5	68	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5003729 Analysis was performed from different jar.

Analysis performed at AGAT Toronto (unless marked by *)

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Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z026646
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-19

DATE REPORTED: 2023-06-28

				SAMPLE DESCRIPTION:	23-1 SA1	23-1 SA11	23-2 SA2	23-3 SA2
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2023-05-17 11:50	2023-05-17 11:50	2023-05-17 15:10	2023-05-15 10:15
Parameter	Unit	G / S	RDL		5003726	5003727	5003728	5003729
Naphthalene	µg/g	0.6	0.05		<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05		<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	7.9	0.05		<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05		<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	6.2	0.05		<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05		<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05		<0.05	<0.05	<0.05	0.10
Pyrene	µg/g	78	0.05		<0.05	<0.05	<0.05	0.09
Benz(a)anthracene	µg/g	0.5	0.05		<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	7	0.05		<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05		<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05		<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05		<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05		<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05		<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05		<0.05	<0.05	<0.05	<0.05
1 and 2 Methlynaphthalene	µg/g	0.99	0.05		<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1		5.3	5.7	16.0	20.8
Surrogate	Unit	Acceptable Limits						
Naphthalene-d8	%	50-140			106	79	116	99
Acridine-d9	%	50-140			89	85	85	105
Terphenyl-d14	%	50-140			85	84	84	79

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Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5003726-5003729 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z026646
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2023-05-19

DATE REPORTED: 2023-06-28

				SAMPLE DESCRIPTION:	23-1 SA1	23-1 SA11	23-2 SA2	23-3 SA2
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2023-05-17 11:50	2023-05-17 11:50	2023-05-17 15:10	2023-05-15 10:15
Parameter	Unit	G / S	RDL		5003726	5003727	5003728	5003729
F1 (C6 - C10)	µg/g		5		<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5	<5	<5	<5
F2 (C10 to C16)	µg/g	98	10		<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10		<10	<10	<10	<10
F3 (C16 to C34)	µg/g	300	50		<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50		<50	<50	<50	<50
F4 (C34 to C50)	µg/g	2800	50		<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50		NA	NA	NA	NA
Moisture Content	%		0.1		5.3	5.7	16.0	20.8
Surrogate	Unit	Acceptable Limits						
Toluene-d8	%	50-140			82	79	78	78
Terphenyl	%	60-140			71	65	74	68

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5003726-5003729 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

DRAFT

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z026646
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-19

DATE REPORTED: 2023-06-28

SAMPLE DESCRIPTION:				23-1 SA1	23-1 SA11	23-2 SA2	23-3 SA2
SAMPLE TYPE:				Soil	Soil	Soil	Soil
DATE SAMPLED:				2023-05-17 11:50	2023-05-17 11:50	2023-05-17 15:10	2023-05-15 10:15
Parameter	Unit	G / S	RDL	5003726	5003727	5003728	5003729
Dichlorodifluoromethane	µg/g	16	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
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	3.5	0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	3.4	0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.38	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
Benzene	ug/g	0.21	0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.061	0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	13	0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	1.7	0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	2.3	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
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.28	0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	2	0.05	<0.05	<0.05	<0.05	<0.05

DRAFT

Certified By: R. Chakraberty

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Certificate of Analysis

AGAT WORK ORDER: 23Z026646
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-19

DATE REPORTED: 2023-06-28

				SAMPLE DESCRIPTION:	23-1 SA1	23-1 SA11	23-2 SA2	23-3 SA2
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2023-05-17 11:50	2023-05-17 11:50	2023-05-17 15:10	2023-05-15 10:15
Parameter	Unit	G / S	RDL		5003726	5003727	5003728	5003729
m & p-Xylene	ug/g		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
Styrene	ug/g	0.7	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
o-Xylene	ug/g		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
1,4-Dichlorobenzene	ug/g	0.083	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
Xylenes (Total)	ug/g	3.1	0.05		<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05		<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	2.8	0.05		<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1		5.3	5.7	16.0	20.8
Surrogate	Unit	Acceptable Limits						
Toluene-d8	% Recovery	50-140			82	79	78	78
4-Bromofluorobenzene	% Recovery	50-140			101	103	98	98

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5003726-5003729 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

DRAFT

Certified By: R. Chakraberty

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Exceedance Summary

AGAT WORK ORDER: 23Z026646

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile; Paul Hurst

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5003729	23-3 SA2	ON T7 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Cobalt	µg/g	22	25.5
5003729	23-3 SA2	ON T7 S RPI CT	O. Reg. 153(511) - Metals (Including Hydrides) (Soil)	Cobalt	µg/g	22	29.5

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 21494078

SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z026646

ATTENTION TO: Daniel Stabile; Paul Hurst

SAMPLED BY:Rob Ireland

Soil Analysis

RPT Date: Jun 28, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	5003269		<0.8	<0.8	NA	< 0.8	122%	70%	130%	102%	80%	120%	77%	70%	130%
Arsenic	5003269		6	6	0.0%	< 1	120%	70%	130%	100%	80%	120%	101%	70%	130%
Barium	5003269		139	138	0.7%	< 2.0	105%	70%	130%	106%	80%	120%	106%	70%	130%
Beryllium	5003269		0.5	0.5	NA	< 0.5	96%	70%	130%	89%	80%	120%	97%	70%	130%
Boron	5003269		10	10	NA	< 5	83%	70%	130%	91%	80%	120%	91%	70%	130%
Boron (Hot Water Soluble)	5005899		0.37	0.38	NA	< 0.10	109%	60%	140%	100%	70%	130%	88%	60%	140%
Cadmium	5003269		<0.5	<0.5	NA	< 0.5	101%	70%	130%	102%	80%	120%	101%	70%	130%
Chromium	5003269		22	23	NA	< 5	101%	70%	130%	106%	80%	120%	105%	70%	130%
Cobalt	5003269		11.6	11.8	1.7%	< 0.8	100%	70%	130%	105%	80%	120%	100%	70%	130%
Copper	5003269		28.7	30.4	5.8%	< 1.0	93%	70%	130%	105%	80%	120%	98%	70%	130%
Lead	5003269		14	14	0.0%	< 1	98%	70%	130%	100%	80%	120%	97%	70%	130%
Molybdenum	5003269		<0.5	<0.5	NA	< 0.5	112%	70%	130%	108%	80%	120%	109%	70%	130%
Nickel	5003269		23	24	4.3%	< 1	99%	70%	130%	104%	80%	120%	95%	70%	130%
Selenium	5003269		<0.8	<0.8	NA	< 0.8	83%	70%	130%	99%	80%	120%	100%	70%	130%
Silver	5003269		<0.5	<0.5	NA	< 0.5	111%	70%	130%	104%	80%	120%	102%	70%	130%
Thallium	5003269		<0.5	<0.5	NA	< 0.5	102%	70%	130%	99%	80%	120%	98%	70%	130%
Uranium	5003269		0.67	0.70	NA	< 0.50	104%	70%	130%	104%	80%	120%	106%	70%	130%
Vanadium	5003269		31.7	33.1	4.3%	< 2.0	104%	70%	130%	104%	80%	120%	103%	70%	130%
Zinc	5003269		56	58	3.5%	< 5	98%	70%	130%	102%	80%	120%	108%	70%	130%
Chromium, Hexavalent	5002535		<0.2	<0.2	NA	< 0.2	107%	70%	130%	98%	80%	120%	87%	70%	130%
Cyanide, WAD	5005899		<0.040	<0.040	NA	< 0.040	91%	70%	130%	111%	80%	120%	86%	70%	130%
Mercury	5003269		<0.10	<0.10	NA	< 0.10	103%	70%	130%	101%	80%	120%	99%	70%	130%
Electrical Conductivity (2:1)	5005899		0.842	0.781	7.5%	< 0.005	87%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	5005899		6.56	6.60	0.6%	NA									
pH, 2:1 CaCl2 Extraction	5002650		6.70	6.96	3.8%	NA	102%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	5087504		<0.8	<0.8	NA	< 0.8	116%	70%	130%	102%	80%	120%	87%	70%	130%
Arsenic	5087504		3	3	NA	< 1	121%	70%	130%	105%	80%	120%	106%	70%	130%
Barium	5087504		42.8	48.2	11.9%	< 2.0	104%	70%	130%	100%	80%	120%	97%	70%	130%
Beryllium	5087504		<0.5	<0.5	NA	< 0.5	89%	70%	130%	100%	80%	120%	102%	70%	130%
Boron	5087504		7	8	NA	< 5	82%	70%	130%	99%	80%	120%	106%	70%	130%
Cadmium	5087504		<0.5	<0.5	NA	< 0.5	93%	70%	130%	104%	80%	120%	103%	70%	130%
Chromium	5087504		14	15	NA	< 5	109%	70%	130%	112%	80%	120%	123%	70%	130%
Cobalt	5087504		5.3	5.6	4.9%	< 0.8	108%	70%	130%	104%	80%	120%	106%	70%	130%
Copper	5087504		11.9	12.6	5.5%	< 1.0	102%	70%	130%	108%	80%	120%	102%	70%	130%

DRAFT

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z026646
ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

Soil Analysis (Continued)

RPT Date: Jun 28, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Lead	5087504		8	8	4.6%	< 1	110%	70%	130%	106%	80%	120%	101%	70%	130%
Molybdenum	5087504		<0.5	<0.5	NA	< 0.5	117%	70%	130%	110%	80%	120%	115%	70%	130%
Nickel	5087504		11	11	4.2%	< 1	107%	70%	130%	101%	80%	120%	99%	70%	130%
Selenium	5087504		<0.8	<0.8	NA	< 0.8	98%	70%	130%	108%	80%	120%	109%	70%	130%
Silver	5087504		<0.5	<0.5	NA	< 0.5	103%	70%	130%	103%	80%	120%	96%	70%	130%
Thallium	5087504		<0.5	<0.5	NA	< 0.5	98%	70%	130%	100%	80%	120%	97%	70%	130%
Uranium	5087504		0.53	0.55	NA	< 0.50	121%	70%	130%	101%	80%	120%	106%	70%	130%
Vanadium	5087504		24.7	26.2	5.9%	< 2.0	111%	70%	130%	106%	80%	120%	115%	70%	130%
Zinc	5087504		45	40	10.2%	< 5	109%	70%	130%	109%	80%	120%	104%	70%	130%
Mercury	5087504		<0.10	<0.10	NA	< 0.10	111%	70%	130%	100%	80%	120%	99%	70%	130%

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

Antimony	5087504		<0.8	<0.8	NA	< 0.8	116%	70%	130%	102%	80%	120%	87%	70%	130%
Arsenic	5087504		3	3	NA	< 1	121%	70%	130%	105%	80%	120%	106%	70%	130%
Barium	5087504		42.8	48.2	11.9%	< 2.0	104%	70%	130%	100%	80%	120%	97%	70%	130%
Beryllium	5087504		<0.5	<0.5	NA	< 0.5	89%	70%	130%	100%	80%	120%	102%	70%	130%
Boron	5087504		7	8	NA	< 5	82%	70%	130%	99%	80%	120%	106%	70%	130%
Cadmium	5087504		<0.5	<0.5	NA	< 0.5	93%	70%	130%	104%	80%	120%	103%	70%	130%
Chromium	5087504		14	15	NA	< 5	109%	70%	130%	112%	80%	120%	123%	70%	130%
Cobalt	5087504		5.3	5.6	5.5%	< 0.8	108%	70%	130%	104%	80%	120%	106%	70%	130%
Copper	5087504		11.9	12.6	5.7%	< 1.0	102%	70%	130%	108%	80%	120%	102%	70%	130%
Lead	5087504		8	8	0.0%	< 1	110%	70%	130%	106%	80%	120%	101%	70%	130%
Molybdenum	5087504		<0.5	<0.5	NA	< 0.5	117%	70%	130%	110%	80%	120%	115%	70%	130%
Nickel	5087504		11	11	0.0%	< 1	107%	70%	130%	101%	80%	120%	99%	70%	130%
Selenium	5087504		<0.8	<0.8	NA	< 0.8	132%	70%	130%	108%	80%	120%	109%	70%	130%
Silver	5087504		<0.5	<0.5	NA	< 0.5	103%	70%	130%	103%	80%	120%	96%	70%	130%
Thallium	5087504		<0.5	<0.5	NA	< 0.5	98%	70%	130%	100%	80%	120%	97%	70%	130%
Uranium	5087504		0.53	0.55	NA	< 0.50	121%	70%	130%	101%	80%	120%	106%	70%	130%
Vanadium	5087504		24.7	26.2	5.9%	< 2.0	111%	70%	130%	106%	80%	120%	115%	70%	130%
Zinc	5087504		45	40	11.8%	< 5	109%	70%	130%	109%	80%	120%	104%	70%	130%

Comments: NA Signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

DRAFT

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http://www.agatlabs.com

Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 21494078

SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z026646

ATTENTION TO: Daniel Stabile; Paul Hurst

SAMPLED BY:Rob Ireland

Soil Analysis (Continued)

RPT Date: Jun 28, 2023			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

DRAFT

Certified By:

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PROJECT: 21494078

SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z026646

ATTENTION TO: Daniel Stabile; Paul Hurst

SAMPLED BY:Rob Ireland

Trace Organics Analysis

RPT Date: Jun 28, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)															
F1 (C6 - C10)	5003729	5003729	<5	<5	NA	< 5	126%	60%	140%	113%	60%	140%	83%	60%	140%
F2 (C10 to C16)	5003729	5003729	< 10	< 10	NA	< 10	108%	60%	140%	121%	60%	140%	121%	60%	140%
F3 (C16 to C34)	5003729	5003729	< 50	< 50	NA	< 50	108%	60%	140%	105%	60%	140%	104%	60%	140%
F4 (C34 to C50)	5003729	5003729	< 50	< 50	NA	< 50	82%	60%	140%	104%	60%	140%	82%	60%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	5003729	5003729	<0.05	<0.05	NA	< 0.05	101%	50%	140%	88%	50%	140%	105%	50%	140%
Acenaphthylene	5003729	5003729	<0.05	<0.05	NA	< 0.05	104%	50%	140%	100%	50%	140%	100%	50%	140%
Acenaphthene	5003729	5003729	<0.05	<0.05	NA	< 0.05	114%	50%	140%	90%	50%	140%	105%	50%	140%
Fluorene	5003729	5003729	<0.05	<0.05	NA	< 0.05	114%	50%	140%	98%	50%	140%	100%	50%	140%
Phenanthrene	5003729	5003729	<0.05	<0.05	NA	< 0.05	122%	50%	140%	93%	50%	140%	108%	50%	140%
Anthracene	5003729	5003729	<0.05	<0.05	NA	< 0.05	113%	50%	140%	98%	50%	140%	95%	50%	140%
Fluoranthene	5003729	5003729	0.10	0.09	NA	< 0.05	107%	50%	140%	100%	50%	140%	95%	50%	140%
Pyrene	5003729	5003729	0.09	0.09	NA	< 0.05	114%	50%	140%	100%	50%	140%	95%	50%	140%
Benz(a)anthracene	5003729	5003729	<0.05	<0.05	NA	< 0.05	113%	50%	140%	93%	50%	140%	90%	50%	140%
Chrysene	5003729	5003729	<0.05	<0.05	NA	< 0.05	107%	50%	140%	75%	50%	140%	80%	50%	140%
Benzo(b)fluoranthene	5003729	5003729	<0.05	<0.05	NA	< 0.05	63%	50%	140%	93%	50%	140%	75%	50%	140%
Benzo(k)fluoranthene	5003729	5003729	<0.05	<0.05	NA	< 0.05	87%	50%	140%	80%	50%	140%	100%	50%	140%
Benzo(a)pyrene	5003729	5003729	<0.05	<0.05	NA	< 0.05	66%	50%	140%	70%	50%	140%	78%	50%	140%
Indeno(1,2,3-cd)pyrene	5003729	5003729	<0.05	<0.05	NA	< 0.05	71%	50%	140%	73%	50%	140%	80%	50%	140%
Dibenz(a,h)anthracene	5003729	5003729	<0.05	<0.05	NA	< 0.05	62%	50%	140%	85%	50%	140%	103%	50%	140%
Benzo(g,h,i)perylene	5003729	5003729	<0.05	<0.05	NA	< 0.05	68%	50%	140%	105%	50%	140%	78%	50%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	5003729	5003729	<0.05	<0.05	NA	< 0.05	114%	50%	140%	100%	50%	140%	102%	50%	140%
Vinyl Chloride	5003729	5003729	<0.02	<0.02	NA	< 0.02	100%	50%	140%	109%	50%	140%	90%	50%	140%
Bromomethane	5003729	5003729	<0.05	<0.05	NA	< 0.05	105%	50%	140%	80%	50%	140%	75%	50%	140%
Trichlorofluoromethane	5003729	5003729	<0.05	<0.05	NA	< 0.05	104%	50%	140%	111%	50%	140%	114%	50%	140%
Acetone	5003729	5003729	<0.50	<0.50	NA	< 0.50	86%	50%	140%	83%	50%	140%	74%	50%	140%
1,1-Dichloroethylene	5003729	5003729	<0.05	<0.05	NA	< 0.05	94%	50%	140%	105%	60%	130%	84%	50%	140%
Methylene Chloride	5003729	5003729	<0.05	<0.05	NA	< 0.05	74%	50%	140%	77%	60%	130%	74%	50%	140%
Trans- 1,2-Dichloroethylene	5003729	5003729	<0.05	<0.05	NA	< 0.05	113%	50%	140%	114%	60%	130%	70%	50%	140%
Methyl tert-butyl Ether	5003729	5003729	<0.05	<0.05	NA	< 0.05	95%	50%	140%	98%	60%	130%	80%	50%	140%
1,1-Dichloroethane	5003729	5003729	<0.02	<0.02	NA	< 0.02	85%	50%	140%	104%	60%	130%	76%	50%	140%
Methyl Ethyl Ketone	5003729	5003729	<0.50	<0.50	NA	< 0.50	110%	50%	140%	100%	50%	140%	72%	50%	140%
Cis- 1,2-Dichloroethylene	5003729	5003729	<0.02	<0.02	NA	< 0.02	85%	50%	140%	110%	60%	130%	87%	50%	140%
Chloroform	5003729	5003729	<0.04	<0.04	NA	< 0.04	100%	50%	140%	104%	60%	130%	88%	50%	140%
1,2-Dichloroethane	5003729	5003729	<0.03	<0.03	NA	< 0.03	102%	50%	140%	101%	60%	130%	119%	50%	140%
1,1,1-Trichloroethane	5003729	5003729	<0.05	<0.05	NA	< 0.05	99%	50%	140%	95%	60%	130%	90%	50%	140%
Carbon Tetrachloride	5003729	5003729	<0.05	<0.05	NA	< 0.05	108%	50%	140%	83%	60%	130%	79%	50%	140%

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z026646

PROJECT: 21494078

ATTENTION TO: Daniel Stabile; Paul Hurst

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

Trace Organics Analysis (Continued)

RPT Date: Jun 28, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzene	5003729	5003729	<0.02	<0.02	NA	< 0.02	93%	50%	140%	81%	60%	130%	71%	50%	140%
1,2-Dichloropropane	5003729	5003729	<0.03	<0.03	NA	< 0.03	83%	50%	140%	79%	60%	130%	75%	50%	140%
Trichloroethylene	5003729	5003729	<0.03	<0.03	NA	< 0.03	117%	50%	140%	99%	60%	130%	74%	50%	140%
Bromodichloromethane	5003729	5003729	<0.05	<0.05	NA	< 0.05	104%	50%	140%	95%	60%	130%	100%	50%	140%
Methyl Isobutyl Ketone	5003729	5003729	<0.50	<0.50	NA	< 0.50	73%	50%	140%	93%	50%	140%	108%	50%	140%
1,1,2-Trichloroethane	5003729	5003729	<0.04	<0.04	NA	< 0.04	117%	50%	140%	88%	60%	130%	106%	50%	140%
Toluene	5003729	5003729	<0.05	<0.05	NA	< 0.05	117%	50%	140%	93%	60%	130%	70%	50%	140%
Dibromochloromethane	5003729	5003729	<0.05	<0.05	NA	< 0.05	115%	50%	140%	93%	60%	130%	118%	50%	140%
Ethylene Dibromide	5003729	5003729	<0.04	<0.04	NA	< 0.04	96%	50%	140%	115%	60%	130%	99%	50%	140%
Tetrachloroethylene	5003729	5003729	<0.05	<0.05	NA	< 0.05	83%	50%	140%	113%	60%	130%	82%	50%	140%
1,1,1,2-Tetrachloroethane	5003729	5003729	<0.04	<0.04	NA	< 0.04	71%	50%	140%	103%	60%	130%	81%	50%	140%
Chlorobenzene	5003729	5003729	<0.05	<0.05	NA	< 0.05	91%	50%	140%	104%	60%	130%	75%	50%	140%
Ethylbenzene	5003729	5003729	<0.05	<0.05	NA	< 0.05	90%	50%	140%	107%	60%	130%	77%	50%	140%
m & p-Xylene	5003729	5003729	<0.05	<0.05	NA	< 0.05	106%	50%	140%	118%	60%	130%	90%	50%	140%
Bromoform	5003729	5003729	<0.05	<0.05	NA	< 0.05	107%	50%	140%	83%	60%	130%	61%	50%	140%
Styrene	5003729	5003729	<0.05	<0.05	NA	< 0.05	91%	50%	140%	110%	60%	130%	80%	50%	140%
1,1,2,2-Tetrachloroethane	5003729	5003729	<0.05	<0.05	NA	< 0.05	108%	50%	140%	85%	60%	130%	85%	50%	140%
o-Xylene	5003729	5003729	<0.05	<0.05	NA	< 0.05	105%	50%	140%	119%	60%	130%	88%	50%	140%
1,3-Dichlorobenzene	5003729	5003729	<0.05	<0.05	NA	< 0.05	76%	50%	140%	88%	60%	130%	72%	50%	140%
1,4-Dichlorobenzene	5003729	5003729	<0.05	<0.05	NA	< 0.05	71%	50%	140%	90%	60%	130%	72%	50%	140%
1,2-Dichlorobenzene	5003729	5003729	<0.05	<0.05	NA	< 0.05	89%	50%	140%	94%	60%	130%	73%	50%	140%
n-Hexane	5003729	5003729	<0.05	<0.05	NA	< 0.05	89%	50%	140%	89%	60%	130%	103%	50%	140%

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

DRAFT

Certified By: R. Chakraberty

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QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z026646

PROJECT: 21494078

ATTENTION TO: Daniel Stabile; Paul Hurst

RPT Date: Jun 28, 2023

PARAMETER	Sample Id	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Soil)										
Selenium		132%	70%	130%	108%	80%	120%	109%	70%	130%

Comments: NA Signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z026646

PROJECT: 21494078

ATTENTION TO: Daniel Stabile; Paul Hurst

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z026646

PROJECT: 21494078

ATTENTION TO: Daniel Stabile; Paul Hurst

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

DRAFT

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z026646

PROJECT: 21494078

ATTENTION TO: Daniel Stabile; Paul Hurst

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z026646

PROJECT: 21494078

ATTENTION TO: Daniel Stabile; Paul Hurst

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

DRAFT

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webearth.agatlabs.com

WORK ORDER

Chain of Custody Record

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

Report Information:

Company: WSP
Contact: Daniel Stabile / Paul Hurst.
Address: 1931 Robertson Rd.
Ottawa, Ont. K2H 5B7
Phone: 613-592-9600 Fax: 613-592-9601
Reports to be sent to:
1. Email: Daniel.Stabile@wsp.com
2. Email: Paul.Hurst@wsp.com

Project Information:

Project: 21494078
Site Location: 1047 Richmond Rd.
Sampled By: Rob Ireland
AGAT Quote #: 2023 Golder - AGAT: MSA 735000 EB
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company: WSP
Contact: Daniel Stabile / Paul Hurst.
Address: Same
Email: AP_CustomerService@wsp.com.

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
Region

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
Indicate One

Is this submission for a Record of Site Condition? ☒ Yes ☐ No

Report Guideline on Certificate of Analysis ☒ Yes ☐ No

Laboratory Use Only

Work Order #: 23702660460
Cooler Quantity: one - bagged ice
Arrival Temperatures: 5.3 6.9 6.3 / 3.4 3.1 3.0
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes:

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☒ CrVI, ☒ Hg, ☒ HWSB	O. Reg 153: ~~BTEX~~, F1-F4 PHCs	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 153: Aroclors	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: Include Moisture ☐ Sulphide ☐	Potentially Hazardous or High Concentration (Y/N)
23-1 SA1	2023-05-17	11:50 AM/PM	4	Soil			✓	✓	✓	✓		✓						
23-1 SA11	2023-05-17	11:50 AM/PM	3	Soil			✓	✓	✓	✓		✓						
23-2 SA2	2023-05-17	15:[illegible] AM/PM	4	Soil			✓	✓	✓	✓		✓						
23-3 SA2	2023-05-15	10.15 AM/PM	4	Soil			✓	✓	✓	✓		✓						
		AM/PM																
		AM/PM																
		AM/PM																
		AM/PM			EQuIS EDD													
		AM/PM			Facility # 220360930													
		AM/PM																
		AM/PM																

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Rob Ireland	2023-05-19	12:20	C. Griffiths	MAY 19 2023	12h20
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
[illegible]	MAY 19 2023	16h00	GWYNETH V	05/20/23	10:35
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1
N°: T - 139468

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AGAT Laboratories

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CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600

ATTENTION TO: Daniel Stabile

PROJECT: 21494078

AGAT WORK ORDER: 23Z029406

TRACE ORGANICS REVIEWED BY: Radhika Chakraberty, Trace Organics Lab Manager

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Jun 06, 2023

PAGES (INCLUDING COVER): 20

VERSION*: 1

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

*Notes

DRAFT

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.

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Certificate of Analysis

AGAT WORK ORDER: 23Z029406
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

SAMPLE DESCRIPTION:				23-1	23-2	DUP 1	23-3
SAMPLE TYPE:				Water	Water	Water	Water
DATE SAMPLED:				2023-05-25 14:15	2023-05-26 10:00	2023-05-26 10:00	2023-05-26 13:20
Parameter	Unit	G / S	RDL	5025522	5025526	5025527	5025528
Naphthalene	µg/L	7	0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	290	0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	380	0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	1	0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	44	0.20	<0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	5.7	0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	1.8	0.20	<0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	0.7	0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.75	0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.4	0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.81	0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.4	0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	1500	0.20	<0.20	<0.20	<0.20	<0.20
Sediment				1	1	1	1
Surrogate	Unit	Acceptable Limits					
Naphthalene-d8	%	50-140		105	107	106	109
Acridine-d9	%	50-140		90	97	92	95
Terphenyl-d14	%	50-140		85	93	86	90

DRAFT

Certified By: R. Chakraberty

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Certificate of Analysis

AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5025522-5025528 Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

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Certified By: R. Chakraberty

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AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

				SAMPLE DESCRIPTION:	23-1	23-2	DUP 1	23-3
				SAMPLE TYPE:	Water	Water	Water	Water
				DATE SAMPLED:	2023-05-25 14:15	2023-05-26 10:00	2023-05-26 10:00	2023-05-26 13:20
Parameter	Unit	G / S	RDL		5025522	5025526	5025527	5025528
F1 (C6-C10)	µg/L		25		<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100		<100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100		<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100		<100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100		<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100		<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA	NA
Sediment					1	1	1	1
Surrogate	Unit	Acceptable Limits						
Toluene-d8	%	50-140			105	105	103	102
Terphenyl	% Recovery	60-140			61	67	81	92

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Certified By: R. Chakraberty

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AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5025522-5025528 The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

DRAFT

Certified By: R. Chakraberty

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AGAT WORK ORDER: 23Z029406
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

				SAMPLE DESCRIPTION:	VOC Field Blank	VOC Trip Blank
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2023-05-26 13:20	
Parameter	Unit	G / S	RDL		5025530	5025531
Dichlorodifluoromethane	µg/L	3500	0.40		<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17		<0.17	<0.17
Bromomethane	µg/L	0.89	0.20		<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40		<0.40	<0.40
Acetone	µg/L	100000	1.0		<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30		<0.30	<0.30
Methylene Chloride	µg/L	26	0.30		<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20		<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20		<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30		<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0		<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20		<0.20	<0.20
Chloroform	µg/L	2	0.20		<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20		<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30		<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20		<0.20	<0.20
Benzene	µg/L	0.5	0.20		<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20		<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20		<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20		<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0		<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20		<0.20	<0.20
Toluene	µg/L	320	0.20		<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10		<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10		<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20		<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10		<0.10	<0.10
Chlorobenzene	µg/L	140	0.10		<0.10	<0.10
Ethylbenzene	µg/L	54	0.10		<0.10	<0.10

DRAFT

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z029406
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

				SAMPLE DESCRIPTION:	VOC Field Blank	VOC Trip Blank
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2023-05-26 13:20	
Parameter	Unit	G / S	RDL		5025530	5025531
m & p-Xylene	µg/L		0.20		<0.20	<0.20
Bromoform	µg/L	5	0.10		<0.10	<0.10
Styrene	µg/L	43	0.10		<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10	<0.10
o-Xylene	µg/L		0.10		<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20
n-Hexane	µg/L	5	0.20		<0.20	<0.20
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140			106	90
4-Bromofluorobenzene	% Recovery	50-140			83	88

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5025530-5025531 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

DRAFT

Certified By: R. Chakraberty

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z029406
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

SAMPLE DESCRIPTION:				23-1	23-2	DUP 1	23-3
SAMPLE TYPE:				Water	Water	Water	Water
DATE SAMPLED:				2023-05-25 14:15	2023-05-26 10:00	2023-05-26 10:00	2023-05-26 13:20
Parameter	Unit	G / S	RDL	5025522	5025526	5025527	5025528
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	<0.10	<0.10

DRAFT

Certified By: R. Chakraberty

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Certificate of Analysis

AGAT WORK ORDER: 23Z029406
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

				SAMPLE DESCRIPTION:	23-1	23-2	DUP 1	23-3
				SAMPLE TYPE:	Water	Water	Water	Water
				DATE SAMPLED:	2023-05-25 14:15	2023-05-26 10:00	2023-05-26 10:00	2023-05-26 13:20
Parameter	Unit	G / S	RDL		5025522	5025526	5025527	5025528
m & p-Xylene	µg/L		0.20		<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10		<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	43	0.10		<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10		<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20		<0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits						
Toluene-d8	% Recovery	50-140			105	105	103	102
4-Bromofluorobenzene	% Recovery	50-140			91	84	80	90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5025522-5025528 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

DRAFT

Certified By: R. Chakraberty

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Certificate of Analysis

AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

SAMPLE DESCRIPTION:				23-1	23-2	DUP 1	23-3
SAMPLE TYPE:				Water	Water	Water	Water
DATE SAMPLED:				2023-05-25 14:15	2023-05-26 10:00	2023-05-26 10:00	2023-05-26 13:20
Parameter	Unit	G / S	RDL	5025522	5025526	5025527	5025528
Dissolved Antimony	µg/L	16000	1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	1500	1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Barium	µg/L	23000	2.0	162	168	165	152
Dissolved Beryllium	µg/L	53	0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	36000	10.0	337	582	558	308
Dissolved Cadmium	µg/L	2.1	0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	640	2.0	<2.0	<2.0	<2.0	3.4
Dissolved Cobalt	µg/L	52	0.50	1.80	2.19	2.22	2.68
Dissolved Copper	µg/L	69	1.0	1.0	<1.0	1.1	1.1
Dissolved Lead	µg/L	20	0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	7300	0.50	<0.50	0.75	0.57	<0.50
Dissolved Nickel	µg/L	390	1.0	3.6	4.1	4.6	3.1
Dissolved Selenium	µg/L	50	1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Silver	µg/L	1.2	0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	400	0.30	<0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	330	0.50	1.07	1.52	1.53	0.76
Dissolved Vanadium	µg/L	200	0.40	<0.40	<0.40	<0.40	<0.40
Dissolved Zinc	µg/L	890	5.0	<5.0	<5.0	<5.0	<5.0
Mercury	µg/L	0.1	0.02	<0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L	110	2.000	<2.000	<2.000	<2.000	<2.000
Cyanide, WAD	µg/L	52	2	<2	<2	<2	<2
Dissolved Sodium	µg/L	1800000	100	444000	488000	477000	381000
Chloride	µg/L	1800000	100	972000	1110000	1110000	832000
Electrical Conductivity	uS/cm	NA	2	3740	4220	4230	3300
pH	pH Units		NA	7.65	7.59	7.62	7.68

DRAFT

Certified By: Iris Verástegui

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5025522-5025528 Metals analysis completed on a filtered sample.
Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

DRAFT

Certified By: Iris Verástegui

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z029406
ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

Trace Organics Analysis

RPT Date: Jun 06, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	5021359		<0.40	<0.40	NA	< 0.40	87%	50%	140%	106%	50%	140%	108%	50%	140%
Vinyl Chloride	5021359		<0.17	<0.17	NA	< 0.17	106%	50%	140%	101%	50%	140%	81%	50%	140%
Bromomethane	5021359		<0.20	<0.20	NA	< 0.20	111%	50%	140%	93%	50%	140%	80%	50%	140%
Trichlorofluoromethane	5021359		<0.40	<0.40	NA	< 0.40	117%	50%	140%	108%	50%	140%	115%	50%	140%
Acetone	5021359		<1.0	<1.0	NA	< 1.0	101%	50%	140%	118%	50%	140%	105%	50%	140%
1,1-Dichloroethylene	5021359		<0.30	<0.30	NA	< 0.30	112%	50%	140%	89%	60%	130%	83%	50%	140%
Methylene Chloride	5021359		<0.30	<0.30	NA	< 0.30	99%	50%	140%	85%	60%	130%	96%	50%	140%
trans- 1,2-Dichloroethylene	5021359		<0.20	<0.20	NA	< 0.20	111%	50%	140%	88%	60%	130%	98%	50%	140%
Methyl tert-butyl ether	5021359		<0.20	<0.20	NA	< 0.20	78%	50%	140%	90%	60%	130%	70%	50%	140%
1,1-Dichloroethane	5021359		<0.30	<0.30	NA	< 0.30	103%	50%	140%	88%	60%	130%	80%	50%	140%
Methyl Ethyl Ketone	5021359		<1.0	<1.0	NA	< 1.0	87%	50%	140%	91%	50%	140%	80%	50%	140%
cis- 1,2-Dichloroethylene	5021359		<0.20	<0.20	NA	< 0.20	91%	50%	140%	103%	60%	130%	109%	50%	140%
Chloroform	5021359		<0.20	<0.20	NA	< 0.20	101%	50%	140%	103%	60%	130%	105%	50%	140%
1,2-Dichloroethane	5021359		<0.20	<0.20	NA	< 0.20	108%	50%	140%	117%	60%	130%	101%	50%	140%
1,1,1-Trichloroethane	5021359		<0.30	<0.30	NA	< 0.30	98%	50%	140%	86%	60%	130%	91%	50%	140%
Carbon Tetrachloride	5021359		<0.20	<0.20	NA	< 0.20	109%	50%	140%	79%	60%	130%	94%	50%	140%
Benzene	5021359		<0.20	<0.20	NA	< 0.20	82%	50%	140%	102%	60%	130%	96%	50%	140%
1,2-Dichloropropane	5021359		<0.20	<0.20	NA	< 0.20	78%	50%	140%	84%	60%	130%	81%	50%	140%
Trichloroethylene	5021359		<0.20	<0.20	NA	< 0.20	113%	50%	140%	95%	60%	130%	96%	50%	140%
Bromodichloromethane	5021359		<0.20	<0.20	NA	< 0.20	115%	50%	140%	93%	60%	130%	85%	50%	140%
Methyl Isobutyl Ketone	5021359		<1.0	<1.0	NA	< 1.0	85%	50%	140%	99%	50%	140%	82%	50%	140%
1,1,2-Trichloroethane	5021359		<0.20	<0.20	NA	< 0.20	97%	50%	140%	98%	60%	130%	104%	50%	140%
Toluene	5021359		<0.20	<0.20	NA	< 0.20	84%	50%	140%	105%	60%	130%	104%	50%	140%
Dibromochloromethane	5021359		<0.10	<0.10	NA	< 0.10	96%	50%	140%	114%	60%	130%	119%	50%	140%
Ethylene Dibromide	5021359		<0.10	<0.10	NA	< 0.10	89%	50%	140%	106%	60%	130%	108%	50%	140%
Tetrachloroethylene	5021359		<0.20	<0.20	NA	< 0.20	89%	50%	140%	97%	60%	130%	112%	50%	140%
1,1,1,2-Tetrachloroethane	5021359		<0.10	<0.10	NA	< 0.10	96%	50%	140%	99%	60%	130%	104%	50%	140%
Chlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	98%	50%	140%	116%	60%	130%	90%	50%	140%
Ethylbenzene	5021359		<0.10	<0.10	NA	< 0.10	100%	50%	140%	101%	60%	130%	83%	50%	140%
m & p-Xylene	5021359		<0.20	<0.20	NA	< 0.20	105%	50%	140%	89%	60%	130%	112%	50%	140%
Bromoform	5021359		<0.10	<0.10	NA	< 0.10	102%	50%	140%	102%	60%	130%	117%	50%	140%
Styrene	5021359		<0.10	<0.10	NA	< 0.10	94%	50%	140%	95%	60%	130%	122%	50%	140%
1,1,2,2-Tetrachloroethane	5021359		<0.10	<0.10	NA	< 0.10	94%	50%	140%	85%	60%	130%	85%	50%	140%
o-Xylene	5021359		<0.10	<0.10	NA	< 0.10	100%	50%	140%	103%	60%	130%	114%	50%	140%
1,3-Dichlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	112%	50%	140%	115%	60%	130%	97%	50%	140%
1,4-Dichlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	97%	50%	140%	115%	60%	130%	86%	50%	140%
1,2-Dichlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	119%	50%	140%	113%	60%	130%	108%	50%	140%
n-Hexane	5021359		<0.20	<0.20	NA	< 0.20	117%	50%	140%	73%	60%	130%	91%	50%	140%

DRAFT

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z029406
ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

Trace Organics Analysis (Continued)

RPT Date: Jun 06, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)															
F1 (C6-C10)	5021359		<25	<25	NA	< 25	100%	60%	140%	119%	60%	140%	93%	60%	140%
F2 (C10 to C16)	5027965		< 100	< 100	NA	< 100	110%	60%	140%	110%	60%	140%	77%	60%	140%
F3 (C16 to C34)	5027965		< 100	< 100	NA	< 100	110%	60%	140%	99%	60%	140%	72%	60%	140%
F4 (C34 to C50)	5027965		< 100	< 100	NA	< 100	87%	60%	140%	72%	60%	140%	97%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5021359		<0.40	<0.40	NA	< 0.40	87%	50%	140%	106%	50%	140%	108%	50%	140%
Vinyl Chloride	5021359		<0.17	<0.17	NA	< 0.17	106%	50%	140%	101%	50%	140%	81%	50%	140%
Bromomethane	5021359		<0.20	<0.20	NA	< 0.20	111%	50%	140%	93%	50%	140%	80%	50%	140%
Trichlorofluoromethane	5021359		<0.40	<0.40	NA	< 0.40	117%	50%	140%	108%	50%	140%	115%	50%	140%
Acetone	5021359		<1.0	<1.0	NA	< 1.0	101%	50%	140%	118%	50%	140%	105%	50%	140%
1,1-Dichloroethylene	5021359		<0.30	<0.30	NA	< 0.30	112%	50%	140%	89%	60%	130%	83%	50%	140%
Methylene Chloride	5021359		<0.30	<0.30	NA	< 0.30	99%	50%	140%	85%	60%	130%	96%	50%	140%
trans- 1,2-Dichloroethylene	5021359		<0.20	<0.20	NA	< 0.20	111%	50%	140%	88%	60%	130%	98%	50%	140%
Methyl tert-butyl ether	5021359		<0.20	<0.20	NA	< 0.20	78%	50%	140%	90%	60%	130%	70%	50%	140%
1,1-Dichloroethane	5021359		<0.30	<0.30	NA	< 0.30	103%	50%	140%	88%	60%	130%	80%	50%	140%
Methyl Ethyl Ketone	5021359		<1.0	<1.0	NA	< 1.0	87%	50%	140%	91%	50%	140%	80%	50%	140%
cis- 1,2-Dichloroethylene	5021359		<0.20	<0.20	NA	< 0.20	91%	50%	140%	103%	60%	130%	109%	50%	140%
Chloroform	5021359		<0.20	<0.20	NA	< 0.20	101%	50%	140%	103%	60%	130%	105%	50%	140%
1,2-Dichloroethane	5021359		<0.20	<0.20	NA	< 0.20	108%	50%	140%	117%	60%	130%	101%	50%	140%
1,1,1-Trichloroethane	5021359		<0.30	<0.30	NA	< 0.30	98%	50%	140%	86%	60%	130%	91%	50%	140%
Carbon Tetrachloride	5021359		<0.20	<0.20	NA	< 0.20	109%	50%	140%	79%	60%	130%	94%	50%	140%
Benzene	5021359		<0.20	<0.20	NA	< 0.20	82%	50%	140%	102%	60%	130%	96%	50%	140%
1,2-Dichloropropane	5021359		<0.20	<0.20	NA	< 0.20	78%	50%	140%	84%	60%	130%	81%	50%	140%
Trichloroethylene	5021359		<0.20	<0.20	NA	< 0.20	113%	50%	140%	95%	60%	130%	96%	50%	140%
Bromodichloromethane	5021359		<0.20	<0.20	NA	< 0.20	115%	50%	140%	93%	60%	130%	85%	50%	140%
Methyl Isobutyl Ketone	5021359		<1.0	<1.0	NA	< 1.0	85%	50%	140%	99%	50%	140%	82%	50%	140%
1,1,2-Trichloroethane	5021359		<0.20	<0.20	NA	< 0.20	97%	50%	140%	98%	60%	130%	104%	50%	140%
Toluene	5021359		<0.20	<0.20	NA	< 0.20	84%	50%	140%	105%	60%	130%	104%	50%	140%
Dibromochloromethane	5021359		<0.10	<0.10	NA	< 0.10	96%	50%	140%	114%	60%	130%	119%	50%	140%
Ethylene Dibromide	5021359		<0.10	<0.10	NA	< 0.10	89%	50%	140%	106%	60%	130%	108%	50%	140%
Tetrachloroethylene	5021359		<0.20	<0.20	NA	< 0.20	89%	50%	140%	97%	60%	130%	112%	50%	140%
1,1,1,2-Tetrachloroethane	5021359		<0.10	<0.10	NA	< 0.10	96%	50%	140%	99%	60%	130%	104%	50%	140%
Chlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	98%	50%	140%	116%	60%	130%	90%	50%	140%
Ethylbenzene	5021359		<0.10	<0.10	NA	< 0.10	100%	50%	140%	101%	60%	130%	83%	50%	140%
m & p-Xylene	5021359		<0.20	<0.20	NA	< 0.20	105%	50%	140%	89%	60%	130%	112%	50%	140%
Bromoform	5021359		<0.10	<0.10	NA	< 0.10	102%	50%	140%	102%	60%	130%	117%	50%	140%
Styrene	5021359		<0.10	<0.10	NA	< 0.10	94%	50%	140%	95%	60%	130%	122%	50%	140%
1,1,2,2-Tetrachloroethane	5021359		<0.10	<0.10	NA	< 0.10	94%	50%	140%	85%	60%	130%	85%	50%	140%
o-Xylene	5021359		<0.10	<0.10	NA	< 0.10	100%	50%	140%	103%	60%	130%	114%	50%	140%

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z029406
ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

Trace Organics Analysis (Continued)

RPT Date: Jun 06, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	112%	50%	140%	115%	60%	130%	97%	50%	140%
1,4-Dichlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	97%	50%	140%	115%	60%	130%	86%	50%	140%
1,2-Dichlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	119%	50%	140%	113%	60%	130%	108%	50%	140%
n-Hexane	5021359		<0.20	<0.20	NA	< 0.20	117%	50%	140%	73%	60%	130%	91%	50%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene	5020802		<0.20	<0.20	NA	< 0.20	109%	50%	140%	95%	50%	140%	98%	50%	140%
Acenaphthylene	5020802		<0.20	<0.20	NA	< 0.20	111%	50%	140%	91%	50%	140%	94%	50%	140%
Acenaphthene	5020802		<0.20	<0.20	NA	< 0.20	93%	50%	140%	71%	50%	140%	71%	50%	140%
Fluorene	5020802		<0.20	<0.20	NA	< 0.20	117%	50%	140%	90%	50%	140%	89%	50%	140%
Phenanthrene	5020802		<0.10	<0.10	NA	< 0.10	117%	50%	140%	93%	50%	140%	91%	50%	140%
Anthracene	5020802		<0.10	<0.10	NA	< 0.10	101%	50%	140%	83%	50%	140%	80%	50%	140%
Fluoranthene	5020802		<0.20	<0.20	NA	< 0.20	116%	50%	140%	96%	50%	140%	94%	50%	140%
Pyrene	5020802		<0.20	<0.20	NA	< 0.20	118%	50%	140%	102%	50%	140%	100%	50%	140%
Benzo(a)anthracene	5020802		<0.20	<0.20	NA	< 0.20	112%	50%	140%	99%	50%	140%	89%	50%	140%
Chrysene	5020802		<0.10	<0.10	NA	< 0.10	103%	50%	140%	90%	50%	140%	96%	50%	140%
Benzo(b)fluoranthene	5020802		<0.10	<0.10	NA	< 0.10	113%	50%	140%	82%	50%	140%	78%	50%	140%
Benzo(k)fluoranthene	5020802		<0.10	<0.10	NA	< 0.10	114%	50%	140%	87%	50%	140%	91%	50%	140%
Benzo(a)pyrene	5020802		<0.01	<0.01	NA	< 0.01	100%	50%	140%	80%	50%	140%	86%	50%	140%
Indeno(1,2,3-cd)pyrene	5020802		<0.20	<0.20	NA	< 0.20	102%	50%	140%	81%	50%	140%	73%	50%	140%
Dibenz(a,h)anthracene	5020802		<0.20	<0.20	NA	< 0.20	100%	50%	140%	77%	50%	140%	70%	50%	140%
Benzo(g,h,i)perylene	5020802		<0.20	<0.20	NA	< 0.20	117%	50%	140%	81%	50%	140%	86%	50%	140%

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

DRAFT

Certified By: R. Chakraberty

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

Water Analysis

RPT Date: Jun 06, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Water)															
Dissolved Antimony	5025522	5025522	<1.0	<1.0	NA	< 1.0	106%	70%	130%	107%	80%	120%	103%	70%	130%
Dissolved Arsenic	5025522	5025522	<1.0	<1.0	NA	< 1.0	100%	70%	130%	107%	80%	120%	111%	70%	130%
Dissolved Barium	5025522	5025522	162	161	0.6%	< 2.0	92%	70%	130%	95%	80%	120%	121%	70%	130%
Dissolved Beryllium	5025522	5025522	<0.50	<0.50	NA	< 0.50	108%	70%	130%	115%	80%	120%	107%	70%	130%
Dissolved Boron	5025522	5025522	337	333	1.2%	< 10.0	99%	70%	130%	107%	80%	120%	100%	70%	130%
Dissolved Cadmium	5025522	5025522	<0.20	<0.20	NA	< 0.20	100%	70%	130%	101%	80%	120%	103%	70%	130%
Dissolved Chromium	5025522	5025522	<2.0	<2.0	NA	< 2.0	95%	70%	130%	98%	80%	120%	104%	70%	130%
Dissolved Cobalt	5025522	5025522	1.80	1.79	NA	< 0.50	95%	70%	130%	99%	80%	120%	100%	70%	130%
Dissolved Copper	5025522	5025522	1.0	<1.0	NA	< 1.0	98%	70%	130%	95%	80%	120%	93%	70%	130%
Dissolved Lead	5025522	5025522	<0.50	<0.50	NA	< 0.50	100%	70%	130%	100%	80%	120%	90%	70%	130%
Dissolved Molybdenum	5025522	5025522	<0.50	<0.50	NA	< 0.50	101%	70%	130%	105%	80%	120%	110%	70%	130%
Dissolved Nickel	5025522	5025522	3.6	3.3	NA	< 1.0	96%	70%	130%	97%	80%	120%	95%	70%	130%
Dissolved Selenium	5025522	5025522	<1.0	<1.0	NA	< 1.0	106%	70%	130%	113%	80%	120%	109%	70%	130%
Dissolved Silver	5025522	5025522	<0.20	<0.20	NA	< 0.20	97%	70%	130%	98%	80%	120%	92%	70%	130%
Dissolved Thallium	5025522	5025522	<0.30	<0.30	NA	< 0.30	101%	70%	130%	101%	80%	120%	97%	70%	130%
Dissolved Uranium	5025522	5025522	1.07	1.07	NA	< 0.50	99%	70%	130%	108%	80%	120%	109%	70%	130%
Dissolved Vanadium	5025522	5025522	<0.40	<0.40	NA	< 0.40	99%	70%	130%	101%	80%	120%	110%	70%	130%
Dissolved Zinc	5025522	5025522	<5.0	<5.0	NA	< 5.0	101%	70%	130%	97%	80%	120%	98%	70%	130%
Mercury	5025055		<0.02	<0.02	NA	< 0.02	103%	70%	130%	101%	80%	120%	94%	70%	130%
Chromium VI	5025055		<2.000	<2.000	NA	< 2	101%	70%	130%	107%	80%	120%	116%	70%	130%
Cyanide, WAD	5025055		<2	<2	NA	< 2	107%	70%	130%	106%	80%	120%	104%	70%	130%
Dissolved Sodium	5025522	5025522	444000	423000	4.8%	< 50	108%	70%	130%	114%	80%	120%	NA	70%	130%
Chloride	5016529		196000	195000	0.5%	< 100	94%	70%	130%	99%	80%	120%	NA	70%	130%
Electrical Conductivity	5026053		309	309	0.0%	< 2	102%	90%	110%						
pH	5026053		7.66	7.70	0.5%	NA	99%	90%	110%						

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.
Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

DRAFT

Certified By: Iris Verástegui

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			N/A
F1 (C6-C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

DRAFT

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Method Summary

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PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6073	modified from SM 3500-CR B	LACHAT FIA
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Dissolved Sodium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP/MS
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories — WORK ORDER

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

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 23Z029406

Cooler Quantity: one-bagged ice

Arrival Temperatures: 9.8 | 9.6 | 9.6
8.9 | 12.1 | 16.2

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: Melted ice

Report Information:

Company: WSP
Contact: Daniel Stabile / Paul Hurst
Address: 1931 Robertson Rd
Ottawa, Ont - K2H 5B7
Phone: 613-592-9600 Fax: 613-592-9601
Reports to be sent to:
1. Email: Daniel.Stabile@wsp.com
2. Email: Paul.Hurst@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 — Table 7 (Indicate One) — ☐ Ind/Com ☒ Res/Park ☐ Agriculture
Soil Texture (Check One): ☐ Coarse ☐ Fine
☐ Excess Soils R406 — Table ____ (Indicate One)
☐ Regulation 558
☐ CCME
☐ Sewer Use ☐ Sanitary ☐ Storm — Region ____
☐ Prov. Water Quality Objectives (PWQO)
☐ Other ____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): ____

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

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

Project Information:

Project: 21494078
Site Location: 1647 Richmond Rd.
Sampled By: Rob Ireland
AGAT Quote #: 2023 Golder-AGAT MSA 735000E13
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: WSP
Contact: Daniel Stabile / Paul Hurst
Address:
Email: AP-CustomerService@wsp.com

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☒ CrVI, ☒ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 153: Aroclors	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: Include Moisture ☐ Sulphide ☐	Potentially Hazardous or High Concentration (Y/N)
23-1	2023-05-25	14:15 AM/PM	16	GW		Y	✓	✓	✓	✓		✓						
23-2	2023-05-26	10:00 AM/PM	16	GW		Y	✓	✓	✓	✓		✓						
Dup 1	2023-05-26	10:00 AM/PM	16	GW		Y	✓	✓	✓	✓		✓						
23-3	2023-05-26	13:20 AM/PM	16	GW		Y	✓	✓	✓	✓		✓						
VOC Field Blank	2023-05-26	13:20 AM/PM	3	DI Water		N						✓						
VOC Trip Blank		AM/PM	3		Lab supplied	/						✓						
		AM/PM																
		AM/PM																
		AM/PM																
		AM/PM			EMAIS EDD Facility # 230360930													
		AM/PM																
		AM/PM																

'23 MAY 30 8:28 AM

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Rob Ireland	2023-05-26	15:47	C. Guthrie	MAY 26 2023	15h50
~~C. Guthrie~~ Ottawa	2023/05/29	16h00	L. Ferreira	May 30/23	8:30

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N°: T - 139514

Document ID: DIV 78 1511 022

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 2022

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APPENDIX C

Correspondence with the Area Municipality Regarding the Use of Non-potable Groundwater Standards (PENDING)

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APPENDIX D

Sampling and Analysis Plan

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SAMPLING AND ANALYSIS PLAN

DATE May 11, 2023 **Project No.** 21494078

TO Field Supervisor
WSP Canada Inc.

CC Paul Hurst, Project Director, QP; Tim Mullings , Senior Reviewer, Dipl T

FROM Daniel Stabile, Project Manager **EMAIL** Daniel_Stabile@wsp.com

SAMPLING AND ANALYSIS PLAN FOR THE CONVEYED AREA PARCEL AT 1047 RICHMOND ROAD, OTTAWA, ONTARIO

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1.0 OBJECTIVE

The intent of this Phase Two Environmental Site Assessment (ESA) is to investigate the soil and groundwater within the areas of potential environmental concern (APECs) identified in the Phase One ESA at Conveyed Area at 1047 Richmond Rd., Ottawa, Ontario (the "Site"). The Site is currently an inactive car dealership that will be demolished for redevelopment. The Phase Two ESA is required to support a future filing of a Record of Site Condition (RSC) to facilitate the conveyance of the area to the city in the future.

2.0 SITE BACKGROUND

WSP's Phase One team conducted a site visit, and the following APECs were identified. A summary of the APECs identified at the Phase One Property site visit is provided in the following table.

Area of Potential Environmental Concern[1]	**Location of Area of Potential Environmental Concern on Phase One Property**	**Potentially Contaminating Activity[2]**	**Location of PCA (on-Site or off-Site)**	**Contaminants of Potential Concern[3]**	**Media Potentially Impacted**
APEC 1 – Inferred fill materials to be present site-wide	Entire Site	*# 30. Importation of Fill Material of Unknown Quality*	On-Site	Metals, Hydride-Forming Metals, ORP and PAH	Soil
APEC 2 – Entire Site	Entire Site	*# OTHER. The application of de-icing salt for the purposes of vehicular and pedestrian safety has occurred at the Phase One Property.*	On-Site	SAR, EC, sodium, chloride	Soil and groundwater
APEC 3 – Off-site automotive garage	Northeast of the Site	*#10. Commercial Autobody Shops*	Off-Site	PHCs F1-F4, BTEX and VOCs	Soil and groundwater

WSP Canda Inc.
100 Scotia Court, Whitby, Ontario, L1N 8Y6, Canada T: +1 905 723 2727 F: +1 905 723 2182

3.0 SITE ACCESS REQUIREMENTS

Table 1: Site Access

Access Concern	Information
Site Contacts	Corina Sajewski Director, Development C: +1-(647)-895-7245 corina.sajewski@fengate.com
Access	No restrictions.
Hours of Work	Within daylight hours (Approx. 7 am to 6 pm)
Site Check-In/Out Procedures	Daily check-in/out with Daniel Stabile
Photography	No restrictions.
H&S	Follow the HaSEP and COVID procedure Conduct tailgate with drilling crew.

4.0 GENERAL REQUIREMENTS

- Follow standard operating procedures for drilling, soil logging, and soil sampling. All work is to be completed assuming a Record of Site Condition will be required.
- Follow WSP Standard Operating Procedures (SOPs) referenced in this sampling and analysis plan and use WSP standard field forms.
- Complete a Daily Log and Field Level Risk Analysis (FLRA) form for every day of fieldwork.
- New disposable Nitrile™ gloves will be used at each sampling location to prevent cross-contamination.
- All non-dedicated sampling equipment (e.g., interface probes) will be decontaminated between sampling locations. Sampling equipment in contact with soil or groundwater will be washed with a laboratory-grade detergent solution (i.e. phosphate-free AlcoNox) and thoroughly rinsed with analyte-free water. Use plastic pales from any hardware store. They can also be used for wastewater storage.

5.0 PRIVATE LOCATES

- Private locates was completed on May 8, 2023, with USL-1.
- Bring public and private locate sheets with you to the Site.
- Ensure the private locator clears each borehole location before leaving the Site and that the radius of 2-3 m clearance is provided by the locator for each location. Adjust locations as applicable. If in doubt/clear a second nearby location as an alternate.

6.0 DRILLING ACTIVITIES

- Borehole drilling and monitoring well installation is booked for May 15-17, 2023, with Strata Drilling Group at 8 am.

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6.1 Borehole Drilling and Soil Sampling

- Ensure that borehole drilling and soil sampling is carried out in conformance with SOP No. 3: Borehole Drilling and Sampling.
- Confirm that the private locator has cleared every drilling location before penetrating the ground.
- Borehole IDs are found in the proposed BH locations plan.
- Screen overburden soil samples at maximum 0.6 m (2 ft) intervals using a combustible gas and photoionization detector (i.e. RKI Eagle, calibrated for hexane and isobutylene), as per SOP No. 4: Headspace Screening.
- Collect the 40 ml vails first, then fill the headspace bag for measurement.
- Log overburden soil stratigraphy at maximum 0.6 m (2 ft) intervals, as per SOP No. 6: Soil Logging and SOP No. 14: Soil Classification and Description.
- Bedrock is expected to be encountered from 3 – 4 m bgs. After this depth, the drilling will be performed with air hammer tooling, and no soil samples will be collected.
- Collect soil samples (including 2 x vials per interval) at a maximum of 0.6 m (2 ft) intervals from the ground surface to borehole refusal (call Daniel Stabile if soil conditions are tight or soil recovery is not satisfactory). Submit soil samples in accordance with Table 2 (below).
- *Duplicate samples to be collected and submitted for analysis at a rate of one duplicate per every ten samples submitted to the laboratory. A summary of duplicates required is included at the end of Table 2.*
- *Collect duplicates (as needed) at the same intervals of the higher headspace readings and/or according to Table 2. (keep your soil cores until you finalize the headspace headings); and from the inferred capillary fringe/water table interface interval.*
- Each interval you should fill: 2 x 40 ml Methanol Vails for VOC and PHC F1 analysis; 1 x 120 ml jar for PHC F2-F4 and moisture and 1 x 250 ml jar (up to 1.5 m bgs) for Metals and ORP. *For duplicates, double the number of containers for the duplicated interval.*
- Samples are to be stored in coolers with ice after collection (the samples must be below 10°C upon receipt to the lab). Bring ice to the Site in the morning.
- Fill out the chain of custody per the details in Table 5.
- Ask drillers to leave one 200L drum to store purged groundwater for the development and sampling stages and one (as needed) steel drum per BH location to store drilling cutting.
- Bedrock refusal is expected at 2-3 m bgs. After that, soil/rock sampling is not required. No rock coring will be done once the drilling setup is air hammering.

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Table 2: Borehole drilling and Soil Sampling

ID	Rationale	Proposed Investigation	Laboratory Soil Analysis
BH23-1	Investigate possible impacts at the fill brought to the site during the first site development and throughout the site history	APEC 1 – Inferred fill materials to be present site-wide (*# 30. Importation of Fill Material of Unknown Quality*) APEC 2 – The application of de-icing salt for the purposes of vehicular and pedestrian safety has occurred at the Phase One Property. APEC 3 – Off-Site automotive garage (*#10. Commercial Autobody Shops*) Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 2-5 m bgs).	**1 x Sample** *(1 surface soil – up to 1.5 mbgs)*: **PAH, Metals, Hydride-Forming Metals and ORP** *(based on visual observations)* **1 x Sample** *(higher headspace reading/capillary fringe)*: **VOC and PHC** *(based on headspace and visual/olfactory observations)*
BH23-2	Investigate possible impacts at the fill brought to the site during the first site development and throughout the site history	APEC 1 – Inferred fill materials to be present site-wide (*# 30. Importation of Fill Material of Unknown Quality*) APEC 2 – The application of de-icing salt for the purposes of vehicular and pedestrian safety has occurred at the Phase One Property. Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 2-5 m bgs).	**1 x Sample** *(1 surface soil – up to 1.5 mbgs)*: **PAH, Metals, Hydride-Forming Metals and ORP** *(based on visual observations)* **1 x Sample** *(higher headspace reading/capillary fringe)*: **VOC and PHC** *(based on headspace and visual/olfactory observations)*
BH23-3	Investigate possible impacts from off-Site Automotive Shop	APEC 1 – Inferred fill materials to be present site-wide (*# 30. Importation of Fill Material of Unknown Quality*) APEC 2 – The application of de-icing salt for the purposes of vehicular and pedestrian safety has occurred at the Phase One Property. APEC 3 – Off-site automotive garage (*#10. Commercial Autobody Shops*) Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 2-5 m bgs).	**1 x Sample** *(1 surface soil – up to 1.5 mbgs)*: **PAH, Metals, Hydride-Forming Metals, pH and ORP** *(based on visual observations)* **1 x Sample** *(higher headspace reading/capillary fringe)*: **pH, VOC and PHC** *(based on headspace and visual/olfactory observations)*
Grain Size: submit **two soil samples** for grain size – one from 0.0-1.5m bgs) and the second at or near the anticipated water table			
Duplicate Samples: One duplicate soil sample for each VOC, PAH, PHC, and M&ORP (Higher VOC/worst case)			

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6.2 Monitoring Well Installation

- Refer to SOP No. 1: Monitoring Well Installation. The monitoring wells will consist of 50 mm inner diameter ("ID") Schedule 40 polyvinyl chloride ("PVC") casing and 50 mm ID Schedule 40 PVC well screen (up to 3 metres in length, #10 slot size); sand pack surrounding the screen will be #00 or #0. The annulus will be backfilled using clean silica sand around the screened portion, extending approximately 0.3 to 0.6 m above the screen, followed by bentonite to just below the ground surface. The monitoring wells will be completed with a flush-mounted style protective casing set in concrete and sealed with a PVC j-plug. Label the j-plug with the monitoring well ID during installation. Mark the reference point at the top of well pipe with a small notch. Do NOT use sharpie/marker to mark out reference point.
- Please confirm monitoring well construction with Daniel Stabile prior to installation where any deviation from our typical monitoring well construction is expected.
- Install environmental monitoring wells per the details in Table 3.
- If water table is encountered within overburden, before the last spoon/interval is sampled, take a picture of the BH log and send it to Daniel Stabile for review and definition on the monitoring well design.
- If water table is within the bedrock, well is to be sealed completely on the bedrock to avoid water from the overburden to infiltrate inside the well through the bentonite seal and sand pack.

Table 3: Monitoring Well Construction Details

Location	Well Screen (m bgs)	Screen Length (ft / m)	Well Diameter (mm)	Protective Casing Type
BH23-1	2 to 5 – depending on finding the water table	10 / 3	50	Flush-mount
BH23-2				
BH23-3				

- Well depths are to be adjusted during drilling.

7.0 MONITORING WELL DEVELOPMENT OF NEWLY INSTALLED WELLS

- Monitoring well development of the newly installed to be done after the well installation.
- Develop each newly installed monitoring well in accordance with SOP No. 5: Monitoring Well Development.
- Develop the monitoring well with Waterra tubing, foot valve, and surge block for two minutes of pumping for each 0.3 m (1 ft) of the screen.
- Following the surging, continue to purge the ten well volumes or until dry three times.
- Contain all purge water in labelled and sealed drums/totes for off-site disposal.
- Please contact Daniel Stabile if you observe or suspect that there is sheen/product in any monitoring well.

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8.0 GROUNDWATER MONITORING AND SAMPLE COLLECTION

- Groundwater monitoring from the monitoring wells located at the Site and groundwater sample collection of the newly installed monitoring wells.

8.1 Groundwater Monitoring

- Collect water levels using a water level tape from the monitoring wells at the Site before collecting groundwater samples from any monitoring wells.
- Please contact Daniel Stabile if you observe or suspect that there is free product in any monitoring well.
- If product is detected or product signs are observed during monitoring well development, check for product thickness with a bailer and take photos of the bailer (regardless of whether product is observed). Record product thickness using the interface probe and the bailer.
    - Clean interface probe and dispose of bailer immediately if impacts are observed.

8.2 Groundwater Sample Collection

- Refer to SOP No. 10: Low Flow Sample Collection and SOP No. 12: Measurement of Field Parameters. Use the "Groundwater Sample Collection" form to collect all data during groundwater sampling.
- Use a low-flow pump for purging and sample collection and monitor depth to groundwater and water quality field parameters (i.e., pH, specific conductivity, temperature, dissolved oxygen, and reduction-oxidation potential) in accordance with SOP Nos. 10 and 12. If field water quality parameters do not stabilize during low flow purging, do not purge longer than 30 minutes before collecting a groundwater sample.
- If drawdown in the monitoring well is greater than 0.3 m but remains stable, continue purging. If the drawdown is more significant than 0.3 m and is not stable, then complete purging and sample collection in accordance with SOP No. 9: Conventional Groundwater Sample Collection or use the low-field procedure. Sample with a bailer if using the conventional method.
- For wells that can use the conventional method based on observations during development, complete the purging at the beginning of the day and return to the well at the end of the day for sampling.
- Collect groundwater samples in accordance with Table 4. Collect QA/QC samples as indicated at the end of Table 4. The duplicate groundwater samples should be labelled in a manner that the laboratory cannot readily identify the sample as a duplicate (i.e. DUP1). A trip blank sample is required for every groundwater sample submission, and one field blank sample is also required (DI water is provided).
- Metals are to be field filtered per lab requirements.
- Samples are to be stored in coolers with ice after collection (the samples **must** be below 10°C upon receipt to the lab).
- Fill out the chain of custody per the details in Table 5.

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Table 4: Groundwater Sampling Plan (Field Check List)

Location	Laboratory Groundwater Analysis			Sampled?	
	VOC	PHC (F1-F4)	M&ORP	YES	NO
BH23-1	X	X	X	☐	☐
BH23-2	X	X	X	☐	☐
BH23-3	X	X	X	☐	☐
Total Samples	3	3	3	☐	☐
Duplicate Samples: One duplicate groundwater sample for each VOC, PHC, and M&ORP **Trip Blanks:** One trip blank per groundwater sample submission for VOC **Field Blank:** One field blank for VOC					

9.0 CHAIN OF CUSTODY INFORMATION

- Please send a copy of the chain of custody to Daniel Stabile for review prior to submitting the soil and groundwater samples to the laboratory.
- After confirmation/approval, staff can submit samples for analysis.

Table 5: Chain of Custody Details

Chain of Custody Item	Information
Analytical Laboratory	AGAT Labs
Generic Site Condition Standards (SCS)	O. Reg 153/05 Table 7, Residential/Parkland/Institutional
Use Record of Site Condition analytical procedures?	Yes
Turn-around Time	Regular TAT
WSP Reporting Contact	Daniel.Stabile@wsp.com Kristina.Small@wsp.com
Project-Specific Quote Number	2023 Golder-AGAT MSA 735000EB (include *WORK ORDER* on the header of the CoC and provide a signature on the bottom)
Billing Details	AP_CustomerService@wsp.com
Is an EQUIS EDD Required?	YES - Facility # 230360930

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10.0 SURVEYING

- Drilling locations will be surveyed during private locates.
- Northing and easting coordinates will be collected to a +/- 10 cm accuracy.
- Elevations of the ground surface to be measured off of a local benchmark.
- During monitoring events, measure the distance from the top of the pipe to the ground surface/flush mount.

11.0 INVESTIGATION DERIVED WASTE

- Garbage, such as gloves, bags, etc., is to be taken off-site for disposal.
- Label drums for waste management purposes, including the project number, date, site location, drum contents (soil cuttings, purge water).
- Drums should be grouped and placed in an area of the Site for easy disposal. Confirm with the Property Representative (Peter/Michele) where the best location on the Site would be. This is needed to be agreed upon between the Site Supervisor, PM and site representative as soon as possible during the fieldwork.
- Record inventory of waste containers in the field notes.

12.0 DOCUMENT MANAGEMENT

- Field staff submits scanned field notes to Daniel.Stabile@wsp.com. This does not need to be daily but should be weekly for more extensive programs or at the end.
- Put all files in one pdf, and the file name should be as follows: PROJECT_NUMBER Field Notes COMPLETION_DATE" (for example, "1712345 Field Notes April 27, 2023.pdf).
- Take photos, at least two at each one of the drilling/sampling locations showing: (1) general area of drilling; (2) detailed photo of the drilling or some specific aspect you want to highlight and; (3) H&S photo – optional. Take a photo of the drum's storage area.

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https://wsponline.sharepoint.com/sites/gld-152441/project files/6 deliverables/ph two conveyed area/appendix d - sap/21494078-reva-fengate 1047 richmond rd conveyed area sap-8may2023.docx

APPENDIX E

Record of Borehole Sheets

DRAFT

PROJECT: 21494078

LOCATION: N 5026270.00; E 361286.70

RECORD OF BOREHOLE: BH23-01

BORING DATE: May 17, 2023

DRILL RIG: Massenza MI3

SHEET 1 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.64						
0	Air Rotary, 140 mm Casing	ASPHALTIC CONCRETE		0.00						
		FILL - (SW) gravelly SAND, angular; grey; (Pavement Structure)		0.05						
		FILL - (SP) SAND, fine to medium, trace silt; brown; non-cohesive, moist		0.15	1			⊕ ND		Flushmount
		(SM/ML) gravelly SILTY SAND to sandy SILT, trace plastic fines; brown; non-cohesive, moist		65.03 0.61						
1		(GP) GRAVEL, trace silty sand, weathered bedrock; brown; non-cohesive, moist		64.73 0.91	2			⊕ ND		
	Air Rotary, 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey, fine grained, non-porous to faintly porous, medium strong, Dolostone, interbedded with shale, limestone and sandstone		64.42 1.22						Bentonite Seal
2										
3										
4										
5										
6										
7										
8		*CONTINUED NEXT PAGE*								

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DEPTH SCALE

1 : 40

LOGGED:

CHECKED: DS

PROJECT: 21494078

LOCATION: N 5026270.00; E 361286.70

RECORD OF BOREHOLE: BH23-01

BORING DATE: May 17, 2023

DRILL RIG: Massenza MI3

SHEET 2 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*								
8	Air Rotary 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey, fine grained, non-porous to faintly porous, medium strong, Dolostone, interbedded with shale, limestone and sandstone								Bentonite Seal
9										
10										Sand #2
11										
12										Screen
13										Sand #2
13				51.77 13.87						
14		END OF BOREHOLE Notes: 1. Water level measured at a depth of 11.91 m below ground surface (El. 53.73 m asl), May 23, 2023.								
15										
16										

DEPTH SCALE

1 : 40

LOGGED:

CHECKED: DS

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PROJECT: 21494078

LOCATION: N 5026255.00; E 361292.60

RECORD OF BOREHOLE: BH23-02

BORING DATE: May 17, 2023

DRILL RIG: Massenza MI3

SHEET 1 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0		GROUND SURFACE		65.98						
	Air Rotary 140 mm Casing	ASPHALTIC CONCRETE		0.00 / 0.05						
		FILL - (SW) gravelly SAND, angular; grey; (Pavement Structure)		0.18						
		FILL - (SP) SAND, fine to medium, trace silt; brown; non-cohesive, moist		65.52	1			⊕ ND		Flushmount
1		(SM/ML) gravelly SILTY SAND to sandy SILT, trace plastic fines; dark brown to grey-brown, possibly weathered bedrock; non-cohesive, moist to wet		0.46	2			⊕ ND		
				64.76						
	Air Rotary 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey; fine grained, non-porous to faintly porous, medium strong, Dolostone, interbedded with shale, limestone and sandstone		1.22						Bentonite Seal
2										
3										
4										
5										
6										
7										
8		*CONTINUED NEXT PAGE*								

DEPTH SCALE

1 : 40

LOGGED:

CHECKED: DS

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PROJECT: 21494078

LOCATION: N 5026255.00; E 361292.60

RECORD OF BOREHOLE: BH23-02

BORING DATE: May 17, 2023

DRILL RIG: Massenza MI3

SHEET 2 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp, W, Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*								
8	Air Rotary, 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey; fine grained, non-porous to faintly porous, medium strong, Dolostone, interbedded with shale, limestone and sandstone								Bentonite Seal
9										
10										
11										Sand #2
12										
13										Screen
14										
15										Sand #2
		END OF BOREHOLE		50.44 / 15.54						
		Notes:								
16		*CONTINUED NEXT PAGE*								

DEPTH SCALE

1 : 40

LOGGED:

CHECKED: DS

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PROJECT: 21494078

LOCATION: N 5026255.00; E 361292.60

RECORD OF BOREHOLE: BH23-02

BORING DATE: May 17, 2023

DRILL RIG: Massenza MI3

SHEET 3 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA PLOT	SOIL PROFILE: ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
16		*--- CONTINUED FROM PREVIOUS PAGE ---*									
		1. Water level measured at a depth of 12.55 m below ground surface (El. 53.43 m asl), May 23, 2023.									
17											
18											
19											
20											
21											
22											
23											
24											

DEPTH SCALE

1 : 40

LOGGED:

CHECKED: DS

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PROJECT: 21494078

LOCATION: N 5026280.00; E 361311.60

RECORD OF BOREHOLE: BH23-03

BORING DATE: May 15, 2023

DRILL RIG: Massenza MI3

SHEET 1 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		66.00						
0	Air Rotary, 140 mm Casing	ASPHALTIC CONCRETE		0.00						
		FILL - (SW) gravelly SAND, angular; grey; (Pavement Structure)		0.10						
		FILL - (SP) SAND, fine to medium, trace silt, some gravel; brown; non-cohesive, moist		0.20 / 65.39	1					Flushmount
		FILL - (SM) SILTY SAND, some gravel to gravelly, organic matter; brown to dark brown; non-cohesive, moist		0.61 / 65.09	2			ND		
1	Air Rotary, 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey, fine grained, non-porous to faintly porous, medium strong, Dolostone, interbedded with shale, limestone and sandstone		0.91						
2										
3										
4										Bentonite Seal
5										
6										
7										
8		*CONTINUED NEXT PAGE*								

DEPTH SCALE

1 : 40

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PROJECT: 21494078

LOCATION: N 5026280.00; E 361311.60

RECORD OF BOREHOLE: BH23-03

BORING DATE: May 15, 2023

DRILL RIG: Massenza MI3

SHEET 2 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*								
8	Air Rotary 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey, fine grained, non-porous to faintly porous, medium strong, Dolostone, interbedded with shale, limestone and sandstone								Bentonite Seal
9										
10										
11										Sand #2
12										
13										Screen
14				51.37 / 14.63						Sand #2
15		END OF BOREHOLE Notes: 1. Water level measured at a depth of 12.85 m below ground surface (El. 53.15 m asl), May 23, 2023.								
16										

DEPTH SCALE

1 : 40

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APPENDIX F

Remedial Excavation Report

DRAFT

May 29, 2024 Project No. 21494078

1047 Richmond Nominee Inc.
2275 Upper Middle Road East, Suite 700
Oakville, ON
L6H 0C3

REMEDIAL EXCAVATION, 1047 RICHMOND ROAD (PARKLAND), OTTAWA, ONTARIO

WSP Canada Inc. (WSP), was retained by 1047 Richmond Nominee Inc. to complete a Phase Two Environmental Site Assessment (ESA) on a 0.101-hectare portion of the property parcel with municipal address 1047 Richmond Road in Ottawa, Ontario (the Phase Two Property). The Phase Two Property is located on the southern corner of the larger 1047 Richmond Road property. The larger property is eventually going to be redeveloped into a mixed residential-commercial development while the Phase Two Property is to be conveyed to the City of Ottawa for redevelopment as a small municipal park. The Phase Two Property is currently considered commercial property use (a parking lot that was associated with of a former automotive dealership located on the larger parcel) and a Record of Site Condition (RSC) will therefore be required prior to the Phase Two Property being redeveloped as a municipal park.

During the Phase Two ESA investigation, soil with a concentration of cobalt exceeding the applicable MECP[1] Table 7 Generic Site Conditions Standards for Shallow Soils in a Non-Potable Ground Water Condition, residential/parkland/institutional property use, coarse soil texture (MECP Table 7 Standards) was encountered at a borehole advanced on the northeastern area of the Phase Two Property. A remediation was undertaken to address the cobalt exceedance with the object of obtaining a generic RSC.

This letter provides a summary of the remedial excavation and confirmatory sampling conducted on November 17, 2023. No exceedances of MECP Table 7 Standards were identified in the confirmatory samples collected from the extents of the remedial excavation.

Remedial Actions

The cobalt exceedance was identified in a soil sample collected from borehole BH23-03 at a depth of 0.61 to 0.91 meters below ground surface (m bgs). Prior to the remedial actions being undertaken, the monitoring well that was installed into the underlying bedrock at BH23-03 was decommissioned by a licensed well technician employed by Strata Soil (Strata) in accordance with O.Reg. 903: Wells. Decomissioning was conducted under the supervision of WSP field personnel.

[1] MECP – Ministry of Environment, Conservation and Parks. Document titled "*Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, April 15, 2011*"

WSP Canada Inc.
100 Scotia Court Whitby
Ontario L1N 8Y6
T: +1 905 723 2727 F: +1 905 723 2182

DRAFT

On November 17, 2023 an excavation centred on the former location of BH23-03 was advanced using an excavator supplied and operated by 1047 Richmond Nominee Inc. under the direction of WSP. The excavation was advanced in stages, first to approximate dimensions of 1 m by 1 m centred on BH23-03, then extended to approximate dimensions of 3 m by 3 m. During both stages, the excavation and was advanced to the underlying bedrock surface at a depth of 0.91 m. A total soil volume of approximately 8.2 m^3 was excavated. Excavated materials were deposited directly into a waiting haul truck for transport off Site to an appropriate disposal facility. The final extent of the remedial excavation is shown on Figure 1, after the text.

Confirmatory samples were collected by WSP from the north, east, south, and west walls of the excavation at both the 1 m by 1 m, and 3 m by 3 m stage. Confirmatory samples were obtained from the same depth as the BH23-03 sample, 0.61 to 0.91 m bgs. Vertical delineation was achieved by the presence of shallow bedrock in the area, with no floor samples able to be collected. The four confirmatory soil samples collected from the 1m by 1 m stage of the excavation (SA1A, SA2A, SA3A, and SA4A) and one field duplicate (SA1A Dup) were submitted to AGAT Laboratories (AGAT) for analysis of metals, hydride-forming metals, SAR, EC, pH, mercury, cyanide, and chromium. AGAT is accredited in accordance with the International Standard ISO/IEC 17025 (CALA) (General Requirement for the Competence of Testing and Calibration Laboratories, May 5, 2005, as amended) and the standards for proficiency testing developed by the Standards Council of Canada, the Canadian Association for Laboratory Accreditation or another accreditation body accepted by the MECP. The confirmatory samples collected from the 3 m by 3 m stage of the excavation (SA5A, SA6A, SA7A, and SA8A) were submitted to AGAT on hold pending the analytical results of the 1 m by 1 m confirmatory samples.

Free Flowing Product

No free flowing product was observed in the remedial excavation and no free flowing product is known to exist at the Phase Two Property.

Results of Confirmation Sampling and Analysis

The analytical results for all confirmatory soil samples were compared to MECP Table 7 Standards. The reported concentrations for the confirmatory soil samples in comparison to the MECP Table 7 Standards are summarized in Table 1 following the text of this report. The laboratory certificates of analysis are provided in Attachment A.

The reported concentrations of all contaminants of potential concern in the confirmatory samples collected from the 1 m by 1 m stage of the excavation were below the applicable MECP Table 7 Standards. The confirmatory samples collected from the 3 m by 3 m stage of the excavation were therefore not analysed as all impacted soil was confirmed to have been removed.

The relative percent differences (RPD) of the reported results for the duplicate sample pair SA1A and SA1A Dup were calculated in accordance with the MECP document: *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act,* April 15, 2011. Based on the analytical results of the field duplicate and its parent sample, the RPD are within acceptable control limits (<30% in soil for metals, hydride-forming metals and ORP).

Conclusions

The reported concentrations of all confirmatory soil samples met the applicable MECP Table 7 Standards, therefore, no additional assessment of remediation work is required in support of filing a Record of Site Condition (RSC).

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Limitations

This report was prepared for the exclusive use of 1047 Richmond Nominee Inc. No third parties may rely upon this report. Any use which a third party makes of this report, or any reliance on or decision to be made based on it, is the sole responsibility of such third party. This report is based on data and information collected during this investigation by WSP Canada Inc. in accordance with our proposal and is based solely on-Site conditions encountered at the time of Site characterization activities. Only limited chemical analyses of soil samples were carried out. Regulatory criteria are used for comparison purposes only and are not necessarily enforceable on the Site owner. It should be noted that the results of an investigation of this nature should, in no way, be construed as a warranty that the Site is free from any and all contamination from past or current practices.

If additional information is obtained during future work at the Site, including excavations, borings, or other studies, and/or if conditions exposed during construction are different from those encountered in this assessment, WSP should be requested to re-evaluate the conclusions presented in this report and provide amendments as required.

Closing

We trust this letter is sufficient for your current needs. If you have any questions, please do not hesitate to contact the undersigned.

WSP Canada Inc.

Sofia Herczegh, M.Sc., EPt
Environmental Scientist

Kristina Small, M.Sc., P.Geo., QPESA
Contaminant Hydrogeologist

SH/KS/sg
https://wsponline.sharepoint.com/sites/gld-152441/project files/6 deliverables/ph two conveyed area/appendix f - remedial excavation report/21494078-reva-appfremed-fengate-29may2024.docx

Attachments: Table 1 – Soil Analytical Results – Metals, Hydride-Forming Metals, and Other Regulated Parameters (ORP)
Figure 1 – Final Extents of Remedial Excavation
Attachment A – Certificates of Analysis

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Table

Table 1

Soil Delineation Analytical Results - Metals and Other Regulated Parameters

1047 Richmond Road, Ottawa, Ontario

			Sample Location	SA1A	SA1A Dup	SA2A	SA3A	SA4A
			Sample Date	17-11-2023	17-11-2023	17-11-2023	17-11-2023	17-11-2023
			Sample Depth	0.61 - 0.91 m	0.61 - 0.91 m	0.61 - 0.91 m	0.61 - 0.91 m	0.61 - 0.91 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**		Field Duplicate			
Metals								
Barium	390	ug/g	143	102	25.4	148	119
Beryllium	4	ug/g	0.7	<0.5	<0.5	0.8	0.6
Boron	120	ug/g	15	10	<5	14	9
Cadmium	1.2	ug/g	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	160	ug/g	30	21	10	32	26
Cobalt	22	ug/g	21.2	12.4	4.2	21.2	17.3
Copper	140	ug/g	24.9	21.2	5.6	25.1	27.8
Lead	120	ug/g	28	30	4	22	34
Molybdenum	6.9	ug/g	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel	100	ug/g	27	18	7	31	25
Silver	20	ug/g	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Thallium	1	ug/g	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Uranium	23	ug/g	0.51	0.56	< 0.50	< 0.5	< 0.50
Vanadium	86	ug/g	28.9	24.2	18.6	26.7	25.4
Zinc	340	ug/g	74	58	24	68	73
Metals, Hydride-Forming							
Antimony	7.5	ug/g	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium	2.4	ug/g	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Arsenic	18	ug/g	2	1	<1	1	2
Other Regulated Parameters							
Boron, Hot Water Soluble	1.5	ug/g	0.34	0.30	0.1	0.34	0.29
Hexavalent Chromium	8	ug/g	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Cyanide (WAD)	0.051	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Conductivity	0.7	ms/cm	0.504	0.327	0.218	0.399	0.361
Mercury	0.27	ug/g	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium Adsorption Ratio	5	none	0.543	0.662	0.465	0.536	0.55
pH	5 - 9	pH units	7.42	7.31	7.4	7.2	7.25
Moisture, Percent	NV	%	-	-	-	-	-

DRAFT

Notes:

Bold: Value exceeding Table 7 standards

REG153 (11) T7-R/P/I SOIL COARSE — Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition

ug/g: micrograms per gram

ms/cm: microsiemens per centimeter

%: percentage

NV: No Value

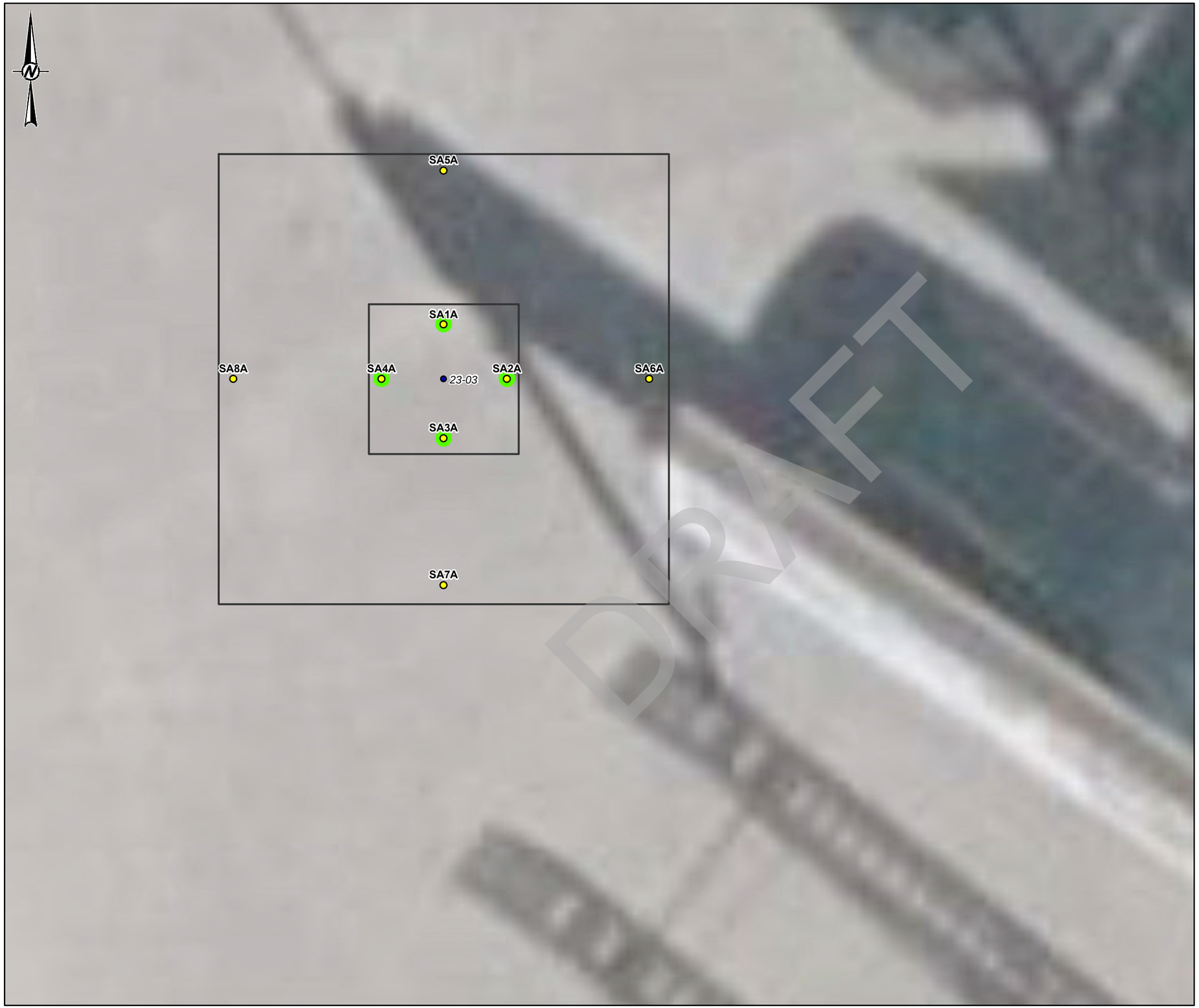
<: Indicates parameter not detected above laboratory method detection limit.

Data Entered By: DS

Checked By: SH

DRAFT

Figure



LEGEND

- BOREHOLE LOCATION
- APPROXIMATE SAMPLE LOCATION
- LOCATIONS WHERE ALL SAMPLES MEET APPLICABLE STANDARDS
- EXCAVATION AREA

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE
2. ALL SAMPLES WERE TAKEN 0.61-0.91 (DEPTH OF EXCAVATION) THEN RESAMPLED AT SAME DEPTH 0.61-0.91.
3. DEPTH 1.22 MBGS (BEDROCK)
4. O.REG 153 (2011) TABLE STANDARDS FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL (R/P/I) PROPERTY USE FOR COARSE TEXTURED SOIL IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION.

REFERENCE(S)

1. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 0.325 0.65 1.3

1:26 METRES

CLIENT
LPF DEVELOPMENT FUND 3

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
SITE EXCAVATION AREA AND CONFIRMATORY SAMPLE LOCATIONS

CONSULTANT

YYYY-MM-DD	5/28/2024
DESIGNED	----
PREPARED	RRD
REVIEWED	DS
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0008	0	**F1**

DRAFT

Path: S:\Clients\Fengate\1047_Richmond_R d99_PRO_02 1494078_Fengate_GeoEnvrc\0008_Excavation\21494078-0008-eHS-0002.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm 0

DRAFT

ATTACHMENT A

Certificates of Analysis

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

CLIENT NAME: WSP CANADA INC.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727
ATTENTION TO: Daniel Stabile
PROJECT: 21494078 Fengate Ph Two
AGAT WORK ORDER: 23Z094471
SOIL ANALYSIS REVIEWED BY: Sukhwinder Randhawa, Inorganic Team Lead
DATE REPORTED: Nov 28, 2023
PAGES (INCLUDING COVER): 11
VERSION*: 1

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

*Notes

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Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

Ignitability in Soil

DATE RECEIVED: 2023-11-17

DATE REPORTED: 2023-11-28

				SAMPLE DESCRIPTION:	TCLP1
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2023-11-17 10:50
Parameter	Unit	G / S	RDL	5471058	
Ignitability				N	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5471058 N = Non-Flammable Solid

Analysis performed at AGAT Toronto (unless marked by *)

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Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2023-11-17

DATE REPORTED: 2023-11-28

SAMPLE DESCRIPTION:				SA1A	SA1A Dup	SA2A	SA3A	SA4A
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2023-11-17 10:30	2023-11-17 10:30	2023-11-17 10:35	2023-11-17 10:40	2023-11-17 10:45
Parameter	Unit	G / S	RDL	5471044	5471049	5471054	5471056	5471057
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	2	1	<1	1	2
Barium	µg/g	390	2.0	143	102	25.4	148	119
Beryllium	µg/g	4	0.5	0.7	<0.5	<0.5	0.8	0.6
Boron	µg/g	120	5	15	10	<5	14	9
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.34	0.30	0.10	0.34	0.29
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	30	21	10	32	26
Cobalt	µg/g	22	0.8	21.2	12.4	4.2	21.2	17.3
Copper	µg/g	140	1.0	24.9	21.2	5.6	25.1	27.8
Lead	µg/g	120	1	28	30	4	22	34
Molybdenum	µg/g	6.9	0.5	<0.5	<0.5	<0.5	<0.5	0.5
Nickel	µg/g	100	1	27	18	7	31	25
Selenium	µg/g	2.4	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	<0.50	0.51	<0.50	<0.50	<0.50
Vanadium	µg/g	86	2.0	28.9	24.2	18.6	26.7	25.4
Zinc	µg/g	340	5	74	58	24	68	73
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.504	0.327	0.218	0.399	0.361
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.543	0.662	0.465	0.536	0.550
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.42	7.31	7.40	7.20	7.25

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Certificate of Analysis

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2023-11-17

DATE REPORTED: 2023-11-28

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5471044-5471057 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

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Certificate of Analysis

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

O. Reg. 558 - Metals & Inorganics

DATE RECEIVED: 2023-11-17

DATE REPORTED: 2023-11-28

		SAMPLE DESCRIPTION:		TCLP1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2023-11-17 10:50
Parameter	Unit	G / S	RDL	5471058
Arsenic Leachate	mg/L	2.5	0.010	0.022
Barium Leachate	mg/L	100	0.020	0.356
Boron Leachate	mg/L	500	0.050	<0.050
Cadmium Leachate	mg/L	0.5	0.010	<0.010
Chromium Leachate	mg/L	5	0.050	<0.050
Lead Leachate	mg/L	5	0.010	0.016
Mercury Leachate	mg/L	0.1	0.01	<0.01
Selenium Leachate	mg/L	1	0.020	0.041
Silver Leachate	mg/L	5	0.010	<0.010
Uranium Leachate	mg/L	10	0.050	<0.050
Fluoride Leachate	mg/L	150	0.10	<0.10
Cyanide Leachate	mg/L	20	0.05	<0.05
(Nitrate + Nitrite) as N Leachate	mg/L	1000	0.70	<0.70

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg. 558 - Schedule IV Leachate Quality Criteria
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078 Fengate Ph Two
SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

AGAT WORK ORDER: 23Z094471
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ben Waechter

Soil Analysis

RPT Date: Nov 28, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	5474728		<0.8	<0.8	NA	< 0.8	114%	70%	130%	81%	80%	120%	97%	70%	130%
Arsenic	5474728		3	3	NA	< 1	119%	70%	130%	100%	80%	120%	105%	70%	130%
Barium	5474728		38.6	39.3	1.8%	< 2.0	100%	70%	130%	103%	80%	120%	109%	70%	130%
Beryllium	5474728		<0.5	<0.5	NA	< 0.5	105%	70%	130%	102%	80%	120%	107%	70%	130%
Boron	5474728		<5	<5	NA	< 5	79%	70%	130%	95%	80%	120%	91%	70%	130%
Boron (Hot Water Soluble)	5479563		<0.10	<0.10	NA	< 0.10	94%	60%	140%	97%	70%	130%	102%	60%	140%
Cadmium	5474728		<0.5	<0.5	NA	< 0.5	108%	70%	130%	106%	80%	120%	109%	70%	130%
Chromium	5474728		14	15	NA	< 5	106%	70%	130%	93%	80%	120%	100%	70%	130%
Cobalt	5474728		5.0	5.1	2.0%	< 0.8	97%	70%	130%	95%	80%	120%	103%	70%	130%
Copper	5474728		10.3	10.1	2.0%	< 1.0	99%	70%	130%	95%	80%	120%	94%	70%	130%
Lead	5474728		10	10	0.0%	< 1	97%	70%	130%	90%	80%	120%	88%	70%	130%
Molybdenum	5474728		<0.5	<0.5	NA	< 0.5	108%	70%	130%	110%	80%	120%	113%	70%	130%
Nickel	5474728		11	12	8.7%	< 1	104%	70%	130%	105%	80%	120%	106%	70%	130%
Selenium	5474728		<0.8	<0.8	NA	< 0.8	70%	70%	130%	104%	80%	120%	110%	70%	130%
Silver	5474728		<0.5	<0.5	NA	< 0.5	90%	70%	130%	95%	80%	120%	93%	70%	130%
Thallium	5474728		<0.5	<0.5	NA	< 0.5	89%	70%	130%	101%	80%	120%	101%	70%	130%
Uranium	5474728		<0.50	<0.50	NA	< 0.50	94%	70%	130%	91%	80%	120%	94%	70%	130%
Vanadium	5474728		22.3	22.7	1.8%	< 2.0	105%	70%	130%	88%	80%	120%	112%	70%	130%
Zinc	5474728		43	44	2.3%	< 5	122%	70%	130%	107%	80%	120%	113%	70%	130%
Chromium, Hexavalent	5469552		<0.2	<0.2	NA	< 0.2	99%	70%	130%	92%	80%	120%	98%	70%	130%
Cyanide, WAD	5477741		<0.040	<0.040	NA	< 0.040	99%	70%	130%	95%	80%	120%	96%	70%	130%
Mercury	5474728		<0.10	<0.10	NA	< 0.10	103%	70%	130%	105%	80%	120%	107%	70%	130%
Electrical Conductivity (2:1)	5476277		0.560	0.591	5.4%	< 0.005	105%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	5469752		7.36	7.26	1.4%	NA									
pH, 2:1 CaCl2 Extraction	5469358		11.7	11.8	0.9%	NA	102%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Ignitability in Soil															
Ignitability	5471058	5471058	N	N	NA	NA									

Comments: N = Non-Flammable Solid
NA = Not Applicable

O. Reg. 558 - Metals & Inorganics															
Arsenic Leachate	5471058	5471058	0.022	<0.010	NA	< 0.010	100%	70%	130%	106%	80%	120%	112%	70%	130%
Barium Leachate	5471058	5471058	0.356	0.341	4.3%	< 0.020	100%	70%	130%	100%	80%	120%	83%	70%	130%
Boron Leachate	5471058	5471058	<0.050	<0.050	NA	< 0.050	101%	70%	130%	98%	80%	120%	108%	70%	130%
Cadmium Leachate	5471058	5471058	<0.010	<0.010	NA	< 0.010	101%	70%	130%	103%	80%	120%	100%	70%	130%
Chromium Leachate	5471058	5471058	<0.050	<0.050	NA	< 0.050	101%	70%	130%	94%	80%	120%	92%	70%	130%

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Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078 Fengate Ph Two
SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

AGAT WORK ORDER: 23Z094471
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ben Waechter

Soil Analysis (Continued)

RPT Date: Nov 28, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Lead Leachate	5471058	5471058	0.016	<0.010	NA	< 0.010	87%	70%	130%	85%	80%	120%	79%	70%	130%
Mercury Leachate	5471058	5471058	<0.01	<0.01	NA	< 0.01	106%	70%	130%	106%	80%	120%	68%	70%	130%
Selenium Leachate	5471058	5471058	0.041	<0.020	NA	< 0.020	101%	70%	130%	119%	80%	120%	121%	70%	130%
Silver Leachate	5471058	5471058	<0.010	<0.010	NA	< 0.010	101%	70%	130%	99%	80%	120%	94%	70%	130%
Uranium Leachate	5471058	5471058	<0.050	<0.050	NA	< 0.050	98%	70%	130%	85%	80%	120%	81%	70%	130%
Fluoride Leachate	5471058	5471058	<0.10	<0.10	NA	< 0.10	102%	90%	110%	101%	90%	110%	101%	70%	130%
Cyanide Leachate	5471058	5471058	<0.05	<0.05	NA	< 0.05	90%	70%	130%	108%	80%	120%	109%	70%	130%
(Nitrate + Nitrite) as N Leachate	5471058	5471058	<0.70	<0.70	NA	< 0.70	101%	80%	120%	98%	80%	120%	99%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

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QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

ATTENTION TO: Daniel Stabile

RPT Date: Nov 28, 2023

PARAMETER	Sample Id	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 558 - Metals & Inorganics										
Mercury Leachate	5471058	106%	70%	130%	106%	80%	120%	68%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Ignitability	INOR-93-6063	EPA SW-846 1030	BURN MOLD
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE
Arsenic Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Barium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Boron Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Cadmium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS

DRAFT

Results relate only to the items tested. Results apply to samples as received.

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

Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chromium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Lead Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Mercury Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Selenium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Silver Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Uranium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Fluoride Leachate	INOR-93-6000	EPA SW 846-1311; SM 4500F-C	ION SELECTIVE ELECTRODE
Cyanide Leachate	INOR-93-6052	EPA 1311 modified from MOE 3015 SM 4500 CN-I,G387	SEGMENTED FLOW ANALYSIS
(Nitrate + Nitrite) as N Leachate	INOR-93-6053	EPA SW 846-1311 & modified from SM 4500 - NO3- I	LACHAT FIA

DRAFT

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 23709447 1

Cooler Quantity: one - loose ice.

Arrival Temperatures: 6.0 | 5.9 | 5.9.
1.1 | 2.3 | 1.8

Custody Seal Intact: ☐ Yes ☐ No ☑ N/A

Notes: Bagged ice

Report Information:

Company: WSP Canada Inc.
Contact: Daniel Stabile
Address: 701 Rossland Rd E #201, Whitby, ON L1N 8Y9
Phone: +1 905-213-4732 Fax:

Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email: Ben.Waechter@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☑ Res/Park
☐ Agriculture
Soil Texture (Check One)
☑ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
____ (Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): ____

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

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

Project Information:

Project: 21494078 Fengate Ph Two
Site Location: 1047 Richmond Rd, Ottawa, ON
Sampled By: Ben Waechter
AGAT Quote #: ____ PO: ____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company: WSP Canada Inc
Contact: Daniel Stabile
Address: 701 Rossland Rd E #201 Whitby, ON.
Email: daniel.stabile@wsp.com

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ ABNs ☐ B(a)P ☐ PCBs ☐ VOCs ☐ TCLP: F1-F4 & BTEX	O. Reg 406: Excess Soils SPLP Rainwater Leach	O. Reg 406: Excess Soils SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
SA1A	17 Nov 2023	10:30 AM/PM	3	S		N	✓												
SA1A Dup		10:30 AM/PM	3				✓												
SA2A		10:35 AM/PM	5				✓												
SA3A		10:40 AM/PM	5				✓												
SA4A		10:45 AM/PM	5				✓												
TCLP1		10:50 AM/PM	2		Ignitability & metals	✓								✓					
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Ben Waechter	17 Nov 2023			11/17/23	13h26
	11/17/23	15h30		11/18/23	10:25AM

Page ____ of ____

N°: T 129389

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wsp.com

APPENDIX IV
SAMPLING AND ANALYSIS PLANS

SAMPLING AND ANALYSIS PLAN

DATE December 20, 2021 **Project No.** 21494078

TO Field Supervisor
Golder Associates Ltd.

CC Paul Hurst, Project Director, QP

FROM Daniel Stabile, Project Manager **EMAIL Daniel_Stabile@golder.com**

SAMPLING AND ANALYSIS PLAN, 1047 RICHMOND ROAD, OTTAWA, ONTARIO

1.0 OBJECTIVE

The intent of this Phase Two Environmental Site Assessment (ESA) is to investigate the soil and groundwater within the areas of potential environmental concern (APECs) identified in the Phase One ESA at 1047 Richmond Rd., Ottawa, Ontario (the "Site").

The Site is currently an active car dealership, and we need to keep our operations confidential and not disclose any information to the business employees. The Phase Two ESA is required to support a future filing of a Record of Site Condition (RSC) if financing and/or sale of the property is intended in the future.

2.0 SITE BACKGROUND

One round of drilling was performed in September 2021 when the Phase One, Phase Two and Geotechnical assessments were carried out, and two locations presented exceedances of the Table 3 Site ondition Standards, one in soil and one in groundwater. A second mobilization was conducted in November 2021 with the objective to delineate the impacts in soil and in groundwater by adding three additional boreholes around BH21-05 which presented exceedances of PHC F2-F4 and 1,4-dichlorobenzene, and monitoring wells aiming to assess the extent of the exceedances at the BH21-04 and BH21-14 with exceedances of benzene, 1,2-dichloroethane and trichloroethylene. On December 2021, a third drilling program was performed to determine average PHC concentrations at BH21-05 and assess if impacted groundwater was possibly flowing off-site, beyond the property limit.

Golder's Phase One team conducted a site visit in September 2021, and the following APECs were identified. A summary of the APECs identified at the Phase One Property site visit is provided in the following table.

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Area of Potential Environmental Concern[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Groundwater, soil and/or Sediment)
APEC 1 – On-site automotive garage	Centre of the Site	*#10. Commercial Autobody Shops*	On-Site	PHCs F1-F4, BTEX and VOCs	Soil and groundwater
APEC 2A – Former UST location	Northeast portion of the Site building	*#28. Gasoline and Associated Products Storage in Fixed Tanks*	On-Site	PHCs F1-F4 and BTEX	Soil and groundwater
APEC 2B – Former UST location	Southeats portion of the Site building			PHCs F1-F4 and BTEX	Soil
APEC 3 –Presence of an AST for used waste lubricant oil and oil-stained asphalt	Northeast portion of the Site building	*#28. Gasoline and Associated Products Storage in Fixed Tanks*	On-Site	PHCs F1-F4 and BTEX	Soil and groundwater
APEC 4 – Presence of painting operations (paint booth)	Northeast and Northwest of the Site building	*#39. Paints Manufacturing, Processing and Bulk Storage*	On-Site	Metals, Hydride-Forming Metals, ORP, VOCs and PHCs	Soil and groundwater
APEC 5 – Inferred fill materials site-wide	Entire Site	*# 30. Importation of Fill Material of Unknown Quality*	On-Site	Metals, Hydride-Forming Metals, ORP and PHCs	Soil and groundwater
APEC 6 – Pole mounted transformer and fuse box	Four pole-mounted transformers were observed on the driveway of New Orchard Ave.	*#55. Transformer Manufacturing, Processing and Use*	On-Site	PCBs, PHCs	Soil

Notes:

1 Area of potential environmental concern means the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental Site assessment, including through, •(a) identification of past or present uses on, in or under the phase one property, and •(b) identification of potentially contaminating activity

2 Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area

3 Contaminants of potential concern specified using the method groups as identified in the "Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011

4 Metals – Ba (Barium), Beryllium (Be), Boron (B), Cadmium (Cd), Chromium (Cr), Cobalt (Co), Copper (Cu), Lead (Pb), Molybdenum (Mo), Nickel (Ni), Silver (Ag), Thallium (Th), Uranium (U), Vanadium (V), Zinc (Zn); Hydride-Forming Metals – Arsenic (As), Selenium (Se), Antimony (Sb); ORP – Hexavalent Chromium (Cr-VI), Sodium (Na), Mercury (Hg), Hot Water Soluble Boron (B-HWS), Chloride (Cl-), Cyanide (CN-), Sodium Adsorption Ratio (SAR), Electrical Conductivity (EC); PHC – Petroleum Hydrocarbons; BTEX – Benzene, Toluene, Ethylbenzene and Xylenes; VOC – Volatile Organic Compounds; PCB – Polychlorinated Byphenils.

3.0 SITE ACCESS REQUIREMENTS

Table 1: Site Access

Access Concern	Information
Site Contacts	Mr. Peter Pears and Ms. Michele Pears Office: 613-327-5153 michelep@metrochrysler.com
Access	No restrictions.
Hours of Work	■ Within daylight hours (Approx. 7 am to 6 pm) ■ Interior drilling from 06:00pm to 12:00 am ■ Exterior drilling From 08:00am to 05:00pm
Site Check-In/Out Procedures	Daily check-in/out with Daniel Stabile
Photography	No restrictions
H&S	■ Follow the HaSEP and COVID procedures; and conduct tailgate with drilling crew. ■ Not to disclose any information to the site employees. Ask Michele help if this happens

4.0 GENERAL REQUIREMENTS

- Follow standard operating procedures for drilling, soil logging, and soil sampling. All work is to be completed assuming a Record of Site Condition will be required.
- Follow Golder Standard Operating Procedures (SOPs) referenced in this sampling and analysis plan and use Golder standard field forms.
- Complete a Daily Log and Job Safety and Environment Analysis (JSEA) form for every day of fieldwork.
- New disposable Nitrile™ gloves will be used at each sampling location to prevent cross-contamination.
- All non-dedicated sampling equipment (e.g., interface probes) will be decontaminated between sampling locations. Sampling equipment in contact with soil or groundwater will be washed with a laboratory-grade detergent solution (i.e. phosphate-free AlcoNox) and thoroughly rinsed with analyte-free water. Use plastic pales from any hardware store. They can also be used for wastewater storage.

5.0 PRIVATE LOCATES

- Private locates was performed on September 16, 2021, November 2, 2021 and December 16, 2021, with USL-1.
- Bring public locate sheets with you to the Site.
- Ensure the private locator clears each borehole location before leaving the Site and that the radius of 2-3 m clearance is provided by the locator for each location. Adjust locations as applicable. If in doubt/clear a second nearby location as an alternate.

6.0 DRILLING ACTIVITIES

- Borehole drilling and monitoring well installation is booked for September 21-24, 2021, with CCC Group.
- Borehole drilling and monitoring well installation is booked for November 11-12, 2021, with Marathon Underground.
- Borehole drilling and monitoring well installation is booked for November 22, 24-25, 2021, with Marathon Underground.
- Borehole drilling and monitoring well installation is booked for December 22, 2021, with Strata Group.

6.1 Borehole Drilling and Soil Sampling

- Ensure that borehole drilling and soil sampling is carried out in conformance with SOP No. 3: Borehole Drilling and Sampling.
- Confirm that the private locator has cleared every drilling location before penetrating the ground.
- Borehole IDs are found in the proposed BH locations plan.
- Screen overburden soil samples at maximum 0.6 m (2 ft) intervals using a combustible gas and photoionization detector (i.e. RKI Eagle, calibrated for hexane and isobutylene), as per SOP No. 4: Headspace Screening.
- Log overburden soil stratigraphy at maximum 0.6 m (2 ft) intervals, as per SOP No. 6: Soil Logging and SOP No. 14: Soil Classification and Description.
- Bedrock is expected to be encountered from 3 – 4 m bgs. After this depth, the drilling will be performed with rock coring tooling, and no soil samples will be collected. Keep the rock cores in the core box.
- Collect soil samples (including 2 x vials per interval) at a maximum of 0.6 m (2 ft) intervals from the ground surface to borehole refusal (call Daniel Stabile if soil conditions are tight or soil recovery is not satisfactory). Submit soil samples in accordance with Table 2 (below).
- Duplicate *samples to be collected and submitted for analysis at a rate of one duplicate per every ten samples submitted to the laboratory. A summary of duplicates required is included at the end of Table 2.*
- Collect *duplicates at the same intervals of the higher headspace readings and/or according to Table 2. (keep your soil cores until you finalize the headspace headings); and from the inferred capillary fringe/water table interface interval.*
- Soil jar quantities: 2 x 40 ml Methanol Vails for VOC and PHC F1/BTEX analysis; 1 x 120 ml jar for PHC F2-F4 and moisture and 1 x 250 ml jar (up to 1.5 m bgs) for Metals and ORP. At the transformers location, fill 1 x 250 ml jar (up to 15 cm bgs). *For duplicates, double the amount of container for the duplicated interval.*
- Samples are to be stored in coolers with ice after collection (the samples must be below 10°C upon receipt to the lab). Bring ice to the Site in the morning.
- Fill out the chain of custody per the details in Table 5.

- Ask drillers to leave two 200L drums to store purged groundwater for the development and sampling stages and one (as needed) steel drum per BH locations to store drilling cutting.
- The first five boreholes will be used for environmental purposes. See Geotech instructions for the

Table 2: Drilling Program Summary and Soil Sampling Details

ID	Rationale	Proposed Investigation	Laboratory Soil Analysis
BH21-1	Investigate possible impacts at the front of the building, possible off-site impacts, and sewer line (tank present on fire plans from 1976)	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 5 – Inferred fill materials to be present site-wide (*# 30. Importation of Fill Material of Unknown Quality*) - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 5-7 m bgs).	**1 x Sample** *(higher headspace reading/capillary fringe – Keep other samples ON HOLD at Golder warehouse fridge)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)* **1 x Sample** *(1 surface soil – up to 1.5 mbgs)*: - **Metals, Hydride-Forming Metals and ORP** *(based on visual observations)*
BH21-2	Investigate possible impacts at waste oil AST location. Some stains on asphalt are to be assessed	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 3 –Presence of an AST used waste lubricant oil and oil-stained asphalt (*#28. Gasoline and Associated)* - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 5-7 m bgs).	**1 x Samples** *(higher headspace reading/capillary fringe – Keep other samples ON HOLD at Golder warehouse fridge)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)*
BH21-3 and BH21-5	Investigate possible impacts at the paint booth	- APEC 4 – Presence of painting operations - paint booth (*#39 Paints Manufacturing, Processing and Bulk Storage*) - APEC 5 – Inferred fill materials to be present site-wide (*# 30 Importation of Fill Material of Unknown Quality*) - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 5-7 m bgs).	**2 x Sample** *(higher headspace reading/capillary fringe – Keep other samples ON HOLD at Golder warehouse fridge)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)* **2 x Sample** *(2 subsurface soil – > 1.5 mbgs)*: - **Metals, Hydride-Forming Metals and ORP** *(based on visual observations)*

ID	Rationale	Proposed Investigation	Laboratory Soil Analysis
BH21-4	Investigate possible impacts at former UST location at northeast corner of the building	- APEC 2A – Former UST location *(#28. Gasoline and Associated Products Storage in Fixed Tanks*) - APEC 5 – Inferred fill materials to be present site-wide (*# 30. Importation of Fill Material of Unknown Quality*) - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 5 - 7 m bgs).	**1 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)* **1 x Sample** *(1 surface soil – up to 1.5 mbgs)*: - **Metals, Hydride-Forming Metals and ORP** *(based on visual observations)*
BH21-11 and BH21-12	Attempt to delineate SAR exceedances at BH21-03 and to assess potential cross gradient impacts at potential former body shop	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 4 – Presence of painting operations - paint booth (*#39 Paints Manufacturing, Processing and Bulk Storage*) - APEC 5 – Inferred fill materials to be present site-wide (*# 30 Importation of Fill Material of Unknown Quality*) - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 3 - 4 m bgs).	**2 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)* **2 x Sample** *(1 surface soil – up to 1.5 mbgs)*: **Metals, Hydride-Forming Metals and ORP** *(based on visual observations)*
BH21-13	Attempt to delineate SAR exceedances at BH21-03.	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 5 – Inferred fill materials to be present site-wide (*# 30 Importation of Fill Material of Unknown Quality*) - Perform headspace reading every 0.6 m.	**1 x Sample** *(1 surface soil – up to 1.5 mbgs)*: **Metals, Hydride-Forming Metals and ORP** *(based on visual observations)*
BH21-14 and BH21-15	Attempt to provide context on potential magnitude of 1,2-DCA exceedance at BH21-04 in GW. Multilevel well at BH21-15 shalow and deep screened	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 4 – Presence of painting operations - paint booth (*#39 Paints Manufacturing, Processing and Bulk Storage*) - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 3 - 4 m bgs).	**2 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)*

ID	Rationale	Proposed Investigation	Laboratory Soil Analysis
BH21-16 to BH21-18	Attempt to delineate PHC F2-F4 exceedances at BH21-04	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 5 – Inferred fill materials to be present site-wide *(# 30 Importation of Fill Material of Unknown Quality*) - Perform headspace reading every 0.6 m.	**3 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)*
BH21-19 and BH21-20	Investigate possible impacts at at interior, area of hoists and paint booth	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 4 – Presence of painting operations - paint booth (*#39 Paints Manufacturing, Processing and Bulk Storage*) - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 3 - 4 m bgs).	**2 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **VOC** *(based on headspace and visual/olfactory observations)* - **PHC/BTEX** *(based on headspace and visual/olfactory observations)*
BH21-21 and BH21-22	Investigate possible impacted groundwater flowing off-site, beyond the property limit	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - APEC 4 – Presence of painting operations - paint booth (*#39 Paints Manufacturing, Processing and Bulk Storage*) - Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 3 - 4 m bgs).	**2 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **VOC** *(based on headspace and visual/olfactory observations)* **PHC/BTEX** *(based on headspace and visual/olfactory observations)*
BH21-23 and BH21-24	Averaging PHC concentrations at BH21-05	- APEC 1 – On-site automotive garage (*#10. Commercial Autobody Shops*) - Perform headspace reading every 0.6 m.	**2 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **PHC/BTEX** *(based on headspace and visual/olfactory observations)*
BH21-25	Investigate possible impacts at former UST location at southeast corner of the building	- APEC 2A – Former UST location *(#28. Gasoline and Associated Products Storage in Fixed Tanks*) - Perform headspace reading every 0.6 m.	**1 x Sample** *(1 higher headspace reading/capillary fringe zone and 1 deeper sample for delineation - ON HOLD)*: - **PHC/BTEX** *(based on headspace and visual/olfactory observations)*

ID	Rationale	Proposed Investigation	Laboratory Soil Analysis
TP21-1	Investigate possible impacts at pole-mounted transformers at the entrance driveway of New Orchard Ave.	- APEC 6 - Four pole-mounted transformers and fuse box were observed on the driveway of New Orchard Ave. (*#55. Transformer Manufacturing, Processing and Use)*	**1 x Sample** *(1 hand-dug sample from the first 15 cm of soil profile)*: - **PCB** - **PHC/BTEX**
Grain Size: submit **two soil samples** for grain size at or near the anticipated water table (check Geotech sampling plan) **pH**: in conjunction with other parameters - **two soil samples** (two of surface soil (0-1.5 m bgs), two of subsurface soil (> 1.5 m bgs)) for pH **Duplicate Samples**: One duplicate soil sample for each VOC, PHC/BTEX, and M&ORP (Higher VOC/worst case)			

6.2 Monitoring Well Installation

- Refer to SOP No. 1: Monitoring Well Installation. The monitoring wells will consist of 50 mm inner diameter ("ID") Schedule 40 polyvinyl chloride ("PVC") casing and 50 mm ID Schedule 40 PVC well screen (up to 3 metres in length, #10 slot size); sand pack surrounding the screen will be #00 or #0. The annulus will be backfilled using clean silica sand around the screened portion, extending approximately 0.3 to 0.6 m above the screen, followed by bentonite to just below the ground surface. The monitoring wells will be completed with a flush-mounted style protective casing set in concrete and sealed with a PVC j-plug. Label the j-plug with the monitoring well ID during installation. Mark the reference point at the top of well pipe with a small notch. Do NOT use sharpie/marker to mark out reference point.
- Please confirm monitoring well construction with Daniel Stabile prior to installation where any deviation from our typical monitoring well construction is expected.
- Install environmental monitoring wells per the details in Table 3.
- If water table is encountered within overburden, before the last spoon/interval is sampled, take a picture of the BH log and send it to Daniel Stabile for review and definition on the monitoring well design.
- If water table is within the bedrock, well is to be sealed completely on the bedrock to avoid water from the overburden to infiltrate inside the well through the bentonite seal and sand pack.

Table 3: Monitoring Well Construction Details

Location	Screen Depth (m bgs)	Screen Length (ft / m)	Well Diameter (mm/inches)	Protective Casing Type
BH21-01	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-02	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-03	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-04	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-05	Set to straddle the water table	10 / 3	51 / 2	Flush-mount

Location	Screen Depth (m bgs)	Screen Length (ft / m)	Well Diameter (mm/inches)	Protective Casing Type
BH21-11	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-14	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-15S	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-15D	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-19	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-20	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-21	Set to straddle the water table	10 / 3	51 / 2	Flush-mount
BH21-22	Set to straddle the water table	10 / 3	51 / 2	Flush-mount

7.0 MONITORING WELL DEVELOPMENT OF NEWLY INSTALLED WELLS

- Monitoring well development to be conductec upon completion of the monitoring well installation.
- Develop each newly installed monitoring well in accordance with SOP No. 5: Monitoring Well Development.
- Develop the monitoring well with Waterra tubing, foot valve, and surge block for two minutes of pumping for each 0.3 m (1 ft) of the screen.
- Following the surging, continue to purge the ten well volumes or until dry three times.
- Contain all purge water in labelled and sealed drums/totes for off-site disposal.
- Please contact Daniel Stabile if you observe or suspect that there is sheen/product in any monitoring well.

8.0 GROUNDWATER MONITORING AND SAMPLE COLLECTION

8.1 Groundwater Monitoring

- Collect water levels using an interface probe from all the monitoring wells at the Site before collecting groundwater samples from any monitoring wells.
- Please contact Daniel Stabile if you observe or suspect that there is free product in any monitoring well.
- If product is detected with the interface probe or product signs are observed during monitoring well development, check for product thickness with a bailer and take photos of the bailer (regardless of whether product is observed). Record product thickness using the interface probe and the bailer.
    - Clean interface probe and dispose of bailer immediately if impacts are observed.

8.2 Groundwater Sample Collection

- Refer to SOP No. 10: Low Flow Sample Collection and SOP No. 12: Measurement of Field Parameters. Use the "Groundwater Sample Collection" form to collect all data during groundwater sampling.

- Use a low-flow pump for purging and sample collection and monitor depth to groundwater and water quality field parameters (i.e., pH, specific conductivity, temperature, dissolved oxygen, and reduction-oxidation potential) in accordance with SOP Nos. 10 and 12. If field water quality parameters do not stabilize during low flow purging, do not purge longer than 30 minutes before collecting a groundwater sample.
- If drawdown in the monitoring well is greater than 0.3 m but remains stable, continue purging. If the drawdown is more significant than 0.3 m and is not stable, then complete purging and sample collection in accordance with SOP No. 9: Conventional Groundwater Sample Collection or use the low-field procedure. Sample with a bailer if using the conventional method.
- For wells that can use the conventional method based on observations during development, complete the purging at the beginning of the day and return to the well at the end of the day for sampling.
- Collect groundwater samples in accordance with Table 4. Collect QA/QC samples as indicated at the end of Table 4. The duplicate groundwater samples should be labelled in a manner that the laboratory cannot readily identify the sample as a duplicate (i.e. DUP1). A trip blank sample is required for every groundwater sample submission and one field blank sample is also required.
- Metals are to be field filtered per lab requirements.
- For the resamapling of BH21-04 on November 30, 2021, sample needs to be collected from the top of the screened section (aprox. 4.5-4.7 m btoc).
- BH21-01 were found dry after installation and did not recovered enough water for sampling, during the first investigation effort. Measure the water level on both wells and if water column is observed to be sampable, please collect sample without purging the well.
- Samples are to be stored in coolers with ice after collection (the samples **must** be below 10°C upon receipt to the lab).
- Fill out the chain of custody per the details in Table 5.

Table 4: Groundwater Sampling Plan (Field Check List)

Location	Sampling Date	Laboratory Groundwater Analysis			Sampled?		OBS.
		VOC	PHC (F1-F4) and BTEX	Metals and ORP	YES	NO	
BH21-1	04-Oct-2021	X	X	X	☐	☒	Dry well
BH21-2	04-Oct-2021	X	X	X	☒	☐	
BH21-3	04-Oct-2021	X	X	X	☒	☐	
BH21-4	04-Oct-2021	X	X	X	☒	☐	
	30-Nov-2021	X	X		☒	☐	DUP-1
	09-Dec-2021	X	X		☒	☐	
	22-Dec-2021	X	X		☒	☐	
BH21-05	04-Oct-2021	X	X	X	☒	☐	DUP-1

Location	Sampling Date	Laboratory Groundwater Analysis			Sampled?		OBS.
		VOC	PHC (F1-F4) and BTEX	Metals and ORP	YES	NO	
BH21-11	30-Nov-2021	X	X	X	☒	☐	DUP-2
BH21-14	30-Nov-2021	X	X		☒	☐	
	09-Dec-2021	X	X		☒	☐	DUP
	22-Dec-2021	X	X		☒	☐	
BH21-15S	30-Nov-2021	X	X		☒	☐	
BH21-15D	30-Nov-2021	X	X		☒	☐	
BH21-19	30-Nov-2021	X	X		☒	☐	
BH21-20	30-Nov-2021	X	X		☒	☐	
BH21-21	22-Dec-2021	X	X		☒	☐	DUP
BH21-22	22-Dec-2021	X	X		☒	☐	
Total Samples		**17**	**17**	**5**			

Duplicate Sample: One duplicate groundwater sample VOC, PHC/BTEX
Trip Blanks: One trip blank per groundwater sample submission for VOC (per cooler)
Field Blank: One field blank for VOC

9.0 CHAIN OF CUSTODY INFORMATION

- Please send a copy of the chain of custody to Daniel Stabile for review prior to submitting the soil and groundwater samples to the laboratory.
- After confirmation/approval, staff can submit samples for analysis.

Table 5: Chain of Custody Details

Chain of Custody Item	Information
Analytical Laboratory	BV Labs and AGAT Laboratory
Generic Site Condition Standards (SCS)	O. Reg 153/05 Table 7, R/P/I and I/C/C (don't report SCS on CofA)
Use Record of Site Condition analytical procedures?	Yes
Turn-around Time	48hs soil and GW TAT
Golder Reporting Contact	Daniel_Stabile@golder.com Paul_Hurst@golder.com
Project-Specific Quote Number	Golder-BV MSA and Golder-AGAT MSA (include *WORK ORDER* on the header of the CoC and provide the MSA signature date of May 18, 2020)
Billing Details	AP_CustomerService@golder.com
Is an EQUIS EDD Required?	Yes -
Lab User Certificate Facility	230360930

10.0 SURVEYING

- Drilling locations will be surveyed after monitoring well installations.
- Northing and easting coordinates are to be collected to a +/- 10 cm accuracy (Phone APP should work).
- Elevations of the ground surface and top of pipe to be measured off of a local benchmark (previous MW's).
- During monitoring events, measure the distance from the top of the pipe to the ground surface/flushmount if top of pipe can not be surveyed.

11.0 INVESTIGATION DERIVED WASTE

- Garbage, such as gloves, bags, etc., is to be taken off-site for disposal.
- Label drums for waste management purposes include the project number, date, site location, drum contents (soil cuttings, purge water).
- Drums should be grouped and placed in an area of the Site for easy access. Confirm with the Property Representative (Peter/Michelle) where the best location on the Site would be. This is needed to be agreed upon between the Site Supervisor, PM and site representee as soon as possible during the first day of fieldwork.
- Record inventory of waste containers in the field notes.

12.0 DOCUMENT MANAGEMENT

- Field staff submits scanned field notes to GTAFieldFile@golder.com and Daniel_Stabile@golder.com. This does not need to be daily but should be weekly for more extensive programs or at the fieldwork's end.
- Put all files in one single pdf, and the file name should be as follows: PROJECT_NUMBER Field Notes COMPLETION_DATE" (for example, "1712345 Field Notes April 27, 2017.pdf).
- Take photos, at least two at each one of the drilling/sampling locations showing: (1) general area of drilling; (2) detailed photo of the drilling or some specific aspect you want to highlight and; (3) H&S photo – optional. Take photo of the drums storage area.

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SAMPLING AND ANALYSIS PLAN

DATE May 5, 2022 **Project No.** 21494078

TO Field Supervisor
Golder Associates Ltd.

CC Paul Hurst, Project Director, QP

FROM Daniel Stabile, Project Manager **EMAIL Daniel_Stabile@golder.com**

SAMPLING AND ANALYSIS PLAN, 1047 RICHMOND ROAD, OTTAWA, ONTARIO

1.0 OBJECTIVE

The intent of this Phase Two Environmental Site Assessment (ESA) is to investigate the soil and groundwater within the areas of potential environmental concern (APECs) identified in the Phase One ESA at 1047 Richmond Rd., Ottawa, Ontario (the Site).

The Site is currently an active car dealership, and we need to keep our operations confidential and not disclose any information to the business employees. The Phase Two ESA is required to support a future filing of a Record of Site Condition (RSC) if financing and/or sale of the property is intended in the future.

Four rounds of drilling were completed, and this stage's objective is to delineate GW impacts at BH21-4 and BH21-14 vertically and horizontally. Telescope drilling will be performed to install multilevel monitoring well pairs at BH21-4 and BH21-14 to achieve horizontal delineation. Since these boreholes will be drilled through an impacted GW zone, telescopic drilling will be required to avoid dragging contamination from upper zones to deeper depths.

2.0 SITE ACCESS REQUIREMENTS

Table 1: Site Access

Access Concern	Information
Site Contacts	Mr. Peter Pears and Ms. Michele Pears Office: 613-327-5153 michelep@metrochrysler.com
Access	No restrictions.
Hours of Work	■ Within daylight hours (Approx. 7 am to 6 pm) ■ Interior drilling from 06:00pm to 12:00 am ■ Exterior drilling From 08:00am to 05:00pm
Site Check-In/Out Procedures	Daily check-in/out with Daniel Stabile
Photography	No restrictions

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Access Concern	Information
H&S	■ Follow the HaSEP and COVID procedures; and conduct tailgate with drilling crew. ■ Not to disclose any information to the site employees. Ask Michele help if this happens

3.0 GENERAL REQUIREMENTS

- Follow standard operating procedures for drilling, soil logging, and soil sampling. All work is to be completed assuming a Record of Site Condition will be required.
- Follow Golder Standard Operating Procedures (SOPs) referenced in this sampling and analysis plan and use Golder standard field forms.
- Complete a Daily Log and Job Safety and Environment Analysis (JSEA) form for every day of fieldwork.
- New disposable Nitrile™ gloves will be used at each sampling location to prevent cross-contamination.
- All non-dedicated sampling equipment (e.g., interface probes) will be decontaminated between sampling locations. Sampling equipment in contact with soil or groundwater will be washed with a laboratory-grade detergent solution (i.e. phosphate-free AlcoNox) and thoroughly rinsed with analyte-free water. Use plastic pales from any hardware store. They can also be used for wastewater storage.

4.0 PRIVATE LOCATES

- Private locates was performed on May 5, 2022, with USL-1.
- Bring public locate sheets with you to the Site.
- Ensure the private locator clears each borehole location before leaving the Site and that the radius of 2-3 m clearance is provided by the locator for each location. Adjust locations as applicable. If in doubt/clear a second nearby location as an alternate.

5.0 DRILLING ACTIVITIES

- Borehole drilling and monitoring well installation is booked for May 9, 2022, with Strata Group.

5.1 Borehole Drilling and Soil Sampling

- Ensure that borehole drilling and soil sampling is carried out in conformance with SOP No. 3: Borehole Drilling and Sampling.
- Confirm that the private locator has cleared every drilling location before penetrating the ground.
- Borehole IDs are found in the proposed BH locations plan.
- Screen overburden soil samples at maximum 0.75 m (2.5 ft) intervals using a combustible gas and photoionization detector (i.e. RKI Eagle, calibrated for hexane and isobutylene), as per SOP No. 4: Headspace Screening.
- Log overburden soil stratigraphy, as per SOP No. 6: Soil Logging and SOP No. 14: Soil Classification and Description.

- Bedrock is expected to be encountered from 3 – 4 m bgs. After this depth, the drilling will be performed with ait hammer tooling, and no soil samples or soil cores will be collected.
- Collect soil samples (including 2 x vials per interval) at a maximum of 0.75 m (2.5 ft) intervals from the ground surface to borehole refusal (call Daniel Stabile if soil conditions are tight or soil recovery is not satisfactory). Submit soil samples in accordance with Table 2 (below).
- Duplicate *samples to be collected and submitted for analysis at a rate of one duplicate per every ten samples submitted to the laboratory. A summary of duplicates required is included at the end of Table 2.*
- Collect *duplicates at the same intervals of the higher headspace readings and/or according to Table 2. (keep your soil cores until you finalize the headspace headings); and from the inferred capillary fringe/water table interface interval.*
- Soil jar quantities: 2 x 40 ml Methanol Vails for VOC and PHC F1/BTEX analysis; 2 x 120 ml jar for PHC F2-F4 and moisture. *For duplicates, double the amount of container for the duplicated interval.*
- Samples are to be stored in coolers with ice after collection (the samples must be below 10°C upon receipt to the lab). Bring ice to the Site in the morning.
- Fill out the chain of custody per the details in Table 5.
- Ask drillers to leave two 200L drums to store purged groundwater for the development and sampling stages and one (as needed) steel drum per BH locations to store drilling cutting.

Table 2: Drilling Program Summary and Soil Sampling Details

Borehole	MW	Analysis	Rationale	OBS
BH22-01	Deep BR: 8 - 9.5 mbgs	Soil: (1) PHC/BTEX/VOC GW: (1) PHC/BTEX /VOC	Telescopic drilling to avoid cross-contamination and access groundwater quality and delineate vertical impact at BH21-04.	BH21-04 is screened from 4.5 – 7.5 mbgs
BH22-02	Upper BR: 4.5-7.5 mbgs	Soil: (1) PHC/BTEX/VOC GW: (1) PHC/BTEX /VOC	Upper bedrock wells to delineate east of BH21-04 area	
BH22-03	Deep BR: 5 - 6.5 mbgs	Soil: (1) PHC/BTEX/VOC GW: (1) PHC/BTEX /VOC	Telescopic drilling to avoid cross-contamination and access groundwater quality and delineate vertical impact at BH21-14.	BH21-14 is screened from 3 – 4.5 mbgs
BH22-04	Upper BR: 5 -8 mbgs	Soil: (1) PHC/BTEX/VOC GW: (1) PHC/BTEX /VOC	Upper bedrock wells to delineate west of BH21-14 area	
BH22-05	OB: 2 - 5 mbgs BR: 8.5 - 11.5 mbgs	Soil: (1) PHC/BTEX GW: (2) PHC/BTEX	Additional bedrock MW at the possible UST nest in the front of the building to confirm no impacts on that APEC in groundwater.	BH21-07 located west of this area presented water at 9.5 m bgs

BH21-04	Existing MW	GW: (1) PHC/BTEX /VOC	Re-sample PHC /BTEX /VOC	-
BH21-14	Existing MW	GW: (1) PHC/BTEX /VOC	Re-sample PHC /BTEX /VOC	-
GW: (2) Field Trip/Field Blank for VOC			QA/QC	-
Soil/GW Duplicates @ 10% ratio: Soil (1), GW (1)			QA/QC	-

5.2 Monitoring Well Installation

- Refer to SOP No. 1: Monitoring Well Installation. The monitoring wells will consist of 50 mm inner diameter ("ID") Schedule 40 polyvinyl chloride ("PVC") casing and 50 mm ID Schedule 40 PVC well screen (up to 3 metres in length, #10 slot size); sand pack surrounding the screen will be #00 or #0. The annulus will be backfilled using clean silica sand around the screened portion, extending approximately 0.3 to 0.6 m above the screen, followed by bentonite to just below the ground surface. The monitoring wells will be completed with a flush-mounted style protective casing set in concrete and sealed with a PVC j-plug. Label the j-plug with the monitoring well ID during installation. Mark the reference point at the top of well pipe with a small notch. Do NOT use sharpie/marker to mark out reference point.
- Please confirm monitoring well construction with Daniel Stabile prior to installation where any deviation from our typical monitoring well construction is expected.
- Install environmental monitoring wells per the details in Table 3.
- If water table is encountered within overburden, before the last spoon/interval is sampled, take a picture of the BH log and send it to Daniel Stabile for review and definition on the monitoring well design.
- If water table is within the bedrock, well is to be sealed completely on the bedrock to avoid water from the overburden to infiltrate inside the well through the bentonite seal and sand pack.

Table 3: Monitoring Well Construction Details

Location	Screen Depth (m bgs)	Screen Length (ft / m)	Well Diameter (mm/inches)	Protective Casing Type
BH22-01	8 - 9.5 mbgs	3 / 1.5	51 / 2	Flush-mount
BH22-02	4.5 - 7.5 mbgs	10 / 3	51 / 2	Flush-mount
BH22-03	5 - 6.5 mbgs	3 / 1.5	51 / 2	Flush-mount
BH22-04	5 - 8 mbgs	10 / 3	51 / 2	Flush-mount
BH22-05	8.5 - 11.5 mbgs	10 / 3	51 / 2	Flush-mount

6.0 MONITORING WELL DEVELOPMENT OF NEWLY INSTALLED WELLS

- Monitoring well development to be conductec upon completion of the monitoring well installation.
- Develop each newly installed monitoring well in accordance with SOP No. 5: Monitoring Well Development.
- Develop the monitoring well with Waterra tubing, foot valve, and surge block for two minutes of pumping for each 0.3 m (1 ft) of the screen.

- Following the surging, continue to purge the ten well volumes or until dry three times.
- Contain all purge water in labelled and sealed drums/totes for off-site disposal.
- Please contact Daniel Stabile if you observe or suspect that there is sheen/product in any monitoring well.

7.0 GROUNDWATER MONITORING AND SAMPLE COLLECTION

7.1 Groundwater Monitoring

- Collect water levels using an interface probe from all the monitoring wells at the Site before collecting groundwater samples from any monitoring wells.
- Please contact Daniel Stabile if you observe or suspect that there is free product in any monitoring well.
- If product is detected with the interface probe or product signs are observed during monitoring well development, check for product thickness with a bailer and take photos of the bailer (regardless of whether product is observed). Record product thickness using the interface probe and the bailer.
    - Clean interface probe and dispose of bailer immediately if impacts are observed.

7.2 Groundwater Sample Collection

- Refer to SOP No. 10: Low Flow Sample Collection and SOP No. 12: Measurement of Field Parameters. Use the "Groundwater Sample Collection" form to collect all data during groundwater sampling.
- Use a low-flow pump for purging and sample collection and monitor the depth to groundwater and water quality field parameters (i.e., pH, specific conductivity, temperature, dissolved oxygen, and reduction-oxidation potential) in accordance with SOP Nos. 10 and 12. If field water quality parameters do not stabilize during low flow purging, do not purge longer than 30 minutes before collecting a groundwater sample.
- If drawdown in the monitoring well is greater than 0.3 m but remains stable, continue purging. If the drawdown is more significant than 0.3 m and is not stable, then complete purging and sample collection in accordance with SOP No. 9: Conventional Groundwater Sample Collection or use the low-field procedure. Sample with a bailer if using the conventional method.
- For wells that can use the conventional method based on observations during development, complete the purging at the beginning of the day and return to the well at the end of the day for sampling.
- Collect groundwater samples in accordance with Table 4. Collect QA/QC samples as indicated at the end of Table 4. The duplicate groundwater samples should be labelled in a manner that the laboratory cannot readily identify the sample as a duplicate (i.e. DUP1). A trip blank sample is required for every groundwater sample submission and one field blank sample is also required.
- For BH21-04, sample needs to be collected from the top of the screened section (aprox. 4.5-4.7 m btoc).
- Samples are to be stored in coolers with ice after collection (the samples **must** be below 10°C upon receipt to the lab).
- Fill out the chain of custody per the details in Table 5.

8.0 CHAIN OF CUSTODY INFORMATION

- Please send a copy of the chain of custody to Daniel Stabile for review prior to submitting the soil and groundwater samples to the laboratory.
- After confirmation/approval, staff can submit samples for analysis.

Table 4: Chain of Custody Details

Chain of Custody Item	Information
Analytical Laboratory	AGAT Laboratory
Generic Site Condition Standards (SCS)	O. Reg 153/05 Table 7, R/P/I and I/C/C (don't report SCS on CofA)
Use Record of Site Condition analytical procedures?	Yes
Turn-around Time	Regular TAT
Golder Reporting Contact	Daniel_Stabile@golder.com Paul_Hurst@golder.com
Project-Specific Quote Number	Golder-BV MSA and Golder-AGAT MSA (include *WORK ORDER* on the header of the CoC and provide the MSA signature date of May 18, 2020)
Billing Details	AP_CustomerService@golder.com
Is an EQUIS EDD Required?	Yes -
Lab User Certificate Facility	230360930

9.0 SURVEYING

- Drilling locations will be surveyed after monitoring well installations.
- Northing and easting coordinates are to be collected to a +/- 10 cm accuracy (Phone APP should work).
- Elevations of the ground surface and top of pipe to be measured off of a local benchmark (previous MW's).
- During monitoring events, measure the distance from the top of the pipe to the ground surface/flushmount if top of pipe can not be surveyed.

10.0 INVESTIGATION DERIVED WASTE

- Garbage, such as gloves, bags, etc., is to be taken off-site for disposal.
- Label drums for waste management purposes include the project number, date, site location, drum contents (soil cuttings, purge water).
- Drums should be grouped and placed in an area of the Site for easy access. Confirm with the Property Representative (Peter/Michele) where the best location on the Site would be. This is needed to be agreed upon between the Site Supervisor, PM and site representee as soon as possible during the first day of fieldwork.
- Record inventory of waste containers in the field notes.

11.0 DOCUMENT MANAGEMENT

- Field staff submits scanned field notes to GTAFieldFile@golder.com and Daniel_Stabile@golder.com. This does not need to be daily but should be weekly for more extensive programs or at the fieldwork's end.
- Put all files in one single pdf, and the file name should be as follows: PROJECT_NUMBER Field Notes COMPLETION_DATE" (for example, "1712345 Field Notes April 27, 2017.pdf).
- Take photos, at least two at each one of the drilling/sampling locations showing: (1) general area of drilling; (2) detailed photo of the drilling or some specific aspect you want to highlight and; (3) H&S photo – optional. Take photo of the drums storage area.

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SAMPLING AND ANALYSIS PLAN

DATE October 2, 2022 **Project No.** 21494078

TO Field Supervisor
Golder Associates Ltd.

CC Paul Hurst, Project Director, QP

FROM Daniel Stabile, Project Manager **EMAIL Daniel_Stabile@golder.com**

SAMPLING AND ANALYSIS PLAN, 1047 RICHMOND ROAD, OTTAWA, ONTARIO

1.0 OBJECTIVE

The intent of this Phase Two Environmental Site Assessment (ESA) is to investigate the soil and groundwater within the areas of potential environmental concern (APECs) identified in the Phase One ESA at 1047 Richmond Rd., Ottawa, Ontario (the Site).

The Site is currently an active car dealership, and we need to keep our operations confidential and not disclose any information to the business employees. The Phase Two ESA is required to support a future filing of a Record of Site Condition (RSC) if financing and/or sale of the property is intended in the future.

Several rounds of drilling were completed, and this stage's objective is to delineate GW impacts at BH21-4 and BH21-14 vertically and horizontally. Telescope drilling will be performed to install multilevel monitoring well pairs at BH21-4 and BH21-14 to achieve horizontal delineation. Since these boreholes will be drilled through an impacted GW zone, telescopic drilling will be required to avoid dragging contamination from upper zones to deeper depths.

2.0 SITE ACCESS REQUIREMENTS

Table 1: Site Access

Access Concern	Information
Site Contacts	Mr. Peter Pears and Ms. Michele Pears Office: 613-327-5153 michelep@metrochrysler.com
Access	No restrictions.
Hours of Work	■ Within daylight hours (Approx. 7 am to 6 pm) ■ Interior drilling from 06:00pm to 12:00 am ■ Exterior drilling From 08:00am to 05:00pm
Site Check-In/Out Procedures	Daily check-in/out with Daniel Stabile
Photography	No restrictions

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Access Concern	Information
H&S	■ Follow the HaSEP and COVID procedures; and conduct tailgate with drilling crew. ■ Not to disclose any information to the site employees. Ask Michele help if this happens

3.0 GENERAL REQUIREMENTS

- Follow standard operating procedures for drilling, soil logging, and soil sampling. All work is to be completed assuming a Record of Site Condition will be required.
- Follow Golder Standard Operating Procedures (SOPs) referenced in this sampling and analysis plan and use Golder standard field forms.
- Complete a Daily Log and Job Safety and Environment Analysis (JSEA) form for every day of fieldwork.
- New disposable Nitrile™ gloves will be used at each sampling location to prevent cross-contamination.
- All non-dedicated sampling equipment (e.g., interface probes) will be decontaminated between sampling locations. Sampling equipment in contact with soil or groundwater will be washed with a laboratory-grade detergent solution (i.e. phosphate-free AlcoNox) and thoroughly rinsed with analyte-free water. Use plastic pales from any hardware store. They can also be used for wastewater storage.

4.0 PRIVATE LOCATES

- Private locates was performed on May 5, 2022, with USL-1.
- Bring public locate sheets with you to the Site.
- Ensure the private locator clears each borehole location before leaving the Site and that the radius of 2-3 m clearance is provided by the locator for each location. Adjust locations as applicable. If in doubt/clear a second nearby location as an alternate.

5.0 DRILLING ACTIVITIES

- Borehole drilling and monitoring well installation is booked for October 3 and October 4 2022, with Strata Group.

5.1 Borehole Drilling and Soil Sampling

- Ensure that borehole drilling and soil sampling is carried out in conformance with SOP No. 3: Borehole Drilling and Sampling.
- Confirm that the private locator has cleared every drilling location before penetrating the ground.
- Borehole IDs are found in the proposed BH locations plan.
- Screen overburden soil samples at maximum 0.75 m (2.5 ft) intervals using a combustible gas and photoionization detector (i.e. RKI Eagle, calibrated for hexane and isobutylene), as per SOP No. 4: Headspace Screening.

- Log overburden soil stratigraphy, as per SOP No. 6: Soil Logging and SOP No. 14: Soil Classification and Description.
- Bedrock is expected to be encountered from 3 – 4 m bgs. After this depth, the drilling will be performed with ait hammer tooling, and no soil samples or soil cores will be collected.
- Collect soil samples (including 2 x vials per interval) at a maximum of 0.75 m (2.5 ft) intervals from the ground surface to borehole refusal (call Daniel Stabile if soil conditions are tight or soil recovery is not satisfactory). Submit soil samples in accordance with Table 2 (below).
- Duplicate *samples to be collected and submitted for analysis at a rate of one duplicate per every ten samples submitted to the laboratory. A summary of duplicates required is included at the end of Table 2.*
- Collect *duplicates at the same intervals of the higher headspace readings and/or according to Table 2. (keep your soil cores until you finalize the headspace headings); and from the inferred capillary fringe/water table interface interval.*
- Soil jar quantities: 2 x 40 ml Methanol Vails for VOC and PHC F1/BTEX analysis; 2 x 120 ml jar for PHC F2-F4 and moisture. *For duplicates, double the amount of container for the duplicated interval.*
- Samples are to be stored in coolers with ice after collection (the samples must be below 10°C upon receipt to the lab). Bring ice to the Site in the morning.
- Fill out the chain of custody per the details in Table 5.
- Ask drillers to leave two 200L drums to store purged groundwater for the development and sampling stages and one (as needed) steel drum per BH locations to store drilling cutting.

Table 2: Drilling Program Summary and Soil Sampling Details

Borehole	MW	Analysis	Rationale	OBS
BH22-06	~7 mbgs	GW: (1) VOC, PHC (F1-F4), BTEX	Telescopic drilling to avoid cross-contamination and access groundwater quality and delineate vertical impact at BH21-04.	BH21-04 is screened from 4.5 – 7.5 mbgs
BH22-07	~7 mbgs	GW: (1) PHC/BTEX /VOC	Upper bedrock wells to delineate east of BH21-04 area	
BH22-08	Deep ~10 mbgs	GW: (1) VOC	Telescopic drilling to avoid cross-contamination and access groundwater quality and delineate vertical impact at BH21-14.	BH21-14 is screened from 3 – 4.5 mbgs
BH21-04	Existing MW	GW: (1) PHC/BTEX /VOC	Re-sample PHC /BTEX /VOC	-
BH21-14	Existing MW	GW: (1) PHC/BTEX /VOC	Re-sample PHC /BTEX /VOC	-
GW: (2) Field Trip/Field Blank for VOC			QA/QC	-

Soil/GW Duplicates @ 10% ratio: Soil (1), GW (1)	QA/QC	-

5.2 Monitoring Well Installation

- Refer to SOP No. 1: Monitoring Well Installation. The monitoring wells will consist of 50 mm inner diameter ("ID") Schedule 40 polyvinyl chloride ("PVC") casing and 50 mm ID Schedule 40 PVC well screen (up to 3 metres in length, #10 slot size); sand pack surrounding the screen will be #00 or #0. The annulus will be backfilled using clean silica sand around the screened portion, extending approximately 0.3 to 0.6 m above the screen, followed by bentonite to just below the ground surface. The monitoring wells will be completed with a flush-mounted style protective casing set in concrete and sealed with a PVC j-plug. Label the j-plug with the monitoring well ID during installation. Mark the reference point at the top of well pipe with a small notch. Do NOT use sharpie/marker to mark out reference point.
- Please confirm monitoring well construction with Daniel Stabile prior to installation where any deviation from our typical monitoring well construction is expected.
- Install environmental monitoring wells per the details in Table 3.
- If water table is encountered within overburden, before the last spoon/interval is sampled, take a picture of the BH log and send it to Daniel Stabile for review and definition on the monitoring well design.
- If water table is within the bedrock, well is to be sealed completely on the bedrock to avoid water from the overburden to infiltrate inside the well through the bentonite seal and sand pack.

Table 3: Monitoring Well Construction Details

Location	Screen Depth (m bgs)	Screen Length (m)	Well Diameter (mm/inches)	Protective Casing Type
BH22-06	6.00 - 7.00 mbgs	1	51 / 2	Flush-mount
BH22-07	6.00 - 7.00 mbgs	1	51 / 2	Flush-mount
BH22-08	9.00 - 10.00 mbgs	1	51 / 2	Flush-mount

6.0 MONITORING WELL DEVELOPMENT OF NEWLY INSTALLED WELLS

- Monitoring well development to be conducted upon completion of the monitoring well installation.
- Develop each newly installed monitoring well in accordance with SOP No. 5: Monitoring Well Development.
- Develop the monitoring well with Waterra tubing, foot valve, and surge block for two minutes of pumping for each 0.3 m (1 ft) of the screen.
- Following the surging, continue to purge the ten well volumes or until dry three times.
- Contain all purge water in labelled and sealed drums/totes for off-site disposal.
- Please contact Daniel Stabile if you observe or suspect that there is sheen/product in any monitoring well.

7.0 GROUNDWATER MONITORING AND SAMPLE COLLECTION

7.1 Groundwater Monitoring

- Collect water levels using an interface probe from all the monitoring wells at the Site before collecting groundwater samples from any monitoring wells.
- Please contact Daniel Stabile if you observe or suspect that there is free product in any monitoring well.
- If product is detected with the interface probe or product signs are observed during monitoring well development, check for product thickness with a bailer and take photos of the bailer (regardless of whether product is observed). Record product thickness using the interface probe and the bailer.
    - Clean interface probe and dispose of bailer immediately if impacts are observed.

7.2 Groundwater Sample Collection

- Refer to SOP No. 10: Low Flow Sample Collection and SOP No. 12: Measurement of Field Parameters. Use the "Groundwater Sample Collection" form to collect all data during groundwater sampling.
- Use a low-flow pump for purging and sample collection and monitor the depth to groundwater and water quality field parameters (i.e., pH, specific conductivity, temperature, dissolved oxygen, and reduction-oxidation potential) in accordance with SOP Nos. 10 and 12. If field water quality parameters do not stabilize during low flow purging, do not purge longer than 30 minutes before collecting a groundwater sample.
- If drawdown in the monitoring well is greater than 0.3 m but remains stable, continue purging. If the drawdown is more significant than 0.3 m and is not stable, then complete purging and sample collection in accordance with SOP No. 9: Conventional Groundwater Sample Collection or use the low-field procedure. Sample with a bailer if using the conventional method.
- For wells that can use the conventional method based on observations during development, complete the purging at the beginning of the day and return to the well at the end of the day for sampling.
- Collect groundwater samples in accordance with Table 4. Collect QA/QC samples as indicated at the end of Table 4. The duplicate groundwater samples should be labelled in a manner that the laboratory cannot readily identify the sample as a duplicate (i.e. DUP1). A trip blank sample is required for every groundwater sample submission and one field blank sample is also required.
- Samples are to be stored in coolers with ice after collection (the samples **must** be below 10°C upon receipt to the lab).
- Fill out the chain of custody per the details in Table 5.

8.0 CHAIN OF CUSTODY INFORMATION

- Please send a copy of the chain of custody to Daniel Stabile for review prior to submitting the soil and groundwater samples to the laboratory.
- After confirmation/approval, staff can submit samples for analysis.

Table 4: Chain of Custody Details

Chain of Custody Item	Information
Analytical Laboratory	AGAT Laboratory
Generic Site Condition Standards (SCS)	O. Reg 153/05 Table 7, R/P/I and I/C/C (don't report SCS on CofA)
Use Record of Site Condition analytical procedures?	Yes
Turn-around Time	Regular TAT
Golder Reporting Contact	Daniel_Stabile@golder.com Paul_Hurst@golder.com
Project-Specific Quote Number	Golder-BV MSA and Golder-AGAT MSA (include *WORK ORDER* on the header of the CoC and provide the MSA signature date of May 18, 2020)
Billing Details	AP_CustomerService@golder.com
Is an EQUIS EDD Required?	Yes -
Lab User Certificate Facility	230360930

9.0 SURVEYING

- Drilling locations will be surveyed after monitoring well installations.
- Northing and easting coordinates are to be collected to a +/- 10 cm accuracy (Phone APP should work).
- Elevations of the ground surface and top of pipe to be measured off of a local benchmark (previous MW's).
- During monitoring events, measure the distance from the top of the pipe to the ground surface/flushmount if top of pipe can not be surveyed.

10.0 INVESTIGATION DERIVED WASTE

- Garbage, such as gloves, bags, etc., is to be taken off-site for disposal.
- Label drums for waste management purposes include the project number, date, site location, drum contents (soil cuttings, purge water).
- Drums should be grouped and placed in an area of the Site for easy access. Confirm with the Property Representative (Peter/Michele) where the best location on the Site would be. This is needed to be agreed upon between the Site Supervisor, PM and site representee as soon as possible during the first day of fieldwork.
- Record inventory of waste containers in the field notes.

11.0 DOCUMENT MANAGEMENT

- Field staff submits scanned field notes to GTAFieldFile@golder.com and Daniel_Stabile@golder.com. This does not need to be daily but should be weekly for more extensive programs or at the fieldwork's end.
- Put all files in one single pdf, and the file name should be as follows: PROJECT_NUMBER Field Notes COMPLETION_DATE" (for example, "1712345 Field Notes April 27, 2017.pdf).

- Take photos, at least two at each one of the drilling/sampling locations showing: (1) general area of drilling; (2) detailed photo of the drilling or some specific aspect you want to highlight and; (3) H&S photo – optional. Take photo of the drums storage area.

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SAMPLING AND ANALYSIS PLAN

DATE May 10, 2023 **Project No.** 21494078

TO Field Supervisor
Golder Associates Ltd.

CC Paul Hurst, Project Director, QP;

FROM Daniel Stabile, Project Manager **EMAIL Daniel_Stabile@golder.com**

SAMPLING AND ANALYSIS PLAN, 1047 RICHMOND ROAD, OTTAWA, ONTARIO

1.0 OBJECTIVE

The intent of this Phase Two Environmental Site Assessment (ESA) is to investigate the soil and groundwater within the areas of potential environmental concern (APECs) identified in the Phase One ESA at 1047 Richmond Rd., Ottawa, Ontario (the Site).

The Site is currently an inactive car dealership and the Phase Two ESA is required to support a future filing of a Record of Site Condition (RSC) in the future.

2.0 SITE BACKGROUND

Several rounds of drilling were performed in 2021 and 2022. Two locations presented exceedances of the Table 7 in groundwater (BH21-4 and 21-14) with exceedances of benzene, 1,2-dichloroethane and trichloroethylene. The present delineation attempt is to delineate impacts at BH22-2, discovered on the last delineation round, to north and east of this BH location to install shallow and deep monitoring wells and assess if impacted groundwater is possibly flowing off-site, beyond the property limit.

3.0 SITE ACCESS REQUIREMENTS

Table 1: Site Access

Access Concern	Information
Site Contacts	Corina Sajewski Director, Development C: +1-(647)-895-7245 corina.sajewski@fengate.com
Access	No restrictions.
Hours of Work	Within daylight hours (Approx. 7 am to 6 pm)
Site Check-In/Out Procedures	Daily check-in/out with Daniel Stabile
Photography	No restrictions.

Access Concern	Information
H&S	Follow the HaSEP and COVID procedure Conduct tailgate with drilling crew.

4.0 GENERAL REQUIREMENTS

- Follow standard operating procedures for drilling, soil logging, and soil sampling. All work is to be completed assuming a Record of Site Condition will be required.
- Follow Golder Standard Operating Procedures (SOPs) referenced in this sampling and analysis plan and use Golder standard field forms.
- Complete a Daily Log and Job Safety and Environment Analysis (JSEA) form for every day of fieldwork.
- New disposable Nitrile™ gloves will be used at each sampling location to prevent cross-contamination.
- All non-dedicated sampling equipment (e.g., interface probes) will be decontaminated between sampling locations. Sampling equipment in contact with soil or groundwater will be washed with a laboratory-grade detergent solution (i.e. phosphate-free AlcoNox) and thoroughly rinsed with analyte-free water. Use plastic pales from any hardware store. They can also be used for wastewater storage.

5.0 PRIVATE LOCATES

- Private locates was completed in May 8, 2023, with USL-1.
- Bring public and private locate sheets with you to the Site.
- Ensure the private locator clears each borehole location before leaving the Site and that the radius of 2-3 m clearance is provided by the locator for each location. Adjust locations as applicable. If in doubt/clear a second nearby location as an alternate.

6.0 DRILLING ACTIVITIES

- Borehole drilling and monitoring well installation is booked for May 15-17, 2023, with Strata Drilling Group at 8 am.

6.1 Borehole Drilling and Soil Sampling

- Ensure that borehole drilling and soil sampling is carried out in conformance with SOP No. 3: Borehole Drilling and Sampling.
- Confirm that the private locator has cleared every drilling location before penetrating the ground.
- Borehole IDs are found in the proposed BH locations plan.
- Screen overburden soil samples at maximum 0.6 m (2 ft) intervals using a combustible gas and photoionization detector (i.e. RKI Eagle, calibrated for hexane and isobutylene), as per SOP No. 4: Headspace Screening.
- Log overburden soil stratigraphy at maximum 0.6 m (2 ft) intervals, as per SOP No. 6: Soil Logging and SOP No. 14: Soil Classification and Description.
- Bedrock is expected to be encountered from 2 – 4 m bgs. After this depth, the drilling will be performed with rock coring tooling or air hammer, and no soil samples will be collected.
- No soil samples will be collected. The borehole is exclusively for headspace screening of the overburden soil, bedrock drilling and for monitoring well installation

- Ask drillers to leave two 200L drums to store purged groundwater for the development and sampling stages and one (as needed) steel drum per BH locations to store drilling cutting.

Table 2: Drilling Program Summary and Soil Sampling Details

ID	Rationale	Proposed Investigation	Laboratory GW Analysis
BH22-9S/D	Horizontal and vertical delineation from BH22-2	Shallow screen: 3-6 m (3 m of screened section) Deep screen: 9-10 m (1m of screened section)	**2 x VOC** Samples (one each monitoring well)
BH22-10S/D	Horizontal and vertical delineation from BH22-2	Shallow screen: 3-6 m (3 m of screened section) Deep screen: 9-10 m (1m of screened section)	**2 x VOC** Samples (one each monitoring well)
Duplicate Samples: One duplicate GW sample for each VOC **QA/QC samples:** One trip blank (VOC) and one field blank (VOC)			

6.2 Monitoring Well Installation

- Refer to SOP No. 1: Monitoring Well Installation. The monitoring wells will consist of 50 mm inner diameter ("ID") Schedule 40 polyvinyl chloride ("PVC") casing and 50 mm ID Schedule 40 PVC well screen (up to 3 metres in length, #10 slot size); sand pack surrounding the screen will be #00 or #0. The annulus will be backfilled using clean silica sand around the screened portion, extending approximately 0.3 to 0.6 m above the screen, followed by bentonite to just below the ground surface. The monitoring wells will be completed with a flush-mounted style protective casing set in concrete and sealed with a PVC j-plug. Label the j-plug with the monitoring well ID during installation. Mark the reference point at the top of well pipe with a small notch. Do NOT use sharpie/marker to mark out reference point.
- Please confirm monitoring well construction with Daniel Stabile prior to installation where any deviation from our typical monitoring well construction is expected.
- Install environmental monitoring wells per the details in Table 3.
- If water table is encountered within overburden before the last interval is sampled, take a picture of the BH log and send it to Daniel Stabile for review and definition on the monitoring well design.
- If water table is within the bedrock, the well is to be sealed completely on the bedrock to avoid water from the overburden to infiltrate inside the well through the bentonite seal and sand pack.

Table 3: Monitoring Well Construction Details

Location	Well Screen (m bgs)	Screen Length (ft / m)	Well Diameter (mm/inches)	Protective Casing Type
BH22-9S	3.0 – 6.0 m bgs	10 / 3	50 / 2	Flush mount
BH22-9D	9.0 – 10.0 m bgs	3.2 / 1		
BH22-10S	3.0 – 6.0 m bgs	10 / 3		
BH22-10D	9.0 – 10.0 m bgs	3.2 / 1		

7.0 MONITORING WELL DEVELOPMENT OF NEWLY INSTALLED WELLS

- Monitoring well development to be conducted upon completion of the monitoring well installation.
- Develop each newly installed monitoring well in accordance with SOP No. 5: Monitoring Well Development.
- Develop the monitoring well with Waterra tubing, foot valve, and surge block for two minutes of pumping for each 0.3 m (1 ft) of the screen.
- Following the surging, continue to purge the ten well volumes or until dry three times.
- Contain all purge water in labelled and sealed drums/totes for off-site disposal.
- Please contact Daniel Stabile if you observe or suspect that there is sheen/product in any monitoring well.

8.0 GROUNDWATER MONITORING AND SAMPLE COLLECTION

8.1 Groundwater Monitoring

- Collect water levels using a water tape from all the monitoring wells at the Site before collecting groundwater samples from any monitoring wells.
- Please contact Daniel Stabile if you observe or suspect that there is free product in any monitoring well.
- If product is detected or product signs are observed during monitoring well development, check for product thickness with a bailer and take photos of the bailer (regardless of whether product is observed). Record product thickness using the interface probe and the bailer.
    - Clean interface probe and dispose of bailer immediately if impacts are observed.

8.2 Groundwater Sample Collection

- Refer to SOP No. 10: Low Flow Sample Collection and SOP No. 12: Measurement of Field Parameters. Use the "Groundwater Sample Collection" form to collect all data during groundwater sampling.
- Use a low-flow pump for purging and sample collection and monitor depth to groundwater and water quality field parameters (i.e., pH, specific conductivity, temperature, dissolved oxygen, and reduction-oxidation potential) in accordance with SOP Nos. 10 and 12. If field water quality parameters do not stabilize during low flow purging, do not purge longer than 30 minutes before collecting a groundwater sample.
- If drawdown in the monitoring well is greater than 0.3 m but remains stable, continue purging. If the drawdown is more significant than 0.3 m and is not stable, then complete purging and sample collection in accordance with SOP No. 9: Conventional Groundwater Sample Collection or use the low-field procedure. Sample with a bailer if using the conventional method.
- For wells that can use the conventional method based on observations during development, complete the purging at the beginning of the day and return to the well at the end of the day for sampling.
- Collect groundwater samples in accordance with Table 4. Collect QA/QC samples as indicated at the end of Table 4. The duplicate groundwater samples should be labelled in a manner that the laboratory cannot readily identify the sample as a duplicate (i.e. DUP1). A trip blank sample is required for every groundwater sample submission and one field blank sample is also required.
- Samples are to be stored in coolers with ice after collection (the samples must be below 10°C upon receipt to the lab). Bring ice to the Site in the morning.
- Fill out the chain of custody per the details in Table 5.

Table 4: Groundwater Sampling Plan (Field Check List)

Location	Laboratory GW Analysis	Sampled?	
	VOC	YES	NO
BH21-9S	1	☐	☐
BH21-9D	1	☐	☐
BH21-10S	1	☐	☐
BH21-10D	1	☐	☐
Duplicate Sample: One duplicate groundwater sample VOC **Trip Blanks:** One trip blank for VOC **Field Blank:** One field blank for VOC			

9.0 CHAIN OF CUSTODY INFORMATION

- Please send a copy of the chain of custody to Daniel Stabile for review prior to submitting the groundwater samples to the laboratory.
- After confirmation/approval, staff can submit samples for analysis.

Table 5: Chain of Custody Details

Chain of Custody Item	Information
Analytical Laboratory	AGAT Labs
Generic Site Condition Standards (SCS)	O. Reg 153/05 Table 7, Residential/Parkland/Institutional (don't report SCS on CofA)
Use Record of Site Condition analytical procedures?	Yes
Turn-around Time	Regular TAT
Golder Reporting Contact	Daniel.Stabile@wsp.com Paul.Hurst@wsp.com
Project-Specific Quote Number	2023 Golder-AGAT MSA 735000EB (include *WORK ORDER* on the header of the CoC and provide a signature on the bottom)
Billing Details	AP_CustomerService@wsp.com
Is an EQUIS EDD Required?	YES - Facility # 230360930

10.0 SURVEYING

- Drilling locations will be surveyed after monitoring well installations.
- Northing and easting coordinates are to be collected to a +/- 10 cm accuracy (Phone APP should work).

- Elevations of the ground surface and top of pipe are to be measured off of a local benchmark (previous MW's).
- During monitoring events, measure the distance from the top of the pipe to the ground surface/flushmount if top of pipe can not be surveyed.

11.0 INVESTIGATION DERIVED WASTE

- Garbage, such as gloves, bags, etc., must be disposed of off-site.
- Label drums for waste management purposes, including the project number, date, site location, and drum contents (soil cuttings, purge water).
- Drums should be grouped and placed in an area of the Site for easy access. Confirm with the Property Representative (Peter/Michelle) where the best location on the Site would be. This is needed to be agreed upon between the Site Supervisor, PM and site representative as soon as possible during the first day of fieldwork.
- Record inventory of waste containers in the field notes.

12.0 DOCUMENT MANAGEMENT

- Field staff submits scanned field notes to Daniel.Stabile@wsp.com. This does not need to be daily but should be weekly for more extensive programs or at the fieldwork's end.
- Put all files in one single pdf, and the file name should be as follows: PROJECT_NUMBER Field Notes COMPLETION_DATE" (for example, "1712345 Field Notes April 27, 2017.pdf).
- Take photos, at least two at each one of the drilling/sampling locations showing: (1) general area of drilling; (2) a detailed photo of the drilling or some specific aspect you want to highlight and; (3) H&S photo – optional. Take a photo of the drum's storage area.

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Project Manager - Contaminated Sites *Associate, National Capital Region Contaminated Sites Team Lead*

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SAMPLING AND ANALYSIS PLAN

DATE May 11, 2023 **Project No.** 21494078

TO Field Supervisor
WSP Canada Inc.

CC Paul Hurst, Project Director, QP; Tim Mullings , Senior Reviewer, Dipl T

FROM Daniel Stabile, Project Manager **EMAIL** Daniel_Stabile@wsp.com

SAMPLING AND ANALYSIS PLAN FOR THE CONVEYED AREA PARCEL AT 1047 RICHMOND ROAD, OTTAWA, ONTARIO

DRAFT

1.0 OBJECTIVE

The intent of this Phase Two Environmental Site Assessment (ESA) is to investigate the soil and groundwater within the areas of potential environmental concern (APECs) identified in the Phase One ESA at Conveyed Area at 1047 Richmond Rd., Ottawa, Ontario (the "Site"). The Site is currently an inactive car dealership that will be demolished for redevelopment. The Phase Two ESA is required to support a future filing of a Record of Site Condition (RSC) to facilitate the conveyance of the area to the city in the future.

2.0 SITE BACKGROUND

WSP's Phase One team conducted a site visit, and the following APECs were identified. A summary of the APECs identified at the Phase One Property site visit is provided in the following table.

Area of Potential Environmental Concern[1]	**Location of Area of Potential Environmental Concern on Phase One Property**	**Potentially Contaminating Activity[2]**	**Location of PCA (on-Site or off-Site)**	**Contaminants of Potential Concern[3]**	**Media Potentially Impacted**
APEC 1 – Inferred fill materials to be present site-wide	Entire Site	*# 30. Importation of Fill Material of Unknown Quality*	On-Site	Metals, Hydride-Forming Metals, ORP and PAH	Soil
APEC 2 – Entire Site	Entire Site	*# OTHER. The application of de-icing salt for the purposes of vehicular and pedestrian safety has occurred at the Phase One Property.*	On-Site	SAR, EC, sodium, chloride	Soil and groundwater
APEC 3 – Off-site automotive garage	Northeast of the Site	*#10. Commercial Autobody Shops*	Off-Site	PHCs F1-F4, BTEX and VOCs	Soil and groundwater

WSP Canda Inc.
100 Scotia Court, Whitby, Ontario, L1N 8Y6, Canada T: +1 905 723 2727 F: +1 905 723 2182

3.0 SITE ACCESS REQUIREMENTS

Table 1: Site Access

Access Concern	Information
Site Contacts	Corina Sajewski Director, Development C: +1-(647)-895-7245 corina.sajewski@fengate.com
Access	No restrictions.
Hours of Work	Within daylight hours (Approx. 7 am to 6 pm)
Site Check-In/Out Procedures	Daily check-in/out with Daniel Stabile
Photography	No restrictions.
H&S	Follow the HaSEP and COVID procedure Conduct tailgate with drilling crew.

4.0 GENERAL REQUIREMENTS

- Follow standard operating procedures for drilling, soil logging, and soil sampling. All work is to be completed assuming a Record of Site Condition will be required.
- Follow WSP Standard Operating Procedures (SOPs) referenced in this sampling and analysis plan and use WSP standard field forms.
- Complete a Daily Log and Field Level Risk Analysis (FLRA) form for every day of fieldwork.
- New disposable Nitrile™ gloves will be used at each sampling location to prevent cross-contamination.
- All non-dedicated sampling equipment (e.g., interface probes) will be decontaminated between sampling locations. Sampling equipment in contact with soil or groundwater will be washed with a laboratory-grade detergent solution (i.e. phosphate-free AlcoNox) and thoroughly rinsed with analyte-free water. Use plastic pales from any hardware store. They can also be used for wastewater storage.

5.0 PRIVATE LOCATES

- Private locates was completed on May 8, 2023, with USL-1.
- Bring public and private locate sheets with you to the Site.
- Ensure the private locator clears each borehole location before leaving the Site and that the radius of 2-3 m clearance is provided by the locator for each location. Adjust locations as applicable. If in doubt/clear a second nearby location as an alternate.

6.0 DRILLING ACTIVITIES

- Borehole drilling and monitoring well installation is booked for May 15-17, 2023, with Strata Drilling Group at 8 am.

DRAFT

6.1 Borehole Drilling and Soil Sampling

- Ensure that borehole drilling and soil sampling is carried out in conformance with SOP No. 3: Borehole Drilling and Sampling.
- Confirm that the private locator has cleared every drilling location before penetrating the ground.
- Borehole IDs are found in the proposed BH locations plan.
- Screen overburden soil samples at maximum 0.6 m (2 ft) intervals using a combustible gas and photoionization detector (i.e. RKI Eagle, calibrated for hexane and isobutylene), as per SOP No. 4: Headspace Screening.
- Collect the 40 ml vails first, then fill the headspace bag for measurement.
- Log overburden soil stratigraphy at maximum 0.6 m (2 ft) intervals, as per SOP No. 6: Soil Logging and SOP No. 14: Soil Classification and Description.
- Bedrock is expected to be encountered from 3 – 4 m bgs. After this depth, the drilling will be performed with air hammer tooling, and no soil samples will be collected.
- Collect soil samples (including 2 x vials per interval) at a maximum of 0.6 m (2 ft) intervals from the ground surface to borehole refusal (call Daniel Stabile if soil conditions are tight or soil recovery is not satisfactory). Submit soil samples in accordance with Table 2 (below).
- *Duplicate samples to be collected and submitted for analysis at a rate of one duplicate per every ten samples submitted to the laboratory. A summary of duplicates required is included at the end of Table 2.*
- *Collect duplicates (as needed) at the same intervals of the higher headspace readings and/or according to Table 2. (keep your soil cores until you finalize the headspace headings); and from the inferred capillary fringe/water table interface interval.*
- Each interval you should fill: 2 x 40 ml Methanol Vails for VOC and PHC F1 analysis; 1 x 120 ml jar for PHC F2-F4 and moisture and 1 x 250 ml jar (up to 1.5 m bgs) for Metals and ORP. *For duplicates, double the number of containers for the duplicated interval.*
- Samples are to be stored in coolers with ice after collection (the samples must be below 10°C upon receipt to the lab). Bring ice to the Site in the morning.
- Fill out the chain of custody per the details in Table 5.
- Ask drillers to leave one 200L drum to store purged groundwater for the development and sampling stages and one (as needed) steel drum per BH location to store drilling cutting.
- Bedrock refusal is expected at 2-3 m bgs. After that, soil/rock sampling is not required. No rock coring will be done once the drilling setup is air hammering.

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Table 2: Borehole drilling and Soil Sampling

ID	Rationale	Proposed Investigation	Laboratory Soil Analysis
BH23-1	Investigate possible impacts at the fill brought to the site during the first site development and throughout the site history	APEC 1 – Inferred fill materials to be present site-wide (*# 30. Importation of Fill Material of Unknown Quality*) APEC 2 – The application of de-icing salt for the purposes of vehicular and pedestrian safety has occurred at the Phase One Property. APEC 3 – Off-Site automotive garage (*#10. Commercial Autobody Shops*) Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 2-5 m bgs).	**1 x Sample** *(1 surface soil – up to 1.5 mbgs)*: **PAH, Metals, Hydride-Forming Metals and ORP** *(based on visual observations)* **1 x Sample** *(higher headspace reading/capillary fringe)*: **VOC and PHC** *(based on headspace and visual/olfactory observations)*
BH23-2	Investigate possible impacts at the fill brought to the site during the first site development and throughout the site history	APEC 1 – Inferred fill materials to be present site-wide (*# 30. Importation of Fill Material of Unknown Quality*) APEC 2 – The application of de-icing salt for the purposes of vehicular and pedestrian safety has occurred at the Phase One Property. Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 2-5 m bgs).	**1 x Sample** *(1 surface soil – up to 1.5 mbgs)*: **PAH, Metals, Hydride-Forming Metals and ORP** *(based on visual observations)* **1 x Sample** *(higher headspace reading/capillary fringe)*: **VOC and PHC** *(based on headspace and visual/olfactory observations)*
BH23-3	Investigate possible impacts from off-Site Automotive Shop	APEC 1 – Inferred fill materials to be present site-wide (*# 30. Importation of Fill Material of Unknown Quality*) APEC 2 – The application of de-icing salt for the purposes of vehicular and pedestrian safety has occurred at the Phase One Property. APEC 3 – Off-site automotive garage (*#10. Commercial Autobody Shops*) Perform headspace reading every 0.6 m. Drill borehole and install monitoring well to screen the water table (water table is anticipated to be approx. 2-5 m bgs).	**1 x Sample** *(1 surface soil – up to 1.5 mbgs)*: **PAH, Metals, Hydride-Forming Metals, pH and ORP** *(based on visual observations)* **1 x Sample** *(higher headspace reading/capillary fringe)*: **pH, VOC and PHC** *(based on headspace and visual/olfactory observations)*
Grain Size: submit **two soil samples** for grain size – one from 0.0-1.5m bgs) and the second at or near the anticipated water table			
Duplicate Samples: One duplicate soil sample for each VOC, PAH, PHC, and M&ORP (Higher VOC/worst case)			

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6.2 Monitoring Well Installation

- Refer to SOP No. 1: Monitoring Well Installation. The monitoring wells will consist of 50 mm inner diameter ("ID") Schedule 40 polyvinyl chloride ("PVC") casing and 50 mm ID Schedule 40 PVC well screen (up to 3 metres in length, #10 slot size); sand pack surrounding the screen will be #00 or #0. The annulus will be backfilled using clean silica sand around the screened portion, extending approximately 0.3 to 0.6 m above the screen, followed by bentonite to just below the ground surface. The monitoring wells will be completed with a flush-mounted style protective casing set in concrete and sealed with a PVC j-plug. Label the j-plug with the monitoring well ID during installation. Mark the reference point at the top of well pipe with a small notch. Do NOT use sharpie/marker to mark out reference point.
- Please confirm monitoring well construction with Daniel Stabile prior to installation where any deviation from our typical monitoring well construction is expected.
- Install environmental monitoring wells per the details in Table 3.
- If water table is encountered within overburden, before the last spoon/interval is sampled, take a picture of the BH log and send it to Daniel Stabile for review and definition on the monitoring well design.
- If water table is within the bedrock, well is to be sealed completely on the bedrock to avoid water from the overburden to infiltrate inside the well through the bentonite seal and sand pack.

Table 3: Monitoring Well Construction Details

Location	Well Screen (m bgs)	Screen Length (ft / m)	Well Diameter (mm)	Protective Casing Type
BH23-1	2 to 5 – depending on finding the water table	10 / 3	50	Flush-mount
BH23-2				
BH23-3				

- Well depths are to be adjusted during drilling.

7.0 MONITORING WELL DEVELOPMENT OF NEWLY INSTALLED WELLS

- Monitoring well development of the newly installed to be done after the well installation.
- Develop each newly installed monitoring well in accordance with SOP No. 5: Monitoring Well Development.
- Develop the monitoring well with Waterra tubing, foot valve, and surge block for two minutes of pumping for each 0.3 m (1 ft) of the screen.
- Following the surging, continue to purge the ten well volumes or until dry three times.
- Contain all purge water in labelled and sealed drums/totes for off-site disposal.
- Please contact Daniel Stabile if you observe or suspect that there is sheen/product in any monitoring well.

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8.0 GROUNDWATER MONITORING AND SAMPLE COLLECTION

- Groundwater monitoring from the monitoring wells located at the Site and groundwater sample collection of the newly installed monitoring wells.

8.1 Groundwater Monitoring

- Collect water levels using a water level tape from the monitoring wells at the Site before collecting groundwater samples from any monitoring wells.
- Please contact Daniel Stabile if you observe or suspect that there is free product in any monitoring well.
- If product is detected or product signs are observed during monitoring well development, check for product thickness with a bailer and take photos of the bailer (regardless of whether product is observed). Record product thickness using the interface probe and the bailer.
    - Clean interface probe and dispose of bailer immediately if impacts are observed.

8.2 Groundwater Sample Collection

- Refer to SOP No. 10: Low Flow Sample Collection and SOP No. 12: Measurement of Field Parameters. Use the "Groundwater Sample Collection" form to collect all data during groundwater sampling.
- Use a low-flow pump for purging and sample collection and monitor depth to groundwater and water quality field parameters (i.e., pH, specific conductivity, temperature, dissolved oxygen, and reduction-oxidation potential) in accordance with SOP Nos. 10 and 12. If field water quality parameters do not stabilize during low flow purging, do not purge longer than 30 minutes before collecting a groundwater sample.
- If drawdown in the monitoring well is greater than 0.3 m but remains stable, continue purging. If the drawdown is more significant than 0.3 m and is not stable, then complete purging and sample collection in accordance with SOP No. 9: Conventional Groundwater Sample Collection or use the low-field procedure. Sample with a bailer if using the conventional method.
- For wells that can use the conventional method based on observations during development, complete the purging at the beginning of the day and return to the well at the end of the day for sampling.
- Collect groundwater samples in accordance with Table 4. Collect QA/QC samples as indicated at the end of Table 4. The duplicate groundwater samples should be labelled in a manner that the laboratory cannot readily identify the sample as a duplicate (i.e. DUP1). A trip blank sample is required for every groundwater sample submission, and one field blank sample is also required (DI water is provided).
- Metals are to be field filtered per lab requirements.
- Samples are to be stored in coolers with ice after collection (the samples **must** be below 10°C upon receipt to the lab).
- Fill out the chain of custody per the details in Table 5.

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Table 4: Groundwater Sampling Plan (Field Check List)

Location	Laboratory Groundwater Analysis			Sampled?	
	VOC	PHC (F1-F4)	M&ORP	YES	NO
BH23-1	X	X	X	☐	☐
BH23-2	X	X	X	☐	☐
BH23-3	X	X	X	☐	☐
Total Samples	3	3	3	☐	☐
Duplicate Samples: One duplicate groundwater sample for each VOC, PHC, and M&ORP **Trip Blanks:** One trip blank per groundwater sample submission for VOC **Field Blank:** One field blank for VOC					

9.0 CHAIN OF CUSTODY INFORMATION

- Please send a copy of the chain of custody to Daniel Stabile for review prior to submitting the soil and groundwater samples to the laboratory.
- After confirmation/approval, staff can submit samples for analysis.

Table 5: Chain of Custody Details

Chain of Custody Item	Information
Analytical Laboratory	AGAT Labs
Generic Site Condition Standards (SCS)	O. Reg 153/05 Table 7, Residential/Parkland/Institutional
Use Record of Site Condition analytical procedures?	Yes
Turn-around Time	Regular TAT
WSP Reporting Contact	Daniel.Stabile@wsp.com Kristina.Small@wsp.com
Project-Specific Quote Number	2023 Golder-AGAT MSA 735000EB (include *WORK ORDER* on the header of the CoC and provide a signature on the bottom)
Billing Details	AP_CustomerService@wsp.com
Is an EQUIS EDD Required?	YES - Facility # 230360930

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10.0 SURVEYING

- Drilling locations will be surveyed during private locates.
- Northing and easting coordinates will be collected to a +/- 10 cm accuracy.
- Elevations of the ground surface to be measured off of a local benchmark.
- During monitoring events, measure the distance from the top of the pipe to the ground surface/flush mount.

11.0 INVESTIGATION DERIVED WASTE

- Garbage, such as gloves, bags, etc., is to be taken off-site for disposal.
- Label drums for waste management purposes, including the project number, date, site location, drum contents (soil cuttings, purge water).
- Drums should be grouped and placed in an area of the Site for easy disposal. Confirm with the Property Representative (Peter/Michele) where the best location on the Site would be. This is needed to be agreed upon between the Site Supervisor, PM and site representative as soon as possible during the fieldwork.
- Record inventory of waste containers in the field notes.

12.0 DOCUMENT MANAGEMENT

- Field staff submits scanned field notes to Daniel.Stabile@wsp.com. This does not need to be daily but should be weekly for more extensive programs or at the end.
- Put all files in one pdf, and the file name should be as follows: PROJECT_NUMBER Field Notes COMPLETION_DATE" (for example, "1712345 Field Notes April 27, 2023.pdf).
- Take photos, at least two at each one of the drilling/sampling locations showing: (1) general area of drilling; (2) detailed photo of the drilling or some specific aspect you want to highlight and; (3) H&S photo – optional. Take a photo of the drum's storage area.

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https://wsponline.sharepoint.com/sites/gld-152441/project files/6 deliverables/ph two conveyed area/appendix d - sap/21494078-reva-fengate 1047 richmond rd conveyed area sap-8may2023.docx

APPENDIX V
BOREHOLE LOGS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-01

SHEET 1 OF 1

LOCATION: N 5026314.5 ;E 361326.2

BORING DATE: September 24, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.73						
0	Power Auger 200 mm Diam. (Hollow Stem)	ASPHALT		0.00						
		FILL - (SW) gravelly SAND, angular; brown (PAVEMENT STRUCTURE); non-cohesive, moist		0.10 65.43	1	SS	19	ND		Flush Mount Casing
		FILL - (SM) gravelly SILTY SAND; grey to dark brown, trace sand (SP); non-coohesive, moist, compact to very loose		0.30	1	SS	19	ND	Metals	
1					2	SS	4	ND		
					3	SS	2	ND	PHCs, VOCs	
				63.90						
2	Air Hammer H Bit	BEDROCK (Auger Refusal) (Air hammer from 1.83 m to 7.62 m)		1.83						Bentonite Seal
3										
4										Sllica Sand
5										
6										50 mm Diam. PVC #10 Slot Screen
7				58.11						
		End of Borehole		7.62						
8		Note(s): 1. Water level at BH21-01 measured at a depth of 7.68 m (Elev. 58.04 m) on October 4, 2021 2. Record of borehole log not prepared for geotechnical engineering purposes								
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DG

CHECKED: AG

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-02

SHEET 1 OF 1

LOCATION: N 5026359.3 ;E 361297.8

BORING DATE: September 21, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.46						
0	Power Auger 200 mm Diam. (Hollow Stem)	ASPHALT		0.08						
		FILL - (SW) gravellyl SAND, angular; grey (PAVEMENT STRUCTURE); non-cohesive, moist		65.16	1	SS	22	ND		Flush Mount Casing
				0.30						
		FILL - (SP) SAND, fine to medium, trace silt; brown; non-cohesive, moist, compact to dense			2	SS	31	ND		
1									Metals	
				64.24						
		FILL - (SM/GP) SILTY SAND and GRAVEL; dark brown, contains brick fragments and rootlets; non-cohesive, moist, compact		1.22	3	SS	10	ND		
				63.63						
2		Highly weathered BEDROCK		1.83	4	SS	>84	ND		Bentonite Seal
					5	SS	>50	ND	PHCs, VOCs	
3				62.41						
	Air Hammer H Bit	BEDROCK (Auger Refusal) (Air hammer from 3.05 M TO 7.62 M)		3.05						Sllica Sand
4										
5										
6										50 mm Diam. PVC #10 Slot Screen
7				57.84						
		End of Borehole		7.62						
8		Note(s):								
		1. Water level at BH21-03 measured at a depth of 3.17 m (Elev. 62.28 m) on October 4, 2021								
		2. Record of borehole log not prepared for geotechnical engineering purposes								
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DG

CHECKED: AG

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PROJECT: 21494078

RECORD OF BOREHOLE: 21-03

SHEET 1 OF 1

LOCATION: N 5026355.1 ;E 361289.2

BORING DATE: September 21 & 22, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.24						
0	Power Auger 200 mm Diam. (Hollow Stem)	ASPHALT		0.08						Flush Mount Casing
		FILL - (SW) gravelly SAND, angular; grey (PAVEMENT STRUCTURE); non-cohesive, moist		64.63	1	SS	43	ND	VOCs	
		FILL - (SP) SAND, fine to medium, trace silt; brown; non-cohesive, moist, dense		0.61	2	SS	31	ND	PHCs	
1				64.02						
		FILL - (SM) SILTY SAND, some topsoil, trace gravel; dark brown, contains shale fragments; non-cohesive, moist, compact		1.22	3	SS	12	ND	Metals	
				63.41						
2		Highly weathered BEDROCK		1.83	4	SS	>94	ND		Bentonite Seal
					5	SS	52/ 6"			
3				62.19						
	Air Hammer H Bit	BEDROCK (Auger Refusal) (Air hammer from 3.05 m to 7.62 m)		3.05						
4										
										Sllica Sand
5										
6										50 mm Diam. PVC #10 Slot Screen
7				57.62						
		End of Borehole		7.62						
8		Note(s):								
		1. Water level at BH21-03 measured at a depth of 3.56 m (Elev. 61.68 m) on October 4, 2021								
		2. Record of borehole log not prepared for geotechnical engineering purposes								
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DG

CHECKED: AG

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PROJECT: 21494078

RECORD OF BOREHOLE: 21-11

SHEET 1 OF 1

LOCATION: N 5026332.1 ;E 361283.0

BORING DATE: November 12, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected) 100 200 300 400 / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected) 100 200 300 400	HYDRAULIC CONDUCTIVITY, k, cm/s 10^{-6} 10^{-5} 10^{-4} 10^{-3} / WATER CONTENT PERCENT Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.26						
0	Power Auger, Geoprobe	GRAVEL		0.00 / 64.96						Flush Mount Casing
		(SP) SAND; brown; non-cohesive, dry		0.30 / 64.50	1	SS		ND		
1		(SM) SILTY SAND; grey-brown; non-cohesive, dry		0.76 / 63.74	2	SS		ND	Metals, PHCs, VOCs	Bentonite Seal
		Soft, broken, LIMESTONE		1.52	3	SS		ND	Metals	
2										Sllica Sand
3										
4										50 mm Diam. PVC #10 Slot Screen
5				59.72						
6		End of Borehole Upon Refusal Note(s): 1. Water level at BH21-11 measured at a depth of 2.96 m (Elev. 62.30 m) on November 30, 2021 2. Record of borehole log not prepared for geotechnical engineering purposes		5.54						
7										
8										
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: AB

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-12

SHEET 1 OF 1

LOCATION: N 5026352.5 ;E 361280.2

BORING DATE: November 11, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		64.88							
0	Power Auger Geoprobe	GRAVEL		0.00							
				64.58	1	SS		ND			
		(SP) SAND; brown; non-cohesive, dry		0.30							
1					2	SS		ND		Metals	
					3	SS		ND		Metals, PHCs, VOCs	
2		Soft, crushed, LIMESTONE		62.90 1.98							
				62.34	4	SS					
		End of Borehole Upon Refusal		2.54							
3		Note(s): 1. Record of borehole log not prepared for geotechnical engineering purposes									
4											
5											
6											
7											
8											
9											
10											

DEPTH SCALE
1 : 50

GOLDER

LOGGED: AB
CHECKED: DS

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PROJECT: 21494078

RECORD OF BOREHOLE: 21-13

SHEET 1 OF 1

LOCATION: N 5026364.0 ;E 361291.0

BORING DATE: November 11, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ *ND = Not Detected* (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ *ND = Not Detected* (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		64.86						
0	Power Auger Geoprobe	GRAVEL		0.00						
				64.56	1	SS		ND		
		(SP) SAND; brown; non-cohesive, dry		0.30						
1					2	SS		ND		Metals
				63.18						
		Soft, crushed, LIMESTONE		1.68	3	SS		ND		Metals
2				62.73						
		End of Borehole Upon Refusal		2.13						
		Note(s): 1. Record of borehole log not prepared for geotechnical engineering purposes								
3										
4										
5										
6										
7										
8										
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: AB

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-19

SHEET 1 OF 1

LOCATION: N 5026348.9 ;E 361305.7

BORING DATE: November 25, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.95							
0	Hilti TE 3000 AVR Hammer Drill	CONCRETE pad		0.00 65.75							Flush Mount Casing
		FILL - (SP) SAND, fine, trace silt; light brown; non-cohesive, dry, loose		0.20	1	SS		ND		PHCs, VOCs	
1					2	SS		ND			
					3	SS		ND			Bentonite Seal
				64.32							
		(CL) SILTY CLAY, trace sand; dark grey; non-cohesive, dry, compact		1.63							
2				63.92	4	SS		ND			
		BEDROCK		2.03							
		- Fractured zone from 2.4 m to 3.1 m depth									Silica Sand
3	Power Auger Geoprobe										
4											52 mm Diam. PVC #10 Slot Screen
5				60.82							
		End of Borehole		5.13							
		Note(s): 1. Water level at BH21-19 measured at a depth of 3.44 m (Elev. 62.51 m) on November 30, 2021 2. Record of borehole log not prepared for geotechnical engineering purposes									
6											
7											
8											
9											
10											

DEPTH SCALE

1 : 50

GOLDER

LOGGED: GS

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-20

SHEET 1 OF 1

LOCATION: N 5026328.5 ;E 361313.9

BORING DATE: November 24, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.93							
0	Power Auger Geoprobe	CONCRETE pad		0.00							Flush Mount Casing
		FILL - (SP) SAND, fine, trace silt, trace clay, trace gravel; light to dark brown, cobbles; non-cohesive; dry		0.13	1	SS		ND			
1					2	SS		ND		PHCs, VOCs	
				64.41							
		(CL) SILTY CLAY, trace sand, trace gravel; dark grey; non-cohesive, dry		1.52							Bentonite Seal
2					3	SS		ND			
				63.64							
		BEDROCK		2.29	4	SS		ND			
3											Silica Sand
4											52 mm Diam. PVC #10 Slot Screen
5				60.75							
		End of Borehole		5.18							
6		Note(s): 1. Water level at BH21-20 measured at a depth of 3.82 m (Elev. 62.11 m) on November 30, 2021 2. Record of borehole log not prepared for geotechnical engineering purposes									
7											
8											
9											
10											

DEPTH SCALE

1 : 50

GOLDER

LOGGED: GS

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-25

SHEET 1 OF 1

LOCATION: N 5026315.8 ;E 361338.3

BORING DATE: December 21, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ *ND = Not Detected* (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ *ND = Not Detected* (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		66.01						
0	Power Auger Geoprobe	ASPHALT		0.00						
		SAND		0.15	1	SS		ND		
1										
					2	SS		ND		
2				63.93						
		SILTY SAND, trace gravel; grey; non-cohesive, moist		2.08	3	SS				
3				62.96						
		BEDROCK		3.05	4	SS		ND		
				62.66						
		End of Borehole		3.35						
		Note(s):								
4		1. Borehole log not for geotechnical purposes.								
5										
6										
7										
8										
9										
10										

DEPTH SCALE
1 : 50

GOLDER

LOGGED: DS
CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: BH22-04

SHEET 1 OF 2

LOCATION: N 5026371.34; E 361293.22

BORING DATE: May 9, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: Geoprobe

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3})	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		64.75				SHEAR STRENGTH Cu, kPa: nat V. + Q - ● / rem V. ⊕ U - ○ (20 40 60 80)	WATER CONTENT PERCENT: Wp — W — Wl (20 40 60 80)		
0	Direct Push, 130 mm Diam. Casing	FILL - (SP) gravelly SAND, with asphalt fragments; grey brown; non-cohesive, moist		0.00							
				64.45							
		FILL - (SP) SAND, medium to coarse, some fines; brown; non-cohesive, moist		0.30	1	DP	-				Silica Sand
1					2	DP	-				
				63.46							
		FILL - (SP/SC) SAND to CLAYEY SAND, low plastic fines; brown; non-cohesive, moist		1.29							
				63.23							
		GLACIAL TILL to WEATHERED CRUST		1.52							
2					3	DP	-				
				62.46							
	Air Hammer	BEDROCK		2.29							Bentonite Seal
3											
4											
											Silica Sand
5											
6											52 mm Diam. PVC #10 Slot Screen
7											▽ S
				56.83							
8				7.92							
		CONTINUED NEXT PAGE									

DEPTH SCALE

1 : 40

LOGGED: DG

CHECKED:

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PROJECT: 21494078

RECORD OF BOREHOLE: BH22-04

SHEET 2 OF 2

LOCATION: N 5026371.34; E 361293.22

BORING DATE: May 9, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: Geoprobe

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA PLOT	SOIL PROFILE: ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m (20 40 60 80) / SHEAR STRENGTH Cu, kPa (nat V. +, rem V. ⊕, Q - ●, U - ○) (20 40 60 80)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp, W, Wl) (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*									
		END OF BOREHOLE Notes: 1. Water level at BH22-04 measured at a depth of 7.09 m (Elev. 57.66 m) on May 26, 2022. 2. Borehole log not prepared for geotechnical engineering purposes.									
9											
10											
11											
12											
13											
14											
15											
16											

DEPTH SCALE

1 : 40

LOGGED: DG

CHECKED:

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PROJECT: 21494078

RECORD OF BOREHOLE: BH22-05

SHEET 1 OF 2

LOCATION: N 5026323.15; E 361338.38

BORING DATE: May 11, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: Geoprobe

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected) 100 200 300 400	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected) 100 200 300 400	HYDRAULIC CONDUCTIVITY, k, cm/s 10^{-6} 10^{-5} 10^{-4} 10^{-3}	WATER CONTENT PERCENT Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.94									
0	Power Auger / Geoprobe	FILL - (SW) gravelly SAND, angular; grey, with asphalt fragments; non-cohesive, dry		0.00 / 65.64									Flush Mount Casing
		FILL - (SP) SAND, medium to coarse, gravelly; brown; non-cohesive, moist		0.30	1	DP	-	ND					
1					2	DP	-	ND					
		FILL - (SM) SILTY SAND, medium to coarse, gravelly; grey brown; non-cohesie, moist		64.42 / 1.52	3	DP	-	ND					
2					4	DP	-	ND					
3					5	DP	-	ND					
	Air Hammer	BEDROCK		62.59 / 3.35									Bentonite Seal
4													
5													
6													
7													Silica Sand
													52 mm Diam. PVC #10 Slot Screen
8		*CONTINUED NEXT PAGE*											

DEPTH SCALE

1 : 40

LOGGED: DG

CHECKED:

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PROJECT: 21494078

RECORD OF BOREHOLE: BH22-05

SHEET 2 OF 2

LOCATION: N 5026323.15; E 361338.38

BORING DATE: May 11, 2022

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

DRILL RIG: Geoprobe

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected; HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected	HYDRAULIC CONDUCTIVITY, k, cm/s; WATER CONTENT PERCENT Wp W Wl	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*						100 200 300 400	10^{-6} 10^{-5} 10^{-4} 10^{-3}		
	Air Hammer	BEDROCK						100 200 300 400	20 40 60 80		52 mm Diam. PVC #10 Slot Screen
9											
10				55.28							
		END OF BOREHOLE		10.66							
11		Notes:									
		1. Water level at BH22-05 measured at a depth of 7.79 m (Elev. 58.15 m) on May 26, 2022.									
12		2. Borehole log not prepared for geotechnical engineering purposes.									
13											
14											
15											
16											

DEPTH SCALE

1 : 40

LOGGED: DG

CHECKED:

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PROJECT: 21494078

LOCATION: N 5026270.00; E 361286.70

RECORD OF BOREHOLE: BH23-01

BORING DATE: May 17, 2023

DRILL RIG: Massenza MI3

SHEET 1 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp, W, Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0		GROUND SURFACE		65.64						
	Air Rotary, 140 mm Casing	ASPHALTIC CONCRETE		0.00 / 0.05						
		FILL - (SW) gravelly SAND, angular; grey; (Pavement Structure)		0.15						
		FILL - (SP) SAND, fine to medium, trace silt; brown; non-cohesive, moist		65.03	1			⊕ ND		Flushmount
		(SM/ML) gravelly SILTY SAND to sandy SILT, trace plastic fines; brown; non-cohesive, moist		0.61 / 64.73	2			⊕ ND		
1		(GP) GRAVEL, trace silty sand, weathered bedrock; brown; non-cohesive, moist		0.91 / 64.42						
	Air Rotary, 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey, fine grained, non-porous to faintly porous, medium strong, Dolostone, interbedded with shale, limestone and sandstone		1.22						Bentonite Seal
2										
3										
4										
5										
6										
7										
8		*CONTINUED NEXT PAGE*								

DEPTH SCALE

1 : 40

LOGGED:

CHECKED: DS

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PROJECT: 21494078

LOCATION: N 5026270.00; E 361286.70

RECORD OF BOREHOLE: BH23-01

BORING DATE: May 17, 2023

DRILL RIG: Massenza MI3

SHEET 2 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*								
8	Air Rotary 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey, fine grained, non-porous to faintly porous, medium strong, Dolostone, interbedded with shale, limestone and sandstone								Bentonite Seal
9										
10										Sand #2
11										
12										Screen
13				51.77 13.87						Sand #2
14		END OF BOREHOLE Notes: 1. Water level measured at a depth of 11.91 m below ground surface (El. 53.73 m asl), May 23, 2023.								
15										
16										

DEPTH SCALE

1 : 40

LOGGED:

CHECKED: DS

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PROJECT: 21494078

LOCATION: N 5026255.00; E 361292.60

RECORD OF BOREHOLE: BH23-02

BORING DATE: May 17, 2023

DRILL RIG: Massenza MI3

SHEET 1 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0		GROUND SURFACE		65.98						
	Air Rotary 140 mm Casing	ASPHALTIC CONCRETE		0.00						
		FILL - (SW) gravelly SAND, angular; grey; (Pavement Structure)		0.05						
		FILL - (SP) SAND, fine to medium, trace silt; brown; non-cohesive, moist		0.18	1			ND		Flushmount
1		(SM/ML) gravelly SILTY SAND to sandy SILT, trace plastic fines; dark brown to grey-brown, possibly weathered bedrock; non-cohesive, moist to wet		65.52 0.46	2			ND		
	Air Rotary 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey; fine grained, non-porous to faintly porous, medium strong, Dolostone, interbedded with shale, limestone and sandstone		64.76 1.22						Bentonite Seal
2										
3										
4										
5										
6										
7										
8		*CONTINUED NEXT PAGE*								

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DEPTH SCALE

1 : 40

LOGGED:

CHECKED: DS

PROJECT: 21494078

LOCATION: N 5026255.00; E 361292.60

RECORD OF BOREHOLE: BH23-02

BORING DATE: May 17, 2023

DRILL RIG: Massenza MI3

SHEET 2 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp, W, Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*								
8	Air Rotary, 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey; fine grained, non-porous to faintly porous, medium strong, Dolostone, interbedded with shale, limestone and sandstone								Bentonite Seal
9										
10										
11										Sand #2
12										
13										Screen
14										
15										Sand #2
				50.44 / 15.54						
16		END OF BOREHOLE Notes:								
		CONTINUED NEXT PAGE								

DEPTH SCALE

1 : 40

LOGGED:

CHECKED: DS

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PROJECT: 21494078

LOCATION: N 5026255.00; E 361292.60

RECORD OF BOREHOLE: BH23-02

BORING DATE: May 17, 2023

DRILL RIG: Massenza MI3

SHEET 3 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
16		*--- CONTINUED FROM PREVIOUS PAGE ---*								
		1. Water level measured at a depth of 12.55 m below ground surface (El. 53.43 m asl), May 23, 2023.								
17										
18										
19										
20										
21										
22										
23										
24										

DEPTH SCALE

1 : 40

LOGGED:

CHECKED: DS

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PROJECT: 21494078

LOCATION: N 5026280.00; E 361311.60

RECORD OF BOREHOLE: BH23-03

BORING DATE: May 15, 2023

DRILL RIG: Massenza MI3

SHEET 1 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		66.00						
0	Air Rotary, 140 mm Casing	ASPHALTIC CONCRETE		0.00						
		FILL - (SW) gravelly SAND, angular; grey; (Pavement Structure)		0.10						
		FILL - (SP) SAND, fine to medium, trace silt, some gravel; brown; non-cohesive, moist		0.20 / 65.39	1			⊕		Flushmount
		FILL - (SM) SILTY SAND, some gravel to gravelly, organic matter; brown to dark brown; non-cohesive, moist		0.61 / 65.09	2			⊕ ND		
1	Air Rotary, 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey, fine grained, non-porous to faintly porous, medium strong, Dolostone, interbedded with shale, limestone and sandstone		0.91						Bentonite Seal
2										
3										
4										
5										
6										
7										
8		*CONTINUED NEXT PAGE*								

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DEPTH SCALE

1 : 40

LOGGED:

CHECKED: DS

PROJECT: 21494078

LOCATION: N 5026280.00; E 361311.60

RECORD OF BOREHOLE: BH23-03

BORING DATE: May 15, 2023

DRILL RIG: Massenza MI3

SHEET 2 OF 3

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp W Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
8		*--- CONTINUED FROM PREVIOUS PAGE ---*								
8	Air Rotary, 89 mm Air Hammer	Slightly weathered to fresh, medium to thickly bedded, medium grey, fine grained, non-porous to faintly porous, medium strong, Dolostone, interbedded with shale, limestone and sandstone								Bentonite Seal
9										
10										
11										Sand #2
12										
13										Screen
14				51.37 / 14.63						Sand #2
15		END OF BOREHOLE Notes: 1. Water level measured at a depth of 12.85 m below ground surface (El. 53.15 m asl), May 23, 2023.								
16										

DEPTH SCALE

1 : 40

LOGGED:

CHECKED: DS

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CLIENT: FENGATE ASSET MANAGEMENT		PROJECT NO.: CO972.00	**RECORD OF: MW202**
ADDRESS: 1047 RICHMOND ROAD			
CITY/PROVINCE: OTTAWA, ONTARIO	NORTHING (m): 5024894.9	EASTING (m): 439023.4	ELEV. (m) 64.96
CONTRACTOR: STRATA DRILLING	METHOD: HOLLOW STEM AUGER		
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 / SAND TYPE: #2	SEALANT TYPE: BENTONITE

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) ● 40 80 120 160 / N-VALUE (Blows/300mm) ▲ 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		GRAVEL trace sand	0	64.5									NO SAMPLES COLLECTED. DRILLED THROUGH BACKFILL FOR MONITORING WELL INSTALLATION.
			0.5										
			1	64									
			1.5	63.5									
			2	63									
			2.5	62.5									
			3	62									
			3.5	61.5									
			4	61									
			4.5	60.5									
			5	60									
			5.5	59.5									
			6	59									
		GRAVEL	6.5	58.5									
			7	58									
			7.5	57.5									
		--- becomming wet	8	57									
			8.5	56.5									
			9	56									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: EB	DRILLING DATE: 2-DEC-2024
INPUT BY: JS	MONITORING DATE: 4-APR-2025
REVIEWED BY: KWB	PAGE 1 OF 1

APPENDIX VI
CHEMICAL LABORATORY CERTIFICATES OF ANALYSIS

Your Project #: 21494078
Site Location: 1047 RICHMOND
Your C.O.C. #: na

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/10/13
Report #: R6851793
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C1S1463
Received: 2021/09/28, 15:20

Sample Matrix: Soil
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Hot Water Extractable Boron (1)	5	2021/10/01	2021/10/01	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum (1)	6	N/A	2021/10/01		EPA 8260C m
Free (WAD) Cyanide (1)	5	2021/10/01	2021/10/01	CAM SOP-00457	OMOE E3015 m
Conductivity (1)	5	2021/10/01	2021/10/01	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1, 2)	5	2021/10/01	2021/10/01	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (1, 3)	1	N/A	2021/10/13	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (1, 3)	2	N/A	2021/09/30	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (1, 4)	1	2021/10/08	2021/10/11	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (1, 4)	1	2021/09/30	2021/10/01	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (1, 4)	5	2021/09/30	2021/09/30	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS (1)	5	2021/10/01	2021/10/01	CAM SOP-00447	EPA 6020B m
Moisture (1)	8	N/A	2021/09/29	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture (1)	5	N/A	2021/09/30	CAM SOP-00445	Carter 2nd ed 51.2 m
pH CaCl2 EXTRACT (1)	5	2021/10/01	2021/10/01	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR) (1)	5	N/A	2021/10/01	CAM SOP-00102	EPA 6010C
Sodium Adsorption Ratio (SAR) (1)	8	N/A	2021/10/12	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs (1)	4	N/A	2021/10/01	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds in Soil (1)	1	N/A	2021/10/01	CAM SOP-00228	EPA 8260C m
Volatile Organic Compounds in Soil (1)	1	N/A	2021/09/30	CAM SOP-00228	EPA 8260C m

Remarks:

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

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

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

Your Project #: 21494078
Site Location: 1047 RICHMOND
Your C.O.C. #: na

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/10/13
Report #: R6851793
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C1S1463
Received: 2021/09/28, 15:20

otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) Soils are reported on a dry weight basis unless otherwise specified.
(3) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
(4) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: emese.gitej@bureauveritas.com
Phone# (905)817-5829
==========
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BV Labs Job #: C1S1463
Report Date: 2021/10/13

Golder Associates Ltd
Client Project #: 21494078
Site Location: 1047 RICHMOND
Sampler Initials: DG

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		QUD247	QUD251			QUD251			QUD254		
Sampling Date		2021/09/24 11:00	2021/09/21 11:30			2021/09/21 11:30			2021/09/24 08:05		
COC Number		na	na			na			na		
	UNITS	21-1 SA1	21-2 SA2	RDL	QC Batch	21-2 SA2 Lab-Dup	RDL	QC Batch	21-5 SA3	RDL	QC Batch
Calculated Parameters											
Sodium Adsorption Ratio	N/A	3.6	0.88		7607144				0.36		7607144
Inorganics											
Conductivity	mS/cm	0.54	0.26	0.002	7612428				0.27	0.002	7612428
Moisture	%	22	4.7	1.0	7610577	5.7	1.0	7610577	14	1.0	7610577
Available (CaCl2) pH	pH	7.51	6.97		7612293				7.42		7612293
WAD Cyanide (Free)	ug/g	<0.01	<0.01	0.01	7612164				<0.01	0.01	7612164
Chromium (VI)	ug/g	<0.18	<0.18	0.18	7611943				<0.18	0.18	7611943
Metals											
Hot Water Ext. Boron (B)	ug/g	0.38	0.15	0.050	7612002				0.40	0.050	7612002
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	0.20	7611998				0.23	0.20	7611998
Acid Extractable Arsenic (As)	ug/g	<1.0	<1.0	1.0	7611998				1.3	1.0	7611998
Acid Extractable Barium (Ba)	ug/g	72	21	0.50	7611998				89	0.50	7611998
Acid Extractable Beryllium (Be)	ug/g	0.49	<0.20	0.20	7611998				0.40	0.20	7611998
Acid Extractable Boron (B)	ug/g	9.8	<5.0	5.0	7611998				6.9	5.0	7611998
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	0.10	7611998				0.54	0.10	7611998
Acid Extractable Chromium (Cr)	ug/g	25	8.3	1.0	7611998				22	1.0	7611998
Acid Extractable Cobalt (Co)	ug/g	7.6	3.1	0.10	7611998				7.9	0.10	7611998
Acid Extractable Copper (Cu)	ug/g	12	4.6	0.50	7611998				14	0.50	7611998
Acid Extractable Lead (Pb)	ug/g	5.6	2.0	1.0	7611998				85	1.0	7611998
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	0.50	7611998				1.2	0.50	7611998
Acid Extractable Nickel (Ni)	ug/g	22	5.5	0.50	7611998				16	0.50	7611998
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	0.50	7611998				<0.50	0.50	7611998
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	0.20	7611998				<0.20	0.20	7611998
Acid Extractable Thallium (Tl)	ug/g	0.10	<0.050	0.050	7611998				0.12	0.050	7611998
Acid Extractable Uranium (U)	ug/g	0.50	0.45	0.050	7611998				0.53	0.050	7611998
Acid Extractable Vanadium (V)	ug/g	30	20	5.0	7611998				30	5.0	7611998
Acid Extractable Zinc (Zn)	ug/g	33	16	5.0	7611998				43	5.0	7611998
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	0.050	7611998				<0.050	0.050	7611998

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

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		QUD258		QUD259		
Sampling Date		2021/09/22 08:30		2021/09/22		
COC Number		na		na		
	UNITS	21-3 SA3	QC Batch	21-3 DUP-1	RDL	QC Batch
Calculated Parameters						
Sodium Adsorption Ratio	N/A	6.1	7607144	9.6		7610400
Inorganics						
Conductivity	mS/cm	0.34	7612428	0.41	0.002	7612465
Moisture	%	16	7610577	15	1.0	7611396
Available (CaCl2) pH	pH	7.54	7612293	7.43		7612293
WAD Cyanide (Free)	ug/g	<0.01	7612164	<0.01	0.01	7612164
Chromium (VI)	ug/g	<0.18	7611943	<0.18	0.18	7611943
Metals						
Hot Water Ext. Boron (B)	ug/g	0.87	7612002	0.67	0.050	7612310
Acid Extractable Antimony (Sb)	ug/g	0.33	7611998	0.46	0.20	7612314
Acid Extractable Arsenic (As)	ug/g	1.7	7611998	2.8	1.0	7612314
Acid Extractable Barium (Ba)	ug/g	99	7611998	110	0.50	7612314
Acid Extractable Beryllium (Be)	ug/g	0.52	7611998	0.72	0.20	7612314
Acid Extractable Boron (B)	ug/g	7.8	7611998	12	5.0	7612314
Acid Extractable Cadmium (Cd)	ug/g	0.45	7611998	0.37	0.10	7612314
Acid Extractable Chromium (Cr)	ug/g	27	7611998	33	1.0	7612314
Acid Extractable Cobalt (Co)	ug/g	13	7611998	14	0.10	7612314
Acid Extractable Copper (Cu)	ug/g	18	7611998	60	0.50	7612314
Acid Extractable Lead (Pb)	ug/g	23	7611998	48	1.0	7612314
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	7611998	0.52	0.50	7612314
Acid Extractable Nickel (Ni)	ug/g	25	7611998	34	0.50	7612314
Acid Extractable Selenium (Se)	ug/g	<0.50	7611998	<0.50	0.50	7612314
Acid Extractable Silver (Ag)	ug/g	<0.20	7611998	<0.20	0.20	7612314
Acid Extractable Thallium (Tl)	ug/g	0.14	7611998	0.21	0.050	7612314
Acid Extractable Uranium (U)	ug/g	0.49	7611998	0.64	0.050	7612314
Acid Extractable Vanadium (V)	ug/g	26	7611998	29	5.0	7612314
Acid Extractable Zinc (Zn)	ug/g	54	7611998	89	5.0	7612314
Acid Extractable Mercury (Hg)	ug/g	0.063	7611998	0.077	0.050	7612314

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs Job #: C1S1463
Report Date: 2021/10/13

Golder Associates Ltd
Client Project #: 21494078
Site Location: 1047 RICHMOND
Sampler Initials: DG

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

BV Labs ID		QUD250			QUD254			QUD257		
Sampling Date		2021/09/21 10:40			2021/09/24 08:05			2021/09/22 08:15		
COC Number		na			na			na		
	UNITS	21-4 SA6	RDL	QC Batch	21-5 SA3	RDL	QC Batch	21-3 SA2	RDL	QC Batch
Inorganics										
Moisture	%	9.6	1.0	7609199				5.6	1.0	7608490
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	0.020	7610488	<0.020	0.020	7632544	<0.020	0.020	7610488
Toluene	ug/g	<0.020	0.020	7610488	<0.020	0.020	7632544	<0.020	0.020	7610488
Ethylbenzene	ug/g	<0.020	0.020	7610488	<0.020	0.020	7632544	<0.020	0.020	7610488
o-Xylene	ug/g	<0.020	0.020	7610488	<0.020	0.020	7632544	<0.020	0.020	7610488
p+m-Xylene	ug/g	<0.040	0.040	7610488	<0.040	0.040	7632544	<0.040	0.040	7610488
Total Xylenes	ug/g	<0.040	0.040	7610488	<0.040	0.040	7632544	<0.040	0.040	7610488
F1 (C6-C10)	ug/g	<10	10	7610488	<10	10	7632544	<10	10	7610488
F1 (C6-C10) - BTEX	ug/g	<10	10	7610488	<10	10	7632544	<10	10	7610488
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7609831	<10	10	7628860	<10	10	7609831
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7609831	200	50	7628860	<50	50	7609831
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7609831	76	50	7628860	<50	50	7609831
Reached Baseline at C50	ug/g	Yes		7609831	Yes		7628860	Yes		7609831
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	100		7610488	106		7632544	103		7610488
4-Bromofluorobenzene	%	102		7610488	90		7632544	94		7610488
D10-o-Xylene	%	93		7610488	78		7632544	103		7610488
D4-1,2-Dichloroethane	%	95		7610488	106		7632544	96		7610488
o-Terphenyl	%	106		7609831	90		7628860	100		7609831

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

BV Labs ID		QUD257		
Sampling Date		2021/09/22 08:15		
COC Number		na		
	UNITS	21-3 SA2 Lab-Dup	RDL	QC Batch
Inorganics				
Moisture	%	5.1	1.0	7608490

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

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

BV Labs ID		QUD248	QUD252	QUD253	QUD255		
Sampling Date		2021/09/24 11:30	2021/09/21 12:00	2021/09/22 10:50	2021/09/22 10:50		
COC Number		na	na	na	na		
	UNITS	21-1 SA3	21-2 SA5	21-5 SA2	21-5 DUP-1	RDL	QC Batch
Inorganics							
Moisture	%	17	7.6	10	9.3	1.0	7609199
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	<0.050	<0.050	0.050	7607143
Volatile Organics							
Acetone (2-Propanone)	ug/g	<0.49	<0.49	<0.49	<0.49	0.49	7612202
Benzene	ug/g	<0.0060	<0.0060	<0.0060	<0.0060	0.0060	7612202
Bromodichloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Bromoform	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Bromomethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Carbon Tetrachloride	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Chlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Chloroform	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Dibromochloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	0.12	0.15	0.040	7612202
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	0.073	0.093	0.040	7612202
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,1-Dichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,2-Dichloroethane	ug/g	<0.049	<0.049	<0.049	<0.049	0.049	7612202
1,1-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,2-Dichloropropane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	<0.030	<0.030	0.030	7612202
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Ethylbenzene	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	7612202
Ethylene Dibromide	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Hexane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	<0.049	<0.049	0.049	7612202
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	<0.40	<0.40	0.40	7612202
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	<0.40	<0.40	0.40	7612202
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Styrene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

BV Labs ID		QUD248	QUD252	QUD253	QUD255		
Sampling Date		2021/09/24 11:30	2021/09/21 12:00	2021/09/22 10:50	2021/09/22 10:50		
COC Number		na	na	na	na		
	UNITS	21-1 SA3	21-2 SA5	21-5 SA2	21-5 DUP-1	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Tetrachloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Toluene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	7612202
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Trichloroethylene	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	7612202
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Vinyl Chloride	ug/g	<0.019	<0.019	<0.019	<0.019	0.019	7612202
p+m-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	7612202
o-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	7612202
Total Xylenes	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	7612202
F1 (C6-C10)	ug/g	<10	<10	<10	<10	10	7612202
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	<10	10	7612202
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	260	10	7609831
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	1500	25000	50	7609831
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	520	8100	50	7609831
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		7609831
Surrogate Recovery (%)							
o-Terphenyl	%	101	101	92	99		7609831
4-Bromofluorobenzene	%	91	91	90	90		7612202
D10-o-Xylene	%	86	81	88	74		7612202
D4-1,2-Dichloroethane	%	116	115	118	117		7612202
D8-Toluene	%	90	89	89	90		7612202

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 VOCS BY HS (SOIL)

BV Labs ID		QUD249			QUD249			QUD256		
Sampling Date		2021/09/21 09:40			2021/09/21 09:40			2021/09/22 08:00		
COC Number		na			na			na		
	UNITS	21-4 SA1	RDL	QC Batch	21-4 SA1 Lab-Dup	RDL	QC Batch	21-3 SA1	RDL	QC Batch
Inorganics										
Moisture	%	6.6	1.0	7608769	6.7	1.0	7608769	3.4	1.0	7608769
Calculated Parameters										
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	7607143				<0.050	0.050	7607143
Volatile Organics										
Acetone (2-Propanone)	ug/g	<0.49	0.49	7609853	<0.49	0.49	7609853	<0.49	0.49	7612260
Benzene	ug/g	<0.0060	0.0060	7609853	<0.0060	0.0060	7609853	<0.0060	0.0060	7612260
Bromodichloromethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Bromoform	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Bromomethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Carbon Tetrachloride	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Chlorobenzene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Chloroform	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Dibromochloromethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,2-Dichlorobenzene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,3-Dichlorobenzene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,4-Dichlorobenzene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,1-Dichloroethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,2-Dichloroethane	ug/g	<0.049	0.049	7609853	<0.049	0.049	7609853	<0.049	0.049	7612260
1,1-Dichloroethylene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,2-Dichloropropane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	7609853	<0.030	0.030	7609853	<0.030	0.030	7612260
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Ethylbenzene	ug/g	<0.010	0.010	7609853	<0.010	0.010	7609853	<0.010	0.010	7612260
Ethylene Dibromide	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Hexane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	0.19	0.040	7612260
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	7609853	<0.049	0.049	7609853	<0.049	0.049	7612260
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	7609853	<0.40	0.40	7609853	<0.40	0.40	7612260
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	7609853	<0.40	0.40	7609853	<0.40	0.40	7612260
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260

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

O.REG 153 VOCS BY HS (SOIL)

BV Labs ID		QUD249			QUD249			QUD256		
Sampling Date		2021/09/21 09:40			2021/09/21 09:40			2021/09/22 08:00		
COC Number		na			na			na		
	UNITS	21-4 SA1	RDL	QC Batch	21-4 SA1 Lab-Dup	RDL	QC Batch	21-3 SA1	RDL	QC Batch
Styrene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Tetrachloroethylene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Toluene	ug/g	<0.020	0.020	7609853	<0.020	0.020	7609853	0.039	0.020	7612260
1,1,1-Trichloroethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,1,2-Trichloroethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Trichloroethylene	ug/g	<0.010	0.010	7609853	<0.010	0.010	7609853	<0.010	0.010	7612260
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Vinyl Chloride	ug/g	<0.019	0.019	7609853	<0.019	0.019	7609853	<0.019	0.019	7612260
p+m-Xylene	ug/g	<0.020	0.020	7609853	<0.020	0.020	7609853	0.045	0.020	7612260
o-Xylene	ug/g	<0.020	0.020	7609853	<0.020	0.020	7609853	<0.020	0.020	7612260
Total Xylenes	ug/g	<0.020	0.020	7609853	<0.020	0.020	7609853	0.045	0.020	7612260
Surrogate Recovery (%)										
4-Bromofluorobenzene	%	106		7609853	105		7609853	87		7612260
D10-o-Xylene	%	99		7609853	95		7609853	97		7612260
D4-1,2-Dichloroethane	%	101		7609853	102		7609853	104		7612260
D8-Toluene	%	96		7609853	95		7609853	94		7612260

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

O.REG 153 VOCS BY HS (SOIL)

BV Labs ID		QUD256		
Sampling Date		2021/09/22 08:00		
COC Number		na		
	UNITS	21-3 SA1 Lab-Dup	RDL	QC Batch
Volatile Organics				
Acetone (2-Propanone)	ug/g	<0.49	0.49	7612260
Benzene	ug/g	<0.0060	0.0060	7612260
Bromodichloromethane	ug/g	<0.040	0.040	7612260
Bromoform	ug/g	<0.040	0.040	7612260
Bromomethane	ug/g	<0.040	0.040	7612260
Carbon Tetrachloride	ug/g	<0.040	0.040	7612260
Chlorobenzene	ug/g	<0.040	0.040	7612260
Chloroform	ug/g	<0.040	0.040	7612260
Dibromochloromethane	ug/g	<0.040	0.040	7612260
1,2-Dichlorobenzene	ug/g	<0.040	0.040	7612260
1,3-Dichlorobenzene	ug/g	<0.040	0.040	7612260
1,4-Dichlorobenzene	ug/g	<0.040	0.040	7612260
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	7612260
1,1-Dichloroethane	ug/g	<0.040	0.040	7612260
1,2-Dichloroethane	ug/g	<0.049	0.049	7612260
1,1-Dichloroethylene	ug/g	<0.040	0.040	7612260
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	7612260
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	7612260
1,2-Dichloropropane	ug/g	<0.040	0.040	7612260
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	7612260
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	7612260
Ethylbenzene	ug/g	<0.010	0.010	7612260
Ethylene Dibromide	ug/g	<0.040	0.040	7612260
Hexane	ug/g	0.18	0.040	7612260
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	7612260
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	7612260
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	7612260
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	7612260
Styrene	ug/g	<0.040	0.040	7612260
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	7612260

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

O.REG 153 VOCS BY HS (SOIL)

BV Labs ID		QUD256		
Sampling Date		2021/09/22 08:00		
COC Number		na		
	UNITS	21-3 SA1 Lab-Dup	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	7612260
Tetrachloroethylene	ug/g	<0.040	0.040	7612260
Toluene	ug/g	0.036	0.020	7612260
1,1,1-Trichloroethane	ug/g	<0.040	0.040	7612260
1,1,2-Trichloroethane	ug/g	<0.040	0.040	7612260
Trichloroethylene	ug/g	<0.010	0.010	7612260
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	7612260
Vinyl Chloride	ug/g	<0.019	0.019	7612260
p+m-Xylene	ug/g	0.046	0.020	7612260
o-Xylene	ug/g	<0.020	0.020	7612260
Total Xylenes	ug/g	0.046	0.020	7612260
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	86		7612260
D10-o-Xylene	%	95		7612260
D4-1,2-Dichloroethane	%	103		7612260
D8-Toluene	%	94		7612260

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

BV Labs Job #: C1S1463
Report Date: 2021/10/13

Golder Associates Ltd
Client Project #: 21494078
Site Location: 1047 RICHMOND
Sampler Initials: DG

RESULTS OF ANALYSES OF SOIL

BV Labs ID		QUD248	QUD249	QUD250	QUD252	QUD253	QUD255	QUD256	
Sampling Date		2021/09/24 11:30	2021/09/21 09:40	2021/09/21 10:40	2021/09/21 12:00	2021/09/22 10:50	2021/09/22 10:50	2021/09/22 08:00	
COC Number		na	na	na	na	na	na	na	
	UNITS	21-1 SA3	21-4 SA1	21-4 SA6	21-2 SA5	21-5 SA2	21-5 DUP-1	21-3 SA1	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	2.3	0.46 (1)	0.34 (1)	4.1	0.24 (1)	0.21 (1)	0.29	7626412

QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

BV Labs ID		QUD257	
Sampling Date		2021/09/22 08:15	
COC Number		na	
	UNITS	21-3 SA2	QC Batch
Calculated Parameters			
Sodium Adsorption Ratio	N/A	5.3	7626412

QC Batch = Quality Control Batch

BV Labs Job #: C1S1463
Report Date: 2021/10/13

Golder Associates Ltd
Client Project #: 21494078
Site Location: 1047 RICHMOND
Sampler Initials: DG

TEST SUMMARY

BV Labs ID: QUD247
Sample ID: 21-1 SA1
Matrix: Soil

Collected: 2021/09/24
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7612002	2021/10/01	2021/10/01	Archana Patel
Free (WAD) Cyanide	TECH	7612164	2021/10/01	2021/10/01	Aditiben Patel
Conductivity	AT	7612428	2021/10/01	2021/10/01	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7611943	2021/10/01	2021/10/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7611998	2021/10/01	2021/10/01	Daniel Teclu
Moisture	BAL	7610577	N/A	2021/09/30	Abhijot Kaur
pH CaCl2 EXTRACT	AT	7612293	2021/10/01	2021/10/01	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7607144	N/A	2021/10/01	Automated Statchk

BV Labs ID: QUD248
Sample ID: 21-1 SA3
Matrix: Soil

Collected: 2021/09/24
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/09/30	Agnieszka Brzuzy-Snopko
Moisture	BAL	7609199	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7612202	N/A	2021/10/01	Denis Reid

BV Labs ID: QUD249
Sample ID: 21-4 SA1
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Moisture	BAL	7608769	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds in Soil	GC/MS	7609853	N/A	2021/09/30	Juan Pangilinan

BV Labs ID: QUD249 Dup
Sample ID: 21-4 SA1
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7608769	N/A	2021/09/29	Kruti Jitesh Patel
Volatile Organic Compounds in Soil	GC/MS	7609853	N/A	2021/09/30	Juan Pangilinan

BV Labs ID: QUD250
Sample ID: 21-4 SA6
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7610488	N/A	2021/09/30	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/09/30	Agnieszka Brzuzy-Snopko
Moisture	BAL	7609199	N/A	2021/09/29	Kruti Jitesh Patel

TEST SUMMARY

BV Labs ID: QUD250
Sample ID: 21-4 SA6
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk

BV Labs ID: QUD251
Sample ID: 21-2 SA2
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7612002	2021/10/01	2021/10/01	Archana Patel
Free (WAD) Cyanide	TECH	7612164	2021/10/01	2021/10/01	Aditiben Patel
Conductivity	AT	7612428	2021/10/01	2021/10/01	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7611943	2021/10/01	2021/10/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7611998	2021/10/01	2021/10/01	Daniel Teclu
Moisture	BAL	7610577	N/A	2021/09/30	Abhijot Kaur
pH CaCl2 EXTRACT	AT	7612293	2021/10/01	2021/10/01	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7607144	N/A	2021/10/01	Automated Statchk

BV Labs ID: QUD251 Dup
Sample ID: 21-2 SA2
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7610577	N/A	2021/09/30	Abhijot Kaur

BV Labs ID: QUD252
Sample ID: 21-2 SA5
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/09/30	Agnieszka Brzuzy-Snopko
Moisture	BAL	7609199	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7612202	N/A	2021/10/01	Denis Reid

BV Labs ID: QUD253
Sample ID: 21-5 SA2
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/09/30	Agnieszka Brzuzy-Snopko
Moisture	BAL	7609199	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7612202	N/A	2021/10/01	Denis Reid

BV Labs Job #: C1S1463
Report Date: 2021/10/13

Golder Associates Ltd
Client Project #: 21494078
Site Location: 1047 RICHMOND
Sampler Initials: DG

TEST SUMMARY

BV Labs ID: QUD254
Sample ID: 21-5 SA3
Matrix: Soil

Collected: 2021/09/24
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7612002	2021/10/01	2021/10/01	Archana Patel
Free (WAD) Cyanide	TECH	7612164	2021/10/01	2021/10/01	Aditiben Patel
Conductivity	AT	7612428	2021/10/01	2021/10/01	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7611943	2021/10/01	2021/10/01	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7632544	N/A	2021/10/13	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7628860	2021/10/08	2021/10/11	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7611998	2021/10/01	2021/10/01	Daniel Teclu
Moisture	BAL	7610577	N/A	2021/09/30	Abhijot Kaur
pH CaCl2 EXTRACT	AT	7612293	2021/10/01	2021/10/01	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7607144	N/A	2021/10/01	Automated Statchk

BV Labs ID: QUD255
Sample ID: 21-5 DUP-1
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/09/30	Agnieszka Brzuzy-Snopko
Moisture	BAL	7609199	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7612202	N/A	2021/10/01	Denis Reid

BV Labs ID: QUD256
Sample ID: 21-3 SA1
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Moisture	BAL	7608769	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds in Soil	GC/MS	7612260	N/A	2021/10/01	Karen Hughes

BV Labs ID: QUD256 Dup
Sample ID: 21-3 SA1
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds in Soil	GC/MS	7612260	N/A	2021/10/01	Karen Hughes

BV Labs ID: QUD257
Sample ID: 21-3 SA2
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7610488	N/A	2021/09/30	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/10/01	Agnieszka Brzuzy-Snopko

TEST SUMMARY

BV Labs ID: QUD257
Sample ID: 21-3 SA2
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7608490	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk

BV Labs ID: QUD257 Dup
Sample ID: 21-3 SA2
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7608490	N/A	2021/09/29	Kruti Jitesh Patel

BV Labs ID: QUD258
Sample ID: 21-3 SA3
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7612002	2021/10/01	2021/10/01	Archana Patel
Free (WAD) Cyanide	TECH	7612164	2021/10/01	2021/10/01	Aditiben Patel
Conductivity	AT	7612428	2021/10/01	2021/10/01	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7611943	2021/10/01	2021/10/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7611998	2021/10/01	2021/10/01	Daniel Teclu
Moisture	BAL	7610577	N/A	2021/09/30	Abhijot Kaur
pH CaCl2 EXTRACT	AT	7612293	2021/10/01	2021/10/01	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7607144	N/A	2021/10/01	Automated Statchk

BV Labs ID: QUD259
Sample ID: 21-3 DUP-1
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7612310	2021/10/01	2021/10/01	Archana Patel
Free (WAD) Cyanide	TECH	7612164	2021/10/01	2021/10/01	Aditiben Patel
Conductivity	AT	7612465	2021/10/01	2021/10/01	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7611943	2021/10/01	2021/10/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7612314	2021/10/01	2021/10/01	Viviana Canzonieri
Moisture	BAL	7611396	N/A	2021/09/30	Abhijot Kaur
pH CaCl2 EXTRACT	AT	7612293	2021/10/01	2021/10/01	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7610400	N/A	2021/10/01	Automated Statchk

GENERAL COMMENTS

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

Package 1	9.0°C

Revised Report [2021/10/13]: Samples 21-1 SA3, 21-4 SA1, SA-4 SA6, SA-2 SA5, 21-5 SA2, 21-5 DUP-1, 21-3 SA1 and 21-3 SA2 have been analyzed for SAR; sample 21-5 SA3 has been analyzed for Reg.153 PHCs as per client request.

Sample QUD250 [21-4 SA6] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample QUD254 [21-5 SA3] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample QUD259 [21-3 DUP-1] : Sample analyzed for Reg. 153 Metals & Inorganics as per client request.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7608490	MUC	RPD [QUD257-02]	Moisture	2021/09/29	9.3		%	20
7608769	MYG	RPD [QUD249-01]	Moisture	2021/09/29	1.5		%	20
7609199	MUC	RPD	Moisture	2021/09/29	9.2		%	20
7609831	ABS	Matrix Spike	o-Terphenyl	2021/09/30		91	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/09/30		96	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/09/30		97	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/09/30		98	%	50 - 130
7609831	ABS	Spiked Blank	o-Terphenyl	2021/09/30		93	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/09/30		97	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/09/30		98	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/09/30		99	%	80 - 120
7609831	ABS	Method Blank	o-Terphenyl	2021/09/30		93	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/09/30	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/09/30	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/09/30	<50		ug/g	
7609831	ABS	RPD	F2 (C10-C16 Hydrocarbons)	2021/09/30	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/09/30	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/09/30	NC		%	30
7609853	JPN	Matrix Spike [QUD249-02]	4-Bromofluorobenzene	2021/09/30		112	%	60 - 140
			D10-o-Xylene	2021/09/30		106	%	60 - 130
			D4-1,2-Dichloroethane	2021/09/30		98	%	60 - 140
			D8-Toluene	2021/09/30		106	%	60 - 140
			Acetone (2-Propanone)	2021/09/30		94	%	60 - 140
			Benzene	2021/09/30		92	%	60 - 140
			Bromodichloromethane	2021/09/30		100	%	60 - 140
			Bromoform	2021/09/30		95	%	60 - 140
			Bromomethane	2021/09/30		99	%	60 - 140
			Carbon Tetrachloride	2021/09/30		103	%	60 - 140
			Chlorobenzene	2021/09/30		99	%	60 - 140
			Chloroform	2021/09/30		99	%	60 - 140
			Dibromochloromethane	2021/09/30		90	%	60 - 140
			1,2-Dichlorobenzene	2021/09/30		96	%	60 - 140
			1,3-Dichlorobenzene	2021/09/30		98	%	60 - 140
			1,4-Dichlorobenzene	2021/09/30		114	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2021/09/30		106	%	60 - 140
			1,1-Dichloroethane	2021/09/30		96	%	60 - 140
			1,2-Dichloroethane	2021/09/30		93	%	60 - 140
			1,1-Dichloroethylene	2021/09/30		101	%	60 - 140
			cis-1,2-Dichloroethylene	2021/09/30		100	%	60 - 140
			trans-1,2-Dichloroethylene	2021/09/30		103	%	60 - 140
			1,2-Dichloropropane	2021/09/30		96	%	60 - 140
			cis-1,3-Dichloropropene	2021/09/30		80	%	60 - 140
			trans-1,3-Dichloropropene	2021/09/30		84	%	60 - 140
			Ethylbenzene	2021/09/30		92	%	60 - 140
			Ethylene Dibromide	2021/09/30		92	%	60 - 140
			Hexane	2021/09/30		104	%	60 - 140
			Methylene Chloride(Dichloromethane)	2021/09/30		110	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2021/09/30		96	%	60 - 140
			Methyl Isobutyl Ketone	2021/09/30		93	%	60 - 140
			Methyl t-butyl ether (MTBE)	2021/09/30		89	%	60 - 140
			Styrene	2021/09/30		108	%	60 - 140
			1,1,1,2-Tetrachloroethane	2021/09/30		102	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,1,2,2-Tetrachloroethane	2021/09/30		92	%	60 - 140
			Tetrachloroethylene	2021/09/30		99	%	60 - 140
			Toluene	2021/09/30		95	%	60 - 140
			1,1,1-Trichloroethane	2021/09/30		104	%	60 - 140
			1,1,2-Trichloroethane	2021/09/30		99	%	60 - 140
			Trichloroethylene	2021/09/30		107	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2021/09/30		106	%	60 - 140
			Vinyl Chloride	2021/09/30		106	%	60 - 140
			p+m-Xylene	2021/09/30		98	%	60 - 140
			o-Xylene	2021/09/30		92	%	60 - 140
7609853	JPN	Spiked Blank	4-Bromofluorobenzene	2021/09/30		113	%	60 - 140
			D10-o-Xylene	2021/09/30		112	%	60 - 130
			D4-1,2-Dichloroethane	2021/09/30		103	%	60 - 140
			D8-Toluene	2021/09/30		104	%	60 - 140
			Acetone (2-Propanone)	2021/09/30		98	%	60 - 140
			Benzene	2021/09/30		94	%	60 - 130
			Bromodichloromethane	2021/09/30		105	%	60 - 130
			Bromoform	2021/09/30		104	%	60 - 130
			Bromomethane	2021/09/30		106	%	60 - 140
			Carbon Tetrachloride	2021/09/30		102	%	60 - 130
			Chlorobenzene	2021/09/30		101	%	60 - 130
			Chloroform	2021/09/30		103	%	60 - 130
			Dibromochloromethane	2021/09/30		114	%	60 - 130
			1,2-Dichlorobenzene	2021/09/30		98	%	60 - 130
			1,3-Dichlorobenzene	2021/09/30		98	%	60 - 130
			1,4-Dichlorobenzene	2021/09/30		114	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2021/09/30		106	%	60 - 140
			1,1-Dichloroethane	2021/09/30		98	%	60 - 130
			1,2-Dichloroethane	2021/09/30		99	%	60 - 130
			1,1-Dichloroethylene	2021/09/30		99	%	60 - 130
			cis-1,2-Dichloroethylene	2021/09/30		104	%	60 - 130
			trans-1,2-Dichloroethylene	2021/09/30		103	%	60 - 130
			1,2-Dichloropropane	2021/09/30		100	%	60 - 130
			cis-1,3-Dichloropropene	2021/09/30		91	%	60 - 130
			trans-1,3-Dichloropropene	2021/09/30		98	%	60 - 130
			Ethylbenzene	2021/09/30		91	%	60 - 130
			Ethylene Dibromide	2021/09/30		100	%	60 - 130
			Hexane	2021/09/30		102	%	60 - 130
			Methylene Chloride(Dichloromethane)	2021/09/30		115	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/09/30		105	%	60 - 140
			Methyl Isobutyl Ketone	2021/09/30		106	%	60 - 130
			Methyl t-butyl ether (MTBE)	2021/09/30		92	%	60 - 130
			Styrene	2021/09/30		111	%	60 - 130
			1,1,1,2-Tetrachloroethane	2021/09/30		105	%	60 - 130
			1,1,2,2-Tetrachloroethane	2021/09/30		101	%	60 - 130
			Tetrachloroethylene	2021/09/30		98	%	60 - 130
			Toluene	2021/09/30		96	%	60 - 130
			1,1,1-Trichloroethane	2021/09/30		105	%	60 - 130
			1,1,2-Trichloroethane	2021/09/30		106	%	60 - 130
			Trichloroethylene	2021/09/30		108	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2021/09/30		105	%	60 - 130
			Vinyl Chloride	2021/09/30		106	%	60 - 130
			p+m-Xylene	2021/09/30		97	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			o-Xylene	2021/09/30		92	%	60 - 130
7609853	JPN	Method Blank	4-Bromofluorobenzene	2021/09/30		106	%	60 - 140
			D10-o-Xylene	2021/09/30		103	%	60 - 130
			D4-1,2-Dichloroethane	2021/09/30		108	%	60 - 140
			D8-Toluene	2021/09/30		93	%	60 - 140
			Acetone (2-Propanone)	2021/09/30	<0.49		ug/g	
			Benzene	2021/09/30	<0.0060		ug/g	
			Bromodichloromethane	2021/09/30	<0.040		ug/g	
			Bromoform	2021/09/30	<0.040		ug/g	
			Bromomethane	2021/09/30	<0.040		ug/g	
			Carbon Tetrachloride	2021/09/30	<0.040		ug/g	
			Chlorobenzene	2021/09/30	<0.040		ug/g	
			Chloroform	2021/09/30	<0.040		ug/g	
			Dibromochloromethane	2021/09/30	<0.040		ug/g	
			1,2-Dichlorobenzene	2021/09/30	<0.040		ug/g	
			1,3-Dichlorobenzene	2021/09/30	<0.040		ug/g	
			1,4-Dichlorobenzene	2021/09/30	<0.040		ug/g	
			Dichlorodifluoromethane (FREON 12)	2021/09/30	<0.040		ug/g	
			1,1-Dichloroethane	2021/09/30	<0.040		ug/g	
			1,2-Dichloroethane	2021/09/30	<0.049		ug/g	
			1,1-Dichloroethylene	2021/09/30	<0.040		ug/g	
			cis-1,2-Dichloroethylene	2021/09/30	<0.040		ug/g	
			trans-1,2-Dichloroethylene	2021/09/30	<0.040		ug/g	
			1,2-Dichloropropane	2021/09/30	<0.040		ug/g	
			cis-1,3-Dichloropropene	2021/09/30	<0.030		ug/g	
			trans-1,3-Dichloropropene	2021/09/30	<0.040		ug/g	
			Ethylbenzene	2021/09/30	<0.010		ug/g	
			Ethylene Dibromide	2021/09/30	<0.040		ug/g	
			Hexane	2021/09/30	<0.040		ug/g	
			Methylene Chloride(Dichloromethane)	2021/09/30	<0.049		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2021/09/30	<0.40		ug/g	
			Methyl Isobutyl Ketone	2021/09/30	<0.40		ug/g	
			Methyl t-butyl ether (MTBE)	2021/09/30	<0.040		ug/g	
			Styrene	2021/09/30	<0.040		ug/g	
			1,1,1,2-Tetrachloroethane	2021/09/30	<0.040		ug/g	
			1,1,2,2-Tetrachloroethane	2021/09/30	<0.040		ug/g	
			Tetrachloroethylene	2021/09/30	<0.040		ug/g	
			Toluene	2021/09/30	<0.020		ug/g	
			1,1,1-Trichloroethane	2021/09/30	<0.040		ug/g	
			1,1,2-Trichloroethane	2021/09/30	<0.040		ug/g	
			Trichloroethylene	2021/09/30	<0.010		ug/g	
			Trichlorofluoromethane (FREON 11)	2021/09/30	<0.040		ug/g	
			Vinyl Chloride	2021/09/30	<0.019		ug/g	
			p+m-Xylene	2021/09/30	<0.020		ug/g	
			o-Xylene	2021/09/30	<0.020		ug/g	
			Total Xylenes	2021/09/30	<0.020		ug/g	
7609853	JPN	RPD [QUD249-02]	Acetone (2-Propanone)	2021/09/30	NC		%	50
			Benzene	2021/09/30	NC		%	50
			Bromodichloromethane	2021/09/30	NC		%	50
			Bromoform	2021/09/30	NC		%	50
			Bromomethane	2021/09/30	NC		%	50
			Carbon Tetrachloride	2021/09/30	NC		%	50
			Chlorobenzene	2021/09/30	NC		%	50

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Chloroform	2021/09/30	NC		%	50
			Dibromochloromethane	2021/09/30	NC		%	50
			1,2-Dichlorobenzene	2021/09/30	NC		%	50
			1,3-Dichlorobenzene	2021/09/30	NC		%	50
			1,4-Dichlorobenzene	2021/09/30	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2021/09/30	NC		%	50
			1,1-Dichloroethane	2021/09/30	NC		%	50
			1,2-Dichloroethane	2021/09/30	NC		%	50
			1,1-Dichloroethylene	2021/09/30	NC		%	50
			cis-1,2-Dichloroethylene	2021/09/30	NC		%	50
			trans-1,2-Dichloroethylene	2021/09/30	NC		%	50
			1,2-Dichloropropane	2021/09/30	NC		%	50
			cis-1,3-Dichloropropene	2021/09/30	NC		%	50
			trans-1,3-Dichloropropene	2021/09/30	NC		%	50
			Ethylbenzene	2021/09/30	NC		%	50
			Ethylene Dibromide	2021/09/30	NC		%	50
			Hexane	2021/09/30	NC		%	50
			Methylene Chloride(Dichloromethane)	2021/09/30	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2021/09/30	NC		%	50
			Methyl Isobutyl Ketone	2021/09/30	NC		%	50
			Methyl t-butyl ether (MTBE)	2021/09/30	NC		%	50
			Styrene	2021/09/30	NC		%	50
			1,1,1,2-Tetrachloroethane	2021/09/30	NC		%	50
			1,1,2,2-Tetrachloroethane	2021/09/30	NC		%	50
			Tetrachloroethylene	2021/09/30	NC		%	50
			Toluene	2021/09/30	NC		%	50
			1,1,1-Trichloroethane	2021/09/30	NC		%	50
			1,1,2-Trichloroethane	2021/09/30	NC		%	50
			Trichloroethylene	2021/09/30	NC		%	50
			Trichlorofluoromethane (FREON 11)	2021/09/30	NC		%	50
			Vinyl Chloride	2021/09/30	NC		%	50
			p+m-Xylene	2021/09/30	NC		%	50
			o-Xylene	2021/09/30	NC		%	50
			Total Xylenes	2021/09/30	NC		%	50
7610488	H_W	Matrix Spike	1,4-Difluorobenzene	2021/09/30		97	%	60 - 140
			4-Bromofluorobenzene	2021/09/30		103	%	60 - 140
			D10-o-Xylene	2021/09/30		111	%	60 - 140
			D4-1,2-Dichloroethane	2021/09/30		91	%	60 - 140
			Benzene	2021/09/30		107	%	50 - 140
			Toluene	2021/09/30		111	%	50 - 140
			Ethylbenzene	2021/09/30		124	%	50 - 140
			o-Xylene	2021/09/30		119	%	50 - 140
			p+m-Xylene	2021/09/30		119	%	50 - 140
			F1 (C6-C10)	2021/09/30		105	%	60 - 140
7610488	H_W	Spiked Blank	1,4-Difluorobenzene	2021/09/30		96	%	60 - 140
			4-Bromofluorobenzene	2021/09/30		104	%	60 - 140
			D10-o-Xylene	2021/09/30		106	%	60 - 140
			D4-1,2-Dichloroethane	2021/09/30		86	%	60 - 140
			Benzene	2021/09/30		102	%	50 - 140
			Toluene	2021/09/30		107	%	50 - 140
			Ethylbenzene	2021/09/30		120	%	50 - 140
			o-Xylene	2021/09/30		115	%	50 - 140
			p+m-Xylene	2021/09/30		115	%	50 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F1 (C6-C10)	2021/09/30		96	%	80 - 120
7610488	H_W	Method Blank	1,4-Difluorobenzene	2021/09/30		104	%	60 - 140
			4-Bromofluorobenzene	2021/09/30		96	%	60 - 140
			D10-o-Xylene	2021/09/30		102	%	60 - 140
			D4-1,2-Dichloroethane	2021/09/30		95	%	60 - 140
			Benzene	2021/09/30	<0.020		ug/g	
			Toluene	2021/09/30	<0.020		ug/g	
			Ethylbenzene	2021/09/30	<0.020		ug/g	
			o-Xylene	2021/09/30	<0.020		ug/g	
			p+m-Xylene	2021/09/30	<0.040		ug/g	
			Total Xylenes	2021/09/30	<0.040		ug/g	
			F1 (C6-C10)	2021/09/30	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/09/30	<10		ug/g	
7610488	H_W	RPD	Benzene	2021/09/30	NC		%	50
			Toluene	2021/09/30	NC		%	50
			Ethylbenzene	2021/09/30	NC		%	50
			o-Xylene	2021/09/30	NC		%	50
			p+m-Xylene	2021/09/30	NC		%	50
			Total Xylenes	2021/09/30	NC		%	50
			F1 (C6-C10)	2021/09/30	NC		%	30
			F1 (C6-C10) - BTEX	2021/09/30	NC		%	30
7610577	MUC	RPD [QUD251-02]	Moisture	2021/09/30	19		%	20
7611396	MUC	RPD	Moisture	2021/09/30	2.2		%	20
7611943	VP2	Matrix Spike	Chromium (VI)	2021/10/01		28 (1)	%	70 - 130
7611943	VP2	Spiked Blank	Chromium (VI)	2021/10/01		92	%	80 - 120
7611943	VP2	Method Blank	Chromium (VI)	2021/10/01	<0.18		ug/g	
7611943	VP2	RPD	Chromium (VI)	2021/10/01	NC		%	35
7611998	DT1	Matrix Spike	Acid Extractable Antimony (Sb)	2021/10/01		85	%	75 - 125
			Acid Extractable Arsenic (As)	2021/10/01		100	%	75 - 125
			Acid Extractable Barium (Ba)	2021/10/01		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/10/01		101	%	75 - 125
			Acid Extractable Boron (B)	2021/10/01		86	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/10/01		95	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/10/01		93	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/10/01		92	%	75 - 125
			Acid Extractable Copper (Cu)	2021/10/01		NC	%	75 - 125
			Acid Extractable Lead (Pb)	2021/10/01		NC	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/10/01		94	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/10/01		91	%	75 - 125
			Acid Extractable Selenium (Se)	2021/10/01		98	%	75 - 125
			Acid Extractable Silver (Ag)	2021/10/01		98	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/10/01		98	%	75 - 125
			Acid Extractable Uranium (U)	2021/10/01		98	%	75 - 125
			Acid Extractable Vanadium (V)	2021/10/01		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/10/01		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/10/01		88	%	75 - 125
7611998	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2021/10/01		101	%	80 - 120
			Acid Extractable Arsenic (As)	2021/10/01		104	%	80 - 120
			Acid Extractable Barium (Ba)	2021/10/01		104	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/10/01		99	%	80 - 120
			Acid Extractable Boron (B)	2021/10/01		95	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/10/01		98	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/10/01		100	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Cobalt (Co)	2021/10/01		100	%	80 - 120
			Acid Extractable Copper (Cu)	2021/10/01		99	%	80 - 120
			Acid Extractable Lead (Pb)	2021/10/01		100	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/10/01		96	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/10/01		99	%	80 - 120
			Acid Extractable Selenium (Se)	2021/10/01		103	%	80 - 120
			Acid Extractable Silver (Ag)	2021/10/01		101	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/10/01		104	%	80 - 120
			Acid Extractable Uranium (U)	2021/10/01		101	%	80 - 120
			Acid Extractable Vanadium (V)	2021/10/01		106	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/10/01		102	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/10/01		95	%	80 - 120
7611998	DT1	Method Blank	Acid Extractable Antimony (Sb)	2021/10/01	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/10/01	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/10/01	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/10/01	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/10/01	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/10/01	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/10/01	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/10/01	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/10/01	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/10/01	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/10/01	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/10/01	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/10/01	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/10/01	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/10/01	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/10/01	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/10/01	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/10/01	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/10/01	<0.050		ug/g	
7611998	DT1	RPD	Acid Extractable Antimony (Sb)	2021/10/01	1.1		%	30
			Acid Extractable Arsenic (As)	2021/10/01	0.021		%	30
			Acid Extractable Barium (Ba)	2021/10/01	0.25		%	30
			Acid Extractable Beryllium (Be)	2021/10/01	1.3		%	30
			Acid Extractable Boron (B)	2021/10/01	7.7		%	30
			Acid Extractable Cadmium (Cd)	2021/10/01	19		%	30
			Acid Extractable Chromium (Cr)	2021/10/01	2.1		%	30
			Acid Extractable Cobalt (Co)	2021/10/01	0.43		%	30
			Acid Extractable Copper (Cu)	2021/10/01	1.5		%	30
			Acid Extractable Lead (Pb)	2021/10/01	2.1		%	30
			Acid Extractable Molybdenum (Mo)	2021/10/01	12		%	30
			Acid Extractable Nickel (Ni)	2021/10/01	0.088		%	30
			Acid Extractable Selenium (Se)	2021/10/01	NC		%	30
			Acid Extractable Silver (Ag)	2021/10/01	NC		%	30
			Acid Extractable Thallium (Tl)	2021/10/01	4.6		%	30
			Acid Extractable Uranium (U)	2021/10/01	3.8		%	30
			Acid Extractable Vanadium (V)	2021/10/01	1.5		%	30
			Acid Extractable Zinc (Zn)	2021/10/01	13		%	30
			Acid Extractable Mercury (Hg)	2021/10/01	9.4		%	30
7612002	APT	Matrix Spike	Hot Water Ext. Boron (B)	2021/10/01		98	%	75 - 125
7612002	APT	Spiked Blank	Hot Water Ext. Boron (B)	2021/10/01		94	%	75 - 125
7612002	APT	Method Blank	Hot Water Ext. Boron (B)	2021/10/01	<0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7612002	APT	RPD	Hot Water Ext. Boron (B)	2021/10/01	3.9		%	40
7612164	ABP	Matrix Spike	WAD Cyanide (Free)	2021/10/01		104	%	75 - 125
7612164	ABP	Spiked Blank	WAD Cyanide (Free)	2021/10/01		100	%	80 - 120
7612164	ABP	Method Blank	WAD Cyanide (Free)	2021/10/01	<0.01		ug/g	
7612164	ABP	RPD	WAD Cyanide (Free)	2021/10/01	NC		%	35
7612202	DR1	Matrix Spike	4-Bromofluorobenzene	2021/10/01		102	%	60 - 140
			D10-o-Xylene	2021/10/01		100	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		111	%	60 - 140
			D8-Toluene	2021/10/01		105	%	60 - 140
			Acetone (2-Propanone)	2021/10/01		114	%	60 - 140
			Benzene	2021/10/01		95	%	60 - 140
			Bromodichloromethane	2021/10/01		104	%	60 - 140
			Bromoform	2021/10/01		98	%	60 - 140
			Bromomethane	2021/10/01		111	%	60 - 140
			Carbon Tetrachloride	2021/10/01		100	%	60 - 140
			Chlorobenzene	2021/10/01		94	%	60 - 140
			Chloroform	2021/10/01		104	%	60 - 140
			Dibromochloromethane	2021/10/01		95	%	60 - 140
			1,2-Dichlorobenzene	2021/10/01		95	%	60 - 140
			1,3-Dichlorobenzene	2021/10/01		90	%	60 - 140
			1,4-Dichlorobenzene	2021/10/01		103	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2021/10/01		105	%	60 - 140
			1,1-Dichloroethane	2021/10/01		101	%	60 - 140
			1,2-Dichloroethane	2021/10/01		103	%	60 - 140
			1,1-Dichloroethylene	2021/10/01		103	%	60 - 140
			cis-1,2-Dichloroethylene	2021/10/01		105	%	60 - 140
			trans-1,2-Dichloroethylene	2021/10/01		103	%	60 - 140
			1,2-Dichloropropane	2021/10/01		103	%	60 - 140
			cis-1,3-Dichloropropene	2021/10/01		100	%	60 - 140
			trans-1,3-Dichloropropene	2021/10/01		107	%	60 - 140
			Ethylbenzene	2021/10/01		88	%	60 - 140
			Ethylene Dibromide	2021/10/01		98	%	60 - 140
			Hexane	2021/10/01		104	%	60 - 140
			Methylene Chloride(Dichloromethane)	2021/10/01		118	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01		114	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/01		101	%	60 - 140
			Methyl t-butyl ether (MTBE)	2021/10/01		93	%	60 - 140
			Styrene	2021/10/01		102	%	60 - 140
			1,1,1,2-Tetrachloroethane	2021/10/01		95	%	60 - 140
			1,1,2,2-Tetrachloroethane	2021/10/01		106	%	60 - 140
			Tetrachloroethylene	2021/10/01		95	%	60 - 140
			Toluene	2021/10/01		101	%	60 - 140
			1,1,1-Trichloroethane	2021/10/01		104	%	60 - 140
			1,1,2-Trichloroethane	2021/10/01		102	%	60 - 140
			Trichloroethylene	2021/10/01		104	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2021/10/01		105	%	60 - 140
			Vinyl Chloride	2021/10/01		110	%	60 - 140
			p+m-Xylene	2021/10/01		92	%	60 - 140
			o-Xylene	2021/10/01		89	%	60 - 140
			F1 (C6-C10)	2021/10/01		86	%	60 - 140
7612202	DR1	Spiked Blank	4-Bromofluorobenzene	2021/10/01		103	%	60 - 140
			D10-o-Xylene	2021/10/01		100	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		113	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			D8-Toluene	2021/10/01		104	%	60 - 140
			Acetone (2-Propanone)	2021/10/01		125	%	60 - 140
			Benzene	2021/10/01		94	%	60 - 130
			Bromodichloromethane	2021/10/01		105	%	60 - 130
			Bromoform	2021/10/01		102	%	60 - 130
			Bromomethane	2021/10/01		107	%	60 - 140
			Carbon Tetrachloride	2021/10/01		98	%	60 - 130
			Chlorobenzene	2021/10/01		93	%	60 - 130
			Chloroform	2021/10/01		104	%	60 - 130
			Dibromochloromethane	2021/10/01		97	%	60 - 130
			1,2-Dichlorobenzene	2021/10/01		94	%	60 - 130
			1,3-Dichlorobenzene	2021/10/01		87	%	60 - 130
			1,4-Dichlorobenzene	2021/10/01		101	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2021/10/01		98	%	60 - 140
			1,1-Dichloroethane	2021/10/01		101	%	60 - 130
			1,2-Dichloroethane	2021/10/01		106	%	60 - 130
			1,1-Dichloroethylene	2021/10/01		99	%	60 - 130
			cis-1,2-Dichloroethylene	2021/10/01		106	%	60 - 130
			trans-1,2-Dichloroethylene	2021/10/01		101	%	60 - 130
			1,2-Dichloropropane	2021/10/01		104	%	60 - 130
			cis-1,3-Dichloropropene	2021/10/01		97	%	60 - 130
			trans-1,3-Dichloropropene	2021/10/01		102	%	60 - 130
			Ethylbenzene	2021/10/01		85	%	60 - 130
			Ethylene Dibromide	2021/10/01		101	%	60 - 130
			Hexane	2021/10/01		100	%	60 - 130
			Methylene Chloride(Dichloromethane)	2021/10/01		118	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01		128	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/01		112	%	60 - 130
			Methyl t-butyl ether (MTBE)	2021/10/01		92	%	60 - 130
			Styrene	2021/10/01		103	%	60 - 130
			1,1,1,2-Tetrachloroethane	2021/10/01		94	%	60 - 130
			1,1,2,2-Tetrachloroethane	2021/10/01		111	%	60 - 130
			Tetrachloroethylene	2021/10/01		91	%	60 - 130
			Toluene	2021/10/01		98	%	60 - 130
			1,1,1-Trichloroethane	2021/10/01		102	%	60 - 130
			1,1,2-Trichloroethane	2021/10/01		105	%	60 - 130
			Trichloroethylene	2021/10/01		102	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2021/10/01		101	%	60 - 130
			Vinyl Chloride	2021/10/01		105	%	60 - 130
			p+m-Xylene	2021/10/01		90	%	60 - 130
			o-Xylene	2021/10/01		88	%	60 - 130
			F1 (C6-C10)	2021/10/01		92	%	80 - 120
7612202	DR1	Method Blank	4-Bromofluorobenzene	2021/10/01		91	%	60 - 140
			D10-o-Xylene	2021/10/01		83	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		115	%	60 - 140
			D8-Toluene	2021/10/01		90	%	60 - 140
			Acetone (2-Propanone)	2021/10/01	<0.49		ug/g	
			Benzene	2021/10/01	<0.0060		ug/g	
			Bromodichloromethane	2021/10/01	<0.040		ug/g	
			Bromoform	2021/10/01	<0.040		ug/g	
			Bromomethane	2021/10/01	<0.040		ug/g	
			Carbon Tetrachloride	2021/10/01	<0.040		ug/g	
			Chlorobenzene	2021/10/01	<0.040		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Chloroform	2021/10/01	<0.040		ug/g	
			Dibromochloromethane	2021/10/01	<0.040		ug/g	
			1,2-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			1,3-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			1,4-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			Dichlorodifluoromethane (FREON 12)	2021/10/01	<0.040		ug/g	
			1,1-Dichloroethane	2021/10/01	<0.040		ug/g	
			1,2-Dichloroethane	2021/10/01	<0.049		ug/g	
			1,1-Dichloroethylene	2021/10/01	<0.040		ug/g	
			cis-1,2-Dichloroethylene	2021/10/01	<0.040		ug/g	
			trans-1,2-Dichloroethylene	2021/10/01	<0.040		ug/g	
			1,2-Dichloropropane	2021/10/01	<0.040		ug/g	
			cis-1,3-Dichloropropene	2021/10/01	<0.030		ug/g	
			trans-1,3-Dichloropropene	2021/10/01	<0.040		ug/g	
			Ethylbenzene	2021/10/01	<0.010		ug/g	
			Ethylene Dibromide	2021/10/01	<0.040		ug/g	
			Hexane	2021/10/01	<0.040		ug/g	
			Methylene Chloride(Dichloromethane)	2021/10/01	<0.049		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01	<0.40		ug/g	
			Methyl Isobutyl Ketone	2021/10/01	<0.40		ug/g	
			Methyl t-butyl ether (MTBE)	2021/10/01	<0.040		ug/g	
			Styrene	2021/10/01	<0.040		ug/g	
			1,1,1,2-Tetrachloroethane	2021/10/01	<0.040		ug/g	
			1,1,2,2-Tetrachloroethane	2021/10/01	<0.040		ug/g	
			Tetrachloroethylene	2021/10/01	<0.040		ug/g	
			Toluene	2021/10/01	<0.020		ug/g	
			1,1,1-Trichloroethane	2021/10/01	<0.040		ug/g	
			1,1,2-Trichloroethane	2021/10/01	<0.040		ug/g	
			Trichloroethylene	2021/10/01	<0.010		ug/g	
			Trichlorofluoromethane (FREON 11)	2021/10/01	<0.040		ug/g	
			Vinyl Chloride	2021/10/01	<0.019		ug/g	
			p+m-Xylene	2021/10/01	<0.020		ug/g	
			o-Xylene	2021/10/01	<0.020		ug/g	
			Total Xylenes	2021/10/01	<0.020		ug/g	
			F1 (C6-C10)	2021/10/01	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/10/01	<10		ug/g	
7612202	DR1	RPD	Acetone (2-Propanone)	2021/10/01	NC		%	50
			Benzene	2021/10/01	NC		%	50
			Bromodichloromethane	2021/10/01	NC		%	50
			Bromoform	2021/10/01	NC		%	50
			Bromomethane	2021/10/01	NC		%	50
			Carbon Tetrachloride	2021/10/01	NC		%	50
			Chlorobenzene	2021/10/01	NC		%	50
			Chloroform	2021/10/01	NC		%	50
			Dibromochloromethane	2021/10/01	NC		%	50
			1,2-Dichlorobenzene	2021/10/01	NC		%	50
			1,3-Dichlorobenzene	2021/10/01	NC		%	50
			1,4-Dichlorobenzene	2021/10/01	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2021/10/01	NC		%	50
			1,1-Dichloroethane	2021/10/01	NC		%	50
			1,2-Dichloroethane	2021/10/01	NC		%	50
			1,1-Dichloroethylene	2021/10/01	NC		%	50
			cis-1,2-Dichloroethylene	2021/10/01	NC		%	50

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			trans-1,2-Dichloroethylene	2021/10/01	NC		%	50
			1,2-Dichloropropane	2021/10/01	NC		%	50
			cis-1,3-Dichloropropene	2021/10/01	NC		%	50
			trans-1,3-Dichloropropene	2021/10/01	NC		%	50
			Ethylbenzene	2021/10/01	NC		%	50
			Ethylene Dibromide	2021/10/01	NC		%	50
			Hexane	2021/10/01	NC		%	50
			Methylene Chloride(Dichloromethane)	2021/10/01	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01	NC		%	50
			Methyl Isobutyl Ketone	2021/10/01	NC		%	50
			Methyl t-butyl ether (MTBE)	2021/10/01	1.8		%	50
			Styrene	2021/10/01	NC		%	50
			1,1,1,2-Tetrachloroethane	2021/10/01	NC		%	50
			1,1,2,2-Tetrachloroethane	2021/10/01	NC		%	50
			Tetrachloroethylene	2021/10/01	NC		%	50
			Toluene	2021/10/01	NC		%	50
			1,1,1-Trichloroethane	2021/10/01	NC		%	50
			1,1,2-Trichloroethane	2021/10/01	NC		%	50
			Trichloroethylene	2021/10/01	NC		%	50
			Trichlorofluoromethane (FREON 11)	2021/10/01	NC		%	50
			Vinyl Chloride	2021/10/01	NC		%	50
			p+m-Xylene	2021/10/01	NC		%	50
			o-Xylene	2021/10/01	NC		%	50
			Total Xylenes	2021/10/01	NC		%	50
			F1 (C6-C10)	2021/10/01	NC		%	30
			F1 (C6-C10) - BTEX	2021/10/01	NC		%	30
7612260	KH2	Matrix Spike [QUD256-03]	4-Bromofluorobenzene	2021/10/01		113	%	60 - 140
			D10-o-Xylene	2021/10/01		101	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		100	%	60 - 140
			D8-Toluene	2021/10/01		104	%	60 - 140
			Acetone (2-Propanone)	2021/10/01		91	%	60 - 140
			Benzene	2021/10/01		91	%	60 - 140
			Bromodichloromethane	2021/10/01		99	%	60 - 140
			Bromoform	2021/10/01		95	%	60 - 140
			Bromomethane	2021/10/01		104	%	60 - 140
			Carbon Tetrachloride	2021/10/01		101	%	60 - 140
			Chlorobenzene	2021/10/01		96	%	60 - 140
			Chloroform	2021/10/01		98	%	60 - 140
			Dibromochloromethane	2021/10/01		106	%	60 - 140
			1,2-Dichlorobenzene	2021/10/01		93	%	60 - 140
			1,3-Dichlorobenzene	2021/10/01		95	%	60 - 140
			1,4-Dichlorobenzene	2021/10/01		111	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2021/10/01		95	%	60 - 140
			1,1-Dichloroethane	2021/10/01		94	%	60 - 140
			1,2-Dichloroethane	2021/10/01		93	%	60 - 140
			1,1-Dichloroethylene	2021/10/01		97	%	60 - 140
			cis-1,2-Dichloroethylene	2021/10/01		99	%	60 - 140
			trans-1,2-Dichloroethylene	2021/10/01		101	%	60 - 140
			1,2-Dichloropropane	2021/10/01		94	%	60 - 140
			cis-1,3-Dichloropropene	2021/10/01		93	%	60 - 140
			trans-1,3-Dichloropropene	2021/10/01		99	%	60 - 140
			Ethylbenzene	2021/10/01		88	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Ethylene Dibromide	2021/10/01		92	%	60 - 140
			Hexane	2021/10/01		99	%	60 - 140
			Methylene Chloride(Dichloromethane)	2021/10/01		109	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01		95	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/01		93	%	60 - 140
			Methyl t-butyl ether (MTBE)	2021/10/01		87	%	60 - 140
			Styrene	2021/10/01		105	%	60 - 140
			1,1,1,2-Tetrachloroethane	2021/10/01		100	%	60 - 140
			1,1,2,2-Tetrachloroethane	2021/10/01		91	%	60 - 140
			Tetrachloroethylene	2021/10/01		97	%	60 - 140
			Toluene	2021/10/01		92	%	60 - 140
			1,1,1-Trichloroethane	2021/10/01		103	%	60 - 140
			1,1,2-Trichloroethane	2021/10/01		98	%	60 - 140
			Trichloroethylene	2021/10/01		105	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2021/10/01		103	%	60 - 140
			Vinyl Chloride	2021/10/01		101	%	60 - 140
			p+m-Xylene	2021/10/01		94	%	60 - 140
			o-Xylene	2021/10/01		89	%	60 - 140
7612260	KH2	Spiked Blank	4-Bromofluorobenzene	2021/10/01		114	%	60 - 140
			D10-o-Xylene	2021/10/01		107	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		104	%	60 - 140
			D8-Toluene	2021/10/01		103	%	60 - 140
			Acetone (2-Propanone)	2021/10/01		101	%	60 - 140
			Benzene	2021/10/01		95	%	60 - 130
			Bromodichloromethane	2021/10/01		107	%	60 - 130
			Bromoform	2021/10/01		106	%	60 - 130
			Bromomethane	2021/10/01		108	%	60 - 140
			Carbon Tetrachloride	2021/10/01		103	%	60 - 130
			Chlorobenzene	2021/10/01		99	%	60 - 130
			Chloroform	2021/10/01		104	%	60 - 130
			Dibromochloromethane	2021/10/01		113	%	60 - 130
			1,2-Dichlorobenzene	2021/10/01		97	%	60 - 130
			1,3-Dichlorobenzene	2021/10/01		96	%	60 - 130
			1,4-Dichlorobenzene	2021/10/01		113	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2021/10/01		102	%	60 - 140
			1,1-Dichloroethane	2021/10/01		99	%	60 - 130
			1,2-Dichloroethane	2021/10/01		102	%	60 - 130
			1,1-Dichloroethylene	2021/10/01		99	%	60 - 130
			cis-1,2-Dichloroethylene	2021/10/01		106	%	60 - 130
			trans-1,2-Dichloroethylene	2021/10/01		104	%	60 - 130
			1,2-Dichloropropane	2021/10/01		101	%	60 - 130
			cis-1,3-Dichloropropene	2021/10/01		98	%	60 - 130
			trans-1,3-Dichloropropene	2021/10/01		102	%	60 - 130
			Ethylbenzene	2021/10/01		88	%	60 - 130
			Ethylene Dibromide	2021/10/01		99	%	60 - 130
			Hexane	2021/10/01		101	%	60 - 130
			Methylene Chloride(Dichloromethane)	2021/10/01		116	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01		110	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/01		111	%	60 - 130
			Methyl t-butyl ether (MTBE)	2021/10/01		92	%	60 - 130
			Styrene	2021/10/01		110	%	60 - 130
			1,1,1,2-Tetrachloroethane	2021/10/01		104	%	60 - 130
			1,1,2,2-Tetrachloroethane	2021/10/01		102	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Tetrachloroethylene	2021/10/01		96	%	60 - 130
			Toluene	2021/10/01		94	%	60 - 130
			1,1,1-Trichloroethane	2021/10/01		105	%	60 - 130
			1,1,2-Trichloroethane	2021/10/01		105	%	60 - 130
			Trichloroethylene	2021/10/01		109	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2021/10/01		105	%	60 - 130
			Vinyl Chloride	2021/10/01		105	%	60 - 130
			p+m-Xylene	2021/10/01		95	%	60 - 130
			o-Xylene	2021/10/01		90	%	60 - 130
7612260	KH2	Method Blank	4-Bromofluorobenzene	2021/10/01		107	%	60 - 140
			D10-o-Xylene	2021/10/01		99	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		110	%	60 - 140
			D8-Toluene	2021/10/01		91	%	60 - 140
			Acetone (2-Propanone)	2021/10/01	<0.49		ug/g	
			Benzene	2021/10/01	<0.0060		ug/g	
			Bromodichloromethane	2021/10/01	<0.040		ug/g	
			Bromoform	2021/10/01	<0.040		ug/g	
			Bromomethane	2021/10/01	<0.040		ug/g	
			Carbon Tetrachloride	2021/10/01	<0.040		ug/g	
			Chlorobenzene	2021/10/01	<0.040		ug/g	
			Chloroform	2021/10/01	<0.040		ug/g	
			Dibromochloromethane	2021/10/01	<0.040		ug/g	
			1,2-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			1,3-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			1,4-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			Dichlorodifluoromethane (FREON 12)	2021/10/01	<0.040		ug/g	
			1,1-Dichloroethane	2021/10/01	<0.040		ug/g	
			1,2-Dichloroethane	2021/10/01	<0.049		ug/g	
			1,1-Dichloroethylene	2021/10/01	<0.040		ug/g	
			cis-1,2-Dichloroethylene	2021/10/01	<0.040		ug/g	
			trans-1,2-Dichloroethylene	2021/10/01	<0.040		ug/g	
			1,2-Dichloropropane	2021/10/01	<0.040		ug/g	
			cis-1,3-Dichloropropene	2021/10/01	<0.030		ug/g	
			trans-1,3-Dichloropropene	2021/10/01	<0.040		ug/g	
			Ethylbenzene	2021/10/01	<0.010		ug/g	
			Ethylene Dibromide	2021/10/01	<0.040		ug/g	
			Hexane	2021/10/01	<0.040		ug/g	
			Methylene Chloride(Dichloromethane)	2021/10/01	<0.049		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01	<0.40		ug/g	
			Methyl Isobutyl Ketone	2021/10/01	<0.40		ug/g	
			Methyl t-butyl ether (MTBE)	2021/10/01	<0.040		ug/g	
			Styrene	2021/10/01	<0.040		ug/g	
			1,1,1,2-Tetrachloroethane	2021/10/01	<0.040		ug/g	
			1,1,2,2-Tetrachloroethane	2021/10/01	<0.040		ug/g	
			Tetrachloroethylene	2021/10/01	<0.040		ug/g	
			Toluene	2021/10/01	<0.020		ug/g	
			1,1,1-Trichloroethane	2021/10/01	<0.040		ug/g	
			1,1,2-Trichloroethane	2021/10/01	<0.040		ug/g	
			Trichloroethylene	2021/10/01	<0.010		ug/g	
			Trichlorofluoromethane (FREON 11)	2021/10/01	<0.040		ug/g	
			Vinyl Chloride	2021/10/01	<0.019		ug/g	
			p+m-Xylene	2021/10/01	<0.020		ug/g	
			o-Xylene	2021/10/01	<0.020		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Xylenes	2021/10/01	<0.020		ug/g	
7612260	KH2	RPD [QUD256-03]	Acetone (2-Propanone)	2021/10/01	NC		%	50
			Benzene	2021/10/01	NC		%	50
			Bromodichloromethane	2021/10/01	NC		%	50
			Bromoform	2021/10/01	NC		%	50
			Bromomethane	2021/10/01	NC		%	50
			Carbon Tetrachloride	2021/10/01	NC		%	50
			Chlorobenzene	2021/10/01	NC		%	50
			Chloroform	2021/10/01	NC		%	50
			Dibromochloromethane	2021/10/01	NC		%	50
			1,2-Dichlorobenzene	2021/10/01	NC		%	50
			1,3-Dichlorobenzene	2021/10/01	NC		%	50
			1,4-Dichlorobenzene	2021/10/01	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2021/10/01	NC		%	50
			1,1-Dichloroethane	2021/10/01	NC		%	50
			1,2-Dichloroethane	2021/10/01	NC		%	50
			1,1-Dichloroethylene	2021/10/01	NC		%	50
			cis-1,2-Dichloroethylene	2021/10/01	NC		%	50
			trans-1,2-Dichloroethylene	2021/10/01	NC		%	50
			1,2-Dichloropropane	2021/10/01	NC		%	50
			cis-1,3-Dichloropropene	2021/10/01	NC		%	50
			trans-1,3-Dichloropropene	2021/10/01	NC		%	50
			Ethylbenzene	2021/10/01	NC		%	50
			Ethylene Dibromide	2021/10/01	NC		%	50
			Hexane	2021/10/01	1.8		%	50
			Methylene Chloride(Dichloromethane)	2021/10/01	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01	NC		%	50
			Methyl Isobutyl Ketone	2021/10/01	NC		%	50
			Methyl t-butyl ether (MTBE)	2021/10/01	NC		%	50
			Styrene	2021/10/01	NC		%	50
			1,1,1,2-Tetrachloroethane	2021/10/01	NC		%	50
			1,1,2,2-Tetrachloroethane	2021/10/01	NC		%	50
			Tetrachloroethylene	2021/10/01	NC		%	50
			Toluene	2021/10/01	7.4		%	50
			1,1,1-Trichloroethane	2021/10/01	NC		%	50
			1,1,2-Trichloroethane	2021/10/01	NC		%	50
			Trichloroethylene	2021/10/01	NC		%	50
			Trichlorofluoromethane (FREON 11)	2021/10/01	NC		%	50
			Vinyl Chloride	2021/10/01	NC		%	50
			p+m-Xylene	2021/10/01	1.1		%	50
			o-Xylene	2021/10/01	NC		%	50
			Total Xylenes	2021/10/01	1.1		%	50
7612293	TAK	Spiked Blank	Available (CaCl2) pH	2021/10/01		100	%	97 - 103
7612293	TAK	RPD	Available (CaCl2) pH	2021/10/01	0.084		%	N/A
7612310	APT	Matrix Spike	Hot Water Ext. Boron (B)	2021/10/01		96	%	75 - 125
7612310	APT	Spiked Blank	Hot Water Ext. Boron (B)	2021/10/01		93	%	75 - 125
7612310	APT	Method Blank	Hot Water Ext. Boron (B)	2021/10/01	<0.050		ug/g	
7612310	APT	RPD	Hot Water Ext. Boron (B)	2021/10/01	0.19		%	40
7612314	VIV	Matrix Spike	Acid Extractable Antimony (Sb)	2021/10/01		84	%	75 - 125
			Acid Extractable Arsenic (As)	2021/10/01		100	%	75 - 125
			Acid Extractable Barium (Ba)	2021/10/01		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/10/01		111	%	75 - 125
			Acid Extractable Boron (B)	2021/10/01		105	%	75 - 125

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Cadmium (Cd)	2021/10/01		96	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/10/01		NC	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/10/01		94	%	75 - 125
			Acid Extractable Copper (Cu)	2021/10/01		89	%	75 - 125
			Acid Extractable Lead (Pb)	2021/10/01		100	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/10/01		95	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/10/01		95	%	75 - 125
			Acid Extractable Selenium (Se)	2021/10/01		102	%	75 - 125
			Acid Extractable Silver (Ag)	2021/10/01		99	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/10/01		99	%	75 - 125
			Acid Extractable Uranium (U)	2021/10/01		101	%	75 - 125
			Acid Extractable Vanadium (V)	2021/10/01		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/10/01		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/10/01		98	%	75 - 125
7612314	VIV	Spiked Blank	Acid Extractable Antimony (Sb)	2021/10/01		93	%	80 - 120
			Acid Extractable Arsenic (As)	2021/10/01		102	%	80 - 120
			Acid Extractable Barium (Ba)	2021/10/01		100	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/10/01		100	%	80 - 120
			Acid Extractable Boron (B)	2021/10/01		94	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/10/01		92	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/10/01		93	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/10/01		94	%	80 - 120
			Acid Extractable Copper (Cu)	2021/10/01		91	%	80 - 120
			Acid Extractable Lead (Pb)	2021/10/01		98	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/10/01		94	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/10/01		94	%	80 - 120
			Acid Extractable Selenium (Se)	2021/10/01		103	%	80 - 120
			Acid Extractable Silver (Ag)	2021/10/01		96	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/10/01		98	%	80 - 120
			Acid Extractable Uranium (U)	2021/10/01		98	%	80 - 120
			Acid Extractable Vanadium (V)	2021/10/01		101	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/10/01		95	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/10/01		96	%	80 - 120
7612314	VIV	Method Blank	Acid Extractable Antimony (Sb)	2021/10/01	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/10/01	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/10/01	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/10/01	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/10/01	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/10/01	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/10/01	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/10/01	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/10/01	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/10/01	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/10/01	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/10/01	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/10/01	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/10/01	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/10/01	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/10/01	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/10/01	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/10/01	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/10/01	<0.050		ug/g	
7612314	VIV	RPD	Acid Extractable Antimony (Sb)	2021/10/01	NC		%	30

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Arsenic (As)	2021/10/01	6.0		%	30
			Acid Extractable Barium (Ba)	2021/10/01	0.62		%	30
			Acid Extractable Beryllium (Be)	2021/10/01	2.6		%	30
			Acid Extractable Boron (B)	2021/10/01	1.4		%	30
			Acid Extractable Cadmium (Cd)	2021/10/01	23		%	30
			Acid Extractable Chromium (Cr)	2021/10/01	7.5		%	30
			Acid Extractable Cobalt (Co)	2021/10/01	3.7		%	30
			Acid Extractable Copper (Cu)	2021/10/01	1.5		%	30
			Acid Extractable Lead (Pb)	2021/10/01	0.12		%	30
			Acid Extractable Molybdenum (Mo)	2021/10/01	NC		%	30
			Acid Extractable Nickel (Ni)	2021/10/01	5.5		%	30
			Acid Extractable Selenium (Se)	2021/10/01	NC		%	30
			Acid Extractable Silver (Ag)	2021/10/01	NC		%	30
			Acid Extractable Thallium (Tl)	2021/10/01	9.2		%	30
			Acid Extractable Uranium (U)	2021/10/01	5.4		%	30
			Acid Extractable Vanadium (V)	2021/10/01	3.3		%	30
			Acid Extractable Zinc (Zn)	2021/10/01	2.9		%	30
			Acid Extractable Mercury (Hg)	2021/10/01	NC		%	30
7612428	NYS	Spiked Blank	Conductivity	2021/10/01		100	%	90 - 110
7612428	NYS	Method Blank	Conductivity	2021/10/01	<0.002		mS/cm	
7612428	NYS	RPD	Conductivity	2021/10/01	2.4		%	10
7612465	NYS	Spiked Blank	Conductivity	2021/10/01		100	%	90 - 110
7612465	NYS	Method Blank	Conductivity	2021/10/01	<0.002		mS/cm	
7612465	NYS	RPD	Conductivity	2021/10/01	0		%	10
7628860	DN0	Spiked Blank	o-Terphenyl	2021/10/11		94	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/10/11		104	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/10/11		101	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/10/11		105	%	80 - 120
7628860	DN0	RPD	F2 (C10-C16 Hydrocarbons)	2021/10/11	2.7		%	30
			F3 (C16-C34 Hydrocarbons)	2021/10/11	3.1		%	30
			F4 (C34-C50 Hydrocarbons)	2021/10/11	3.4		%	30
7628860	DN0	Method Blank	o-Terphenyl	2021/10/11		91	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/10/11	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/10/11	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/10/11	<50		ug/g	
7632544	H_W	Spiked Blank	1,4-Difluorobenzene	2021/10/13		99	%	60 - 140
			4-Bromofluorobenzene	2021/10/13		100	%	60 - 140
			D10-o-Xylene	2021/10/13		91	%	60 - 140
			D4-1,2-Dichloroethane	2021/10/13		107	%	60 - 140
			Benzene	2021/10/13		103	%	50 - 140
			Toluene	2021/10/13		102	%	50 - 140
			Ethylbenzene	2021/10/13		115	%	50 - 140
			o-Xylene	2021/10/13		109	%	50 - 140
			p+m-Xylene	2021/10/13		111	%	50 - 140
			F1 (C6-C10)	2021/10/13		89	%	80 - 120
7632544	H_W	RPD	Benzene	2021/10/13	2.2		%	50
			Toluene	2021/10/13	1.7		%	50
			Ethylbenzene	2021/10/13	2.9		%	50
			o-Xylene	2021/10/13	0.60		%	50
			p+m-Xylene	2021/10/13	2.2		%	50
			F1 (C6-C10)	2021/10/13	1.3		%	30
			Benzene	2021/10/13	NC		%	50
			Toluene	2021/10/13	NC		%	50

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Ethylbenzene	2021/10/13	NC		%	50
			o-Xylene	2021/10/13	NC		%	50
			p+m-Xylene	2021/10/13	NC		%	50
			Total Xylenes	2021/10/13	NC		%	50
			F1 (C6-C10)	2021/10/13	NC		%	30
			F1 (C6-C10) - BTEX	2021/10/13	NC		%	30
7632544	H_W	Method Blank	1,4-Difluorobenzene	2021/10/13		107	%	60 - 140
			4-Bromofluorobenzene	2021/10/13		94	%	60 - 140
			D10-o-Xylene	2021/10/13		78	%	60 - 140
			D4-1,2-Dichloroethane	2021/10/13		107	%	60 - 140
			Benzene	2021/10/13	<0.020		ug/g	
			Toluene	2021/10/13	<0.020		ug/g	
			Ethylbenzene	2021/10/13	<0.020		ug/g	
			o-Xylene	2021/10/13	<0.020		ug/g	
			p+m-Xylene	2021/10/13	<0.040		ug/g	
			Total Xylenes	2021/10/13	<0.040		ug/g	
			F1 (C6-C10)	2021/10/13	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/10/13	<10		ug/g	

N/A = Not Applicable

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

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

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

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

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

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

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

(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was reanalyzed with the same results

VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

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

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvlabs.com

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

CHAIN OF CUSTODY RECORD
ENV COC - 00014v2

Page 1 of 2

Invoice Information	Invoice to (requires report)	Report Information (if differs from invoice)		Project Information	
Company :	Golder	Company:		Quotation #:	
Contact Name:	Daniel Stabile	Contact Name:		P.O. #/ AFE#:	
Street Address:		Street Address:		Project #:	21494078
City:	Prov: Postal Code:	City:	Prov: Postal Code:	Site #:	
Phone:	905-213-4732	Phone:		Site Location:	1047 Richmond
Email:	dstabile@golder.com	Email:		Site Location Province:	Ontario
Copies:		Copies:		Sampled By:	DG

28-Sep-21 15:20
Ema Gitej
C1S1463
ENV-1188

Regulatory Criteria

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

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

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

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

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

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

Date Required: YY MM DD

Comments

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX/ F1	5 F2 - F4	6 VOCs	7 Reg 153 metals and inorganics	8 Reg 153 ICPMS metals	9 Reg 153 metals (Hg, Cr VI, ICPMS metals, HWS - B)	10 metals and ORP (see email)	11	12	13	14	15	16	17	18	19	20	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE
1	21-1 SA1	21	9	24	11	0	Soil	NA	Y	N							X										4	
2	21-1 SA3	21	9	24	11	30	Soil	NA	Y	N	X	X	X														4	
3	21-4 SA1	21	9	21	9	40	Soil	NA	Y	N			X														3	
4	21-4 SA6	21	9	21	10	40	Soil	NA	Y	N	X	X															3	
5	21-2 SA2	21	9	21	11	30	Soil	NA	Y	N							X										4	
6	21-2 SA5	21	9	21	12	0	Soil	NA	Y	N	X	X	X														3	
7	21-5 SA2	21	9	22	10	50	Soil	NA	Y	N	X	X	X														4	
8	21-5 SA3	21	9	24	8	5	Soil	NA	Y	N							X										4	
9	21-5 Dup-1	21	9	22	10	50	Soil	NA	Y	N	X	X	X														4	
10	21-3 SA1	21	9	22	8	0	Soil	NA	Y	N			X														4	
11	21-3 SA2	21	9	22	8	15	Soil	NA	Y	N	X	X															4	
12	21-3 SA3	21	9	22	8	30	Soil	NA	Y	N							X										4	

RECEIVED IN OTTAWA

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

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

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

LAB USE ONLY	Yes	No	°C	1	2	3	Temperature reading by:
Seal present		✓					
Seal intact		✓					
Cooling media present ICE	✓			9	9	9	QWW

	Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Special Instructions
1	Tonyla	2021	09	28			AISLINN MULLAHY QWW	2021	09	28	15	20	
2								2021	09	29	08	00	

3/3/4°C

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CHAIN OF CUSTODY RECORD

ENV COC - 00014v2

CONTINUED

[PAGE 1 REFERENCE]

Company:	Golder
Contact Name:	Daniel Stabile
Project #:	21494078

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

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX/F1	5 F2 - F4	6 VOCs	7 Reg 153 metals and inorganics	8 Reg 153 ICPMS metals	9 Reg 153 metals (Hg, CrVI, ICPMS metals, HWS- B)	10	11	12	13	14	15	16	17	18	19	20	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE	Same as above / Comments
13	21-3 SA3	21	9	22	8	30	Soil	NA	N	N							X											1		
14																														
15																														
16																														
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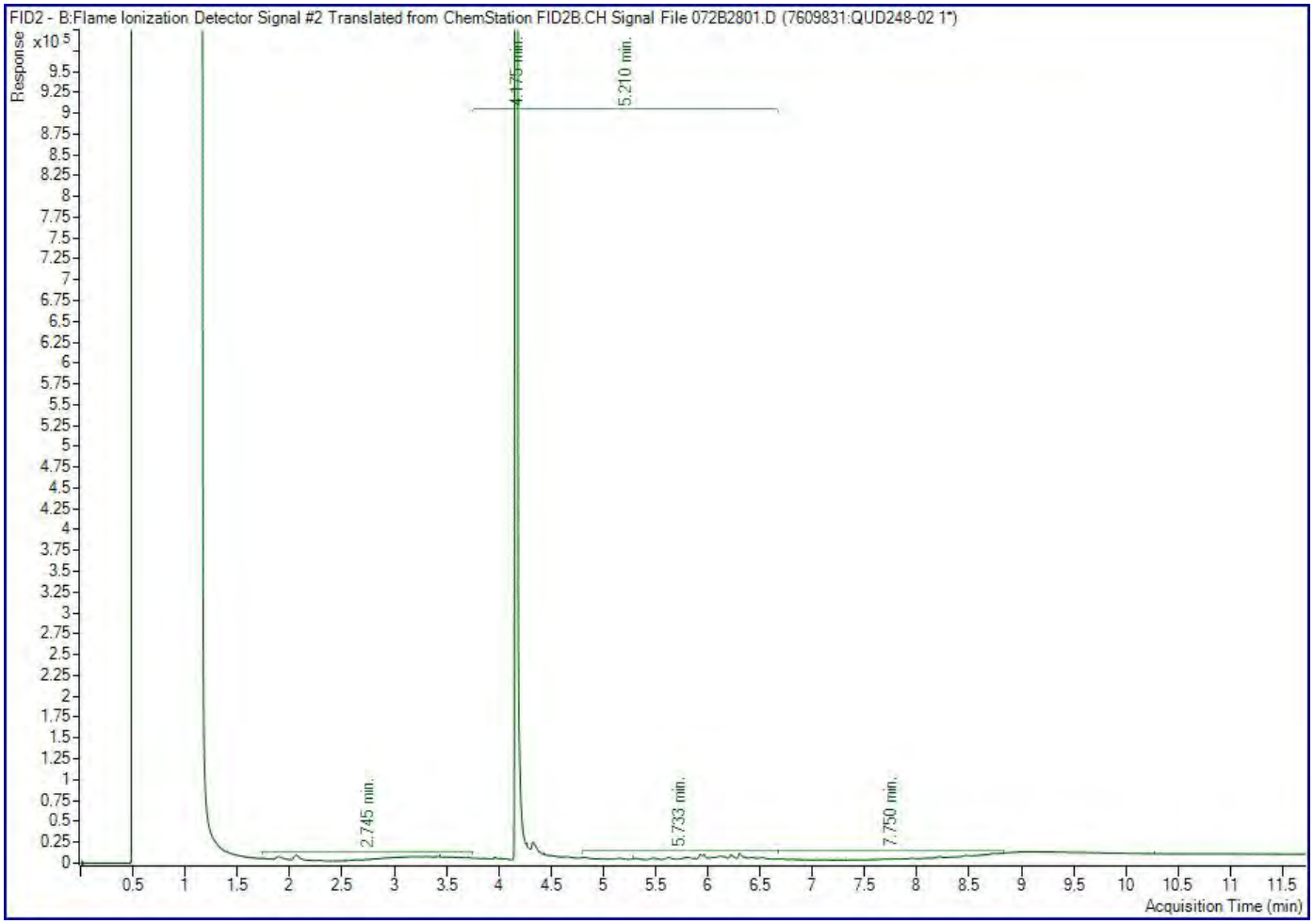
see page 1.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD248

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-1 SA3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

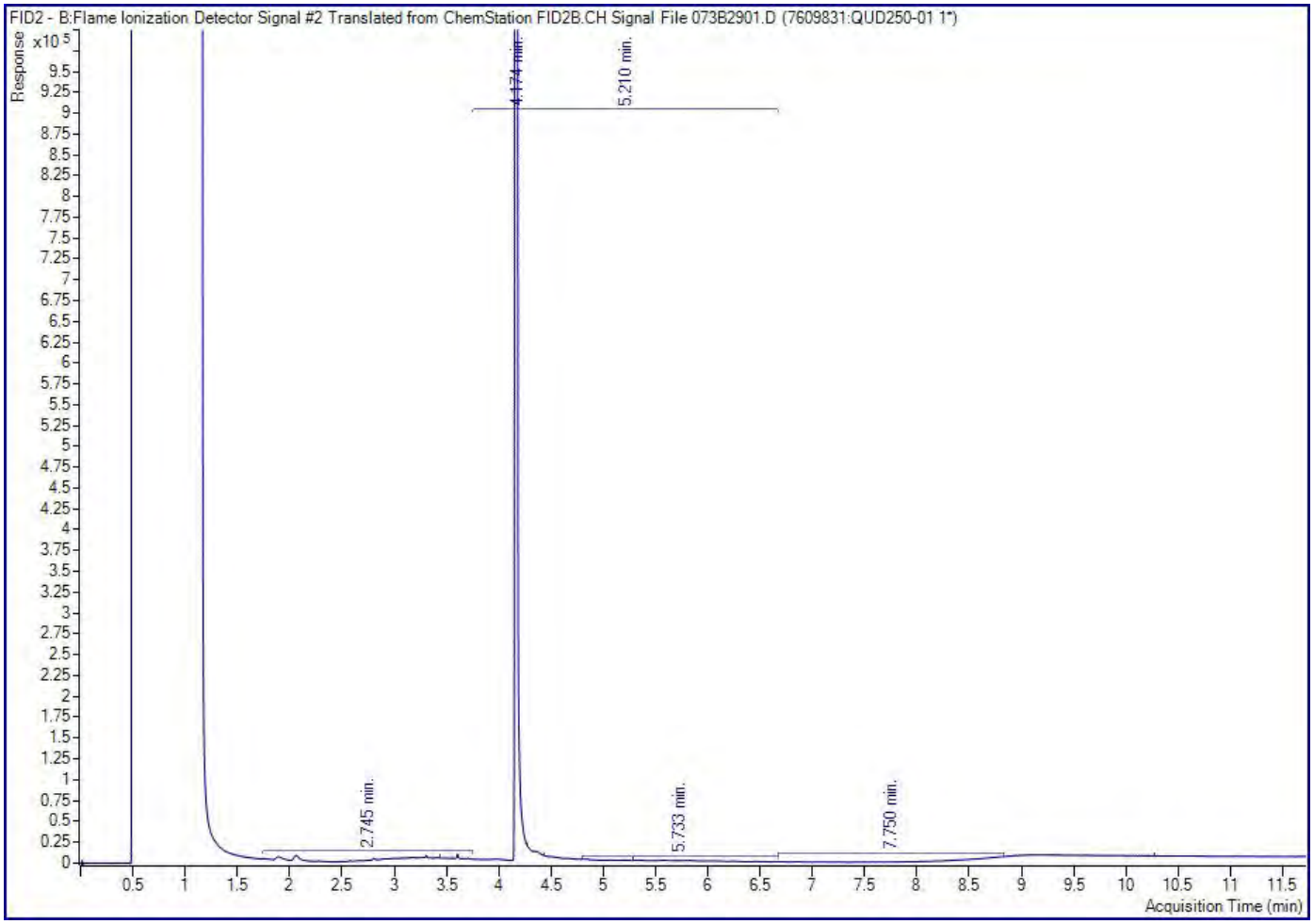


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD250

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-4 SA6

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

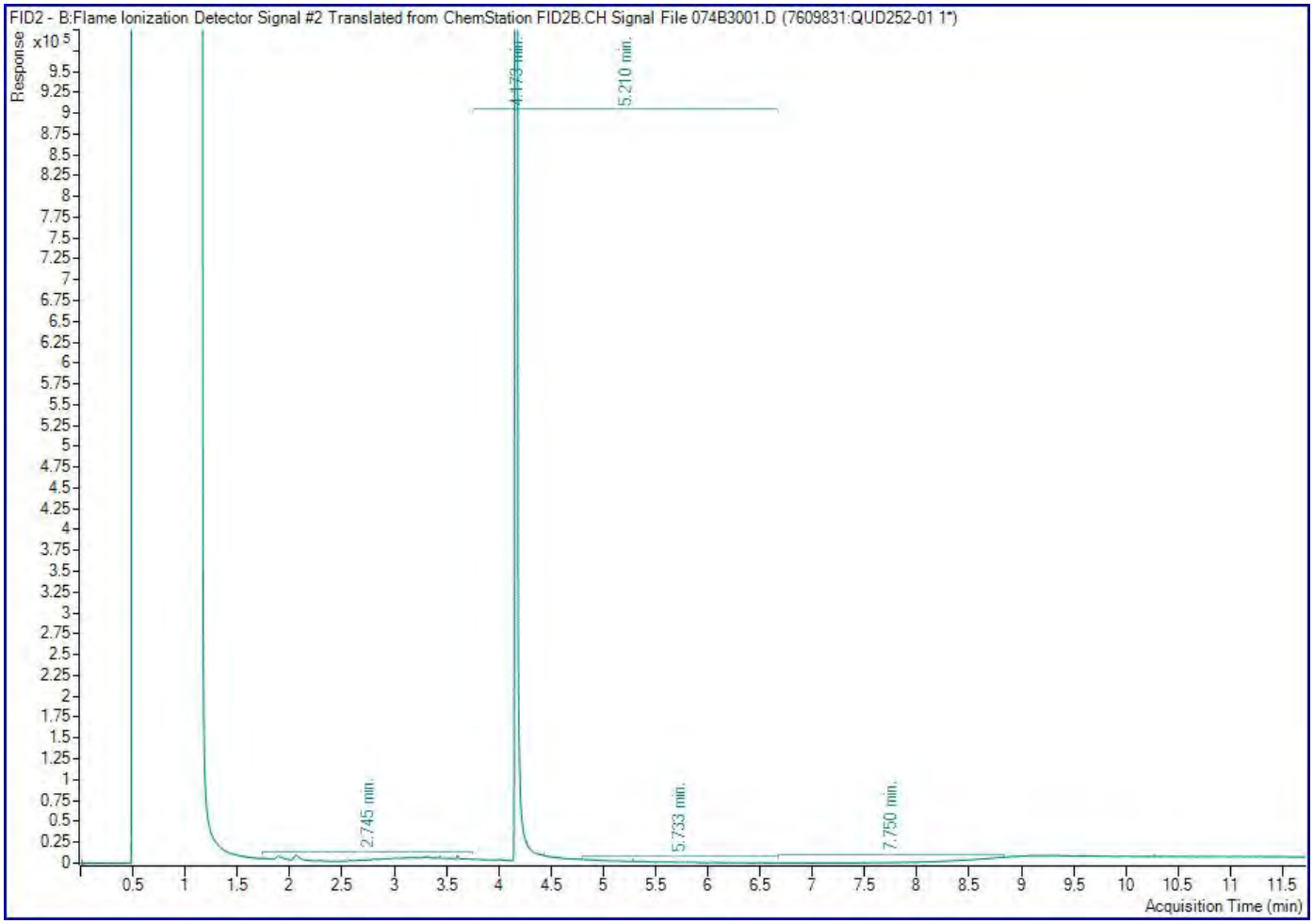


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD252

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-2 SA5

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



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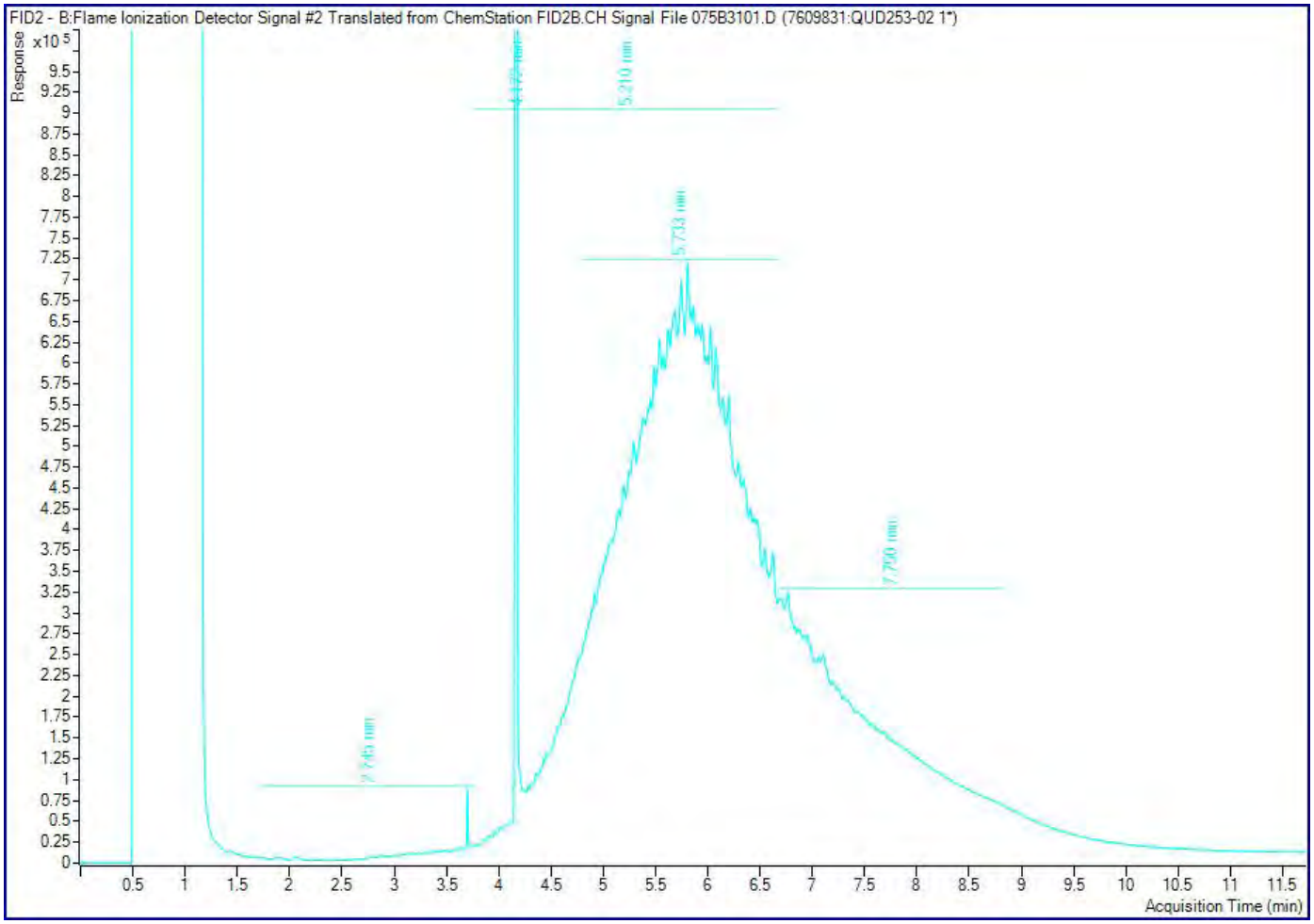
BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD253

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-5 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



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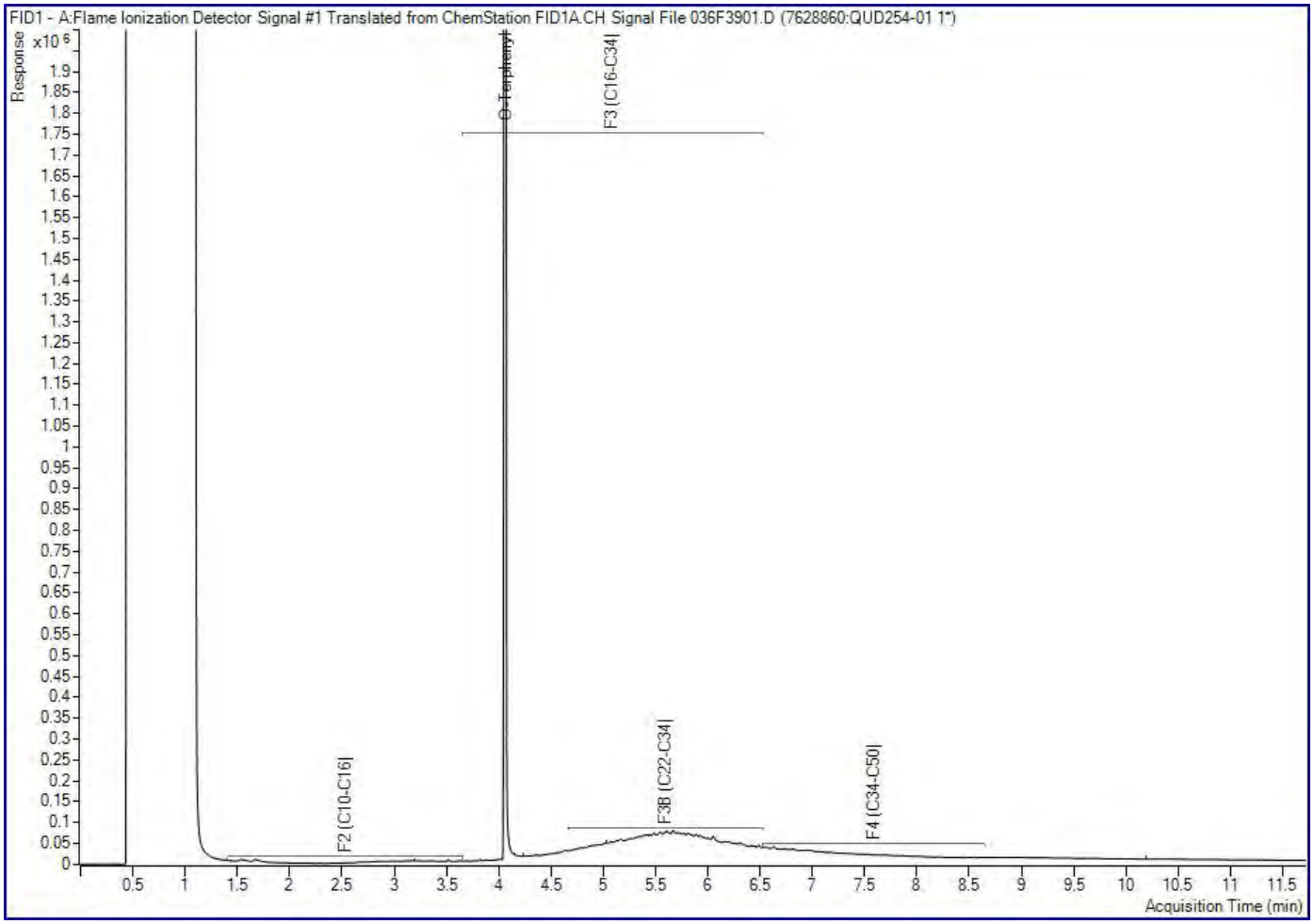
BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD254

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-5 SA3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



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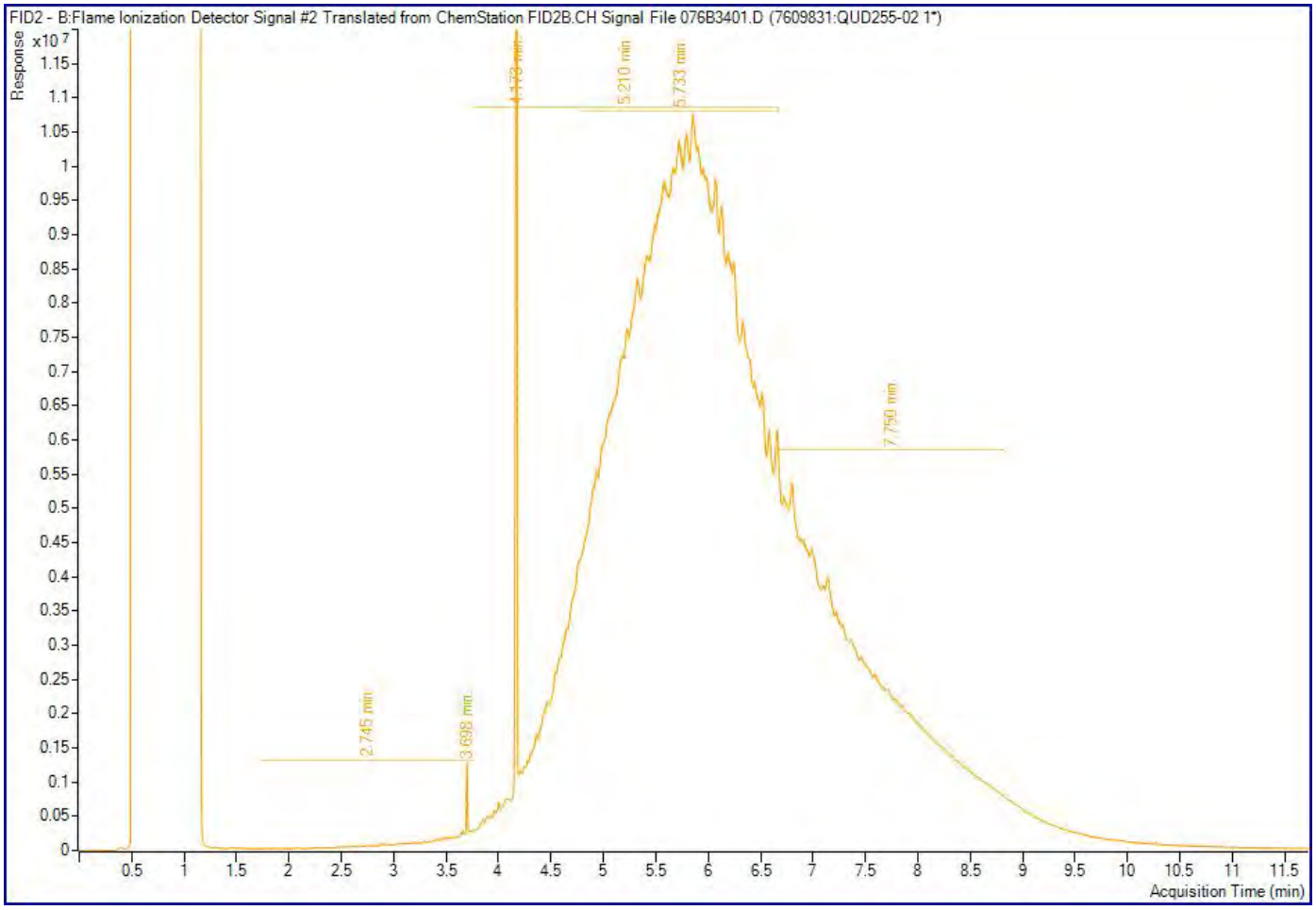
BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD255

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-5 DUP-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



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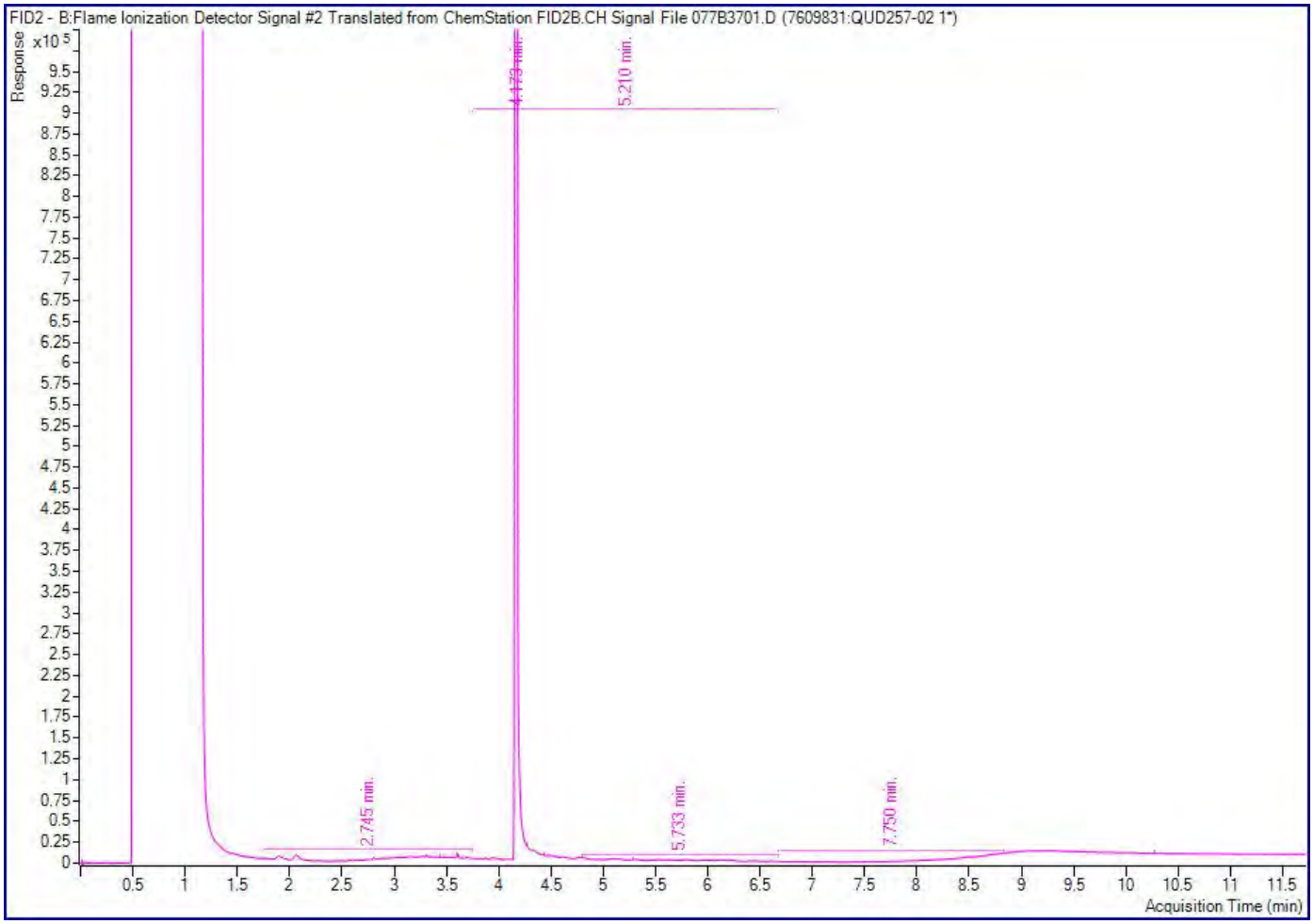
BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD257

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-3 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 21484078
Your C.O.C. #: 849032-01-01

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/10/06
Report #: R6842743
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1S7480
Received: 2021/10/04, 15:40

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
1,3-Dichloropropene Sum (1)	5	N/A	2021/10/05		EPA 8260C m
Chloride by Automated Colourimetry (1)	5	N/A	2021/10/05	CAM SOP-00463	SM 23 4500-Cl E m
Chromium (VI) in Water (1)	5	N/A	2021/10/05	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide (1)	5	N/A	2021/10/05	CAM SOP-00457	OMOE E3015 m
Petroleum Hydrocarbons F2-F4 in Water (1, 2)	5	2021/10/05	2021/10/06	CAM SOP-00316	CCME PHC-CWS m
Mercury (1)	5	2021/10/05	2021/10/05	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS (1)	5	N/A	2021/10/05	CAM SOP-00447	EPA 6020B m
Volatile Organic Compounds and F1 PHCs (1)	7	N/A	2021/10/05	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following “Alberta Environment’s Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods

Your Project #: 21484078
Your C.O.C. #: 849032-01-01

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/10/06
Report #: R6842743
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1S7480
Received: 2021/10/04, 15:40

September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: emese.gitej@bureauveritas.com
Phone# (905)817-5829
==========
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BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

VOLATILE ORGANICS BY GC/MS (WATER)

BV Labs ID		QVN124	QVN125		
Sampling Date		2021/10/04 13:15	2021/10/04		
COC Number		849032-01-01	849032-01-01		
	UNITS	F- BLANK	TRIP BLANK	RDL	QC Batch
Volatile Organics					
Acetone (2-Propanone)	ug/L	<10	<10	10	7614573
Benzene	ug/L	<0.17	<0.17	0.17	7614573
Bromodichloromethane	ug/L	<0.50	<0.50	0.50	7614573
Bromoform	ug/L	<1.0	<1.0	1.0	7614573
Bromomethane	ug/L	<0.50	<0.50	0.50	7614573
Carbon Tetrachloride	ug/L	<0.20	<0.20	0.20	7614573
Chlorobenzene	ug/L	<0.20	<0.20	0.20	7614573
Chloroform	ug/L	<0.20	<0.20	0.20	7614573
Dibromochloromethane	ug/L	<0.50	<0.50	0.50	7614573
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	7614573
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	7614573
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	7614573
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	1.0	7614573
1,1-Dichloroethane	ug/L	<0.20	<0.20	0.20	7614573
1,2-Dichloroethane	ug/L	<0.50	<0.50	0.50	7614573
1,1-Dichloroethylene	ug/L	<0.20	<0.20	0.20	7614573
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	7614573
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	7614573
1,2-Dichloropropane	ug/L	<0.20	<0.20	0.20	7614573
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	0.30	7614573
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	0.40	7614573
Ethylbenzene	ug/L	<0.20	<0.20	0.20	7614573
Ethylene Dibromide	ug/L	<0.20	<0.20	0.20	7614573
Hexane	ug/L	<1.0	<1.0	1.0	7614573
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	2.0	7614573
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	10	7614573
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	5.0	7614573
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	0.50	7614573
Styrene	ug/L	<0.50	<0.50	0.50	7614573
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	7614573
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	7614573
Tetrachloroethylene	ug/L	<0.20	<0.20	0.20	7614573
Toluene	ug/L	<0.20	<0.20	0.20	7614573
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	0.20	7614573
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	0.50	7614573

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

VOLATILE ORGANICS BY GC/MS (WATER)

BV Labs ID		QVN124	QVN125		
Sampling Date		2021/10/04 13:15	2021/10/04		
COC Number		849032-01-01	849032-01-01		
	UNITS	F- BLANK	TRIP BLANK	RDL	QC Batch
Trichloroethylene	ug/L	<0.20	<0.20	0.20	7614573
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	0.50	7614573
Vinyl Chloride	ug/L	<0.20	<0.20	0.20	7614573
p+m-Xylene	ug/L	<0.20	<0.20	0.20	7614573
o-Xylene	ug/L	<0.20	<0.20	0.20	7614573
Total Xylenes	ug/L	<0.20	<0.20	0.20	7614573
F1 (C6-C10)	ug/L	<25	<25	25	7614573
F1 (C6-C10) - BTEX	ug/L	<25	<25	25	7614573
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	83	83		7614573
D4-1,2-Dichloroethane	%	99	100		7614573
D8-Toluene	%	97	96		7614573

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 METALS & INORGANICS PKG (WTR)

BV Labs ID		QVN119			QVN119			QVN120		
Sampling Date		2021/10/04 08:00			2021/10/04 08:00			2021/10/04 11:35		
COC Number		849032-01-01			849032-01-01			849032-01-01		
	UNITS	21-5	RDL	QC Batch	21-5 Lab-Dup	RDL	QC Batch	21-4	RDL	QC Batch
Inorganics										
WAD Cyanide (Free)	ug/L	<1	1	7618434	<1	1	7618434	<1	1	7618434
Dissolved Chloride (Cl-)	mg/L	36	1.0	7618326				47	1.0	7618326
Metals										
Chromium (VI)	ug/L	<0.50	0.50	7616546	<0.50	0.50	7616546	<0.50	0.50	7616546
Mercury (Hg)	ug/L	<0.10	0.10	7618346				<0.10	0.10	7618346
Dissolved Antimony (Sb)	ug/L	<0.50	0.50	7618322				<0.50	0.50	7618322
Dissolved Arsenic (As)	ug/L	<1.0	1.0	7618322				<1.0	1.0	7618322
Dissolved Barium (Ba)	ug/L	77	2.0	7618322				140	2.0	7618322
Dissolved Beryllium (Be)	ug/L	<0.40	0.40	7618322				<0.40	0.40	7618322
Dissolved Boron (B)	ug/L	150	10	7618322				91	10	7618322
Dissolved Cadmium (Cd)	ug/L	<0.090	0.090	7618322				<0.090	0.090	7618322
Dissolved Chromium (Cr)	ug/L	<5.0	5.0	7618322				<5.0	5.0	7618322
Dissolved Cobalt (Co)	ug/L	<0.50	0.50	7618322				4.2	0.50	7618322
Dissolved Copper (Cu)	ug/L	<0.90	0.90	7618322				<0.90	0.90	7618322
Dissolved Lead (Pb)	ug/L	<0.50	0.50	7618322				<0.50	0.50	7618322
Dissolved Molybdenum (Mo)	ug/L	<0.50	0.50	7618322				<0.50	0.50	7618322
Dissolved Nickel (Ni)	ug/L	<1.0	1.0	7618322				2.7	1.0	7618322
Dissolved Selenium (Se)	ug/L	<2.0	2.0	7618322				<2.0	2.0	7618322
Dissolved Silver (Ag)	ug/L	<0.090	0.090	7618322				<0.090	0.090	7618322
Dissolved Sodium (Na)	ug/L	65000	100	7618322				34000	100	7618322
Dissolved Thallium (Tl)	ug/L	<0.050	0.050	7618322				<0.050	0.050	7618322
Dissolved Uranium (U)	ug/L	0.54	0.10	7618322				0.52	0.10	7618322
Dissolved Vanadium (V)	ug/L	<0.50	0.50	7618322				<0.50	0.50	7618322
Dissolved Zinc (Zn)	ug/L	<5.0	5.0	7618322				<5.0	5.0	7618322

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

BV Labs Job #: C1S7480
Report Date: 2021/10/06

Golder Associates Ltd
Client Project #: 21484078
Sampler Initials: ALE

O.REG 153 METALS & INORGANICS PKG (WTR)

BV Labs ID		QVN121		QVN122	QVN123			QVN123		
Sampling Date		2021/10/04 12:40		2021/10/04 13:15	2021/10/04			2021/10/04		
COC Number		849032-01-01		849032-01-01	849032-01-01			849032-01-01		
	UNITS	21-2	RDL	21-3	DUP-1	RDL	QC Batch	DUP-1 Lab-Dup	RDL	QC Batch
Inorganics										
WAD Cyanide (Free)	ug/L	<1	1	<1	<1	1	7618434			
Dissolved Chloride (Cl-)	mg/L	150	2.0	47	36	1.0	7618326			
Metals										
Chromium (VI)	ug/L	<0.50	0.50	<0.50	<0.50	0.50	7616546			
Mercury (Hg)	ug/L	<0.10	0.10	<0.10	<0.10	0.10	7618346			
Dissolved Antimony (Sb)	ug/L	<0.50	0.50	<0.50	<0.50	0.50	7618322	<0.50	0.50	7618322
Dissolved Arsenic (As)	ug/L	<1.0	1.0	<1.0	<1.0	1.0	7618322	<1.0	1.0	7618322
Dissolved Barium (Ba)	ug/L	55	2.0	36	77	2.0	7618322	75	2.0	7618322
Dissolved Beryllium (Be)	ug/L	<0.40	0.40	<0.40	<0.40	0.40	7618322	<0.40	0.40	7618322
Dissolved Boron (B)	ug/L	82	10	86	140	10	7618322	150	10	7618322
Dissolved Cadmium (Cd)	ug/L	<0.090	0.090	<0.090	<0.090	0.090	7618322	<0.090	0.090	7618322
Dissolved Chromium (Cr)	ug/L	<5.0	5.0	<5.0	<5.0	5.0	7618322	<5.0	5.0	7618322
Dissolved Cobalt (Co)	ug/L	<0.50	0.50	<0.50	<0.50	0.50	7618322	<0.50	0.50	7618322
Dissolved Copper (Cu)	ug/L	1.6	0.90	<0.90	<0.90	0.90	7618322	<0.90	0.90	7618322
Dissolved Lead (Pb)	ug/L	<0.50	0.50	<0.50	<0.50	0.50	7618322	<0.50	0.50	7618322
Dissolved Molybdenum (Mo)	ug/L	<0.50	0.50	0.57	<0.50	0.50	7618322	<0.50	0.50	7618322
Dissolved Nickel (Ni)	ug/L	1.6	1.0	1.1	1.0	1.0	7618322	<1.0	1.0	7618322
Dissolved Selenium (Se)	ug/L	<2.0	2.0	<2.0	<2.0	2.0	7618322	<2.0	2.0	7618322
Dissolved Silver (Ag)	ug/L	<0.090	0.090	<0.090	<0.090	0.090	7618322	<0.090	0.090	7618322
Dissolved Sodium (Na)	ug/L	170000	100	87000	64000	100	7618322	65000	100	7618322
Dissolved Thallium (Tl)	ug/L	<0.050	0.050	<0.050	<0.050	0.050	7618322	<0.050	0.050	7618322
Dissolved Uranium (U)	ug/L	0.69	0.10	0.64	0.54	0.10	7618322	0.51	0.10	7618322
Dissolved Vanadium (V)	ug/L	<0.50	0.50	<0.50	<0.50	0.50	7618322	<0.50	0.50	7618322
Dissolved Zinc (Zn)	ug/L	<5.0	5.0	<5.0	<5.0	5.0	7618322	<5.0	5.0	7618322

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

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

BV Labs ID		QVN119	QVN120			QVN120		
Sampling Date		2021/10/04 08:00	2021/10/04 11:35			2021/10/04 11:35		
COC Number		849032-01-01	849032-01-01			849032-01-01		
	UNITS	21-5	21-4	RDL	QC Batch	21-4 Lab-Dup	RDL	QC Batch
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	0.50	7618207			
Volatile Organics								
Acetone (2-Propanone)	ug/L	<10	<10	10	7614573	<10	10	7614573
Benzene	ug/L	<0.17	0.49	0.17	7614573	0.42	0.17	7614573
Bromodichloromethane	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
Bromoform	ug/L	<1.0	<1.0	1.0	7614573	<1.0	1.0	7614573
Bromomethane	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
Carbon Tetrachloride	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
Chlorobenzene	ug/L	<0.20	5.5	0.20	7614573	4.8	0.20	7614573
Chloroform	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
Dibromochloromethane	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
1,2-Dichlorobenzene	ug/L	<0.50	6.3	0.50	7614573	5.7	0.50	7614573
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	1.0	7614573	<1.0	1.0	7614573
1,1-Dichloroethane	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
1,2-Dichloroethane	ug/L	<0.50	9.3	0.50	7614573	8.3	0.50	7614573
1,1-Dichloroethylene	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
1,2-Dichloropropane	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	0.30	7614573	<0.30	0.30	7614573
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	0.40	7614573	<0.40	0.40	7614573
Ethylbenzene	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
Ethylene Dibromide	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
Hexane	ug/L	<1.0	<1.0	1.0	7614573	<1.0	1.0	7614573
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	2.0	7614573	<2.0	2.0	7614573
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	10	7614573	<10	10	7614573
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	5.0	7614573	<5.0	5.0	7614573
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
Styrene	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
Tetrachloroethylene	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573

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

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

BV Labs ID		QVN119	QVN120			QVN120		
Sampling Date		2021/10/04 08:00	2021/10/04 11:35			2021/10/04 11:35		
COC Number		849032-01-01	849032-01-01			849032-01-01		
	UNITS	21-5	21-4	RDL	QC Batch	21-4 Lab-Dup	RDL	QC Batch
Toluene	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
Trichloroethylene	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	0.50	7614573	<0.50	0.50	7614573
Vinyl Chloride	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
p+m-Xylene	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
o-Xylene	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
Total Xylenes	ug/L	<0.20	<0.20	0.20	7614573	<0.20	0.20	7614573
F1 (C6-C10)	ug/L	<25	<25	25	7614573	<25	25	7614573
F1 (C6-C10) - BTEX	ug/L	<25	<25	25	7614573	<25	25	7614573
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	100	7619044			
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	200	7619044			
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	200	7619044			
Reached Baseline at C50	ug/L	Yes	Yes		7619044			
Surrogate Recovery (%)								
o-Terphenyl	%	93	98		7619044			
4-Bromofluorobenzene	%	84	86		7614573	86		7614573
D4-1,2-Dichloroethane	%	123	120		7614573	123		7614573
D8-Toluene	%	91	91		7614573	90		7614573

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

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

BV Labs ID		QVN121	QVN122	QVN123		
Sampling Date		2021/10/04 12:40	2021/10/04 13:15	2021/10/04		
COC Number		849032-01-01	849032-01-01	849032-01-01		
	UNITS	21-2	21-3	DUP-1	RDL	QC Batch
Calculated Parameters						
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	<0.50	0.50	7618207
Volatile Organics						
Acetone (2-Propanone)	ug/L	<10	<10	<10	10	7614573
Benzene	ug/L	<0.17	<0.17	<0.17	0.17	7614573
Bromodichloromethane	ug/L	<0.50	<0.50	<0.50	0.50	7614573
Bromoform	ug/L	<1.0	<1.0	<1.0	1.0	7614573
Bromomethane	ug/L	<0.50	<0.50	<0.50	0.50	7614573
Carbon Tetrachloride	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Chlorobenzene	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Chloroform	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Dibromochloromethane	ug/L	<0.50	<0.50	<0.50	0.50	7614573
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	0.50	7614573
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	0.50	7614573
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	0.50	7614573
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	<1.0	1.0	7614573
1,1-Dichloroethane	ug/L	<0.20	<0.20	<0.20	0.20	7614573
1,2-Dichloroethane	ug/L	<0.50	<0.50	<0.50	0.50	7614573
1,1-Dichloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	7614573
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	0.50	7614573
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	0.50	7614573
1,2-Dichloropropane	ug/L	<0.20	<0.20	<0.20	0.20	7614573
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	<0.30	0.30	7614573
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	<0.40	0.40	7614573
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Ethylene Dibromide	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Hexane	ug/L	<1.0	<1.0	<1.0	1.0	7614573
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	<2.0	2.0	7614573
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	<10	10	7614573
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	<5.0	5.0	7614573
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	<0.50	0.50	7614573
Styrene	ug/L	<0.50	<0.50	<0.50	0.50	7614573
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	0.50	7614573
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	0.50	7614573
Tetrachloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Toluene	ug/L	<0.20	<0.20	<0.20	0.20	7614573

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

BV Labs ID		QVN121	QVN122	QVN123		
Sampling Date		2021/10/04 12:40	2021/10/04 13:15	2021/10/04		
COC Number		849032-01-01	849032-01-01	849032-01-01		
	UNITS	21-2	21-3	DUP-1	RDL	QC Batch
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	<0.20	0.20	7614573
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	<0.50	0.50	7614573
Trichloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	<0.50	0.50	7614573
Vinyl Chloride	ug/L	<0.20	<0.20	<0.20	0.20	7614573
p+m-Xylene	ug/L	<0.20	<0.20	<0.20	0.20	7614573
o-Xylene	ug/L	<0.20	<0.20	<0.20	0.20	7614573
Total Xylenes	ug/L	<0.20	<0.20	<0.20	0.20	7614573
F1 (C6-C10)	ug/L	<25	<25	<25	25	7614573
F1 (C6-C10) - BTEX	ug/L	<25	<25	<25	25	7614573
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	<100	100	7619044
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	<200	200	7619044
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	<200	200	7619044
Reached Baseline at C50	ug/L	Yes	Yes	Yes		7619044
Surrogate Recovery (%)						
o-Terphenyl	%	94	96	98		7619044
4-Bromofluorobenzene	%	83	83	83		7614573
D4-1,2-Dichloroethane	%	120	126	120		7614573
D8-Toluene	%	93	91	93		7614573

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

TEST SUMMARY

BV Labs ID: QVN119
Sample ID: 21-5
Matrix: Water

Collected: 2021/10/04
Shipped:
Received: 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7618207	N/A	2021/10/05	Automated Statchk
Chloride by Automated Colourimetry	KONE	7618326	N/A	2021/10/05	Alina Dobreanu
Chromium (VI) in Water	IC	7616546	N/A	2021/10/05	Lang Le
Free (WAD) Cyanide	SKAL/CN	7618434	N/A	2021/10/05	Louise Harding
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7619044	2021/10/05	2021/10/06	Anna Stuglik-Rolland
Mercury	CV/AA	7618346	2021/10/05	2021/10/05	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7618322	N/A	2021/10/05	Arefa Dabhad
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

BV Labs ID: QVN119 Dup
Sample ID: 21-5
Matrix: Water

Collected: 2021/10/04
Shipped:
Received: 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chromium (VI) in Water	IC	7616546	N/A	2021/10/05	Lang Le
Free (WAD) Cyanide	SKAL/CN	7618434	N/A	2021/10/05	Louise Harding

BV Labs ID: QVN120
Sample ID: 21-4
Matrix: Water

Collected: 2021/10/04
Shipped:
Received: 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7618207	N/A	2021/10/05	Automated Statchk
Chloride by Automated Colourimetry	KONE	7618326	N/A	2021/10/05	Alina Dobreanu
Chromium (VI) in Water	IC	7616546	N/A	2021/10/05	Lang Le
Free (WAD) Cyanide	SKAL/CN	7618434	N/A	2021/10/05	Louise Harding
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7619044	2021/10/05	2021/10/06	Anna Stuglik-Rolland
Mercury	CV/AA	7618346	2021/10/05	2021/10/05	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7618322	N/A	2021/10/05	Arefa Dabhad
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

BV Labs ID: QVN120 Dup
Sample ID: 21-4
Matrix: Water

Collected: 2021/10/04
Shipped:
Received: 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

BV Labs ID: QVN121
Sample ID: 21-2
Matrix: Water

Collected: 2021/10/04
Shipped:
Received: 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7618207	N/A	2021/10/05	Automated Statchk
Chloride by Automated Colourimetry	KONE	7618326	N/A	2021/10/05	Alina Dobreanu
Chromium (VI) in Water	IC	7616546	N/A	2021/10/05	Lang Le
Free (WAD) Cyanide	SKAL/CN	7618434	N/A	2021/10/05	Louise Harding

TEST SUMMARY

BV Labs ID: QVN121 **Collected:** 2021/10/04
Sample ID: 21-2 **Shipped:**
Matrix: Water **Received:** 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7619044	2021/10/05	2021/10/06	Anna Stuglik-Rolland
Mercury	CV/AA	7618346	2021/10/05	2021/10/05	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7618322	N/A	2021/10/05	Arefa Dabhad
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

BV Labs ID: QVN122 **Collected:** 2021/10/04
Sample ID: 21-3 **Shipped:**
Matrix: Water **Received:** 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7618207	N/A	2021/10/05	Automated Statchk
Chloride by Automated Colourimetry	KONE	7618326	N/A	2021/10/05	Alina Dobreanu
Chromium (VI) in Water	IC	7616546	N/A	2021/10/05	Lang Le
Free (WAD) Cyanide	SKAL/CN	7618434	N/A	2021/10/05	Louise Harding
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7619044	2021/10/05	2021/10/06	Anna Stuglik-Rolland
Mercury	CV/AA	7618346	2021/10/05	2021/10/05	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7618322	N/A	2021/10/05	Arefa Dabhad
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

BV Labs ID: QVN123 **Collected:** 2021/10/04
Sample ID: DUP-1 **Shipped:**
Matrix: Water **Received:** 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7618207	N/A	2021/10/05	Automated Statchk
Chloride by Automated Colourimetry	KONE	7618326	N/A	2021/10/05	Alina Dobreanu
Chromium (VI) in Water	IC	7616546	N/A	2021/10/05	Lang Le
Free (WAD) Cyanide	SKAL/CN	7618434	N/A	2021/10/05	Louise Harding
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7619044	2021/10/05	2021/10/06	Anna Stuglik-Rolland
Mercury	CV/AA	7618346	2021/10/05	2021/10/05	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7618322	N/A	2021/10/05	Arefa Dabhad
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

BV Labs ID: QVN123 Dup **Collected:** 2021/10/04
Sample ID: DUP-1 **Shipped:**
Matrix: Water **Received:** 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	7618322	N/A	2021/10/05	Arefa Dabhad

BV Labs ID: QVN124 **Collected:** 2021/10/04
Sample ID: F- BLANK **Shipped:**
Matrix: Water **Received:** 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

BV Labs Job #: C1S7480
Report Date: 2021/10/06

Golder Associates Ltd
Client Project #: 21484078
Sampler Initials: ALE

TEST SUMMARY

BV Labs ID: QVN125
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2021/10/04
Shipped:
Received: 2021/10/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7614573	N/A	2021/10/05	Yang (Philip) Yu

GENERAL COMMENTS

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

Package 1	8.0°C

Methyl Mercury analysis not completed as per client request.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7614573	YY	Matrix Spike [QVN119-08]	4-Bromofluorobenzene	2021/10/05		100	%	70 - 130
			D4-1,2-Dichloroethane	2021/10/05		109	%	70 - 130
			D8-Toluene	2021/10/05		105	%	70 - 130
			Acetone (2-Propanone)	2021/10/05		114	%	60 - 140
			Benzene	2021/10/05		96	%	70 - 130
			Bromodichloromethane	2021/10/05		110	%	70 - 130
			Bromoform	2021/10/05		102	%	70 - 130
			Bromomethane	2021/10/05		99	%	60 - 140
			Carbon Tetrachloride	2021/10/05		102	%	70 - 130
			Chlorobenzene	2021/10/05		99	%	70 - 130
			Chloroform	2021/10/05		105	%	70 - 130
			Dibromochloromethane	2021/10/05		130 (1)	%	70 - 130
			1,2-Dichlorobenzene	2021/10/05		102	%	70 - 130
			1,3-Dichlorobenzene	2021/10/05		102	%	70 - 130
			1,4-Dichlorobenzene	2021/10/05		101	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2021/10/05		74	%	60 - 140
			1,1-Dichloroethane	2021/10/05		104	%	70 - 130
			1,2-Dichloroethane	2021/10/05		104	%	70 - 130
			1,1-Dichloroethylene	2021/10/05		103	%	70 - 130
			cis-1,2-Dichloroethylene	2021/10/05		105	%	70 - 130
			trans-1,2-Dichloroethylene	2021/10/05		102	%	70 - 130
			1,2-Dichloropropane	2021/10/05		104	%	70 - 130
			cis-1,3-Dichloropropene	2021/10/05		99	%	70 - 130
			trans-1,3-Dichloropropene	2021/10/05		106	%	70 - 130
			Ethylbenzene	2021/10/05		90	%	70 - 130
			Ethylene Dibromide	2021/10/05		100	%	70 - 130
			Hexane	2021/10/05		101	%	70 - 130
			Methylene Chloride(Dichloromethane)	2021/10/05		114	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/10/05		106	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/05		88	%	70 - 130
			Methyl t-butyl ether (MTBE)	2021/10/05		91	%	70 - 130
			Styrene	2021/10/05		82	%	70 - 130
			1,1,1,2-Tetrachloroethane	2021/10/05		104	%	70 - 130
			1,1,2,2-Tetrachloroethane	2021/10/05		106	%	70 - 130
			Tetrachloroethylene	2021/10/05		97	%	70 - 130
			Toluene	2021/10/05		95	%	70 - 130
			1,1,1-Trichloroethane	2021/10/05		107	%	70 - 130
			1,1,2-Trichloroethane	2021/10/05		116	%	70 - 130
			Trichloroethylene	2021/10/05		104	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2021/10/05		102	%	70 - 130
			Vinyl Chloride	2021/10/05		97	%	70 - 130
			p+m-Xylene	2021/10/05		93	%	70 - 130
			o-Xylene	2021/10/05		93	%	70 - 130
			F1 (C6-C10)	2021/10/05		107	%	60 - 140
7614573	YY	Spiked Blank	4-Bromofluorobenzene	2021/10/05		101	%	70 - 130
			D4-1,2-Dichloroethane	2021/10/05		111	%	70 - 130
			D8-Toluene	2021/10/05		107	%	70 - 130
			Acetone (2-Propanone)	2021/10/05		122	%	60 - 140
			Benzene	2021/10/05		92	%	70 - 130
			Bromodichloromethane	2021/10/05		106	%	70 - 130
			Bromoform	2021/10/05		101	%	70 - 130
			Bromomethane	2021/10/05		94	%	60 - 140
			Carbon Tetrachloride	2021/10/05		97	%	70 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Chlorobenzene	2021/10/05		95	%	70 - 130
			Chloroform	2021/10/05		101	%	70 - 130
			Dibromochloromethane	2021/10/05		127	%	70 - 130
			1,2-Dichlorobenzene	2021/10/05		99	%	70 - 130
			1,3-Dichlorobenzene	2021/10/05		98	%	70 - 130
			1,4-Dichlorobenzene	2021/10/05		100	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2021/10/05		75	%	60 - 140
			1,1-Dichloroethane	2021/10/05		99	%	70 - 130
			1,2-Dichloroethane	2021/10/05		102	%	70 - 130
			1,1-Dichloroethylene	2021/10/05		98	%	70 - 130
			cis-1,2-Dichloroethylene	2021/10/05		103	%	70 - 130
			trans-1,2-Dichloroethylene	2021/10/05		98	%	70 - 130
			1,2-Dichloropropane	2021/10/05		102	%	70 - 130
			cis-1,3-Dichloropropene	2021/10/05		96	%	70 - 130
			trans-1,3-Dichloropropene	2021/10/05		102	%	70 - 130
			Ethylbenzene	2021/10/05		89	%	70 - 130
			Ethylene Dibromide	2021/10/05		99	%	70 - 130
			Hexane	2021/10/05		99	%	70 - 130
			Methylene Chloride(Dichloromethane)	2021/10/05		110	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/10/05		114	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/05		97	%	70 - 130
			Methyl t-butyl ether (MTBE)	2021/10/05		90	%	70 - 130
			Styrene	2021/10/05		85	%	70 - 130
			1,1,1,2-Tetrachloroethane	2021/10/05		100	%	70 - 130
			1,1,2,2-Tetrachloroethane	2021/10/05		105	%	70 - 130
			Tetrachloroethylene	2021/10/05		90	%	70 - 130
			Toluene	2021/10/05		93	%	70 - 130
			1,1,1-Trichloroethane	2021/10/05		101	%	70 - 130
			1,1,2-Trichloroethane	2021/10/05		113	%	70 - 130
			Trichloroethylene	2021/10/05		99	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2021/10/05		97	%	70 - 130
			Vinyl Chloride	2021/10/05		94	%	70 - 130
			p+m-Xylene	2021/10/05		91	%	70 - 130
			o-Xylene	2021/10/05		91	%	70 - 130
			F1 (C6-C10)	2021/10/05		100	%	60 - 140
7614573	YY	Method Blank	4-Bromofluorobenzene	2021/10/05		85	%	70 - 130
			D4-1,2-Dichloroethane	2021/10/05		119	%	70 - 130
			D8-Toluene	2021/10/05		91	%	70 - 130
			Acetone (2-Propanone)	2021/10/05	<10		ug/L	
			Benzene	2021/10/05	<0.17		ug/L	
			Bromodichloromethane	2021/10/05	<0.50		ug/L	
			Bromoform	2021/10/05	<1.0		ug/L	
			Bromomethane	2021/10/05	<0.50		ug/L	
			Carbon Tetrachloride	2021/10/05	<0.20		ug/L	
			Chlorobenzene	2021/10/05	<0.20		ug/L	
			Chloroform	2021/10/05	<0.20		ug/L	
			Dibromochloromethane	2021/10/05	<0.50		ug/L	
			1,2-Dichlorobenzene	2021/10/05	<0.50		ug/L	
			1,3-Dichlorobenzene	2021/10/05	<0.50		ug/L	
			1,4-Dichlorobenzene	2021/10/05	<0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2021/10/05	<1.0		ug/L	
			1,1-Dichloroethane	2021/10/05	<0.20		ug/L	
			1,2-Dichloroethane	2021/10/05	<0.50		ug/L	
			1,1-Dichloroethylene	2021/10/05	<0.20		ug/L	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			cis-1,2-Dichloroethylene	2021/10/05	<0.50		ug/L	
			trans-1,2-Dichloroethylene	2021/10/05	<0.50		ug/L	
			1,2-Dichloropropane	2021/10/05	<0.20		ug/L	
			cis-1,3-Dichloropropene	2021/10/05	<0.30		ug/L	
			trans-1,3-Dichloropropene	2021/10/05	<0.40		ug/L	
			Ethylbenzene	2021/10/05	<0.20		ug/L	
			Ethylene Dibromide	2021/10/05	<0.20		ug/L	
			Hexane	2021/10/05	<1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2021/10/05	<2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2021/10/05	<10		ug/L	
			Methyl Isobutyl Ketone	2021/10/05	<5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2021/10/05	<0.50		ug/L	
			Styrene	2021/10/05	<0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2021/10/05	<0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2021/10/05	<0.50		ug/L	
			Tetrachloroethylene	2021/10/05	<0.20		ug/L	
			Toluene	2021/10/05	<0.20		ug/L	
			1,1,1-Trichloroethane	2021/10/05	<0.20		ug/L	
			1,1,2-Trichloroethane	2021/10/05	<0.50		ug/L	
			Trichloroethylene	2021/10/05	<0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2021/10/05	<0.50		ug/L	
			Vinyl Chloride	2021/10/05	<0.20		ug/L	
			p+m-Xylene	2021/10/05	<0.20		ug/L	
			o-Xylene	2021/10/05	<0.20		ug/L	
			Total Xylenes	2021/10/05	<0.20		ug/L	
			F1 (C6-C10)	2021/10/05	<25		ug/L	
			F1 (C6-C10) - BTEX	2021/10/05	<25		ug/L	
7614573	YY	RPD [QVN120-08]	Acetone (2-Propanone)	2021/10/05	NC		%	30
			Benzene	2021/10/05	16		%	30
			Bromodichloromethane	2021/10/05	NC		%	30
			Bromoform	2021/10/05	NC		%	30
			Bromomethane	2021/10/05	NC		%	30
			Carbon Tetrachloride	2021/10/05	NC		%	30
			Chlorobenzene	2021/10/05	13		%	30
			Chloroform	2021/10/05	NC		%	30
			Dibromochloromethane	2021/10/05	NC		%	30
			1,2-Dichlorobenzene	2021/10/05	11		%	30
			1,3-Dichlorobenzene	2021/10/05	NC		%	30
			1,4-Dichlorobenzene	2021/10/05	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2021/10/05	NC		%	30
			1,1-Dichloroethane	2021/10/05	NC		%	30
			1,2-Dichloroethane	2021/10/05	11		%	30
			1,1-Dichloroethylene	2021/10/05	NC		%	30
			cis-1,2-Dichloroethylene	2021/10/05	NC		%	30
			trans-1,2-Dichloroethylene	2021/10/05	NC		%	30
			1,2-Dichloropropane	2021/10/05	NC		%	30
			cis-1,3-Dichloropropene	2021/10/05	NC		%	30
			trans-1,3-Dichloropropene	2021/10/05	NC		%	30
			Ethylbenzene	2021/10/05	NC		%	30
			Ethylene Dibromide	2021/10/05	NC		%	30
			Hexane	2021/10/05	NC		%	30
			Methylene Chloride(Dichloromethane)	2021/10/05	NC		%	30
			Methyl Ethyl Ketone (2-Butanone)	2021/10/05	NC		%	30
			Methyl Isobutyl Ketone	2021/10/05	NC		%	30

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methyl t-butyl ether (MTBE)	2021/10/05	NC		%	30
			Styrene	2021/10/05	NC		%	30
			1,1,1,2-Tetrachloroethane	2021/10/05	NC		%	30
			1,1,2,2-Tetrachloroethane	2021/10/05	NC		%	30
			Tetrachloroethylene	2021/10/05	NC		%	30
			Toluene	2021/10/05	NC		%	30
			1,1,1-Trichloroethane	2021/10/05	NC		%	30
			1,1,2-Trichloroethane	2021/10/05	NC		%	30
			Trichloroethylene	2021/10/05	NC		%	30
			Trichlorofluoromethane (FREON 11)	2021/10/05	NC		%	30
			Vinyl Chloride	2021/10/05	NC		%	30
			p+m-Xylene	2021/10/05	NC		%	30
			o-Xylene	2021/10/05	NC		%	30
			Total Xylenes	2021/10/05	NC		%	30
			F1 (C6-C10)	2021/10/05	NC		%	30
			F1 (C6-C10) - BTEX	2021/10/05	NC		%	30
7616546	LLE	Matrix Spike [QVN119-06]	Chromium (VI)	2021/10/05		91	%	80 - 120
7616546	LLE	Spiked Blank	Chromium (VI)	2021/10/05		101	%	80 - 120
7616546	LLE	Method Blank	Chromium (VI)	2021/10/05	<0.50		ug/L	
7616546	LLE	RPD [QVN119-06]	Chromium (VI)	2021/10/05	NC		%	20
7618322	ADA	Matrix Spike [QVN123-05]	Dissolved Antimony (Sb)	2021/10/05		105	%	80 - 120
			Dissolved Arsenic (As)	2021/10/05		102	%	80 - 120
			Dissolved Barium (Ba)	2021/10/05		104	%	80 - 120
			Dissolved Beryllium (Be)	2021/10/05		100	%	80 - 120
			Dissolved Boron (B)	2021/10/05		95	%	80 - 120
			Dissolved Cadmium (Cd)	2021/10/05		102	%	80 - 120
			Dissolved Chromium (Cr)	2021/10/05		97	%	80 - 120
			Dissolved Cobalt (Co)	2021/10/05		96	%	80 - 120
			Dissolved Copper (Cu)	2021/10/05		94	%	80 - 120
			Dissolved Lead (Pb)	2021/10/05		97	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/10/05		105	%	80 - 120
			Dissolved Nickel (Ni)	2021/10/05		95	%	80 - 120
			Dissolved Selenium (Se)	2021/10/05		102	%	80 - 120
			Dissolved Silver (Ag)	2021/10/05		97	%	80 - 120
			Dissolved Sodium (Na)	2021/10/05		NC	%	80 - 120
			Dissolved Thallium (Tl)	2021/10/05		96	%	80 - 120
			Dissolved Uranium (U)	2021/10/05		100	%	80 - 120
			Dissolved Vanadium (V)	2021/10/05		101	%	80 - 120
			Dissolved Zinc (Zn)	2021/10/05		98	%	80 - 120
7618322	ADA	Spiked Blank	Dissolved Antimony (Sb)	2021/10/05		105	%	80 - 120
			Dissolved Arsenic (As)	2021/10/05		105	%	80 - 120
			Dissolved Barium (Ba)	2021/10/05		107	%	80 - 120
			Dissolved Beryllium (Be)	2021/10/05		101	%	80 - 120
			Dissolved Boron (B)	2021/10/05		97	%	80 - 120
			Dissolved Cadmium (Cd)	2021/10/05		103	%	80 - 120
			Dissolved Chromium (Cr)	2021/10/05		99	%	80 - 120
			Dissolved Cobalt (Co)	2021/10/05		100	%	80 - 120
			Dissolved Copper (Cu)	2021/10/05		97	%	80 - 120
			Dissolved Lead (Pb)	2021/10/05		97	%	80 - 120
			Dissolved Molybdenum (Mo)	2021/10/05		105	%	80 - 120
			Dissolved Nickel (Ni)	2021/10/05		98	%	80 - 120
			Dissolved Selenium (Se)	2021/10/05		101	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Silver (Ag)	2021/10/05		99	%	80 - 120
			Dissolved Sodium (Na)	2021/10/05		102	%	80 - 120
			Dissolved Thallium (Tl)	2021/10/05		101	%	80 - 120
			Dissolved Uranium (U)	2021/10/05		99	%	80 - 120
			Dissolved Vanadium (V)	2021/10/05		104	%	80 - 120
			Dissolved Zinc (Zn)	2021/10/05		104	%	80 - 120
7618322	ADA	Method Blank	Dissolved Antimony (Sb)	2021/10/05	<0.50		ug/L	
			Dissolved Arsenic (As)	2021/10/05	<1.0		ug/L	
			Dissolved Barium (Ba)	2021/10/05	<2.0		ug/L	
			Dissolved Beryllium (Be)	2021/10/05	<0.40		ug/L	
			Dissolved Boron (B)	2021/10/05	<10		ug/L	
			Dissolved Cadmium (Cd)	2021/10/05	<0.090		ug/L	
			Dissolved Chromium (Cr)	2021/10/05	<5.0		ug/L	
			Dissolved Cobalt (Co)	2021/10/05	<0.50		ug/L	
			Dissolved Copper (Cu)	2021/10/05	<0.90		ug/L	
			Dissolved Lead (Pb)	2021/10/05	<0.50		ug/L	
			Dissolved Molybdenum (Mo)	2021/10/05	<0.50		ug/L	
			Dissolved Nickel (Ni)	2021/10/05	<1.0		ug/L	
			Dissolved Selenium (Se)	2021/10/05	<2.0		ug/L	
			Dissolved Silver (Ag)	2021/10/05	<0.090		ug/L	
			Dissolved Sodium (Na)	2021/10/05	<100		ug/L	
			Dissolved Thallium (Tl)	2021/10/05	<0.050		ug/L	
			Dissolved Uranium (U)	2021/10/05	<0.10		ug/L	
			Dissolved Vanadium (V)	2021/10/05	<0.50		ug/L	
			Dissolved Zinc (Zn)	2021/10/05	<5.0		ug/L	
7618322	ADA	RPD [QVN123-05]	Dissolved Antimony (Sb)	2021/10/05	NC		%	20
			Dissolved Arsenic (As)	2021/10/05	NC		%	20
			Dissolved Barium (Ba)	2021/10/05	2.6		%	20
			Dissolved Beryllium (Be)	2021/10/05	NC		%	20
			Dissolved Boron (B)	2021/10/05	1.6		%	20
			Dissolved Cadmium (Cd)	2021/10/05	NC		%	20
			Dissolved Chromium (Cr)	2021/10/05	NC		%	20
			Dissolved Cobalt (Co)	2021/10/05	NC		%	20
			Dissolved Copper (Cu)	2021/10/05	NC		%	20
			Dissolved Lead (Pb)	2021/10/05	NC		%	20
			Dissolved Molybdenum (Mo)	2021/10/05	NC		%	20
			Dissolved Nickel (Ni)	2021/10/05	0.70		%	20
			Dissolved Selenium (Se)	2021/10/05	NC		%	20
			Dissolved Silver (Ag)	2021/10/05	NC		%	20
			Dissolved Sodium (Na)	2021/10/05	1.9		%	20
			Dissolved Thallium (Tl)	2021/10/05	NC		%	20
			Dissolved Uranium (U)	2021/10/05	6.3		%	20
			Dissolved Vanadium (V)	2021/10/05	NC		%	20
			Dissolved Zinc (Zn)	2021/10/05	NC		%	20
7618326	ADB	Matrix Spike	Dissolved Chloride (Cl-)	2021/10/05		NC	%	80 - 120
7618326	ADB	Spiked Blank	Dissolved Chloride (Cl-)	2021/10/05		102	%	80 - 120
7618326	ADB	Method Blank	Dissolved Chloride (Cl-)	2021/10/05	<1.0		mg/L	
7618326	ADB	RPD	Dissolved Chloride (Cl-)	2021/10/05	1.1		%	20
7618346	GR1	Matrix Spike	Mercury (Hg)	2021/10/05		98	%	75 - 125
7618346	GR1	Spiked Blank	Mercury (Hg)	2021/10/05		97	%	80 - 120
7618346	GR1	Method Blank	Mercury (Hg)	2021/10/05	<0.10		ug/L	
7618346	GR1	RPD	Mercury (Hg)	2021/10/05	NC		%	20
7618434	LHA	Matrix Spike [QVN119-07]	WAD Cyanide (Free)	2021/10/05		105	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7618434	LHA	Spiked Blank	WAD Cyanide (Free)	2021/10/05		104	%	80 - 120
7618434	LHA	Method Blank	WAD Cyanide (Free)	2021/10/05	<1		ug/L	
7618434	LHA	RPD [QVN119-07]	WAD Cyanide (Free)	2021/10/05	NC		%	20
7619044	AS2	Matrix Spike	o-Terphenyl	2021/10/06		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/10/06		105	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2021/10/06		104	%	60 - 130
			F4 (C34-C50 Hydrocarbons)	2021/10/06		108	%	60 - 130
7619044	AS2	Spiked Blank	o-Terphenyl	2021/10/06		96	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/10/06		102	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2021/10/06		103	%	60 - 130
			F4 (C34-C50 Hydrocarbons)	2021/10/06		105	%	60 - 130
7619044	AS2	Method Blank	o-Terphenyl	2021/10/06		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/10/06	<100		ug/L	
			F3 (C16-C34 Hydrocarbons)	2021/10/06	<200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2021/10/06	<200		ug/L	
7619044	AS2	RPD	F2 (C10-C16 Hydrocarbons)	2021/10/06	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/10/06	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/10/06	NC		%	30

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

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

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

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

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

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

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

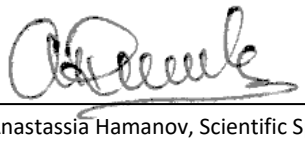
(1) The recovery was above the upper control limit. This may represent a high bias in some results for this specific analyte. For results that were not detected (ND), this potential bias has no impact.

BV Labs Job #: C1S7480
Report Date: 2021/10/06

Golder Associates Ltd
Client Project #: 21484078
Sampler Initials: ALE

VALIDATION SIGNATURE PAGE

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



Anastassia Hamanov, Scientific Specialist

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvlabs.com

RUSH!

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

Page 1 of 1

04-Oct-21 15:40

Ema Gitej

C1S7480

M2K ENV-601

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name	#2292 Golder Associates Ltd	Company Name		Quotation #	B80683
Attention	Accounts Payable	Attention	Daniel Stabile	P.O. #	
Address	100 Scotia Crt Whitby ON L1N 8Y6	Address		Project	21484078
Tel	(905) 723-2727 Fax (905) 723-2182	Tel	Fax	Project Name	
Email	CanadaAccountsPayableInvoices@golder.com	Email	Daniel_Stabile@golder.com	Site #	
				Sampled By	AL

Bottle Order #: 849032

COC #: C#849032-01-01

Project Manager: Ema Gitej

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

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

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

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

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

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

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O Reg 153 VOCs by HS & F1-F4	O Reg 153 Metals & Inorganics Pkg	Methyl Mercury	# of Bottles	Comments
1		21-5	Oct 4/21	900	GW	Y	X	X	X	11	
2		21-4		1135		Y	X	X	X	11	
3		21-2		1240		Y	X	X	X	11	
4		21-3		1315		Y	X	X	X	11	
5		DUP-1		/		Y	X	X	X	11	
6		F-Blank	Oct 4/21	1315	/	N	X			3	
7		Trip Blank	/	/	/	N	X			2	
8											
9											
10											

RECEIVED IN OTTAWA

On Ice 2021/10/04

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Aaron Trakhtman	Oct 4/21	1535	Aisling Mulcahy Maudy Mulcahy	2021/10/04 2021/10/05	15:40 08:40	0

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal Present	Yes	No
	8 8 8	Intact	✓	

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

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

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

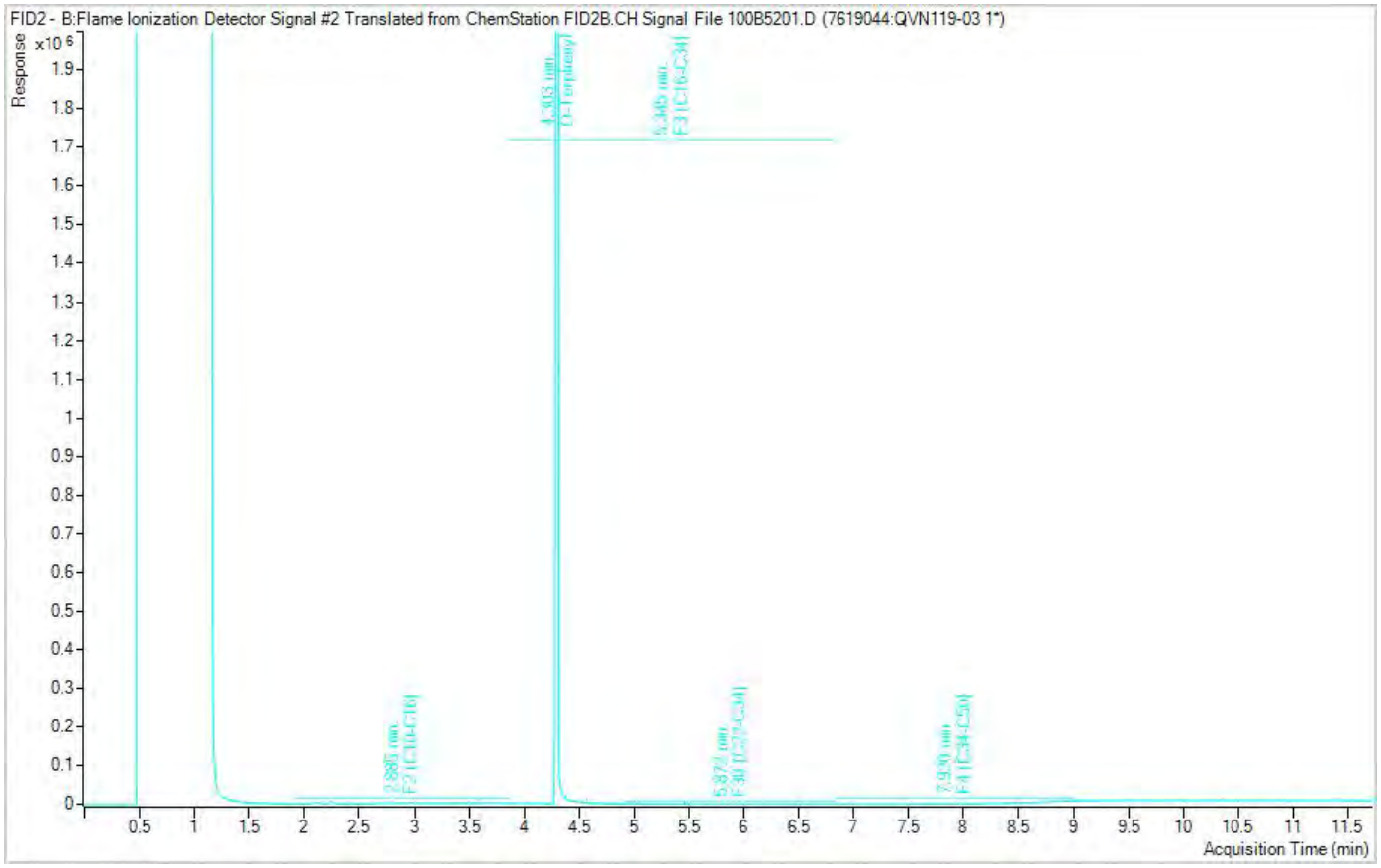
SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

White: BV Labs Yellow: Client

BV Labs Job #: C1S7480
Report Date: 2021/10/06
BV Labs Sample: QVN119

Golder Associates Ltd
Client Project #: 21484078
Client ID: 21-5

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

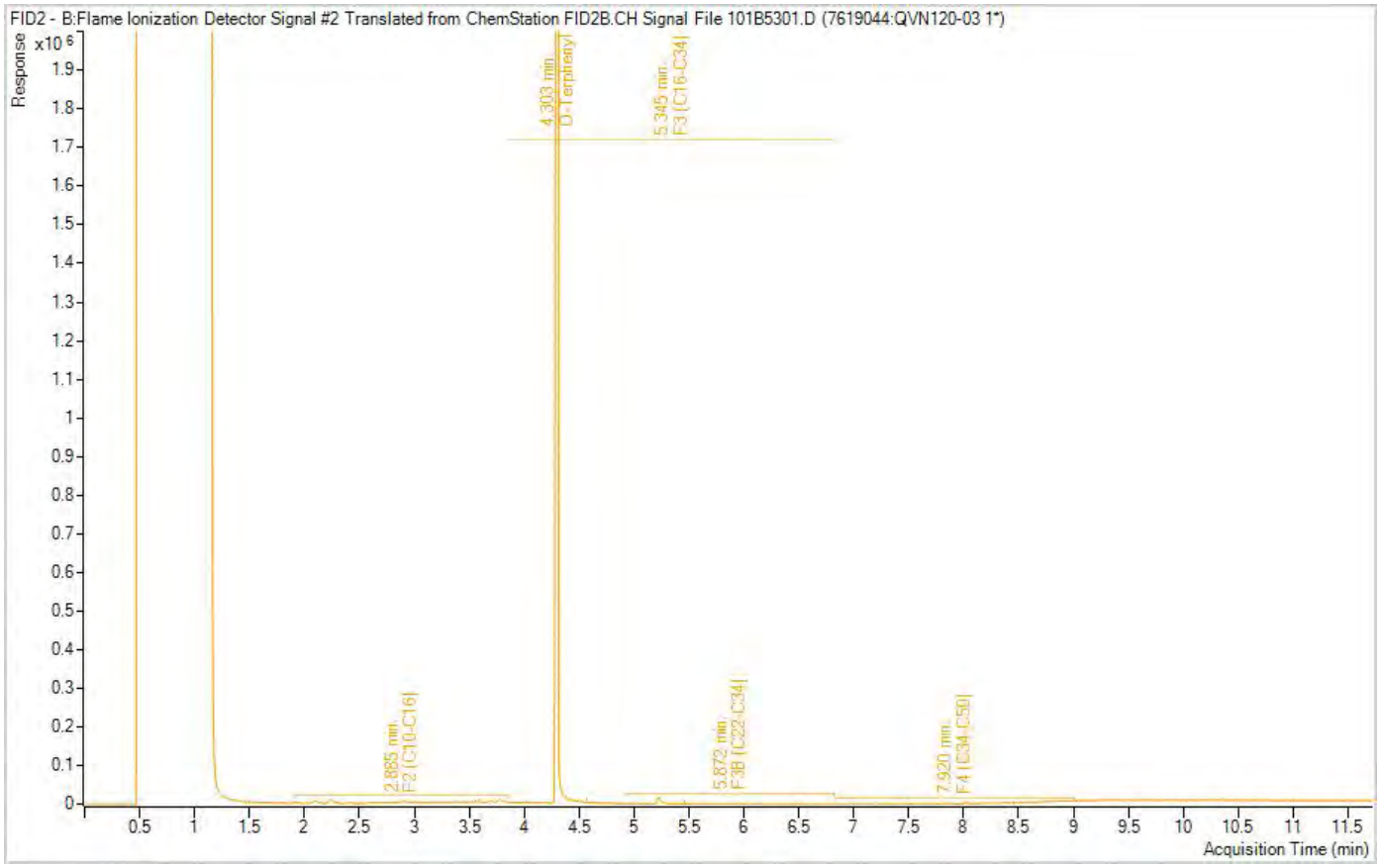


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S7480
Report Date: 2021/10/06
BV Labs Sample: QVN120

Golder Associates Ltd
Client Project #: 21484078
Client ID: 21-4

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

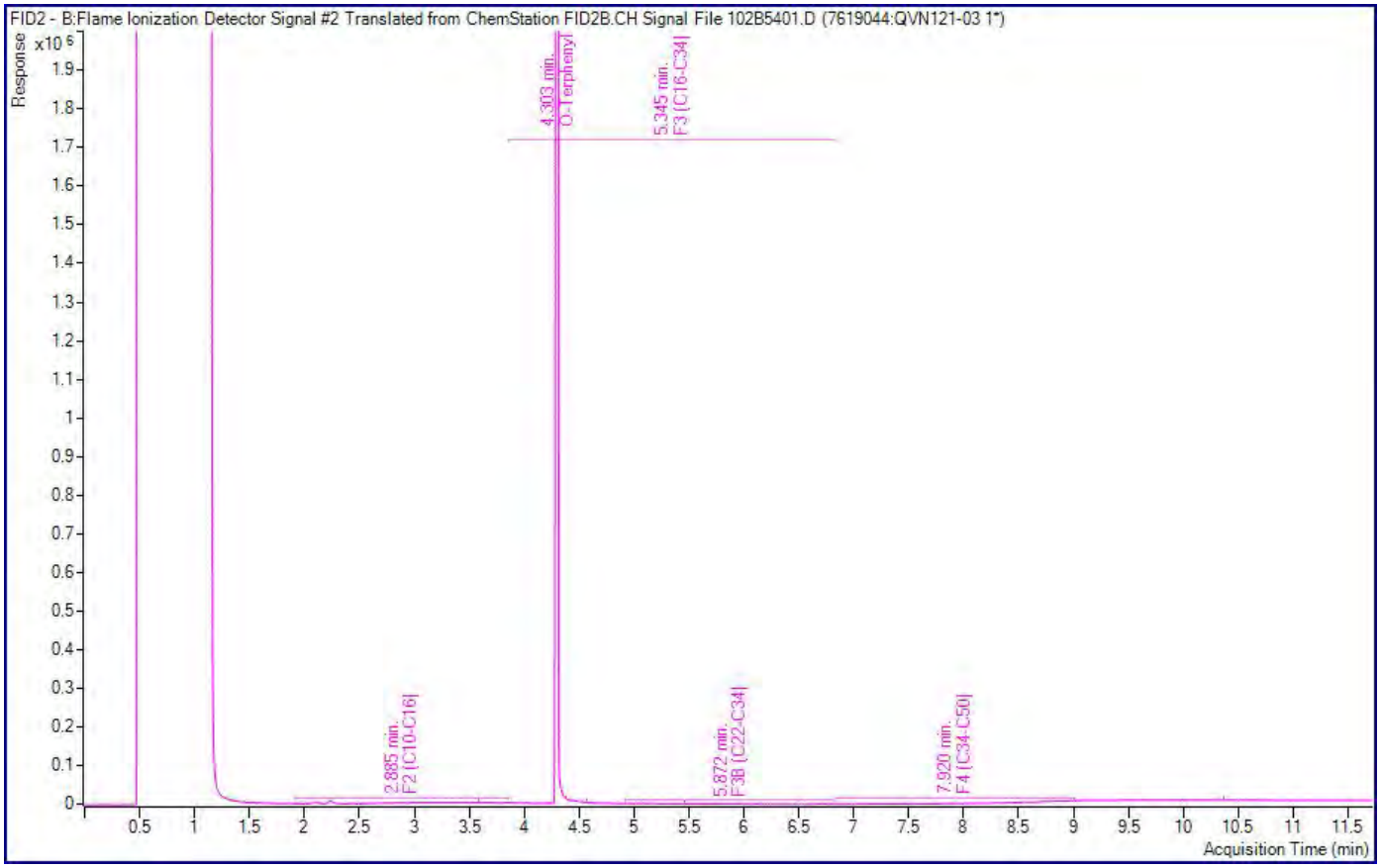


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S7480
Report Date: 2021/10/06
BV Labs Sample: QVN121

Golder Associates Ltd
Client Project #: 21484078
Client ID: 21-2

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

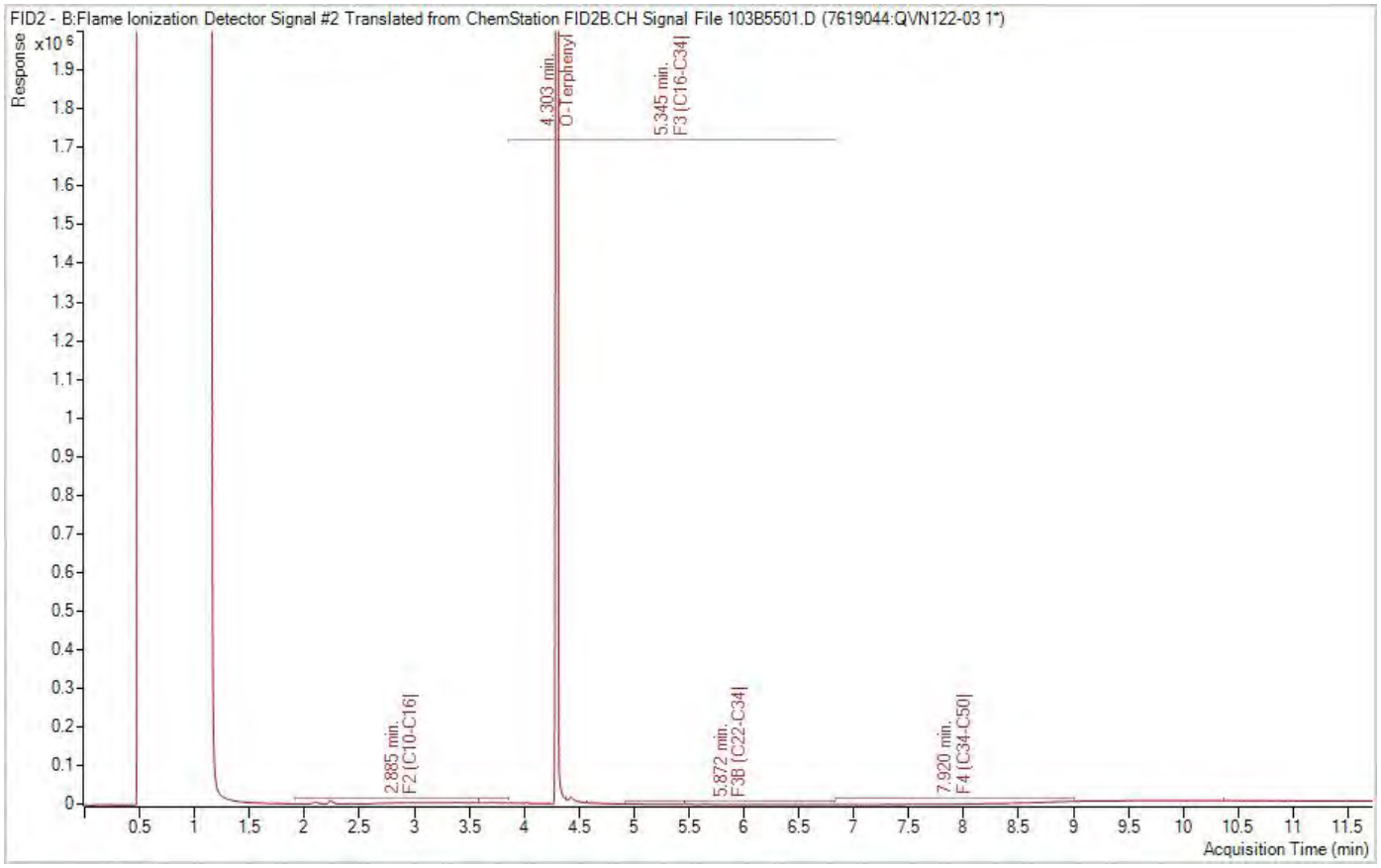


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S7480
Report Date: 2021/10/06
BV Labs Sample: QVN122

Golder Associates Ltd
Client Project #: 21484078
Client ID: 21-3

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

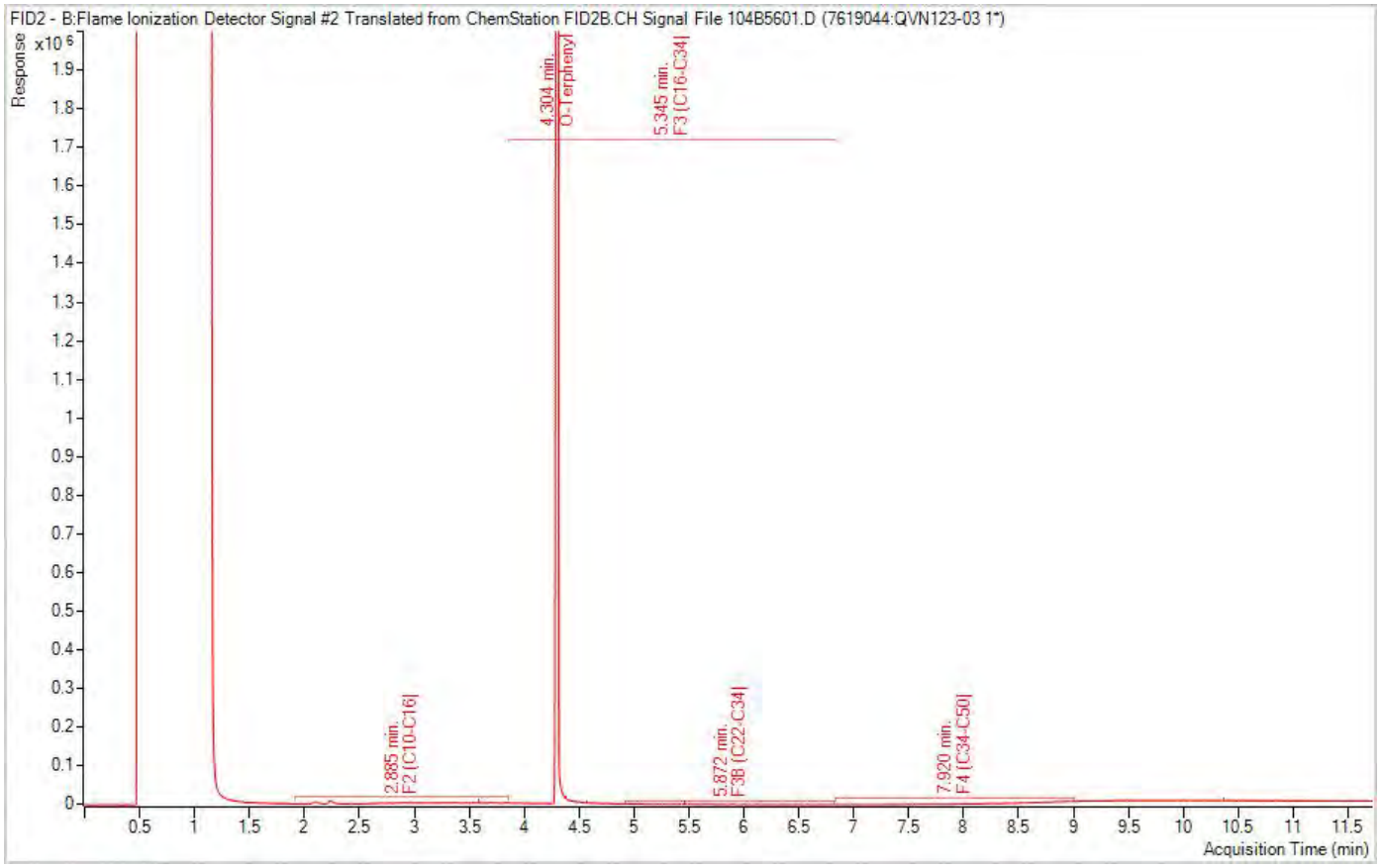


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S7480
Report Date: 2021/10/06
BV Labs Sample: QVN123

Golder Associates Ltd
Client Project #: 21484078
Client ID: DUP-1

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 21494078
Your C.O.C. #: 855386-01-01, 855386-02-01

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2022/01/11
Report #: R6957298
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1X6358
Received: 2021/11/15, 13:20

Sample Matrix: Soil
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Hot Water Extractable Boron (1)	6	2021/11/17	2021/11/17	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum (1)	7	N/A	2021/11/17		EPA 8260C m
Free (WAD) Cyanide (1)	6	2021/11/17	2021/11/17	CAM SOP-00457	OMOE E3015 m
Conductivity (1)	6	2021/11/17	2021/11/17	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1, 2)	6	2021/11/17	2021/11/17	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydrocarbons F2-F4 in Soil (1, 3)	7	2021/11/16	2021/11/17	CAM SOP-00316	CCME CWS m
F4G (CCME Hydrocarbons Gravimetric) (1)	2	2021/11/18	2021/11/18	CAM SOP-00316	CCME PHC-CWS m
Acid Extractable Metals by ICPMS (1)	6	2021/11/17	2021/11/17	CAM SOP-00447	EPA 6020B m
Moisture (1)	11	N/A	2021/11/16	CAM SOP-00445	Carter 2nd ed 51.2 m
pH CaCl2 EXTRACT (1)	6	2021/11/17	2021/11/17	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR) (1)	6	N/A	2021/11/17	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs (1)	7	N/A	2021/11/17	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

Your Project #: 21494078
Your C.O.C. #: 855386-01-01, 855386-02-01

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2022/01/11
Report #: R6957298
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1X6358
Received: 2021/11/15, 13:20

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) Soils are reported on a dry weight basis unless otherwise specified.
(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: emese.gitej@bureauveritas.com
Phone# (905)817-5829
==========
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		RFW712			RFW713	RFW714		
Sampling Date		2021/11/12 12:30			2021/11/12 13:00	2021/11/11 14:00		
COC Number		855386-01-01			855386-01-01	855386-01-01		
	UNITS	21-11 SA2	RDL	QC Batch	21-11 SA3	21-12 SA2	RDL	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A	6.6		7704789	5.9	0.71		7704789
Inorganics								
Conductivity	mS/cm	0.33	0.002	7705253	0.37	0.13	0.002	7705253
Moisture	%				16	8.7	1.0	7704833
Available (CaCl2) pH	pH	7.41		7705354	7.61	6.99		7705354
WAD Cyanide (Free)	ug/g	<0.01	0.01	7705073	<0.01	<0.01	0.01	7705073
Chromium (VI)	ug/g	<0.18	0.18	7705099	<0.18	<0.18	0.18	7705099
Metals								
Hot Water Ext. Boron (B)	ug/g	0.60	0.050	7705250	0.61	0.13	0.050	7705250
Acid Extractable Antimony (Sb)	ug/g	0.53	0.20	7705373	<0.20	<0.20	0.20	7705373
Acid Extractable Arsenic (As)	ug/g	1.1	1.0	7705373	<1.0	<1.0	1.0	7705373
Acid Extractable Barium (Ba)	ug/g	110	0.50	7705373	76	49	0.50	7705373
Acid Extractable Beryllium (Be)	ug/g	0.61	0.20	7705373	0.46	0.31	0.20	7705373
Acid Extractable Boron (B)	ug/g	8.1	5.0	7705373	6.9	<5.0	5.0	7705373
Acid Extractable Cadmium (Cd)	ug/g	0.29	0.10	7705373	0.20	<0.10	0.10	7705373
Acid Extractable Chromium (Cr)	ug/g	26	1.0	7705373	24	15	1.0	7705373
Acid Extractable Cobalt (Co)	ug/g	11	0.10	7705373	7.2	4.3	0.10	7705373
Acid Extractable Copper (Cu)	ug/g	22	0.50	7705373	15	8.6	0.50	7705373
Acid Extractable Lead (Pb)	ug/g	54	1.0	7705373	20	2.7	1.0	7705373
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7705373	0.73	<0.50	0.50	7705373
Acid Extractable Nickel (Ni)	ug/g	26	0.50	7705373	22	8.6	0.50	7705373
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7705373	<0.50	<0.50	0.50	7705373
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7705373	<0.20	<0.20	0.20	7705373
Acid Extractable Thallium (Tl)	ug/g	0.15	0.050	7705373	0.11	0.060	0.050	7705373
Acid Extractable Uranium (U)	ug/g	0.42	0.050	7705373	0.39	0.55	0.050	7705373
Acid Extractable Vanadium (V)	ug/g	27	5.0	7705373	28	27	5.0	7705373
Acid Extractable Zinc (Zn)	ug/g	80	5.0	7705373	60	21	5.0	7705373
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7705373	<0.050	<0.050	0.050	7705373

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		RFW715			RFW715			RFW716		
Sampling Date		2021/11/11 14:10			2021/11/11 14:10			2021/11/11 15:00		
COC Number		855386-01-01			855386-01-01			855386-01-01		
	UNITS	21-12 SA3	RDL	QC Batch	21-12 SA3 Lab-Dup	RDL	QC Batch	21-13 SA2	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.70		7704789				0.54		7704789
Inorganics										
Conductivity	mS/cm	0.59	0.002	7705253	0.61	0.002	7705253	0.060	0.002	7705253
Moisture	%							6.2	1.0	7704833
Available (CaCl2) pH	pH	7.58		7705354				6.88		7705354
WAD Cyanide (Free)	ug/g	<0.01	0.01	7705073				<0.01	0.01	7705073
Chromium (VI)	ug/g	<0.18	0.18	7705099				<0.18	0.18	7705099
Metals										
Hot Water Ext. Boron (B)	ug/g	0.51	0.050	7705250	0.56	0.050	7705250	0.14	0.050	7705250
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7705373	<0.20	0.20	7705373	<0.20	0.20	7705373
Acid Extractable Arsenic (As)	ug/g	<1.0	1.0	7705373	1.1	1.0	7705373	<1.0	1.0	7705373
Acid Extractable Barium (Ba)	ug/g	77	0.50	7705373	74	0.50	7705373	24	0.50	7705373
Acid Extractable Beryllium (Be)	ug/g	0.54	0.20	7705373	0.56	0.20	7705373	<0.20	0.20	7705373
Acid Extractable Boron (B)	ug/g	9.2	5.0	7705373	9.8	5.0	7705373	<5.0	5.0	7705373
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7705373	<0.10	0.10	7705373	<0.10	0.10	7705373
Acid Extractable Chromium (Cr)	ug/g	39	1.0	7705373	40	1.0	7705373	7.0	1.0	7705373
Acid Extractable Cobalt (Co)	ug/g	8.5	0.10	7705373	8.5	0.10	7705373	2.8	0.10	7705373
Acid Extractable Copper (Cu)	ug/g	17	0.50	7705373	17	0.50	7705373	5.3	0.50	7705373
Acid Extractable Lead (Pb)	ug/g	6.7	1.0	7705373	6.6	1.0	7705373	1.9	1.0	7705373
Acid Extractable Molybdenum (Mo)	ug/g	4.6	0.50	7705373	4.6	0.50	7705373	<0.50	0.50	7705373
Acid Extractable Nickel (Ni)	ug/g	18	0.50	7705373	18	0.50	7705373	4.9	0.50	7705373
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7705373	<0.50	0.50	7705373	<0.50	0.50	7705373
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7705373	<0.20	0.20	7705373	<0.20	0.20	7705373
Acid Extractable Thallium (Tl)	ug/g	0.11	0.050	7705373	0.11	0.050	7705373	<0.050	0.050	7705373
Acid Extractable Uranium (U)	ug/g	0.54	0.050	7705373	0.51	0.050	7705373	0.40	0.050	7705373
Acid Extractable Vanadium (V)	ug/g	27	5.0	7705373	26	5.0	7705373	15	5.0	7705373
Acid Extractable Zinc (Zn)	ug/g	32	5.0	7705373	31	5.0	7705373	12	5.0	7705373
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7705373	<0.050	0.050	7705373	<0.050	0.050	7705373

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

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		RFW717		
Sampling Date		2021/11/11 15:10		
COC Number		855386-01-01		
	UNITS	21-13 SA3	RDL	QC Batch
Calculated Parameters				
Sodium Adsorption Ratio	N/A	7.3		7704789
Inorganics				
Conductivity	mS/cm	0.38	0.002	7705253
Moisture	%	10	1.0	7704833
Available (CaCl2) pH	pH	7.68		7705354
WAD Cyanide (Free)	ug/g	<0.01	0.01	7705073
Chromium (VI)	ug/g	<0.18	0.18	7705099
Metals				
Hot Water Ext. Boron (B)	ug/g	0.41	0.050	7705250
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7705373
Acid Extractable Arsenic (As)	ug/g	2.0	1.0	7705373
Acid Extractable Barium (Ba)	ug/g	81	0.50	7705373
Acid Extractable Beryllium (Be)	ug/g	1.1	0.20	7705373
Acid Extractable Boron (B)	ug/g	16	5.0	7705373
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7705373
Acid Extractable Chromium (Cr)	ug/g	41	1.0	7705373
Acid Extractable Cobalt (Co)	ug/g	20	0.10	7705373
Acid Extractable Copper (Cu)	ug/g	7.8	0.50	7705373
Acid Extractable Lead (Pb)	ug/g	5.2	1.0	7705373
Acid Extractable Molybdenum (Mo)	ug/g	0.76	0.50	7705373
Acid Extractable Nickel (Ni)	ug/g	47	0.50	7705373
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7705373
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7705373
Acid Extractable Thallium (Tl)	ug/g	0.21	0.050	7705373
Acid Extractable Uranium (U)	ug/g	0.31	0.050	7705373
Acid Extractable Vanadium (V)	ug/g	27	5.0	7705373
Acid Extractable Zinc (Zn)	ug/g	35	5.0	7705373
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7705373

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		RFW712	RFW715	RFW718	RFW719	RFW721		
Sampling Date		2021/11/12 12:30	2021/11/11 14:10	2021/11/12 16:00	2021/11/12 15:00	2021/11/11 16:00		
COC Number		855386-01-01	855386-01-01	855386-01-01	855386-01-01	855386-01-01		
	UNITS	21-11 SA2	21-12 SA3	21-14 SA3	21-15 SA3	21-16 SA2	RDL	QC Batch
Inorganics								
Moisture	%	18	15	17	11	8.5	1.0	7704833
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7704186
Volatile Organics								
Acetone (2-Propanone)	ug/g	<0.49	<0.49	<0.49	<0.49	<0.49	0.49	7705309
Benzene	ug/g	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.0060	7705309
Bromodichloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Bromoform	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Bromomethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Carbon Tetrachloride	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Chlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Chloroform	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Dibromochloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,1-Dichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,2-Dichloroethane	ug/g	<0.049	<0.049	<0.049	<0.049	<0.049	0.049	7705309
1,1-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,2-Dichloropropane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	7705309
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Ethylbenzene	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7705309
Ethylene Dibromide	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Hexane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	<0.049	<0.049	<0.049	0.049	7705309
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	7705309
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	7705309
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Styrene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		RFW712	RFW715	RFW718	RFW719	RFW721		
Sampling Date		2021/11/12 12:30	2021/11/11 14:10	2021/11/12 16:00	2021/11/12 15:00	2021/11/11 16:00		
COC Number		855386-01-01	855386-01-01	855386-01-01	855386-01-01	855386-01-01		
	UNITS	21-11 SA2	21-12 SA3	21-14 SA3	21-15 SA3	21-16 SA2	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Tetrachloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Toluene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7705309
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Trichloroethylene	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7705309
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Vinyl Chloride	ug/g	<0.019	<0.019	<0.019	<0.019	<0.019	0.019	7705309
p+m-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7705309
o-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7705309
Total Xylenes	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7705309
F1 (C6-C10)	ug/g	<10	<10	<10	<10	<10	10	7705309
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	<10	<10	10	7705309
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	<10	<10	10	7704766
F3 (C16-C34 Hydrocarbons)	ug/g	<50	140	<50	300	100	50	7704766
F4 (C34-C50 Hydrocarbons)	ug/g	<50	310	<50	780	<50	50	7704766
Reached Baseline at C50	ug/g	Yes	No	Yes	No	Yes		7704766
Surrogate Recovery (%)								
o-Terphenyl	%	101	92	101	101	102		7704766
4-Bromofluorobenzene	%	92	91	91	91	91		7705309
D10-o-Xylene	%	80	81	83	81	82		7705309
D4-1,2-Dichloroethane	%	107	108	108	107	107		7705309
D8-Toluene	%	89	90	90	90	90		7705309

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		RFW734	RFW735			RFW735		
Sampling Date		2021/11/11 17:00	2021/11/11 18:00			2021/11/11 18:00		
COC Number		855386-02-01	855386-02-01			855386-02-01		
	UNITS	21-17 SA2	21-18 SA2	RDL	QC Batch	21-18 SA2 Lab-Dup	RDL	QC Batch
Inorganics								
Moisture	%	15	9.9	1.0	7704833	9.6	1.0	7704833
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	7704186			
Volatile Organics								
Acetone (2-Propanone)	ug/g	<0.49	<0.49	0.49	7705309			
Benzene	ug/g	<0.0060	<0.0060	0.0060	7705309			
Bromodichloromethane	ug/g	<0.040	<0.040	0.040	7705309			
Bromoform	ug/g	<0.040	<0.040	0.040	7705309			
Bromomethane	ug/g	<0.040	<0.040	0.040	7705309			
Carbon Tetrachloride	ug/g	<0.040	<0.040	0.040	7705309			
Chlorobenzene	ug/g	<0.040	<0.040	0.040	7705309			
Chloroform	ug/g	<0.040	<0.040	0.040	7705309			
Dibromochloromethane	ug/g	<0.040	<0.040	0.040	7705309			
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	7705309			
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	7705309			
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	7705309			
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	0.040	7705309			
1,1-Dichloroethane	ug/g	<0.040	<0.040	0.040	7705309			
1,2-Dichloroethane	ug/g	<0.049	<0.049	0.049	7705309			
1,1-Dichloroethylene	ug/g	<0.040	<0.040	0.040	7705309			
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	7705309			
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	7705309			
1,2-Dichloropropane	ug/g	<0.040	<0.040	0.040	7705309			
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	7705309			
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	7705309			
Ethylbenzene	ug/g	<0.010	<0.010	0.010	7705309			
Ethylene Dibromide	ug/g	<0.040	<0.040	0.040	7705309			
Hexane	ug/g	<0.040	<0.040	0.040	7705309			
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	0.049	7705309			
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	0.40	7705309			
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	0.40	7705309			
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	0.040	7705309			
Styrene	ug/g	<0.040	<0.040	0.040	7705309			

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

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

Bureau Veritas ID		RFW734	RFW735			RFW735		
Sampling Date		2021/11/11 17:00	2021/11/11 18:00			2021/11/11 18:00		
COC Number		855386-02-01	855386-02-01			855386-02-01		
	UNITS	21-17 SA2	21-18 SA2	RDL	QC Batch	21-18 SA2 Lab-Dup	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	7705309			
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	7705309			
Tetrachloroethylene	ug/g	<0.040	<0.040	0.040	7705309			
Toluene	ug/g	<0.020	<0.020	0.020	7705309			
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	0.040	7705309			
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	0.040	7705309			
Trichloroethylene	ug/g	<0.010	<0.010	0.010	7705309			
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	0.040	7705309			
Vinyl Chloride	ug/g	<0.019	<0.019	0.019	7705309			
p+m-Xylene	ug/g	<0.020	<0.020	0.020	7705309			
o-Xylene	ug/g	<0.020	<0.020	0.020	7705309			
Total Xylenes	ug/g	<0.020	<0.020	0.020	7705309			
F1 (C6-C10)	ug/g	<10	<10	10	7705309			
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	7705309			
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	7704766			
F3 (C16-C34 Hydrocarbons)	ug/g	260	<50	50	7704766			
F4 (C34-C50 Hydrocarbons)	ug/g	87	<50	50	7704766			
Reached Baseline at C50	ug/g	Yes	Yes		7704766			
Surrogate Recovery (%)								
o-Terphenyl	%	99	103		7704766			
4-Bromofluorobenzene	%	90	92		7705309			
D10-o-Xylene	%	77	83		7705309			
D4-1,2-Dichloroethane	%	109	107		7705309			
D8-Toluene	%	89	90		7705309			

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

PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		RFW715	RFW719		
Sampling Date		2021/11/11 14:10	2021/11/12 15:00		
COC Number		855386-01-01	855386-01-01		
	UNITS	**21-12 SA3**	**21-15 SA3**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons					
F4G-sg (Grav. Heavy Hydrocarbons)	ug/g	1400	2200	100	7707684

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

TEST SUMMARY

Bureau Veritas ID: RFW712 **Collected:** 2021/11/12
Sample ID: 21-11 SA2 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW713 **Collected:** 2021/11/12
Sample ID: 21-11 SA3 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk

Bureau Veritas ID: RFW714 **Collected:** 2021/11/11
Sample ID: 21-12 SA2 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk

Bureau Veritas ID: RFW715 **Collected:** 2021/11/11
Sample ID: 21-12 SA3 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John

TEST SUMMARY

Bureau Veritas ID: RFW715
Sample ID: 21-12 SA3
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
F4G (CCME Hydrocarbons Gravimetric)	BAL	7707684	2021/11/18	2021/11/18	Rashmi Dubey
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW715 Dup
Sample ID: 21-12 SA3
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu

Bureau Veritas ID: RFW716
Sample ID: 21-13 SA2
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk

Bureau Veritas ID: RFW717
Sample ID: 21-13 SA3
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal

TEST SUMMARY

Bureau Veritas ID: RFW717 **Collected:** 2021/11/11
Sample ID: 21-13 SA3 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk

Bureau Veritas ID: RFW718 **Collected:** 2021/11/12
Sample ID: 21-14 SA3 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW719 **Collected:** 2021/11/12
Sample ID: 21-15 SA3 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
F4G (CCME Hydrocarbons Gravimetric)	BAL	7707684	2021/11/18	2021/11/18	Rashmi Dubey
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW721 **Collected:** 2021/11/11
Sample ID: 21-16 SA2 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW734 **Collected:** 2021/11/11
Sample ID: 21-17 SA2 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

TEST SUMMARY

Bureau Veritas ID: RFW735
Sample ID: 21-18 SA2
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW735 Dup
Sample ID: 21-18 SA2
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal

GENERAL COMMENTS

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

Package 1	7.0°C

Sample RFW712 [21-11 SA2] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Sample RFW718 [21-14 SA3] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Sample RFW719 [21-15 SA3] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Sample RFW721 [21-16 SA2] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Sample RFW734 [21-17 SA2] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Sample RFW735 [21-18 SA2] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7704766	DN0	Matrix Spike	o-Terphenyl	2021/11/17		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/11/17		108	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/11/17		114	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/11/17		119	%	50 - 130
7704766	DN0	Spiked Blank	o-Terphenyl	2021/11/17		101	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/11/17		109	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/11/17		114	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/11/17		117	%	80 - 120
7704766	DN0	Method Blank	o-Terphenyl	2021/11/17		96	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/11/17	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/11/17	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/11/17	<50		ug/g	
7704766	DN0	RPD	F2 (C10-C16 Hydrocarbons)	2021/11/17	17		%	30
			F3 (C16-C34 Hydrocarbons)	2021/11/17	10		%	30
			F4 (C34-C50 Hydrocarbons)	2021/11/17	NC		%	30
7704833	MYG	RPD [RFW735-01]	Moisture	2021/11/16	3.1		%	20
7705073	LHA	Matrix Spike	WAD Cyanide (Free)	2021/11/17		96	%	75 - 125
7705073	LHA	Spiked Blank	WAD Cyanide (Free)	2021/11/17		97	%	80 - 120
7705073	LHA	Method Blank	WAD Cyanide (Free)	2021/11/17	<0.01		ug/g	
7705073	LHA	RPD	WAD Cyanide (Free)	2021/11/17	NC		%	35
7705099	VP2	Matrix Spike	Chromium (VI)	2021/11/17		17 (1)	%	70 - 130
7705099	VP2	Spiked Blank	Chromium (VI)	2021/11/17		92	%	80 - 120
7705099	VP2	Method Blank	Chromium (VI)	2021/11/17	<0.18		ug/g	
7705099	VP2	RPD	Chromium (VI)	2021/11/17	NC		%	35
7705250	JOH	Matrix Spike [RFW715-03]	Hot Water Ext. Boron (B)	2021/11/17		109	%	75 - 125
7705250	JOH	Spiked Blank	Hot Water Ext. Boron (B)	2021/11/17		100	%	75 - 125
7705250	JOH	Method Blank	Hot Water Ext. Boron (B)	2021/11/17	<0.050		ug/g	
7705250	JOH	RPD [RFW715-03]	Hot Water Ext. Boron (B)	2021/11/17	8.2		%	40
7705253	KIT	Spiked Blank	Conductivity	2021/11/17		98	%	90 - 110
7705253	KIT	Method Blank	Conductivity	2021/11/17	<0.002		mS/cm	
7705253	KIT	RPD [RFW715-03]	Conductivity	2021/11/17	3.5		%	10
7705309	JPN	Matrix Spike	4-Bromofluorobenzene	2021/11/17		105	%	60 - 140
			D10-o-Xylene	2021/11/17		99	%	60 - 130
			D4-1,2-Dichloroethane	2021/11/17		98	%	60 - 140
			D8-Toluene	2021/11/17		106	%	60 - 140
			Acetone (2-Propanone)	2021/11/17		103	%	60 - 140
			Benzene	2021/11/17		87	%	60 - 140
			Bromodichloromethane	2021/11/17		99	%	60 - 140
			Bromoform	2021/11/17		99	%	60 - 140
			Bromomethane	2021/11/17		93	%	60 - 140
			Carbon Tetrachloride	2021/11/17		95	%	60 - 140
			Chlorobenzene	2021/11/17		97	%	60 - 140
			Chloroform	2021/11/17		96	%	60 - 140
			Dibromochloromethane	2021/11/17		96	%	60 - 140
			1,2-Dichlorobenzene	2021/11/17		96	%	60 - 140
			1,3-Dichlorobenzene	2021/11/17		93	%	60 - 140
			1,4-Dichlorobenzene	2021/11/17		111	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2021/11/17		85	%	60 - 140
			1,1-Dichloroethane	2021/11/17		93	%	60 - 140
			1,2-Dichloroethane	2021/11/17		91	%	60 - 140
			1,1-Dichloroethylene	2021/11/17		95	%	60 - 140
			cis-1,2-Dichloroethylene	2021/11/17		101	%	60 - 140
			trans-1,2-Dichloroethylene	2021/11/17		95	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,2-Dichloropropane	2021/11/17		95	%	60 - 140
			cis-1,3-Dichloropropene	2021/11/17		94	%	60 - 140
			trans-1,3-Dichloropropene	2021/11/17		105	%	60 - 140
			Ethylbenzene	2021/11/17		89	%	60 - 140
			Ethylene Dibromide	2021/11/17		94	%	60 - 140
			Hexane	2021/11/17		98	%	60 - 140
			Methylene Chloride(Dichloromethane)	2021/11/17		112	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2021/11/17		110	%	60 - 140
			Methyl Isobutyl Ketone	2021/11/17		102	%	60 - 140
			Methyl t-butyl ether (MTBE)	2021/11/17		90	%	60 - 140
			Styrene	2021/11/17		106	%	60 - 140
			1,1,1,2-Tetrachloroethane	2021/11/17		98	%	60 - 140
			1,1,2,2-Tetrachloroethane	2021/11/17		95	%	60 - 140
			Tetrachloroethylene	2021/11/17		91	%	60 - 140
			Toluene	2021/11/17		89	%	60 - 140
			1,1,1-Trichloroethane	2021/11/17		97	%	60 - 140
			1,1,2-Trichloroethane	2021/11/17		100	%	60 - 140
			Trichloroethylene	2021/11/17		102	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2021/11/17		94	%	60 - 140
			Vinyl Chloride	2021/11/17		94	%	60 - 140
			p+m-Xylene	2021/11/17		92	%	60 - 140
			o-Xylene	2021/11/17		91	%	60 - 140
			F1 (C6-C10)	2021/11/17		98	%	60 - 140
7705309	JPN	Spiked Blank	4-Bromofluorobenzene	2021/11/17		104	%	60 - 140
			D10-o-Xylene	2021/11/17		109	%	60 - 130
			D4-1,2-Dichloroethane	2021/11/17		99	%	60 - 140
			D8-Toluene	2021/11/17		106	%	60 - 140
			Acetone (2-Propanone)	2021/11/17		96	%	60 - 140
			Benzene	2021/11/17		89	%	60 - 130
			Bromodichloromethane	2021/11/17		100	%	60 - 130
			Bromoform	2021/11/17		99	%	60 - 130
			Bromomethane	2021/11/17		90	%	60 - 140
			Carbon Tetrachloride	2021/11/17		98	%	60 - 130
			Chlorobenzene	2021/11/17		98	%	60 - 130
			Chloroform	2021/11/17		98	%	60 - 130
			Dibromochloromethane	2021/11/17		97	%	60 - 130
			1,2-Dichlorobenzene	2021/11/17		96	%	60 - 130
			1,3-Dichlorobenzene	2021/11/17		95	%	60 - 130
			1,4-Dichlorobenzene	2021/11/17		113	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2021/11/17		87	%	60 - 140
			1,1-Dichloroethane	2021/11/17		95	%	60 - 130
			1,2-Dichloroethane	2021/11/17		92	%	60 - 130
			1,1-Dichloroethylene	2021/11/17		97	%	60 - 130
			cis-1,2-Dichloroethylene	2021/11/17		103	%	60 - 130
			trans-1,2-Dichloroethylene	2021/11/17		98	%	60 - 130
			1,2-Dichloropropane	2021/11/17		97	%	60 - 130
			cis-1,3-Dichloropropene	2021/11/17		88	%	60 - 130
			trans-1,3-Dichloropropene	2021/11/17		95	%	60 - 130
			Ethylbenzene	2021/11/17		90	%	60 - 130
			Ethylene Dibromide	2021/11/17		95	%	60 - 130
			Hexane	2021/11/17		101	%	60 - 130
			Methylene Chloride(Dichloromethane)	2021/11/17		114	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/11/17		104	%	60 - 140
			Methyl Isobutyl Ketone	2021/11/17		97	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methyl t-butyl ether (MTBE)	2021/11/17		91	%	60 - 130
			Styrene	2021/11/17		108	%	60 - 130
			1,1,1,2-Tetrachloroethane	2021/11/17		100	%	60 - 130
			1,1,2,2-Tetrachloroethane	2021/11/17		99	%	60 - 130
			Tetrachloroethylene	2021/11/17		94	%	60 - 130
			Toluene	2021/11/17		91	%	60 - 130
			1,1,1-Trichloroethane	2021/11/17		100	%	60 - 130
			1,1,2-Trichloroethane	2021/11/17		101	%	60 - 130
			Trichloroethylene	2021/11/17		105	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2021/11/17		97	%	60 - 130
			Vinyl Chloride	2021/11/17		97	%	60 - 130
			p+m-Xylene	2021/11/17		93	%	60 - 130
			o-Xylene	2021/11/17		92	%	60 - 130
			F1 (C6-C10)	2021/11/17		92	%	80 - 120
7705309	JPN	Method Blank	4-Bromofluorobenzene	2021/11/17		90	%	60 - 140
			D10-o-Xylene	2021/11/17		75	%	60 - 130
			D4-1,2-Dichloroethane	2021/11/17		105	%	60 - 140
			D8-Toluene	2021/11/17		90	%	60 - 140
			Acetone (2-Propanone)	2021/11/17	<0.49		ug/g	
			Benzene	2021/11/17	<0.0060		ug/g	
			Bromodichloromethane	2021/11/17	<0.040		ug/g	
			Bromoform	2021/11/17	<0.040		ug/g	
			Bromomethane	2021/11/17	<0.040		ug/g	
			Carbon Tetrachloride	2021/11/17	<0.040		ug/g	
			Chlorobenzene	2021/11/17	<0.040		ug/g	
			Chloroform	2021/11/17	<0.040		ug/g	
			Dibromochloromethane	2021/11/17	<0.040		ug/g	
			1,2-Dichlorobenzene	2021/11/17	<0.040		ug/g	
			1,3-Dichlorobenzene	2021/11/17	<0.040		ug/g	
			1,4-Dichlorobenzene	2021/11/17	<0.040		ug/g	
			Dichlorodifluoromethane (FREON 12)	2021/11/17	<0.040		ug/g	
			1,1-Dichloroethane	2021/11/17	<0.040		ug/g	
			1,2-Dichloroethane	2021/11/17	<0.049		ug/g	
			1,1-Dichloroethylene	2021/11/17	<0.040		ug/g	
			cis-1,2-Dichloroethylene	2021/11/17	<0.040		ug/g	
			trans-1,2-Dichloroethylene	2021/11/17	<0.040		ug/g	
			1,2-Dichloropropane	2021/11/17	<0.040		ug/g	
			cis-1,3-Dichloropropene	2021/11/17	<0.030		ug/g	
			trans-1,3-Dichloropropene	2021/11/17	<0.040		ug/g	
			Ethylbenzene	2021/11/17	<0.010		ug/g	
			Ethylene Dibromide	2021/11/17	<0.040		ug/g	
			Hexane	2021/11/17	<0.040		ug/g	
			Methylene Chloride(Dichloromethane)	2021/11/17	<0.049		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2021/11/17	<0.40		ug/g	
			Methyl Isobutyl Ketone	2021/11/17	<0.40		ug/g	
			Methyl t-butyl ether (MTBE)	2021/11/17	<0.040		ug/g	
			Styrene	2021/11/17	<0.040		ug/g	
			1,1,1,2-Tetrachloroethane	2021/11/17	<0.040		ug/g	
			1,1,2,2-Tetrachloroethane	2021/11/17	<0.040		ug/g	
			Tetrachloroethylene	2021/11/17	<0.040		ug/g	
			Toluene	2021/11/17	<0.020		ug/g	
			1,1,1-Trichloroethane	2021/11/17	<0.040		ug/g	
			1,1,2-Trichloroethane	2021/11/17	<0.040		ug/g	
			Trichloroethylene	2021/11/17	<0.010		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Trichlorofluoromethane (FREON 11)	2021/11/17	<0.040		ug/g	
			Vinyl Chloride	2021/11/17	<0.019		ug/g	
			p+m-Xylene	2021/11/17	<0.020		ug/g	
			o-Xylene	2021/11/17	<0.020		ug/g	
			Total Xylenes	2021/11/17	<0.020		ug/g	
			F1 (C6-C10)	2021/11/17	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/11/17	<10		ug/g	
7705309	JPN	RPD	Acetone (2-Propanone)	2021/11/17	NC		%	50
			Benzene	2021/11/17	NC		%	50
			Bromodichloromethane	2021/11/17	NC		%	50
			Bromoform	2021/11/17	NC		%	50
			Bromomethane	2021/11/17	NC		%	50
			Carbon Tetrachloride	2021/11/17	NC		%	50
			Chlorobenzene	2021/11/17	NC		%	50
			Chloroform	2021/11/17	NC		%	50
			Dibromochloromethane	2021/11/17	NC		%	50
			1,2-Dichlorobenzene	2021/11/17	NC		%	50
			1,3-Dichlorobenzene	2021/11/17	NC		%	50
			1,4-Dichlorobenzene	2021/11/17	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2021/11/17	NC		%	50
			1,1-Dichloroethane	2021/11/17	NC		%	50
			1,2-Dichloroethane	2021/11/17	NC		%	50
			1,1-Dichloroethylene	2021/11/17	NC		%	50
			cis-1,2-Dichloroethylene	2021/11/17	NC		%	50
			trans-1,2-Dichloroethylene	2021/11/17	NC		%	50
			1,2-Dichloropropane	2021/11/17	NC		%	50
			cis-1,3-Dichloropropene	2021/11/17	NC		%	50
			trans-1,3-Dichloropropene	2021/11/17	NC		%	50
			Ethylbenzene	2021/11/17	NC		%	50
			Ethylene Dibromide	2021/11/17	NC		%	50
			Hexane	2021/11/17	NC		%	50
			Methylene Chloride(Dichloromethane)	2021/11/17	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2021/11/17	NC		%	50
			Methyl Isobutyl Ketone	2021/11/17	NC		%	50
			Methyl t-butyl ether (MTBE)	2021/11/17	NC		%	50
			Styrene	2021/11/17	NC		%	50
			1,1,1,2-Tetrachloroethane	2021/11/17	NC		%	50
			1,1,2,2-Tetrachloroethane	2021/11/17	NC		%	50
			Tetrachloroethylene	2021/11/17	NC		%	50
			Toluene	2021/11/17	NC		%	50
			1,1,1-Trichloroethane	2021/11/17	NC		%	50
			1,1,2-Trichloroethane	2021/11/17	NC		%	50
			Trichloroethylene	2021/11/17	NC		%	50
			Trichlorofluoromethane (FREON 11)	2021/11/17	NC		%	50
			Vinyl Chloride	2021/11/17	NC		%	50
			p+m-Xylene	2021/11/17	NC		%	50
			o-Xylene	2021/11/17	NC		%	50
			Total Xylenes	2021/11/17	NC		%	50
			F1 (C6-C10)	2021/11/17	NC		%	30
			F1 (C6-C10) - BTEX	2021/11/17	NC		%	30
7705354	TAK	Spiked Blank	Available (CaCl2) pH	2021/11/17		100	%	97 - 103
7705354	TAK	RPD	Available (CaCl2) pH	2021/11/17	0.91		%	N/A
7705373	DT1	Matrix Spike [RFW715-03]	Acid Extractable Antimony (Sb)	2021/11/17		93	%	75 - 125

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Arsenic (As)	2021/11/17		102	%	75 - 125
			Acid Extractable Barium (Ba)	2021/11/17		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/11/17		102	%	75 - 125
			Acid Extractable Boron (B)	2021/11/17		97	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/11/17		101	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/11/17		NC	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/11/17		102	%	75 - 125
			Acid Extractable Copper (Cu)	2021/11/17		98	%	75 - 125
			Acid Extractable Lead (Pb)	2021/11/17		96	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/11/17		100	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/11/17		104	%	75 - 125
			Acid Extractable Selenium (Se)	2021/11/17		100	%	75 - 125
			Acid Extractable Silver (Ag)	2021/11/17		100	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/11/17		96	%	75 - 125
			Acid Extractable Uranium (U)	2021/11/17		98	%	75 - 125
			Acid Extractable Vanadium (V)	2021/11/17		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/11/17		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/11/17		84	%	75 - 125
7705373	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2021/11/17		104	%	80 - 120
			Acid Extractable Arsenic (As)	2021/11/17		99	%	80 - 120
			Acid Extractable Barium (Ba)	2021/11/17		99	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/11/17		101	%	80 - 120
			Acid Extractable Boron (B)	2021/11/17		101	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/11/17		98	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/11/17		98	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/11/17		98	%	80 - 120
			Acid Extractable Copper (Cu)	2021/11/17		96	%	80 - 120
			Acid Extractable Lead (Pb)	2021/11/17		96	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/11/17		97	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/11/17		100	%	80 - 120
			Acid Extractable Selenium (Se)	2021/11/17		99	%	80 - 120
			Acid Extractable Silver (Ag)	2021/11/17		97	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/11/17		98	%	80 - 120
			Acid Extractable Uranium (U)	2021/11/17		97	%	80 - 120
			Acid Extractable Vanadium (V)	2021/11/17		99	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/11/17		100	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/11/17		85	%	80 - 120
7705373	DT1	Method Blank	Acid Extractable Antimony (Sb)	2021/11/17	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/11/17	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/11/17	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/11/17	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/11/17	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/11/17	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/11/17	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/11/17	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/11/17	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/11/17	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/11/17	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/11/17	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/11/17	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/11/17	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/11/17	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/11/17	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/11/17	<5.0		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Zinc (Zn)	2021/11/17	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/11/17	<0.050		ug/g	
7705373	DT1	RPD [RFW715-03]	Acid Extractable Antimony (Sb)	2021/11/17	NC		%	30
			Acid Extractable Arsenic (As)	2021/11/17	4.9		%	30
			Acid Extractable Barium (Ba)	2021/11/17	3.0		%	30
			Acid Extractable Beryllium (Be)	2021/11/17	3.3		%	30
			Acid Extractable Boron (B)	2021/11/17	5.6		%	30
			Acid Extractable Cadmium (Cd)	2021/11/17	NC		%	30
			Acid Extractable Chromium (Cr)	2021/11/17	1.6		%	30
			Acid Extractable Cobalt (Co)	2021/11/17	0.95		%	30
			Acid Extractable Copper (Cu)	2021/11/17	0.81		%	30
			Acid Extractable Lead (Pb)	2021/11/17	1.4		%	30
			Acid Extractable Molybdenum (Mo)	2021/11/17	1.0		%	30
			Acid Extractable Nickel (Ni)	2021/11/17	0.81		%	30
			Acid Extractable Selenium (Se)	2021/11/17	NC		%	30
			Acid Extractable Silver (Ag)	2021/11/17	NC		%	30
			Acid Extractable Thallium (Tl)	2021/11/17	1.7		%	30
			Acid Extractable Uranium (U)	2021/11/17	4.1		%	30
			Acid Extractable Vanadium (V)	2021/11/17	3.7		%	30
			Acid Extractable Zinc (Zn)	2021/11/17	1.9		%	30
			Acid Extractable Mercury (Hg)	2021/11/17	NC		%	30
7707684	RDU	Matrix Spike	F4G-sg (Grav. Heavy Hydrocarbons)	2021/11/18		86	%	65 - 135
7707684	RDU	Spiked Blank	F4G-sg (Grav. Heavy Hydrocarbons)	2021/11/18		100	%	65 - 135
7707684	RDU	Method Blank	F4G-sg (Grav. Heavy Hydrocarbons)	2021/11/18	<100		ug/g	
7707684	RDU	RPD	F4G-sg (Grav. Heavy Hydrocarbons)	2021/11/18	10		%	50

N/A = Not Applicable

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

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

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

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

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

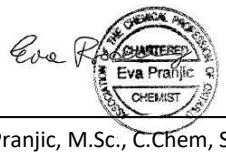
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

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

(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was reanalyzed with the same results

VALIDATION SIGNATURE PAGE

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



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

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

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

Page 1 of 2

CHAIN OF CUSTODY RECORD

RUSH!

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#2292 Golder Associates Ltd	Company Name:		Quotation #:	B80683
Attention:	Accounts Payable	Attention:	Daniel Stabile	P.O. #:	
Address:	100 Scotia Crt Whitby ON L1N 8Y6	Address:		Project:	21494078
				Project Name:	
Tel:	(905) 723-2727 Fax: (905) 723-2182	Tel:	Fax:	Site #:	
Email:	CanadaAccountsPayableInvoices@golder.com	Email:	Daniel_Stabile@golder.com	Sampled By:	AB

15-Nov-21 13:20
Ema Gitej
C1X6358

AVV ENV 1592

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

Regulation 153 (2011): ☐ Table 1 ☒ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☒ For RSC ☒ Table 7

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Reg 406 Table ☐ Other

Special Instructions

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

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

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: 48 hrs Time Required:
Rush Confirmation Number: (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	ORP	PHC	BTEX	VOC	Metals	PHC	BTEX	VOC			# of Bottles	Comments
1		~~21-11~~ SA2	Nov 12/21	1230	Soil	/	X	X	X	X	X						4	
2		21-11 SA3	Nov 12/21	1300		/	X										4	
3		21-12 SA2	Nov 11/21	1400		/	X										1	RUSH
4		21-12 SA3	Nov 11/21	1410		/	X	~~X~~				X	X	X			4	
5		21-13 SA2	Nov 11/21	1500		/	X										1	
6		21-13 SA3	Nov 11/21	1510		/	X										1	
7		21-14 SA3	Nov 12/21	10:00		/		X	X	X							3	RECEIVED IN OTTAWA
8		21-15 SA3	Nov 12/21	15:00		/		X	X	X							3	
9		21-15 SA4	Nov 12/21	15:10		/		X	X	X							3	*on Hold*
10		21-16 SA2	Nov 11/21	1600	↓	/		X	X	X							3	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
			Angelica Santiago	21/11/15	13:20	
			AALISHA VAHORA	21/11/16	08:00	

Laboratory Use Only
Time Sensitive
Temperature (°C) on Receipt: 5.9.7 ice
Custody Seal Present: Yes / No
Intact: Yes / No

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

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

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

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

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

6/7/7

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

Page 2 of 2

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#2292 Golder Associates Ltd	Company Name:		Quotation #:	B80683	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Daniel Stabile	P.O. #:			855386
Address:	100 Scotia Crt Whitby ON L1N 8Y6	Address:		Project:	21494078	COC #:	Project Manager:
Tel:	(905) 723-2727 Fax: (905) 723-2182	Tel:	Fax:	Project Name:		C#855386-02-01	Erna Gitej
Email:	CanadaAccountsPayableInvoices@golder.com	Email:	Daniel_Stabile@golder.com	Site #:			
				Sampled By:	ALB		

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

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☐ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☒ Table 7	☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Reg 406 Table ☐ Other	

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC):

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

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: ____ Time Required: ____
Rush Confirmation Number: 48 hrs (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle) Metals / Hg / Cr VI	PHC	BTEX	VOC	# of Bottles	Comments
1		21-17 SA2	Nov 11/21	1700	Soil	/	X	X	X	3	
2		21-18 SA2	Nov 11/21	1800	Soil	/	X	X	X	3	
3											
4											
5											
6											
7											
8											
9											
10											

RUSH

RECEIVED IN OTTAWA

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
			Angelica Sevilleja see page 1	21/11/15	13:20	

Laboratory Use Only
Time Sensitive
Temperature (°C) on Recei: 5, 9, 7 / ice
Custody Seal Present: Yes
Custody Seal Intact: —

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

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

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

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

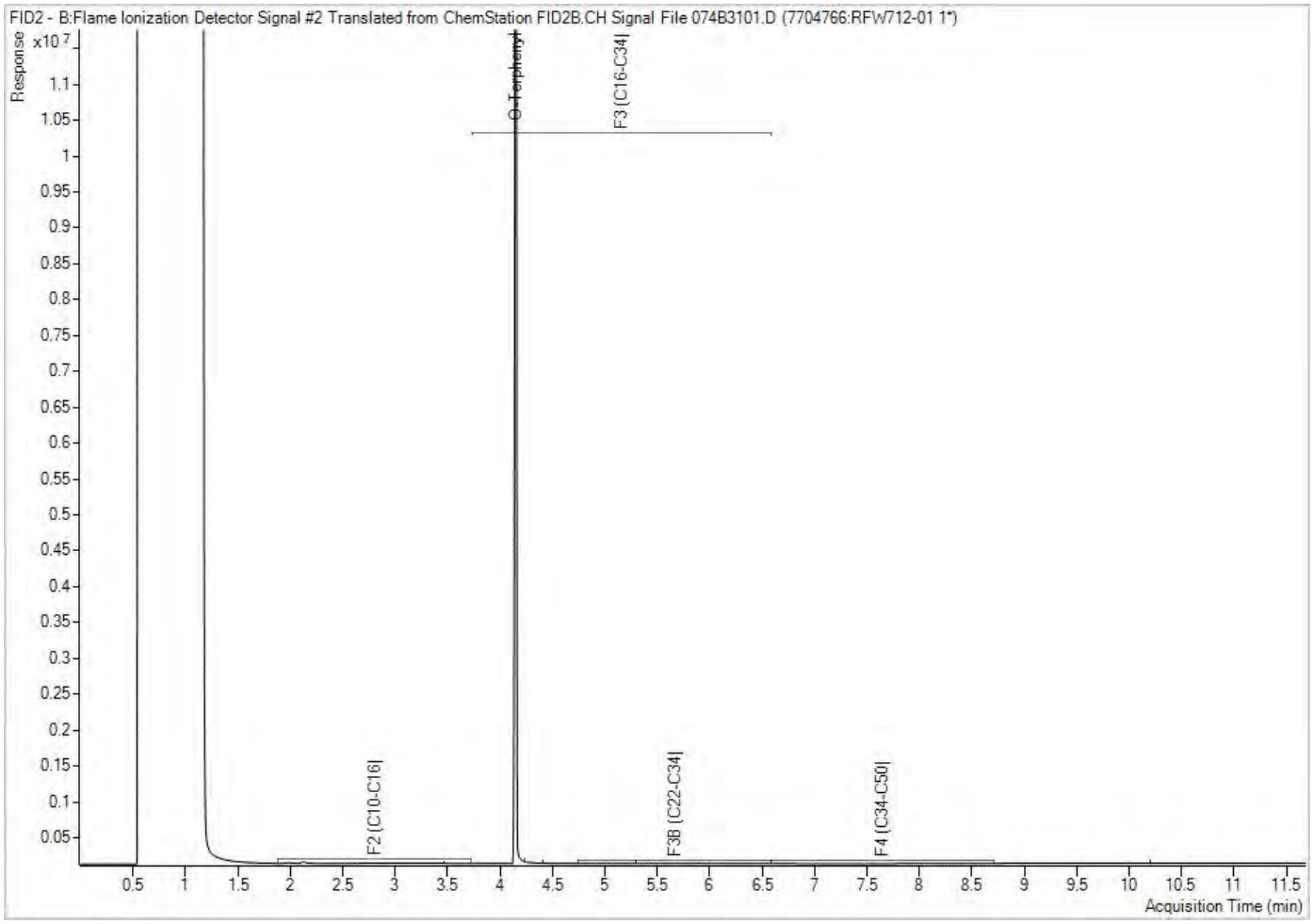
White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW712

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-11 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

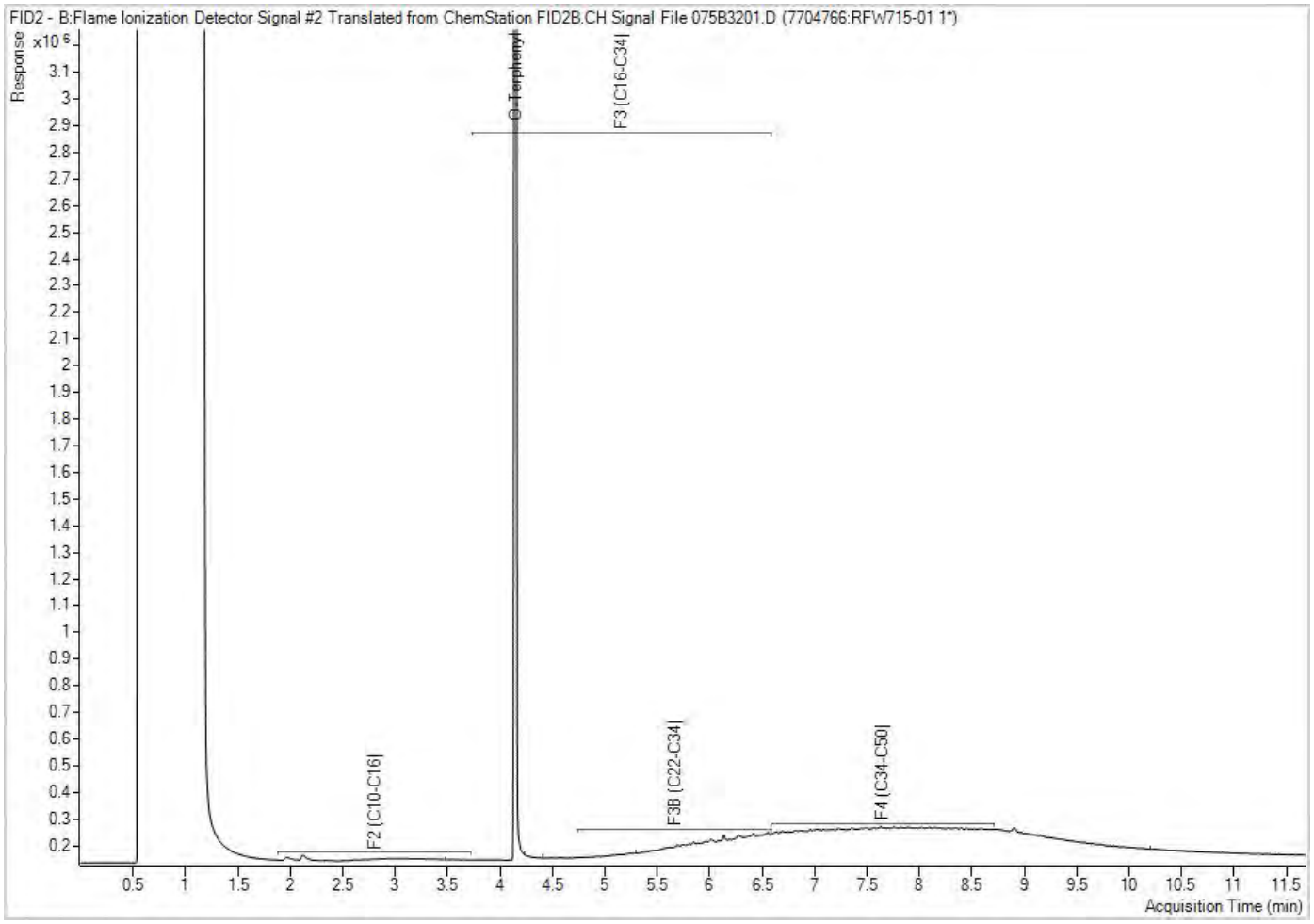


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW715

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-12 SA3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

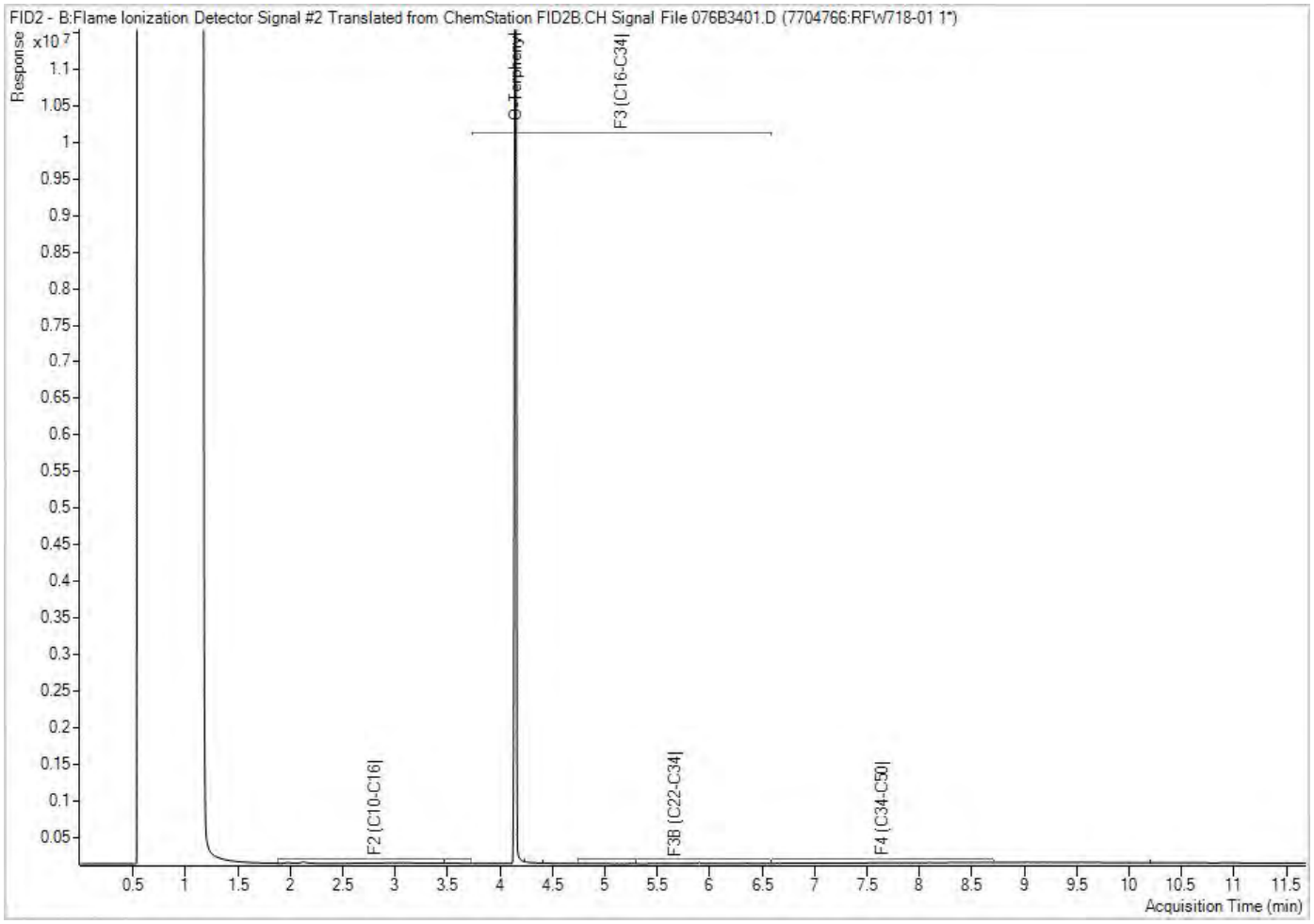


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW718

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-14 SA3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

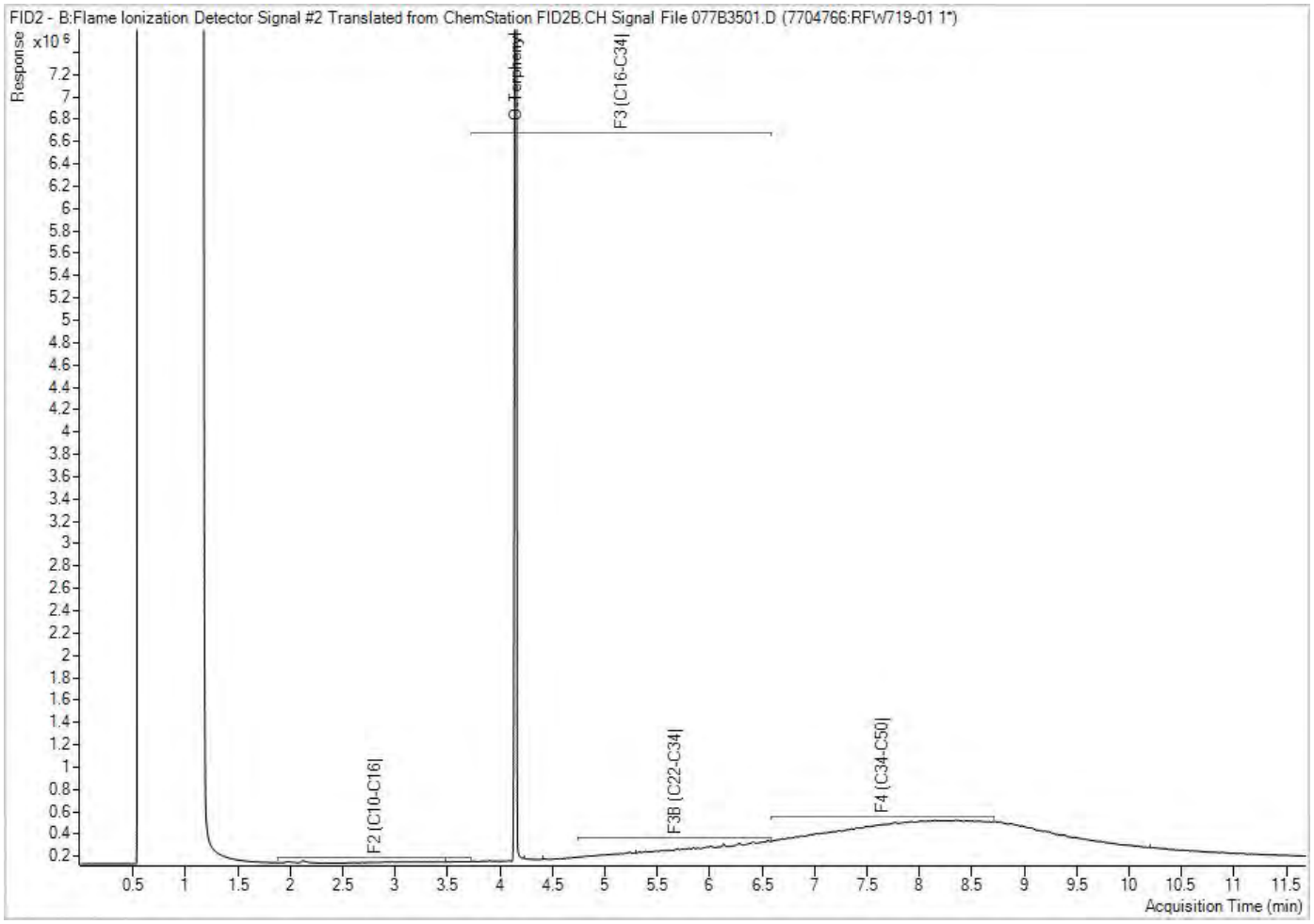


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW719

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-15 SA3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

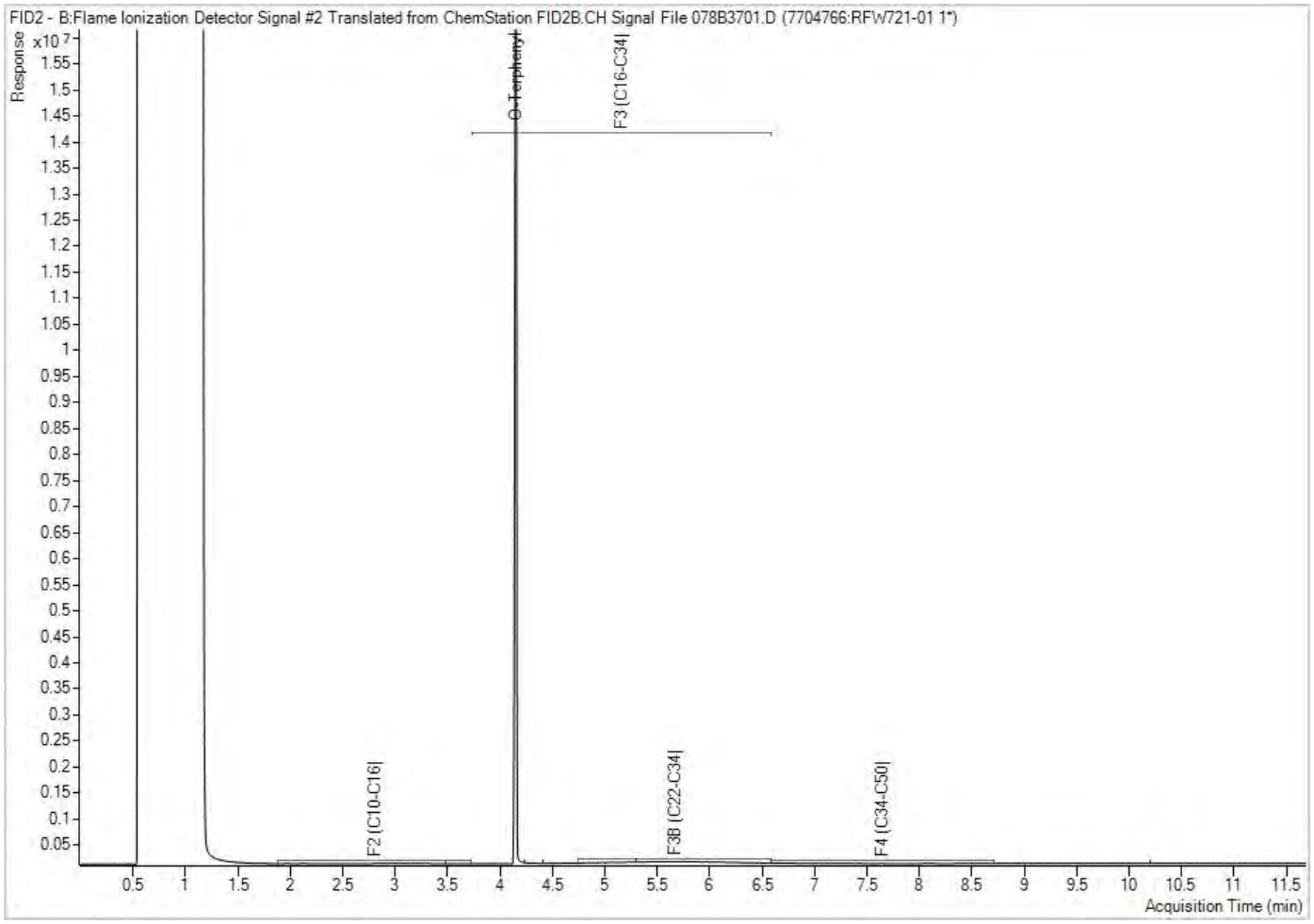


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW721

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-16 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

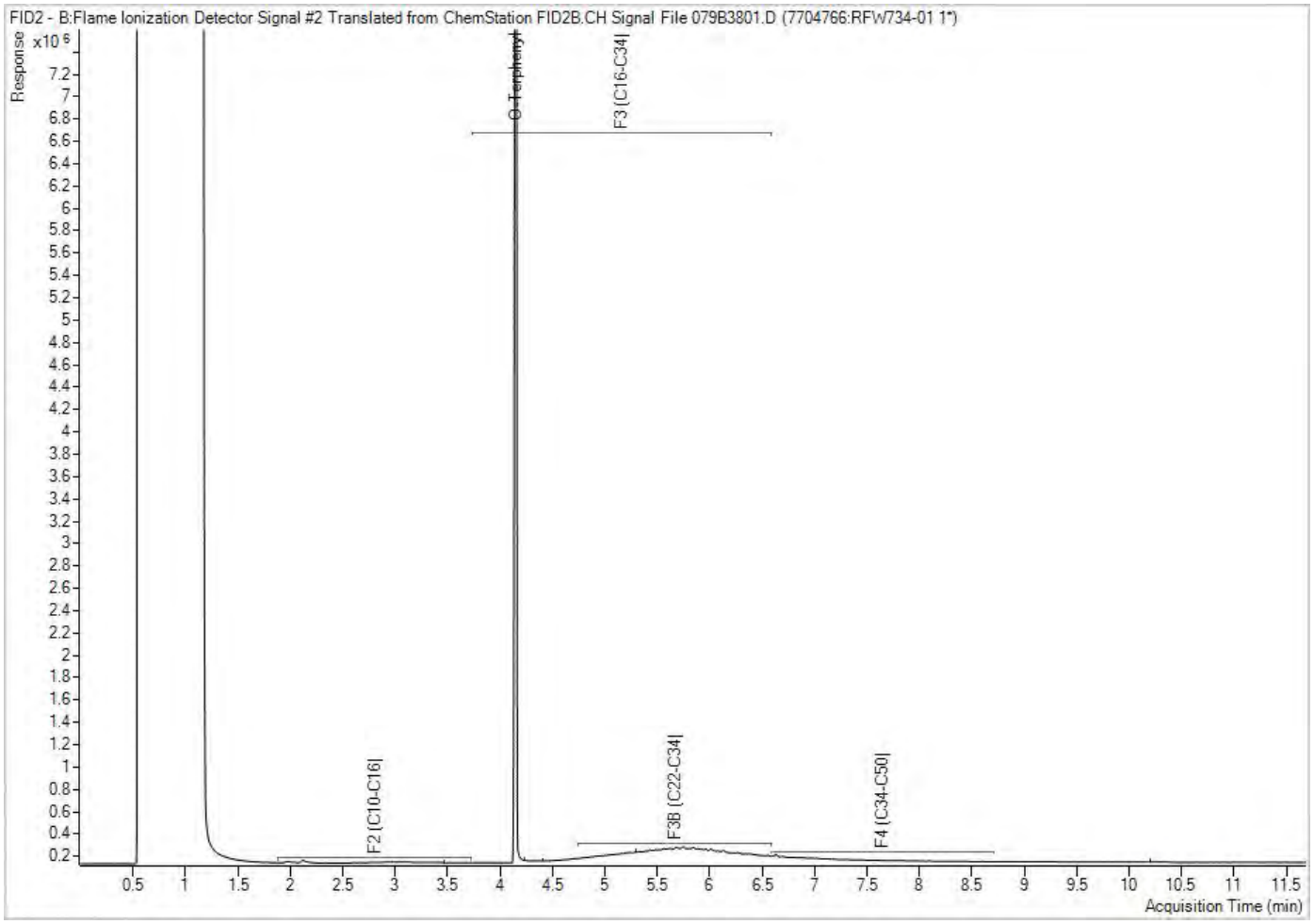


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW734

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-17 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

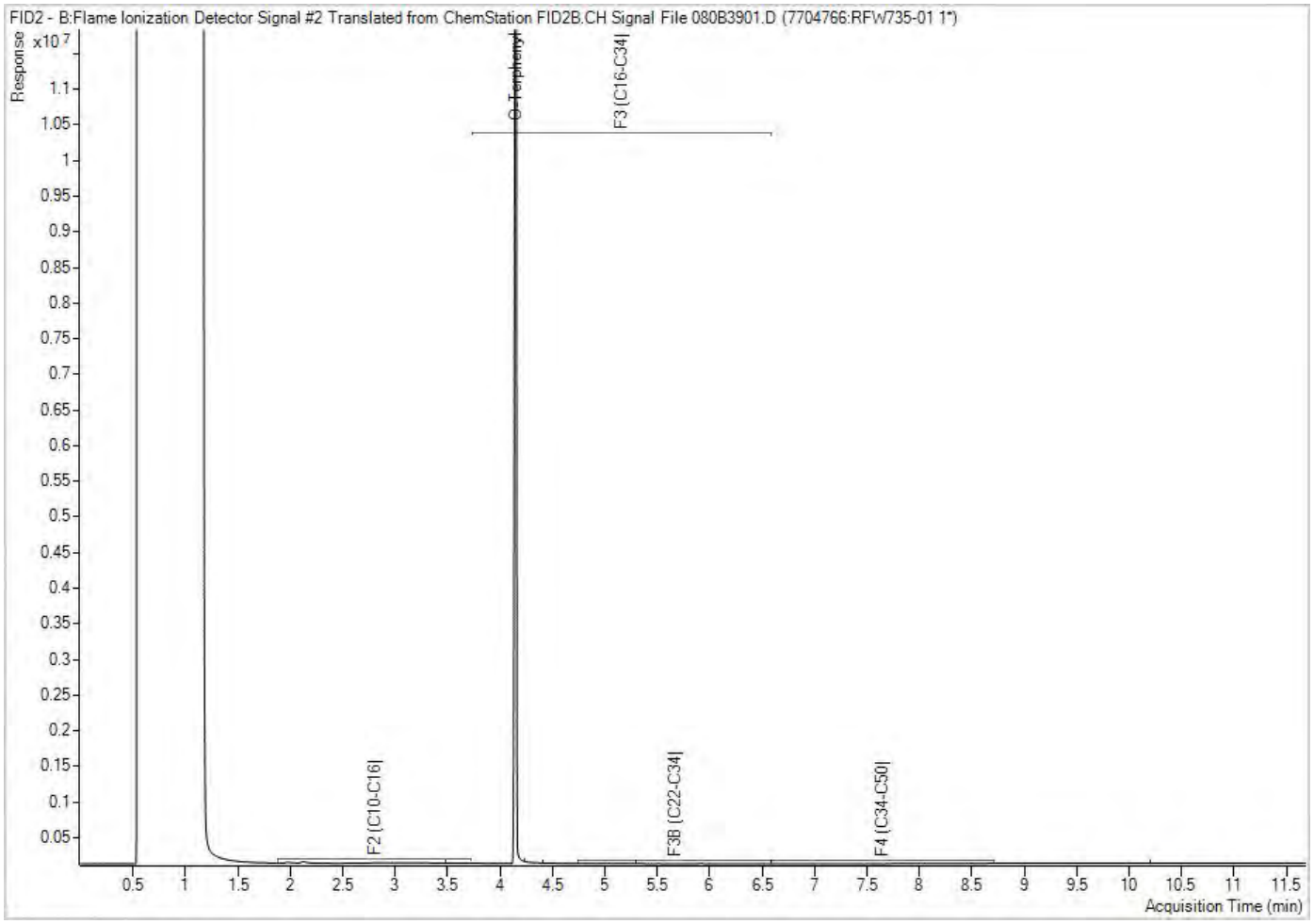


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW735

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-18 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21Z837042

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Road

SAMPLED BY:G.Sharma

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

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-01

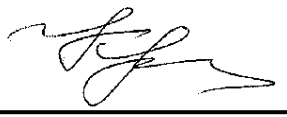
SAMPLE DESCRIPTION:				BH21-19 SA1	BH21-20 SA2	Dup-1 Bh21-20 SA2
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2021-11-22 18:30	2021-11-24 19:30	2021-11-24 19:30
Parameter	Unit	G / S	RDL	3270388	3270410	3270411
F1 (C6 - C10)	µg/g		5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5	<5
F2 (C10 to C16)	µg/g	230	10	<10	<10	<10
F3 (C16 to C34)	µg/g	1700	50	<50	<50	<50
F4 (C34 to C50)	µg/g	3300	50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	3300	50	NA	NA	NA
Moisture Content	%		0.1	11.2	8.2	12.2
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140		88	82	84
Terphenyl	%	60-140		102	88	76

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3270388-3270411 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21Z837042

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Road

SAMPLED BY:G.Sharma

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

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-01

				SAMPLE DESCRIPTION:	TP21-01
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2021-11-22 18:30
Parameter	Unit	G / S	RDL		3270413
Benzene	µg/g	0.32	0.02		<0.02
Toluene	µg/g	68	0.05		<0.05
Ethylbenzene	µg/g	9.5	0.05		<0.05
m & p-Xylene	µg/g		0.05		<0.05
o-Xylene	µg/g		0.05		<0.05
Xylenes (Total)	µg/g	26	0.05		<0.05
F1 (C6 - C10)	µg/g		5		<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5
F2 (C10 to C16)	µg/g	230	10		<10
F3 (C16 to C34)	µg/g	1700	50		<50
F4 (C34 to C50)	µg/g	3300	50		<50
Gravimetric Heavy Hydrocarbons	µg/g	3300	50		NA
Moisture Content	%		0.1		4.2
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	60-140			84
Terphenyl	%	60-140			82

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 21Z837042

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Road

SAMPLED BY:G.Sharma

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

DATE RECEIVED: 2021-11-29

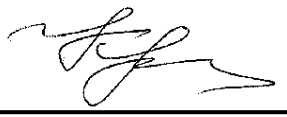
DATE REPORTED: 2021-12-01

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3270413 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 21Z837042

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Road

SAMPLED BY:G.Sharma

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

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-01

SAMPLE DESCRIPTION:				BH21-19 SA1	BH21-20 SA2	Dup-1 Bh21-20 SA2
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2021-11-22 18:30	2021-11-24 19:30	2021-11-24 19:30
Parameter	Unit	G / S	RDL	3270388	3270410	3270411
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.032	0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.064	0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	1.6	0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	1.3	0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	11	0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	17	0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	70	0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	55	0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.47	0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	6.1	0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.21	0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.32	0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.16	0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.91	0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	18	0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	31	0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Toluene	ug/g	68	0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	13	0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	4.5	0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.087	0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21Z837042

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Road

SAMPLED BY:G.Sharma

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

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-01

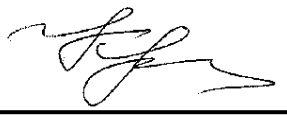
SAMPLE DESCRIPTION:				BH21-19 SA1	BH21-20 SA2	Dup-1 Bh21-20 SA2
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2021-11-22 18:30	2021-11-24 19:30	2021-11-24 19:30
Parameter	Unit	G / S	RDL	3270388	3270410	3270411
Ethylbenzene	ug/g	9.5	0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05
Bromoform	ug/g	0.61	0.05	<0.05	<0.05	<0.05
Styrene	ug/g	34	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
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	9.6	0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.2	0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	6.8	0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	26	0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.18	0.04	<0.04	<0.04	<0.04
n-Hexane	µg/g	46	0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	11.2	8.2	12.2
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140		97	82	101
4-Bromofluorobenzene	% Recovery	50-140		72	90	78

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3270388-3270411 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21Z837042

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Road

SAMPLED BY:G.Sharma

Total PCBs (soil)

DATE RECEIVED: 2021-11-29

DATE REPORTED: 2021-12-01

				SAMPLE DESCRIPTION:	TP21-01
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2021-11-22 18:30
Parameter	Unit	G / S	RDL		3270413
Polychlorinated Biphenyls	µg/g	1.1	0.1		<0.1
Moisture Content	%		0.1		4.2
Surrogate	Unit	Acceptable Limits			
Decachlorobiphenyl	%	60-130			76

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3270413 Results are based on the dry weight of soil extracted.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

3 Lg / 1 Lg Med

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

Chain of Custody Record

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

Report Information:

Company: Golder Associates Ltd.
Contact: Daniel Stabile
Address: 1931 Robertson Road, Nepean, ON
K2H 5B7
Phone: 613 592 9600 Fax:
Reports to be sent to:
1. Email: daniel_stabile@golder.com
2. Email:

Regulatory Requirements:

(Please check all applicable boxes)

- ☑ Regulation 153/04 — Table 7 (Indicate One) — ☑ Ind/Com ☐ Res/Park ☐ Agriculture — Soil Texture (Check One): ☑ Coarse ☐ Fine
- ☐ Excess Soils R406 — Table (Indicate One)
- ☐ Regulation 558
- ☐ CCME
- ☐ Sewer Use ☐ Sanitary ☐ Storm — Region
- ☐ Prov. Water Quality Objectives (PWQO)
- ☐ Other — Indicate One

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Laboratory Use Only

Work Order #: 21783704 2.

Cooler Quantity: one - ICE
Arrival Temperatures: 8.7 | 8.6 | 8.5
see attached
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: BV submission

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☑ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 21494078
Site Location: 1047 Richmond Road
Sampled By: G.Sharma
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company:
Contact:
Address:
Email:

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs — Analyze F4G if required ☑ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach — SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
BH21-19 SA1	11/22/2021	6:30 AM/PM	3	Soil	1 Jar 2 vial	N			☑			☑					
BH21-20 SA2	11/~~26~~ 22/2021	7:30 AM/PM	3	Soil	1 Jar 2 vial	N			☑			☑					
Dup-1 BH21-20 SA2	11/24/2021	7:30 AM/PM	3	Soil	1 Jar 2 vial	N			✓			✓					
TP21-01	11/22/2021	4:00 AM/PM	4	Soil	1 bag 2 vial 1 Jar	N			✓		✓						
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Gopesh Sharma	11/29/2021		C. Griffith	Nov. 29/21	15h00
C. Griffith	Nov. 29/21	16h00	Simon Z	21/11/30	844

Page 1 of 1

N°:

Document ID: DIV-726-1513 021

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Date Issued: March 9, 2021

AGAT Laboratories

Sample Temperature Log

Client: _____

COC# or Work Order #: 21283704 2

# of Coolers: 3 LG + 1 LG MED (ICE)

# of Submissions: _____

Arrival Temperatures - Branch/Driver

Cooler #1:	3.6	4.2	4.7
Cooler #2:	6.1	6.3	5.2
Cooler #3:	4.8	3.6	3.1
Cooler #4:	6	5.1	4.8
Cooler #5:			
Cooler #6:			
Cooler #7:			
Cooler #8			
Cooler #9:			
Cooler #10:			

IR Gun ID: _____

Taken By: Simon

Date (yyyy/mm/dd): 21/11/30 Time: 8:44 (AM) / PM

Arrival Temperatures - Laboratory

Cooler #1:			
Cooler #2:			
Cooler #3:			
Cooler #4:			
Cooler #5:			
Cooler #6:			
Cooler #7:			
Cooler #8			
Cooler #9:			
Cooler #10:			

IR Gun ID: _____

Taken By: _____

Date (yyyy/mm/dd): _____ Time: ____:____ AM / PM

Instructions for use of this form: 1) complete all fields of info including total # of coolers and # of submissions rec'd, 2) photocopy and place in each submission prior to giving a WO#, 3) Proceed as normal, write the WO# and scan (please make sure to scan along with the COC)

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21Z837880

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-03

				SAMPLE DESCRIPTION:	21-4	21-11	21-14	21-15A	21-15B	21-19	21-20	DUP-1
				SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water	Water
				DATE SAMPLED:	2021-11-30 09:15	2021-11-30 10:15	2021-11-30 16:55	2021-11-30 20:00	2021-11-30 20:45	2021-11-30 18:00	2021-11-30 18:50	2021-11-30
Parameter	Unit	G / S	RDL		3284498	3284500	3284517	3284518	3284519	3284520	3284521	3284526
F1 (C6 - C10)	µg/L		25		<25	<25	<25	<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25	<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100		<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100		<100	<100	<100	<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100		<100	<100	<100	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA	NA	NA	NA	NA	NA
Sediment					No	No	No	No	No	No	No	No
Surrogate	Unit	Acceptable Limits										
Toluene-d8	% Recovery	50-140			85.2	82.0	93.2	87.2	74.0	78.0	78.2	86.8
Terphenyl	%	60-140			74	94	96	96	105	97	104	103

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3284498-3284526 The C6-C10 fraction is calculated using Toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 21Z837880

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-03

SAMPLE DESCRIPTION:				21-4	21-11	21-14	21-15A	21-15B	21-19	21-20	DUP-1
SAMPLE TYPE:				Water	Water	Water	Water	Water	Water	Water	Water
DATE SAMPLED:				2021-11-30 09:15	2021-11-30 10:15	2021-11-30 16:55	2021-11-30 20:00	2021-11-30 20:45	2021-11-30 18:00	2021-11-30 18:50	2021-11-30
Parameter	Unit	G / S	RDL	3284498	3284500	3284517	3284518	3284519	3284520	3284521	3284526
Dichlorodifluoromethane	µg/L	3500	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	1.66	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	1.86
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.63	0.31	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	9.12	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	8.70
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21Z837880

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-03

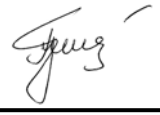
				SAMPLE DESCRIPTION:	21-4	21-11	21-14	21-15A	21-15B	21-19	21-20	DUP-1
				SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water	Water
				DATE SAMPLED:	2021-11-30 09:15	2021-11-30 10:15	2021-11-30 16:55	2021-11-30 20:00	2021-11-30 20:45	2021-11-30 18:00	2021-11-30 18:50	2021-11-30
Parameter	Unit	G / S	RDL		3284498	3284500	3284517	3284518	3284519	3284520	3284521	3284526
m & p-Xylene	µg/L		0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	43	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits										
Toluene-d8	% Recovery	50-140			91	87	84	87	93	89	87	93
4-Bromofluorobenzene	% Recovery	50-140			77	76	78	82	82	85	75	78

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3284498-3284526 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21Z837880

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

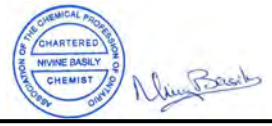
O. Reg. 153(511) - Metals & Inorganics (Water)

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-03

				SAMPLE DESCRIPTION:	21-11	DUP-2
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2021-11-30 10:15	2021-11-30
Parameter	Unit	G / S	RDL		3284500	3284527
Dissolved Antimony	µg/L	16000	1.0		<1.0	<1.0
Dissolved Arsenic	µg/L	1500	1.0		6.0	4.1
Dissolved Barium	µg/L	23000	2.0		47.7	59.7
Dissolved Beryllium	µg/L	53	0.50		<0.50	<0.50
Dissolved Boron	µg/L	36000	10.0		85.0	89.0
Dissolved Cadmium	µg/L	2.1	0.20		<0.20	<0.20
Dissolved Chromium	µg/L	640	2.0		<2.0	<2.0
Dissolved Cobalt	µg/L	52	0.50		0.65	1.24
Dissolved Copper	µg/L	69	1.0		1.2	<1.0
Dissolved Lead	µg/L	20	0.50		<0.50	<0.50
Dissolved Molybdenum	µg/L	7300	0.50		0.63	0.83
Dissolved Nickel	µg/L	390	1.0		2.5	2.9
Dissolved Selenium	µg/L	50	1.0		<1.0	<1.0
Dissolved Silver	µg/L	1.2	0.20		<0.20	<0.20
Dissolved Thallium	µg/L	400	0.30		<0.30	<0.30
Dissolved Uranium	µg/L	330	0.50		0.75	0.84
Dissolved Vanadium	µg/L	200	0.40		0.56	<0.40
Dissolved Zinc	µg/L	890	5.0		<5.0	<5.0
Mercury	µg/L	0.1	0.02		<0.02	<0.02
Chromium VI	µg/L	110	2		<2	<2
Cyanide, Free	µg/L	52	2		3	<2
Dissolved Sodium	µg/L	1800000	100		65500	63100
Chloride	µg/L	1800000	100		121000	124000
Electrical Conductivity	uS/cm	NA	2		1290	1290
pH	pH Units		NA		7.50	7.64

Certified By:



Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 21Z837880

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-01

DATE REPORTED: 2021-12-03

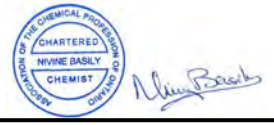
Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3284500-3284527 Metals analysis completed on a filtered sample.

Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Exceedance Summary

AGAT WORK ORDER: 21Z837880

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3284498	21-4	ON T7 NPGW CT	O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)	Benzene	µg/L	0.5	1.66
3284498	21-4	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	Benzene	µg/L	0.5	1.66
3284526	DUP-1	ON T7 NPGW CT	O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)	Benzene	µg/L	0.5	1.86
3284526	DUP-1	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	Benzene	µg/L	0.5	1.86

Results relate only to the items tested. Results apply to samples as received.

WORK ORDER

AGAT Laboratories

RUSH!

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

Chain of Custody Record

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

Report Information:

Company: GOLDER
Contact: DANIEL STABILE
Address:
Phone: Fax:
Reports to be sent to:
1. Email: DANIE_STABILE@GOLDER.COM
2. Email: PAUL_HURST@GOLDER.COM TIM_MULLINGS@GOLDER.COM

Project Information:

Project: 21494078
Site Location: 1047 RICHMOND RD
Sampled By: CLAIRE WOODFIELD
AGAT ID #: MSA AGAT-GOLDER2021
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company:
Contact:
Address:
Email: AP_CUSTOMERSERVICE@GOLDER.COM

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 7 *Indicate One*
☒ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☑ Coarse
☐ Fine

☐ Excess Soils R406
Table _____ *Indicate One*

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
_____ *Region*

☐ Prov. Water Quality Objectives (PWQO)

☑ Other
MOE Forms *Indicate One*

Is this submission for a **Record of Site Condition?** ☐ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Laboratory Use Only

Work Order #: 21783788O

Cooler Quantity: one - ice
Arrival Temperatures: 5.6 | 5.3 | 5.1
6.2 | 6.3 | 6.4
Custody Seal Intact: ☐ Yes ☑ No ☐ N/A
Notes: on ice pack

Turnaround Time (TAT) Required:

Regular TAT (Most Analysis) ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):
SAME DAY

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs, Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: Total PCBs ☐ Arocior	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
21 - 4	30/11/21	915 AM/PM	8	GW					/			/					
21 - 11		1015 AM/PM	4 8 14			Y	/		/			/					
21 - 14		455 AM/PM	8						/			/					
21 - 15A		6 AM/PM	8						/			/					
21 - 15B		845 AM/PM	8						/			/					
21 - 19		6 AM/PM	8						/			/					
21 - 20		650 AM/PM	8						/			/					
		AM/PM	4						/			/					
DUP-1		AM/PM	8 8			Y	/		~								
DUP-2		AM/PM	6														
		AM/PM															

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
CLAIRE WOODFIELD	1/12/21	845		Dec 01/21	08H45
CC to Paul	Dec 01/21	16h00		Dec 02	11:45

Page _____ of _____

№: T 123162

AGAT Laboratories

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CLIENT NAME: GOLDER ASSOCIATES LTD.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727

ATTENTION TO: Daniel Stabile

PROJECT: 21494078

AGAT WORK ORDER: 21Z842764

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

DATE REPORTED: Dec 13, 2021

PAGES (INCLUDING COVER): 9

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Certificate of Analysis

AGAT WORK ORDER: 21Z842764

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2021-12-10

DATE REPORTED: 2021-12-13

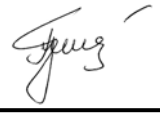
				SAMPLE DESCRIPTION:	BH21-04	BH21-14	DUP
				SAMPLE TYPE:	Water	Water	Water
				DATE SAMPLED:	2021-12-09 16:41	2021-12-09 15:40	2021-12-09 15:40
Parameter	Unit	G / S	RDL		3330747	3330756	3330757
F1 (C6 - C10)	µg/L		25		<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L		25		<25	<25	<25
F2 (C10 to C16)	µg/L		100		<100	<100	<100
F3 (C16 to C34)	µg/L		100		<100	<100	<100
F4 (C34 to C50)	µg/L		100		<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA
Sediment					No	No	No
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140			92.5	74.2	95.2
Terphenyl	%	60-140			70	75	83

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

3330747-3330757 The C6-C10 fraction is calculated using Toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 21Z842764

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

Volatile Organic Compounds in Water (ug/L)

DATE RECEIVED: 2021-12-10

DATE REPORTED: 2021-12-13

SAMPLE DESCRIPTION:				BH21-04		BH21-14	DUP
SAMPLE TYPE:				Water		Water	Water
DATE SAMPLED:				2021-12-09 16:41		2021-12-09 15:40	2021-12-09 15:40
Parameter	Unit	G / S	RDL	3330747	RDL	3330756	3330757
Dichlorodifluoromethane	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Chloromethane	µg/L		0.80	<0.80	0.40	<0.40	<0.40
Vinyl Chloride	µg/L		0.34	<0.34	0.17	<0.17	<0.17
Bromomethane	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Chloroethane	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L		0.80	<0.80	0.40	<0.40	<0.40
Acetone	µg/L		2.0	<2.0	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L		0.4	<0.4	0.2	<0.2	<0.2
Methylene Chloride	µg/L		0.60	<0.60	0.30	<0.30	<0.30
trans- 1,2-dichloroethylene	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L		0.40	<0.40	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L		0.60	<0.60	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L		2.0	<2.0	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Chloroform	µg/L		0.40	<0.40	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L		0.40	40.5	0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L		0.60	<0.60	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Benzene	µg/L		0.40	2.81	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Trichloroethylene	µg/L		0.40	4.26	0.20	2.11	1.99
Bromodichloromethane	µg/L		0.40	<0.40	0.20	<0.20	<0.20
cis-1,3-Dichloropropene	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L		2.0	<2.0	1.0	<1.0	<1.0
trans-1,3-Dichloropropene	µg/L		0.60	<0.60	0.30	<0.30	<0.30
1,1,2-Trichloroethane	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Toluene	µg/L		0.40	<0.40	0.20	<0.20	<0.20
2-Hexanone	µg/L		2.0	<2.0	1.0	<1.0	<1.0
Dibromochloromethane	µg/L		0.20	<0.20	0.10	<0.10	<0.10

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21Z842764

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

Volatile Organic Compounds in Water (ug/L)

DATE RECEIVED: 2021-12-10

DATE REPORTED: 2021-12-13

				SAMPLE DESCRIPTION:		BH21-14	DUP
				SAMPLE TYPE:		Water	Water
				DATE SAMPLED:		2021-12-09 15:40	2021-12-09 15:40
Parameter	Unit	G / S	RDL	3330747	RDL	3330756	3330757
Ethylene Dibromide	µg/L		0.20	<0.20	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L		0.40	<0.40	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L		0.20	<0.20	0.10	<0.10	<0.10
Chlorobenzene	µg/L		0.20	<0.20	0.10	<0.10	<0.10
Ethylbenzene	µg/L		0.20	<0.20	0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Bromoform	µg/L		0.20	<0.20	0.10	<0.10	<0.10
Styrene	µg/L		0.20	<0.20	0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L		0.20	<0.20	0.10	<0.10	<0.10
o-Xylene	µg/L		0.20	<0.20	0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L		0.20	<0.20	0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L		0.20	<0.20	0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L		0.20	<0.20	0.10	<0.10	<0.10
1,2,4-Trichlorobenzene	µg/L		0.60	<0.60	0.30	<0.30	<0.30
1,3-Dichloropropene (Cis + Trans)	µg/L		0.30	<0.30	0.30	<0.30	<0.30
Xylenes (Total)	µg/L		0.20	<0.20	0.20	<0.20	<0.20
n-Hexane	µg/L		0.40	<0.40	0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140		76	1	83	72
4-Bromofluorobenzene	% Recovery	50-140		76	1	96	93

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

3330747 Dilution factor=2
The sample was diluted because it was foamy. The reporting detection limit has been corrected for the dilution factor used.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

3330756-3330757 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21Z842764

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Dec 13, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)															
F1 (C6 - C10)	3282665		<25	<25	NA	< 25	104%	60%	140%	112%	60%	140%	111%	60%	140%
F2 (C10 to C16)	3290856		< 100	< 100	NA	< 100	102%	60%	140%	85%	60%	140%	75%	60%	140%
F3 (C16 to C34)	3290856		< 100	< 100	NA	< 100	90%	60%	140%	76%	60%	140%	79%	60%	140%
F4 (C34 to C50)	3290856		< 100	< 100	NA	< 100	93%	60%	140%	86%	60%	140%	71%	60%	140%
Volatile Organic Compounds in Water (ug/L)															
Dichlorodifluoromethane	3290687		<0.20	<0.20	NA	< 0.20	91%	50%	140%	95%	50%	140%	97%	50%	140%
Chloromethane	3290687		<0.40	<0.40	NA	< 0.40	96%	50%	140%	84%	50%	140%	80%	50%	140%
Vinyl Chloride	3290687		<0.17	<0.17	NA	< 0.17	96%	50%	140%	102%	50%	140%	78%	50%	140%
Bromomethane	3290687		<0.20	<0.20	NA	< 0.20	98%	50%	140%	83%	50%	140%	89%	50%	140%
Chloroethane	3290687		<0.20	<0.20	NA	< 0.20	74%	50%	140%	91%	50%	140%	108%	50%	140%
Trichlorofluoromethane	3290687		<0.40	<0.40	NA	< 0.40	87%	50%	140%	79%	50%	140%	109%	50%	140%
Acetone	3290687		<1.0	<1.0	NA	< 1.0	96%	50%	140%	100%	50%	140%	97%	50%	140%
1,1-Dichloroethylene	3290687		<0.2	<0.2	NA	< 0.2	93%	50%	140%	73%	60%	130%	114%	50%	140%
Methylene Chloride	3290687		<0.30	<0.30	NA	< 0.30	120%	50%	140%	120%	60%	130%	106%	50%	140%
trans- 1,2-dichloroethylene	3290687		<0.20	<0.20	NA	< 0.20	97%	50%	140%	120%	60%	130%	97%	50%	140%
Methyl tert-butyl ether	3290687		<0.20	<0.20	NA	< 0.20	95%	50%	140%	117%	60%	130%	85%	50%	140%
1,1-Dichloroethane	3290687		<0.30	<0.30	NA	< 0.30	85%	50%	140%	110%	60%	130%	93%	50%	140%
Methyl Ethyl Ketone	3290687		<1.0	<1.0	NA	< 1.0	98%	50%	140%	101%	50%	140%	103%	50%	140%
cis- 1,2-Dichloroethylene	3290687		<0.20	<0.20	NA	< 0.20	79%	50%	140%	107%	60%	130%	97%	50%	140%
Chloroform	3290687		<0.20	<0.20	NA	< 0.20	98%	50%	140%	101%	60%	130%	113%	50%	140%
1,2-Dichloroethane	3290687		<0.20	<0.20	NA	< 0.20	116%	50%	140%	97%	60%	130%	83%	50%	140%
1,1,1-Trichloroethane	3290687		<0.30	<0.30	NA	< 0.30	111%	50%	140%	85%	60%	130%	84%	50%	140%
Carbon Tetrachloride	3290687		<0.20	<0.20	NA	< 0.20	98%	50%	140%	120%	60%	130%	120%	50%	140%
Benzene	3290687		<0.20	<0.20	NA	< 0.20	87%	50%	140%	106%	60%	130%	86%	50%	140%
1,2-Dichloropropane	3290687		<0.20	<0.20	NA	< 0.20	111%	50%	140%	97%	60%	130%	98%	50%	140%
Trichloroethylene	3290687		<0.20	<0.20	NA	< 0.20	105%	50%	140%	98%	60%	130%	98%	50%	140%
Bromodichloromethane	3290687		<0.20	<0.20	NA	< 0.20	116%	50%	140%	107%	60%	130%	102%	50%	140%
cis-1,3-Dichloropropene	3290687		<0.20	<0.20	NA	< 0.20	119%	50%	140%	89%	60%	130%	77%	50%	140%
Methyl Isobutyl Ketone	3290687		<1.0	<1.0	NA	< 1.0	109%	50%	140%	103%	50%	140%	101%	50%	140%
trans-1,3-Dichloropropene	3290687		<0.30	<0.30	NA	< 0.30	95%	50%	140%	102%	60%	130%	119%	50%	140%
1,1,2-Trichloroethane	3290687		<0.20	<0.20	NA	< 0.20	117%	50%	140%	97%	60%	130%	113%	50%	140%
Toluene	3290687		<0.20	<0.20	NA	< 0.20	100%	50%	140%	75%	60%	130%	91%	50%	140%
2-Hexanone	3290687		<1.0	<1.0	NA	< 1.0	105%	50%	140%	103%	50%	140%	99%	50%	140%
Dibromochloromethane	3290687		<0.10	<0.10	NA	< 0.10	116%	50%	140%	110%	60%	130%	99%	50%	140%
Ethylene Dibromide	3290687		<0.10	<0.10	NA	< 0.10	111%	50%	140%	91%	60%	130%	111%	50%	140%
Tetrachloroethylene	3290687		<0.20	<0.20	NA	< 0.20	104%	50%	140%	91%	60%	130%	107%	50%	140%
1,1,1,2-Tetrachloroethane	3290687		<0.10	<0.10	NA	< 0.10	105%	50%	140%	86%	60%	130%	103%	50%	140%
Chlorobenzene	3290687		<0.10	<0.10	NA	< 0.10	89%	50%	140%	70%	60%	130%	102%	50%	140%
Ethylbenzene	3290687		<0.10	<0.10	NA	< 0.10	74%	50%	140%	87%	60%	130%	86%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21Z842764

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Dec 13, 2021			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
m & p-Xylene	3290687		<0.20	<0.20	NA	< 0.20	98%	50%	140%	92%	60%	130%	105%	50%	140%
Bromoform	3290687		<0.10	<0.10	NA	< 0.10	106%	50%	140%	84%	60%	130%	109%	50%	140%
Styrene	3290687		<0.10	<0.10	NA	< 0.10	76%	50%	140%	82%	60%	130%	75%	50%	140%
1,1,2,2-Tetrachloroethane	3290687		<0.10	<0.10	NA	< 0.10	94%	50%	140%	77%	60%	130%	96%	50%	140%
o-Xylene	3290687		<0.10	<0.10	NA	< 0.10	78%	50%	140%	78%	60%	130%	80%	50%	140%
1,3-Dichlorobenzene	3290687		<0.10	<0.10	NA	< 0.10	95%	50%	140%	78%	60%	130%	85%	50%	140%
1,4-Dichlorobenzene	3290687		<0.10	<0.10	NA	< 0.10	101%	50%	140%	78%	60%	130%	92%	50%	140%
1,2-Dichlorobenzene	3290687		<0.10	<0.10	NA	< 0.10	98%	50%	140%	80%	60%	130%	91%	50%	140%
1,2,4-Trichlorobenzene	3290687		<0.30	<0.30	NA	< 0.30	101%	50%	140%	105%	60%	130%	106%	50%	140%
n-Hexane	3290687		<0.20	<0.20	NA	< 0.20	93%	50%	140%	95%	60%	130%	102%	50%	140%

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

Certified By:

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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http://www.agatlabs.com

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21Z842764

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F1 (C6 - C10)	VOL-91- 5010	modified from MOE PHC E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC E3421	GC / FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC E3421	GC / FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC E3421	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC E3421	BALANCE
Terphenyl	VOL-91-5009	modified from MOE PHC E3421	GC/FID
Sediment			
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21Z842764

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
cis-1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans-1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
2-Hexanone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2,4-Trichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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AGAT Laboratories PUSH!
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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 21784276 4

Cooler Quantity: one - ice pack

Arrival Temperatures: 9.5 | 9.2 | 9.0 | 3.8 | 4 | 4.3

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes:

Report Information:

Company: GOLDER

Contact: Daniel Stabile

Address: 100 Scotia Court
Whitby, ON. CAP.

Phone: 905 725 2727 Fax:

Reports to be sent to:

1. Email: daniel_stabile@golder.com
2. Email: paul_hurst@golder.com

Regulatory Requirements:

(Please check all applicable boxes)

☐ Regulation 153/04
Table ____ *Indicate One*
☐ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ *Indicate One*

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
____ *Region*

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
____ *Indicate One*

Is this submission for a **Record of Site Condition?** ☐ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT (Most Analysis) ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☒ Next Business Day

OR Date Required (Rush Surcharges May Apply): Dec 10, 2021

Please provide prior notification for rush TAT

**TAT is exclusive of weekends and statutory holidays*

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

Project Information:

Project: 21494078

Site Location:

Sampled By: A. Brunskill

AGAT ID #: PO:

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

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:

Contact:

Address:

Email:

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 (PHCs) Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: Total PCBs ☐ Aroclor	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
BH21-04	Dec 9/21	16:41 AM/PM	8	GW					X			X					
BH21-14	Dec 9/21	15:40 AM/PM	8	GW					X			X					
DUP	Dec 9/21	15:40 AM/PM	8	GW					X			X					
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															

	Date	Time		Date	Time
Samples Relinquished By (Print Name and Sign): A Brunskill	Dec 9/21	18:00	Samples Received By (Print Name and Sign): C. Griffith	21/12/10	08h05
Samples Relinquished By (Print Name and Sign): A Brunskill	Dec 9/21	18:00	Samples Received By (Print Name and Sign): Sima Z	21/12/11	8:49
Samples Relinquished By (Print Name and Sign): CC to Paul	21/12/10	16h00	Samples Received By (Print Name and Sign):	Date	Time

Page ____ of ____

Nº: T 122801

Document ID: DIV-78-1511.020

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Date Issued: December 9, 2020

AGAT Laboratories

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CLIENT NAME: GOLDER ASSOCIATES LTD.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727

ATTENTION TO: Daniel Stabile

PROJECT: 21494078

AGAT WORK ORDER: 21T848962

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Jan 05, 2022

PAGES (INCLUDING COVER): 22

VERSION*: 2

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

*Notes

VERSION 2:Version 2 supersedes work order 21T848962 , Version 1, issued January, 5, 2022. Complete.

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	BH21- 21 SA3	BH21-22 SA3	DUP1
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2021-12-21 10:30	2021-12-21 12:00	2021-12-21
Parameter	Unit	G / S	RDL		3391187	3391190	3391201
F1 (C6 - C10)	µg/g		5		<5	6	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5	6	<5
F2 (C10 to C16)	µg/g	230	10		<10	<10	<10
F3 (C16 to C34)	µg/g	1700	50		<50	260	<50
F4 (C34 to C50)	µg/g	3300	50		<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	3300	50		NA	NA	NA
Moisture Content	%		0.1		9.1	13.6	10.0
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140			112	112	104
Terphenyl	%	60-140			78	100	89

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391187-3391201 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	BH21-21	BH21-4	BH21-14	BH21-22	DUP1
				SAMPLE TYPE:	Water	Water	Water	Water	Water
				DATE SAMPLED:	2021-12-22 10:45	2021-12-22 11:25	2021-12-22 12:00	2021-12-22 12:35	2021-12-22
Parameter	Unit	G / S	RDL		3391083	3391094	3391095	3391097	3391203
F1 (C6 - C10)	µg/L		25		<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100		<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100		<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100		<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA	NA	NA
Sediment					No	No	No	No	No
Surrogate	Unit	Acceptable Limits							
Toluene-d8	% Recovery	50-140			116	70.0	97.5	104	79.2
Terphenyl	%	60-140			86	98	99	104	90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391083-3391203 The C6-C10 fraction is calculated using Toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	BH21-23 SA4	BH21-24 SA4	BH21-25 SA4
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2021-12-21 13:55	2021-12-21 14:25	2021-12-21 15:00
Parameter	Unit	G / S	RDL		3391191	3391192	3391193
Benzene	µg/g	0.32	0.02		<0.02	<0.02	<0.02
Toluene	µg/g	68	0.05		<0.05	<0.05	<0.05
Ethylbenzene	µg/g	9.5	0.05		<0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05		<0.05	<0.05	<0.05
o-Xylene	µg/g		0.05		<0.05	<0.05	<0.05
Xylenes (Total)	µg/g	26	0.05		<0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g		5		<5	154	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5	154	<5
F2 (C10 to C16)	µg/g	230	10		<10	<10	<10
F3 (C16 to C34)	µg/g	1700	50		<50	1500	<50
F4 (C34 to C50)	µg/g	3300	50		<50	170	<50
Gravimetric Heavy Hydrocarbons	µg/g	3300	50		NA	NA	NA
Moisture Content	%		0.1		9.8	10.4	10.6
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	60-140			117	94	116
Terphenyl	%	60-140			89	91	89

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23 DATE REPORTED: 2022-01-05

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391191-3391193 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	TRIP BLANK	FIELD BALNK
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2021-12-22	2021-12-22 12:00
Parameter	Unit	G / S	RDL		3391202	3391204
Benzene	µg/L	0.5	0.20		<0.20	<0.20
Toluene	µg/L	320	0.20		<0.20	<0.20
Ethylbenzene	µg/L	54	0.10		<0.10	<0.10
m & p-Xylene	µg/L		0.20		<0.20	<0.20
o-Xylene	µg/L		0.10		<0.10	<0.10
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20
F1 (C6-C10)	µg/L		25		<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25	<25
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	60-140			122	78.8

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391202-3391204 The C6-C10 fraction is calculated using Toluene response factor.
Total C6-C10 results are corrected for BTEX contributions.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
Extraction and holding times were met for this sample.
NA = Not Applicable

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

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AGAT WORK ORDER: 21T848962

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

SAMPLE DESCRIPTION:				BH21- 21 SA3	BH21-22 SA3	DUP1
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2021-12-21 10:30	2021-12-21 12:00	2021-12-21
Parameter	Unit	G / S	RDL	3391187	3391190	3391201
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.032	0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.064	0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	1.6	0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	1.3	0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	11	0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	17	0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	70	0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	55	0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.47	0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	6.1	0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.21	0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.32	0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.16	0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.91	0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	18	0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	31	0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Toluene	ug/g	68	0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	13	0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	4.5	0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.087	0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	9.5	0.05	<0.05	<0.05	<0.05

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	BH21- 21 SA3	BH21-22 SA3	DUP1
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2021-12-21 10:30	2021-12-21 12:00	2021-12-21
Parameter	Unit	G / S	RDL		3391187	3391190	3391201
m & p-Xylene	ug/g		0.05		<0.05	<0.05	<0.05
Bromoform	ug/g	0.61	0.05		<0.05	<0.05	<0.05
Styrene	ug/g	34	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
o-Xylene	ug/g		0.05		<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	9.6	0.05		<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.2	0.05		<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	6.8	0.05		<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	26	0.05		<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.18	0.04		<0.04	<0.04	<0.04
n-Hexane	µg/g	46	0.05		<0.05	<0.05	<0.05
Moisture Content	%		0.1		9.1	13.6	10.0
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140			108	105	109
4-Bromofluorobenzene	% Recovery	50-140			86	97	76

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391187-3391201 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

SAMPLE DESCRIPTION:				BH21-21	BH21-4		BH21-14	BH21-22		TRIP BLANK	DUP1
SAMPLE TYPE:				Water	Water		Water	Water		Water	Water
DATE SAMPLED:				2021-12-22 10:45	2021-12-22 11:25		2021-12-22 12:00	2021-12-22 12:35		2021-12-22	2021-12-22
Parameter	Unit	G / S	RDL	3391083	3391094	RDL	3391095	3391097	RDL	3391202	3391203
Dichlorodifluoromethane	µg/L	3500	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	0.34	<0.34	<0.34	0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	0.80	<0.80	<0.80	0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	2.0	<2.0	<2.0	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	0.50	<0.50	<0.50	0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	0.60	<0.60	<0.60	0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	0.60	<0.60	<0.60	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	2.0	<2.0	<2.0	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	0.50	2.51	0.40	<0.40	<0.40	0.20	<0.20	0.45
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	0.60	<0.60	<0.60	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	0.20	<0.20	<0.20	0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	2.0	<2.0	<2.0	1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10

Certified By: NPopowkoff

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

		SAMPLE DESCRIPTION:		BH21-21	BH21-4		BH21-14	BH21-22		TRIP BLANK	DUP1
		SAMPLE TYPE:		Water	Water		Water	Water		Water	Water
		DATE SAMPLED:		2021-12-22 10:45	2021-12-22 11:25		2021-12-22 12:00	2021-12-22 12:35		2021-12-22	2021-12-22
Parameter	Unit	G / S	RDL	3391083	3391094	RDL	3391095	3391097	RDL	3391202	3391203
m & p-Xylene	µg/L		0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
Styrene	µg/L	43	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10	<0.10	<0.10	0.20	<0.20	<0.20	0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	0.30	<0.30	<0.30	0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	0.20	<0.20	<0.20	0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	0.40	<0.40	<0.40	0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits									
Toluene-d8	% Recovery	50-140		99	101	2	100	102	1	102	102
4-Bromofluorobenzene	% Recovery	50-140		88	95	2	75	83	1	78	72

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

		SAMPLE DESCRIPTION:		FIELD BALNK
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2021-12-22 12:00
Parameter	Unit	G / S	RDL	3391204
Dichlorodifluoromethane	µg/L	3500	0.20	<0.20
Vinyl Chloride	µg/L	0.5	0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20
Toluene	µg/L	320	0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10

Certified By: N Popowkolof

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	FIELD BALNK
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2021-12-22 12:00
Parameter	Unit	G / S	RDL		3391204
m & p-Xylene	µg/L		0.20		<0.20
Bromoform	µg/L	5	0.10		<0.10
Styrene	µg/L	43	0.10		<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10
o-Xylene	µg/L		0.10		<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20
n-Hexane	µg/L	5	0.20		<0.20
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140			106
4-Bromofluorobenzene	% Recovery	50-140			92

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391083-3391094 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

3391095-3391097 Dilution factor=2
The sample was diluted because it was foamy. The reporting detection limit has been corrected for the dilution factor used.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

3391202-3391204 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

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Exceedance Summary

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3391094	BH21-4	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	2.51
3391192	BH21-24 SA4	ON T7 S ICC CT	O. Reg. 153(511) - PHCs F1 - F4 (Soil)	F1 (C6 to C10) minus BTEX	µg/g	55	154

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 21T848962
ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

Trace Organics Analysis

RPT Date: Jan 05, 2022

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)															
F1 (C6 - C10)	3375873		<25	<25	NA	< 25	93%	60%	140%	104%	60%	140%	113%	60%	140%
F2 (C10 to C16)	3361993		< 100	< 100	NA	< 100	102%	60%	140%	85%	60%	140%	68%	60%	140%
F3 (C16 to C34)	3361993		< 100	< 100	NA	< 100	103%	60%	140%	74%	60%	140%	69%	60%	140%
F4 (C34 to C50)	3361993		< 100	< 100	NA	< 100	105%	60%	140%	75%	60%	140%	72%	60%	140%
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	3330735		<0.20	<0.20	NA	< 0.20	71%	50%	140%	86%	50%	140%	80%	50%	140%
Vinyl Chloride	3330735		<0.17	<0.17	NA	< 0.17	83%	50%	140%	74%	50%	140%	99%	50%	140%
Bromomethane	3330735		<0.20	<0.20	NA	< 0.20	104%	50%	140%	96%	50%	140%	91%	50%	140%
Trichlorofluoromethane	3330735		<0.40	<0.40	NA	< 0.40	74%	50%	140%	87%	50%	140%	108%	50%	140%
Acetone	3330735		<1.0	<1.0	NA	< 1.0	103%	50%	140%	99%	50%	140%	102%	50%	140%
1,1-Dichloroethylene	3330735		<0.30	<0.30	NA	< 0.30	70%	50%	140%	81%	60%	130%	97%	50%	140%
Methylene Chloride	3330735		<0.30	<0.30	NA	< 0.30	107%	50%	140%	100%	60%	130%	107%	50%	140%
trans- 1,2-Dichloroethylene	3330735		<0.20	<0.20	NA	< 0.20	86%	50%	140%	72%	60%	130%	93%	50%	140%
Methyl tert-butyl ether	3330735		<0.20	<0.20	NA	< 0.20	109%	50%	140%	90%	60%	130%	110%	50%	140%
1,1-Dichloroethane	3330735		<0.30	<0.30	NA	< 0.30	90%	50%	140%	79%	60%	130%	114%	50%	140%
Methyl Ethyl Ketone	3330735		<1.0	<1.0	NA	< 1.0	98%	50%	140%	104%	50%	140%	106%	50%	140%
cis- 1,2-Dichloroethylene	3330735		<0.20	<0.20	NA	< 0.20	109%	50%	140%	86%	60%	130%	80%	50%	140%
Chloroform	3330735		<0.20	<0.20	NA	< 0.20	114%	50%	140%	98%	60%	130%	97%	50%	140%
1,2-Dichloroethane	3330735		<0.20	<0.20	NA	< 0.20	83%	50%	140%	99%	60%	130%	98%	50%	140%
1,1,1-Trichloroethane	3330735		<0.30	<0.30	NA	< 0.30	71%	50%	140%	116%	60%	130%	85%	50%	140%
Carbon Tetrachloride	3330735		<0.20	<0.20	NA	< 0.20	75%	50%	140%	80%	60%	130%	92%	50%	140%
Benzene	3330735		<0.20	<0.20	NA	< 0.20	89%	50%	140%	81%	60%	130%	88%	50%	140%
1,2-Dichloropropane	3330735		<0.20	<0.20	NA	< 0.20	82%	50%	140%	82%	60%	130%	109%	50%	140%
Trichloroethylene	3330735		<0.20	<0.20	NA	< 0.20	80%	50%	140%	83%	60%	130%	109%	50%	140%
Bromodichloromethane	3330735		<0.20	<0.20	NA	< 0.20	108%	50%	140%	103%	60%	130%	91%	50%	140%
Methyl Isobutyl Ketone	3330735		<1.0	<1.0	NA	< 1.0	107%	50%	140%	102%	50%	140%	101%	50%	140%
1,1,2-Trichloroethane	3330735		<0.20	<0.20	NA	< 0.20	118%	50%	140%	96%	60%	130%	107%	50%	140%
Toluene	3330735		<0.20	<0.20	NA	< 0.20	109%	50%	140%	105%	60%	130%	79%	50%	140%
Dibromochloromethane	3330735		<0.10	<0.10	NA	< 0.10	81%	50%	140%	105%	60%	130%	100%	50%	140%
Ethylene Dibromide	3330735		<0.10	<0.10	NA	< 0.10	93%	50%	140%	112%	60%	130%	112%	50%	140%
Tetrachloroethylene	3330735		<0.20	<0.20	NA	< 0.20	93%	50%	140%	101%	60%	130%	82%	50%	140%
1,1,1,2-Tetrachloroethane	3330735		<0.10	<0.10	NA	< 0.10	111%	50%	140%	101%	60%	130%	80%	50%	140%
Chlorobenzene	3330735		<0.10	<0.10	NA	< 0.10	100%	50%	140%	101%	60%	130%	92%	50%	140%
Ethylbenzene	3330735		<0.10	<0.10	NA	< 0.10	85%	50%	140%	70%	60%	130%	76%	50%	140%
m & p-Xylene	3330735		<0.20	<0.20	NA	< 0.20	93%	50%	140%	93%	60%	130%	104%	50%	140%
Bromoform	3330735		<0.10	<0.10	NA	< 0.10	99%	50%	140%	110%	60%	130%	101%	50%	140%
Styrene	3330735		<0.10	<0.10	NA	< 0.10	82%	50%	140%	72%	60%	130%	82%	50%	140%
1,1,2,2-Tetrachloroethane	3330735		<0.10	<0.10	NA	< 0.10	105%	50%	140%	85%	60%	130%	116%	50%	140%
o-Xylene	3330735		<0.10	<0.10	NA	< 0.10	83%	50%	140%	94%	60%	130%	73%	50%	140%

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 21T848962
ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

Trace Organics Analysis (Continued)

RPT Date: Jan 05, 2022

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	3330735		<0.10	<0.10	NA	< 0.10	99%	50%	140%	93%	60%	130%	103%	50%	140%
1,4-Dichlorobenzene	3330735		<0.10	<0.10	NA	< 0.10	82%	50%	140%	99%	60%	130%	105%	50%	140%
1,2-Dichlorobenzene	3330735		<0.10	<0.10	NA	< 0.10	97%	50%	140%	83%	60%	130%	97%	50%	140%
n-Hexane	3330735		<0.20	<0.20	NA	< 0.20	94%	50%	140%	107%	60%	130%	110%	50%	140%
O. Reg. 153(511) - PHCs F1/BTEX (Water)															
Benzene	3375873		<0.20	<0.20	NA	< 0.20	101%	60%	140%	99%	60%	140%	88%	60%	140%
Toluene	3375873		<0.20	<0.20	NA	< 0.20	113%	60%	140%	83%	60%	140%	82%	60%	140%
Ethylbenzene	3375873		<0.10	<0.10	NA	< 0.10	86%	60%	140%	91%	60%	140%	82%	60%	140%
m & p-Xylene	3375873		<0.20	<0.20	NA	< 0.20	97%	60%	140%	96%	60%	140%	98%	60%	140%
o-Xylene	3375873		<0.10	<0.10	NA	< 0.10	104%	60%	140%	111%	60%	140%	93%	60%	140%
F1 (C6-C10)	3375873		<25	<25	NA	< 25	93%	60%	140%	104%	60%	140%	113%	60%	140%
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Soil)															
F1 (C6 - C10)	3377182		<5	<5	NA	< 5	113%	60%	140%	97%	60%	140%	107%	60%	140%
F2 (C10 to C16)	3330837		< 10	< 10	NA	< 10	89%	60%	140%	79%	60%	140%	84%	60%	140%
F3 (C16 to C34)	3330837		< 50	< 50	NA	< 50	85%	60%	140%	74%	60%	140%	79%	60%	140%
F4 (C34 to C50)	3330837		< 50	< 50	NA	< 50	79%	60%	140%	76%	60%	140%	86%	60%	140%
O. Reg. 153(511) - VOCs (Soil)															
Dichlorodifluoromethane	3384810		< 0.05	< 0.05	NA	< 0.05	103%	50%	140%	103%	50%	140%	73%	50%	140%
Vinyl Chloride	3384810		< 0.02	< 0.02	NA	< 0.02	104%	50%	140%	94%	50%	140%	78%	50%	140%
Bromomethane	3384810		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	69%	50%	140%	105%	50%	140%
Trichlorofluoromethane	3384810		< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	56%	50%	140%	98%	50%	140%
Acetone	3384810		< 0.50	< 0.50	NA	< 0.50	88%	50%	140%	97%	50%	140%	104%	50%	140%
1,1-Dichloroethylene	3384810		< 0.05	< 0.05	NA	< 0.05	119%	50%	140%	83%	60%	130%	87%	50%	140%
Methylene Chloride	3384810		< 0.05	< 0.05	NA	< 0.05	79%	50%	140%	112%	60%	130%	87%	50%	140%
Trans- 1,2-Dichloroethylene	3384810		< 0.05	< 0.05	NA	< 0.05	115%	50%	140%	82%	60%	130%	90%	50%	140%
Methyl tert-butyl Ether	3384810		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	71%	60%	130%	106%	50%	140%
1,1-Dichloroethane	3384810		< 0.02	< 0.02	NA	< 0.02	72%	50%	140%	112%	60%	130%	95%	50%	140%
Methyl Ethyl Ketone	3384810		< 0.50	< 0.50	NA	< 0.50	102%	50%	140%	98%	50%	140%	101%	50%	140%
Cis- 1,2-Dichloroethylene	3384810		< 0.02	< 0.02	NA	< 0.02	75%	50%	140%	101%	60%	130%	90%	50%	140%
Chloroform	3384810		< 0.04	< 0.04	NA	< 0.04	117%	50%	140%	107%	60%	130%	89%	50%	140%
1,2-Dichloroethane	3384810		< 0.03	< 0.03	NA	< 0.03	111%	50%	140%	101%	60%	130%	90%	50%	140%
1,1,1-Trichloroethane	3384810		< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	86%	60%	130%	86%	50%	140%
Carbon Tetrachloride	3384810		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	98%	60%	130%	78%	50%	140%
Benzene	3384810		< 0.02	< 0.02	NA	< 0.02	110%	50%	140%	112%	60%	130%	120%	50%	140%
1,2-Dichloropropane	3384810		< 0.03	< 0.03	NA	< 0.03	85%	50%	140%	96%	60%	130%	104%	50%	140%
Trichloroethylene	3384810		< 0.03	< 0.03	NA	< 0.03	103%	50%	140%	118%	60%	130%	103%	50%	140%
Bromodichloromethane	3384810		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	96%	60%	130%	94%	50%	140%
Methyl Isobutyl Ketone	3384810		< 0.50	< 0.50	NA	< 0.50	104%	50%	140%	98%	50%	140%	107%	50%	140%

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Quality Assurance

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AGAT WORK ORDER: 21T848962
PROJECT: 21494078
ATTENTION TO: Daniel Stabile
SAMPLING SITE:1047 Richmond Rd.
SAMPLED BY:D.Stabile

Trace Organics Analysis (Continued)

RPT Date: Jan 05, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,1,2-Trichloroethane	3384810		< 0.04	< 0.04	NA	< 0.04	96%	50%	140%	112%	60%	130%	97%	50%	140%
Toluene	3384810		2.46	2.79	NA	< 0.05	110%	50%	140%	76%	60%	130%	98%	50%	140%
Dibromochloromethane	3384810		< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	119%	60%	130%	86%	50%	140%
Ethylene Dibromide	3384810		< 0.04	< 0.04	NA	< 0.04	89%	50%	140%	106%	60%	130%	99%	50%	140%
Tetrachloroethylene	3384810		< 0.05	< 0.05	NA	< 0.05	76%	50%	140%	108%	60%	130%	79%	50%	140%
1,1,1,2-Tetrachloroethane	3384810		< 0.04	< 0.04	NA	< 0.04	110%	50%	140%	84%	60%	130%	79%	50%	140%
Chlorobenzene	3384810		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	106%	60%	130%	97%	50%	140%
Ethylbenzene	3384810		< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	97%	60%	130%	97%	50%	140%
m & p-Xylene	3384810		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	94%	60%	130%	95%	50%	140%
Bromoform	3384810		< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	89%	60%	130%	83%	50%	140%
Styrene	3384810		< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	85%	60%	130%	115%	50%	140%
1,1,2,2-Tetrachloroethane	3384810		< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	96%	60%	130%	81%	50%	140%
o-Xylene	3384810		< 0.05	< 0.05	NA	< 0.05	82%	50%	140%	89%	60%	130%	97%	50%	140%
1,3-Dichlorobenzene	3384810		< 0.05	< 0.05	NA	< 0.05	83%	50%	140%	89%	60%	130%	90%	50%	140%
1,4-Dichlorobenzene	3384810		< 0.05	< 0.05	NA	< 0.05	111%	50%	140%	105%	60%	130%	109%	50%	140%
1,2-Dichlorobenzene	3384810		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	102%	60%	130%	117%	50%	140%
n-Hexane	3384810		< 0.05	< 0.05	NA	< 0.05	106%	50%	140%	103%	60%	130%	109%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	3377182		<0.02	<0.02	NA	< 0.02	110%	60%	140%	93%	60%	140%	93%	60%	140%
Toluene	3377182		<0.05	<0.05	NA	< 0.05	96%	60%	140%	101%	60%	140%	96%	60%	140%
Ethylbenzene	3377182		<0.05	<0.05	NA	< 0.05	97%	60%	140%	107%	60%	140%	105%	60%	140%
m & p-Xylene	3377182		<0.05	<0.05	NA	< 0.05	100%	60%	140%	111%	60%	140%	107%	60%	140%
o-Xylene	3377182		<0.05	<0.05	NA	< 0.05	106%	60%	140%	100%	60%	140%	100%	60%	140%
F1 (C6 - C10)	3377182		<5	<5	NA	< 5	113%	60%	140%	97%	60%	140%	107%	60%	140%

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

Certified By: N Popowkolof

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F1 (C6 - C10)	VOL-91- 5010	modified from MOE PHC E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC E3421	GC / FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC E3421	GC / FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC E3421	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC E3421	BALANCE
Terphenyl	VOL-91-5009	modified from MOE PHC E3421	GC/FID
Sediment			
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Benzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Toluene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F1 (C6-C10)	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

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http://www.agatlabs.com

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

*WORK ORDER # 129

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

Chain of Custody Record

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

Report Information:

Company: GOLDER ASSOCIATES LTD.
Contact: DANIEL STABILE
Address: 100 SCOTIA CRT, WHITBY
L1N 8Y6
Phone: 905-213-4732 Fax:
Reports to be sent to:
1. Email: DSTABILE@GOLDER.COM
2. Email:

Project Information:

Project: 21494078
Site Location: 1047 NICHOLSON Rd. OTT
Sampled By: D. STABILE
AGAT Quote #: MSA GOLDER-AGAT PO: 2020
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 (Indicate One)
☒ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Excess Soils R406
Table (Indicate One)
☐ Regulation 558
☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
(Region)
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
(Indicate One)

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 21T848962
Cooler Quantity:
Arrival Temperatures: 5.1 5.2 5.2 / 5.0 5.1 5.1
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes:

Turnaround Time (TAT) Required:

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - CrVI, Hg, HWSB	O. Reg 153: BTEX, F1-F4 PHCs (Analyze F4G if required ☐ Yes ☐ No)	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	VOC + PHC F1	Potentially Hazardous or High Concentration (Y/N)
BH21-21	12/22/21	1045 AM/PM	4	GW			X		X			X						
BH21-4	↓	1125 AM/PM	↓	↓			↓		↓			↓						
BH21-14		1200 AM/PM																
BH21-22		1235 AM/PM																
BH21-21 SA3	12/21/21	1030 AM/PM	3	SOIL			X		X			X						
BH21-22 SA3	↓	1200 AM/PM	↓	↓			X		X			X						Y
BH21-23 SA4		1355 AM/PM					↓		↓			↓						
BH21-24 SA4		1425 AM/PM																
BH21-25 SA3		1500 AM/PM																
DUP 1	↓	- AM/PM	↓	↓			↓		↓			X						
TRIP BLANK	12/22/21	- AM/PM	4	GW												X		

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
DANIEL STABILE	12/23/21	09:30		2021/12/23	10:10
2021/12/23		1:05			

Page 1 of 2
N°: T 129142

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AGAT Laboratories

work order #

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

Chain of Custody Record

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

Report Information:

Company: ~~GOLDER~~ GOLDER ASSOCIATES LTD.
Contact:
Address: SAME PAGE #1
Phone: Fax:
Reports to be sent to:
1. Email:
2. Email:

Project Information:

Project: 21494074
Site Location:
Sampled By: SAME PAGE #1
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 2 *Indicate One*
☑ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☑ Coarse
☐ Fine

☐ Excess Soils R406
Table _____ *Indicate One*

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
_____ *Region*

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
_____ *Indicate One*

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Sample Matrix Legend

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

Laboratory Use Only

Work Order #:
Cooler Quantity:
Arrival Temperatures: 5.1 5.2 5.2 / 5.0 5.1 5.1
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes:

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☑ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	VOC + PHC F1	Potentially Hazardous or High Concentration (Y/N)
DUP 1	12/22/21	— AM/PM	4	GW					X				X						
FIELD BLANK	12/22/21	1200 AM/PM	4	GW													X		
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	

Samples Relinquished By (Print Name and Sign): DANIEL STABILE	Date: 12/23/21	Time: 09:30	Samples Received By (Print Name and Sign): 2021/12/23	Date:	Time: 10:10
Samples Relinquished By (Print Name and Sign): 2021/12/23	Date:	Time: 1:05	Samples Received By (Print Name and Sign):	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:

Page 2 of 2

N°: T 126605

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AGAT Laboratories

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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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http://www.agatlabs.com

CLIENT NAME: GOLDER ASSOCIATES LTD
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600

ATTENTION TO: Daniel Stabile

PROJECT: 21494078 - 1047 Richmond fengate

AGAT WORK ORDER: 22Z895974

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: May 24, 2022

PAGES (INCLUDING COVER): 11

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

CLIENT NAME: GOLDER ASSOCIATES LTD

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

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

DATE RECEIVED: 2022-05-16

DATE REPORTED: 2022-05-24

		SAMPLE DESCRIPTION:		BH22-05 SA4
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2022-05-11
Parameter	Unit	G / S	RDL	3866975
Benzene	µg/g	0.21	0.02	<0.02
Toluene	µg/g	2.3	0.05	<0.05
Ethylbenzene	µg/g	2	0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05
o-Xylene	µg/g		0.05	<0.05
Xylenes (Total)	µg/g	3.1	0.05	<0.05
F1 (C6 - C10)	µg/g		5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5
F2 (C10 to C16)	µg/g	98	10	<10
F3 (C16 to C34)	µg/g	300	50	<50
F4 (C34 to C50)	µg/g	2800	50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50	NA
Moisture Content	%		0.1	8.7
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	60-140		104
Terphenyl	%	60-140		88

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

CLIENT NAME: GOLDER ASSOCIATES LTD

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

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

DATE RECEIVED: 2022-05-16

DATE REPORTED: 2022-05-24

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3866975 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

CLIENT NAME: GOLDER ASSOCIATES LTD

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

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

DATE RECEIVED: 2022-05-16

DATE REPORTED: 2022-05-24

				SAMPLE DESCRIPTION:	BH22-01 SA2	BH22-02 SA4	BH22-03 SA2	BH22-04 SA1
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2022-05-11	2022-05-09 10:45	2022-05-10	2022-05-09 13:55
Parameter	Unit	G / S	RDL		3866968	3866971	3866973	3866974
F1 (C6 - C10)	µg/g		5		<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5	<5	<5	<5
F2 (C10 to C16)	µg/g	98	10		<10	<10	<10	<10
F3 (C16 to C34)	µg/g	300	50		<50	<50	<50	<50
F4 (C34 to C50)	µg/g	2800	50		<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50		NA	NA	NA	NA
Moisture Content	%		0.1		13.5	8.8	9.6	6.3
Surrogate	Unit	Acceptable Limits						
Toluene-d8	%	50-140			115	112	114	112
Terphenyl	%	60-140			117	100	93	100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3866968-3866974 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

CLIENT NAME: GOLDER ASSOCIATES LTD

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

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

DATE RECEIVED: 2022-05-16

DATE REPORTED: 2022-05-24

		SAMPLE DESCRIPTION:		BH22-01 SA2	BH22-02 SA4	BH22-03 SA2	BH22-04 SA1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2022-05-11	2022-05-09 10:45	2022-05-10	2022-05-09 13:55
Parameter	Unit	G / S	RDL	3866968	3866971	3866973	3866974
Dichlorodifluoromethane	µg/g	16	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
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	3.5	0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	3.4	0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.38	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
Benzene	ug/g	0.21	0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.061	0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	13	0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	1.7	0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	2.3	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
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.28	0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	2	0.05	<0.05	<0.05	<0.05	<0.05

Certified By: N Popowkolof

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

CLIENT NAME: GOLDER ASSOCIATES LTD

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

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

DATE RECEIVED: 2022-05-16

DATE REPORTED: 2022-05-24

				SAMPLE DESCRIPTION:	BH22-01 SA2	BH22-02 SA4	BH22-03 SA2	BH22-04 SA1
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2022-05-11	2022-05-09 10:45	2022-05-10	2022-05-09 13:55
Parameter	Unit	G / S	RDL		3866968	3866971	3866973	3866974
m & p-Xylene	ug/g		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
Styrene	ug/g	0.7	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
o-Xylene	ug/g		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
1,4-Dichlorobenzene	ug/g	0.083	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
Xylenes (Total)	ug/g	3.1	0.05		<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05		<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	2.8	0.05		<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1		13.5	8.8	9.6	6.3
Surrogate	Unit	Acceptable Limits						
Toluene-d8	% Recovery	50-140			115	112	114	112
4-Bromofluorobenzene	% Recovery	50-140			84	80	86	81

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3866968-3866974 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkof

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD
PROJECT: 21494078 - 1047 Richmond fengate
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 22Z895974
ATTENTION TO: Daniel Stabile
SAMPLED BY:DG/KG

Trace Organics Analysis

RPT Date: May 24, 2022

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)															
F1 (C6 - C10)	3866974	3866974	<5	<5	NA	< 5	124%	60%	140%	99%	60%	140%	92%	60%	140%
F2 (C10 to C16)	3866688		< 10	< 10	NA	< 10	111%	60%	140%	95%	60%	140%	67%	60%	140%
F3 (C16 to C34)	3866688		< 50	< 50	NA	< 50	108%	60%	140%	100%	60%	140%	67%	60%	140%
F4 (C34 to C50)	3866688		< 50	< 50	NA	< 50	94%	60%	140%	64%	60%	140%	75%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	114%	50%	140%	109%	50%	140%	83%	50%	140%
Vinyl Chloride	3866974	3866974	<0.02	<0.02	NA	< 0.02	106%	50%	140%	105%	50%	140%	98%	50%	140%
Bromomethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	112%	50%	140%	115%	50%	140%	103%	50%	140%
Trichlorofluoromethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	120%	50%	140%	103%	50%	140%	112%	50%	140%
Acetone	3866974	3866974	<0.50	<0.50	NA	< 0.50	113%	50%	140%	111%	50%	140%	87%	50%	140%
1,1-Dichloroethylene	3866974	3866974	<0.05	<0.05	NA	< 0.05	71%	50%	140%	77%	60%	130%	70%	50%	140%
Methylene Chloride	3866974	3866974	<0.05	<0.05	NA	< 0.05	87%	50%	140%	103%	60%	130%	105%	50%	140%
Trans- 1,2-Dichloroethylene	3866974	3866974	<0.05	<0.05	NA	< 0.05	80%	50%	140%	71%	60%	130%	112%	50%	140%
Methyl tert-butyl Ether	3866974	3866974	<0.05	<0.05	NA	< 0.05	74%	50%	140%	82%	60%	130%	80%	50%	140%
1,1-Dichloroethane	3866974	3866974	<0.02	<0.02	NA	< 0.02	84%	50%	140%	107%	60%	130%	94%	50%	140%
Methyl Ethyl Ketone	3866974	3866974	<0.50	<0.50	NA	< 0.50	113%	50%	140%	94%	50%	140%	86%	50%	140%
Cis- 1,2-Dichloroethylene	3866974	3866974	<0.02	<0.02	NA	< 0.02	78%	50%	140%	86%	60%	130%	88%	50%	140%
Chloroform	3866974	3866974	<0.04	<0.04	NA	< 0.04	77%	50%	140%	80%	60%	130%	80%	50%	140%
1,2-Dichloroethane	3866974	3866974	<0.03	<0.03	NA	< 0.03	80%	50%	140%	82%	60%	130%	84%	50%	140%
1,1,1-Trichloroethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	94%	50%	140%	76%	60%	130%	76%	50%	140%
Carbon Tetrachloride	3866974	3866974	<0.05	<0.05	NA	< 0.05	109%	50%	140%	113%	60%	130%	114%	50%	140%
Benzene	3866974	3866974	<0.02	<0.02	NA	< 0.02	75%	50%	140%	78%	60%	130%	79%	50%	140%
1,2-Dichloropropane	3866974	3866974	<0.03	<0.03	NA	< 0.03	92%	50%	140%	92%	60%	130%	81%	50%	140%
Trichloroethylene	3866974	3866974	<0.03	<0.03	NA	< 0.03	76%	50%	140%	82%	60%	130%	90%	50%	140%
Bromodichloromethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	76%	50%	140%	76%	60%	130%	84%	50%	140%
Methyl Isobutyl Ketone	3866974	3866974	<0.50	<0.50	NA	< 0.50	118%	50%	140%	90%	50%	140%	86%	50%	140%
1,1,2-Trichloroethane	3866974	3866974	<0.04	<0.04	NA	< 0.04	109%	50%	140%	116%	60%	130%	116%	50%	140%
Toluene	3866974	3866974	<0.05	<0.05	NA	< 0.05	100%	50%	140%	108%	60%	130%	107%	50%	140%
Dibromochloromethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	116%	50%	140%	119%	60%	130%	111%	50%	140%
Ethylene Dibromide	3866974	3866974	<0.04	<0.04	NA	< 0.04	99%	50%	140%	111%	60%	130%	106%	50%	140%
Tetrachloroethylene	3866974	3866974	<0.05	<0.05	NA	< 0.05	107%	50%	140%	102%	60%	130%	108%	50%	140%
1,1,1,2-Tetrachloroethane	3866974	3866974	<0.04	<0.04	NA	< 0.04	116%	50%	140%	91%	60%	130%	89%	50%	140%
Chlorobenzene	3866974	3866974	<0.05	<0.05	NA	< 0.05	104%	50%	140%	110%	60%	130%	109%	50%	140%
Ethylbenzene	3866974	3866974	<0.05	<0.05	NA	< 0.05	86%	50%	140%	89%	60%	130%	89%	50%	140%
m & p-Xylene	3866974	3866974	<0.05	<0.05	NA	< 0.05	97%	50%	140%	102%	60%	130%	99%	50%	140%
Bromoform	3866974	3866974	<0.05	<0.05	NA	< 0.05	109%	50%	140%	84%	60%	130%	94%	50%	140%
Styrene	3866974	3866974	<0.05	<0.05	NA	< 0.05	85%	50%	140%	90%	60%	130%	85%	50%	140%
1,1,2,2-Tetrachloroethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	106%	50%	140%	99%	60%	130%	113%	50%	140%
o-Xylene	3866974	3866974	<0.05	<0.05	NA	< 0.05	94%	50%	140%	102%	60%	130%	98%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD
PROJECT: 21494078 - 1047 Richmond fengate
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 22Z895974
ATTENTION TO: Daniel Stabile
SAMPLED BY:DG/KG

Trace Organics Analysis (Continued)

RPT Date: May 24, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	3866974	3866974	<0.05	<0.05	NA	< 0.05	111%	50%	140%	113%	60%	130%	113%	50%	140%
1,4-Dichlorobenzene	3866974	3866974	<0.05	<0.05	NA	< 0.05	104%	50%	140%	113%	60%	130%	105%	50%	140%
1,2-Dichlorobenzene	3866974	3866974	<0.05	<0.05	NA	< 0.05	100%	50%	140%	107%	60%	130%	103%	50%	140%
n-Hexane	3866974	3866974	<0.05	<0.05	NA	< 0.05	95%	50%	140%	79%	60%	130%	91%	50%	140%

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

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)															
Moisture Content	3866971	3866971	8.81	10.00	12.7%	< 0.1	NA			NA			NA		
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	3866067		<0.02	<0.02	NA	< 0.02	96%	60%	140%	137%	60%	140%	121%	60%	140%
Toluene	3866067		<0.05	<0.05	NA	< 0.05	108%	60%	140%	134%	60%	140%	93%	60%	140%
Ethylbenzene	3866067		<0.05	<0.05	NA	< 0.05	134%	60%	140%	120%	60%	140%	130%	60%	140%
m & p-Xylene	3866067		<0.05	<0.05	NA	< 0.05	129%	60%	140%	107%	60%	140%	102%	60%	140%
o-Xylene	3866067		<0.05	<0.05	NA	< 0.05	125%	60%	140%	130%	60%	140%	102%	60%	140%
F1 (C6 - C10)	3866067		<5	<5	NA	< 5	97%	60%	140%	90%	60%	140%	102%	60%	140%

Certified By: N Popowkolof

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

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AGAT Laboratories

1 Mech.

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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 22Z895974

Cooler Quantity: one - loose ice.

Arrival Temperatures: 7.5 | 7.8 | 7.8
6.3 | 5.7 | 5.4

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: ice

Report Information:

Company: WSP - Golder
Contact: Daniel Stabile, Ben Waechter
Address: 1931 Robertson Rd. Nepean, ON. K2H 5B7
Phone: 905-213-4732 2nd Phone: 613-592-9600
Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email: Ben.Waechter@wsp.com

Project Information:

Project: 21494078 - 1047 Richmond Fengate.
Site Location: 1047 Richmond Rd
Sampled By: Dany Giroux/ Kinjal Gajjar
AGAT ID #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company: WSP-Golder
Contact: Daniel Stabile
Address: 1931 Robertson Rd. Nepean, ON.
Email: daniel.stabile@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☑ Res/Park
☐ Agriculture

Soil Texture (Check One)
☐ Coarse
☐ Fine

☐ Excess Soils R406
Table _____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
_____ (Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
_____ (Indicate One)

Is this submission for a Record of Site Condition? ☑ Yes ☐ No

Report Guideline on Certificate of Analysis ☑ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT (Most Analysis) ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs	Analyze F4G if required ☐ Yes ☐ No	PAHs	Total PCBs ☐ Aroclor	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
BH22-01 SA2	11 May 22	AM/PM	3	S					✓				✓					
BH22-02 SA4	9 May 22	10:45 AM/PM	3	S					✓				✓					
BH22-03 SA2	10 May 22	AM/PM	3	S					✓				✓					
BH22-04 SA7	9 May 22	1:55 AM/PM	3	S					✓				✓					
BH22-05 SA4	11 May 22	AM/PM	3	S					✓				✓					
		AM/PM																
		AM/PM																
		AM/PM																
		AM/PM																
		AM/PM																
		AM/PM																

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Ben Waechter	16 May 22	14:48	C. Guillet MAY 16 2022		14h50
CC to purolator MAY 18 2022	16h00		Simon	17/5/22	9:00

Page _____ of _____

N°: T114985

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CLIENT NAME: WSP CANADA INC.
600 Cochrane Drive, 2nd Floor
MARKHAM, ON L3R 5K3
(905) 475

ATTENTION TO: Daniel Stabile

PROJECT: 21494078-1047 Richmond Fengate

AGAT WORK ORDER: 22T901122

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Jun 07, 2022

PAGES (INCLUDING COVER): 12

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 22T901122

PROJECT: 21494078-1047 Richmond Fengate

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond rd

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2022-05-30

DATE REPORTED: 2022-06-07

				SAMPLE DESCRIPTION:	MW 22-01	MW 22-02	MW 22-03	MW 22-04	MW 22-05	MW 21-04	MW 21-14	MW 21-14 dup
				SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water	Water
				DATE SAMPLED:	2022-05-26 15:05	2022-05-26 12:55	2022-05-26 11:08	2022-05-26 13:52	2022-05-26 16:42	2022-05-26 16:02	2022-05-26 14:48	2022-05-26 14:48
Parameter	Unit	G / S	RDL		3911644	3911660	3911661	3911662	3911663	3911664	3911665	3911666
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
F1 (C6 - C10)	µg/L		25		<25	<25	<25	<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25	<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100		<100	<100	120	<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100		<100	<100	300	<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100		<100	<100	<100	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA	NA	NA	NA	NA	NA
Sediment					No	No	No	No	No	No	No	No
Surrogate	Unit	Acceptable Limits										
Toluene-d8	%	50-140			92	104	107	101	106	102	100	98
Terphenyl	% Recovery	60-140			98	80	110	75	108	86	93	103

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3911644-3911666 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 22T901122

PROJECT: 21494078-1047 Richmond Fengate

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond rd

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2022-05-30

DATE REPORTED: 2022-06-07

		SAMPLE DESCRIPTION:		Field Blank	Trip Blank
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2022-05-26 13:19	2022-05-26 13:19
Parameter	Unit	G / S	RDL	3911667	3911747
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 22T901122

PROJECT: 21494078-1047 Richmond Fengate

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond rd

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2022-05-30

DATE REPORTED: 2022-06-07

				SAMPLE DESCRIPTION:	Field Blank	Trip Blank
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2022-05-26 13:19	2022-05-26 13:19
Parameter	Unit	G / S	RDL		3911667	3911747
m & p-Xylene	µg/L		0.20		<0.20	<0.20
Bromoform	µg/L	5	0.10		<0.10	<0.10
Styrene	µg/L	43	0.10		<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10	<0.10
o-Xylene	µg/L		0.10		<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20
n-Hexane	µg/L	5	0.20		<0.20	<0.20
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140			122	103
4-Bromofluorobenzene	% Recovery	50-140			82	84

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3911667-3911747 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 22T901122

PROJECT: 21494078-1047 Richmond Fengate

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond rd

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2022-05-30

DATE REPORTED: 2022-06-07

		SAMPLE DESCRIPTION:		MW 22-01	MW 22-02	MW 22-03	MW 22-04	MW 22-05	MW 21-04	MW 21-14	MW 21-14 dup
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2022-05-26 15:05	2022-05-26 12:55	2022-05-26 11:08	2022-05-26 13:52	2022-05-26 16:42	2022-05-26 16:02	2022-05-26 14:48	2022-05-26 14:48
Parameter	Unit	G / S	RDL	3911644	3911660	3911661	3911662	3911663	3911664	3911665	3911666
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	0.42	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	3.14	<0.20	<0.20	3.99	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	2.39	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	5.88	<0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Certified By: NPopowkolof

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 22T901122

PROJECT: 21494078-1047 Richmond Fengate

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond rd

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2022-05-30

DATE REPORTED: 2022-06-07

		SAMPLE DESCRIPTION:		MW 22-01	MW 22-02	MW 22-03	MW 22-04	MW 22-05	MW 21-04	MW 21-14	MW 21-14 dup
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2022-05-26 15:05	2022-05-26 12:55	2022-05-26 11:08	2022-05-26 13:52	2022-05-26 16:42	2022-05-26 16:02	2022-05-26 14:48	2022-05-26 14:48
Parameter	Unit	G / S	RDL	3911644	3911660	3911661	3911662	3911663	3911664	3911665	3911666
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	43	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	5.99	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits									
Toluene-d8	% Recovery	50-140		92	104	107	101	106	102	100	98
4-Bromofluorobenzene	% Recovery	50-140		73	93	103	84	112	105	102	112

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3911644-3911666 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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Exceedance Summary

AGAT WORK ORDER: 22T901122

PROJECT: 21494078-1047 Richmond Fengate

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3911661	MW 22-03	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (with PHC) (Water)	1,2-Dichloroethane	µg/L	0.5	3.14
3911664	MW 21-04	ON T7 NPGW CT	O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)	Benzene	µg/L	0.5	2.39
3911664	MW 21-04	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (with PHC) (Water)	1,2-Dichloroethane	µg/L	0.5	3.99
3911664	MW 21-04	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (with PHC) (Water)	Benzene	µg/L	0.5	2.39

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 21494078-1047 Richmond Fengate

SAMPLING SITE:1047 Richmond rd

AGAT WORK ORDER: 22T901122

ATTENTION TO: Daniel Stabile

SAMPLED BY:Ben Waechter

Trace Organics Analysis

RPT Date: Jun 07, 2022

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)															
F1 (C6 - C10)	3915063		87	114	NA	< 25	74%	60%	140%	81%	60%	140%	78%	60%	140%
F2 (C10 to C16)	3911661	3911661	120	110	NA	< 100	114%	60%	140%	82%	60%	140%	81%	60%	140%
F3 (C16 to C34)	3911661	3911661	300	260	NA	< 100	103%	60%	140%	82%	60%	140%	76%	60%	140%
F4 (C34 to C50)	3911661	3911661	< 100	< 100	NA	< 100	94%	60%	140%	91%	60%	140%	88%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	3915063		<0.40	<0.40	NA	< 0.40	77%	50%	140%	83%	50%	140%	89%	50%	140%
Vinyl Chloride	3915063		<0.17	<0.17	NA	< 0.17	89%	50%	140%	101%	50%	140%	88%	50%	140%
Bromomethane	3915063		<0.20	<0.20	NA	< 0.20	119%	50%	140%	94%	50%	140%	115%	50%	140%
Trichlorofluoromethane	3915063		<0.40	<0.40	NA	< 0.40	80%	50%	140%	91%	50%	140%	104%	50%	140%
Acetone	3915063		<1.0	<1.0	NA	< 1.0	95%	50%	140%	106%	50%	140%	109%	50%	140%
1,1-Dichloroethylene	3915063		<0.30	<0.30	NA	< 0.30	72%	50%	140%	76%	60%	130%	91%	50%	140%
Methylene Chloride	3915063		<0.30	<0.30	NA	< 0.30	99%	50%	140%	111%	60%	130%	107%	50%	140%
trans- 1,2-Dichloroethylene	3915063		<0.20	<0.20	NA	< 0.20	80%	50%	140%	80%	60%	130%	97%	50%	140%
Methyl tert-butyl ether	3915063		<0.20	<0.20	NA	< 0.20	92%	50%	140%	114%	60%	130%	94%	50%	140%
1,1-Dichloroethane	3915063		<0.30	<0.30	NA	< 0.30	80%	50%	140%	92%	60%	130%	93%	50%	140%
Methyl Ethyl Ketone	3915063		<1.0	<1.0	NA	< 1.0	94%	50%	140%	103%	50%	140%	118%	50%	140%
cis- 1,2-Dichloroethylene	3915063		<0.20	<0.20	NA	< 0.20	96%	50%	140%	99%	60%	130%	95%	50%	140%
Chloroform	3915063		<0.20	<0.20	NA	< 0.20	107%	50%	140%	98%	60%	130%	103%	50%	140%
1,2-Dichloroethane	3915063		<0.20	<0.20	NA	< 0.20	79%	50%	140%	96%	60%	130%	117%	50%	140%
1,1,1-Trichloroethane	3915063		<0.30	<0.30	NA	< 0.30	75%	50%	140%	80%	60%	130%	97%	50%	140%
Carbon Tetrachloride	3915063		<0.20	<0.20	NA	< 0.20	72%	50%	140%	74%	60%	130%	106%	50%	140%
Benzene	3915063		0.48	0.50	NA	< 0.20	90%	50%	140%	88%	60%	130%	77%	50%	140%
1,2-Dichloropropane	3915063		<0.20	<0.20	NA	< 0.20	90%	50%	140%	76%	60%	130%	80%	50%	140%
Trichloroethylene	3915063		<0.20	<0.20	NA	< 0.20	79%	50%	140%	77%	60%	130%	86%	50%	140%
Bromodichloromethane	3915063		<0.20	<0.20	NA	< 0.20	82%	50%	140%	80%	60%	130%	99%	50%	140%
Methyl Isobutyl Ketone	3915063		<1.0	<1.0	NA	< 1.0	95%	50%	140%	105%	50%	140%	104%	50%	140%
1,1,2-Trichloroethane	3915063		<0.20	<0.20	NA	< 0.20	100%	50%	140%	111%	60%	130%	118%	50%	140%
Toluene	3915063		<0.20	<0.20	NA	< 0.20	88%	50%	140%	87%	60%	130%	75%	50%	140%
Dibromochloromethane	3915063		<0.10	<0.10	NA	< 0.10	119%	50%	140%	118%	60%	130%	114%	50%	140%
Ethylene Dibromide	3915063		<0.10	<0.10	NA	< 0.10	110%	50%	140%	118%	60%	130%	113%	50%	140%
Tetrachloroethylene	3915063		<0.20	<0.20	NA	< 0.20	87%	50%	140%	87%	60%	130%	74%	50%	140%
1,1,1,2-Tetrachloroethane	3915063		<0.10	<0.10	NA	< 0.10	86%	50%	140%	85%	60%	130%	72%	50%	140%
Chlorobenzene	3915063		<0.10	<0.10	NA	< 0.10	90%	50%	140%	90%	60%	130%	79%	50%	140%
Ethylbenzene	3915063		2.86	2.83	1.1%	< 0.10	72%	50%	140%	80%	60%	130%	94%	50%	140%
m & p-Xylene	3915063		<0.20	<0.20	NA	< 0.20	88%	50%	140%	83%	60%	130%	113%	50%	140%
Bromoform	3915063		<0.10	<0.10	NA	< 0.10	102%	50%	140%	110%	60%	130%	98%	50%	140%
Styrene	3915063		<0.10	<0.10	NA	< 0.10	80%	50%	140%	75%	60%	130%	96%	50%	140%
1,1,2,2-Tetrachloroethane	3915063		<0.10	<0.10	NA	< 0.10	93%	50%	140%	97%	60%	130%	88%	50%	140%
o-Xylene	3915063		<0.10	<0.10	NA	< 0.10	93%	50%	140%	89%	60%	130%	77%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories
5835 COOPERS AVENUE
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CANADA L4Z 1Y2
TEL (905)712-5100
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http://www.agatlabs.com

Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078-1047 Richmond Fengate
SAMPLING SITE:1047 Richmond rd

AGAT WORK ORDER: 22T901122
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ben Waechter

Trace Organics Analysis (Continued)

RPT Date: Jun 07, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	3915063		<0.10	<0.10	NA	< 0.10	115%	50%	140%	108%	60%	130%	104%	50%	140%
1,4-Dichlorobenzene	3915063		<0.10	<0.10	NA	< 0.10	115%	50%	140%	109%	60%	130%	104%	50%	140%
1,2-Dichlorobenzene	3915063		<0.10	<0.10	NA	< 0.10	109%	50%	140%	100%	60%	130%	98%	50%	140%
n-Hexane	3915063		<0.20	<0.20	NA	< 0.20	106%	50%	140%	108%	60%	130%	106%	50%	140%

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

Certified By:

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 22T901122

PROJECT: 21494078-1047 Richmond Fengate

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond rd

SAMPLED BY:Ben Waechter

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Xylenes (Total)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Sediment			
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 22T901122

PROJECT: 21494078-1047 Richmond Fengate

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond rd

SAMPLED BY:Ben Waechter

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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webearth.agatlabs.com

Chain of Custody Record

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

Laboratory Use Only 22T901122
Work Order #: ~~22T900946~~

Cooler Quantity: 1 Large
Arrival Temperatures: 2.0 6.3 16.7
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Melted Ice

Report Information:

Company: WSP-Golder
Contact: Daniel Stabile; Ben Waechter
Address: 1931 Robertson Rd. Nepean, ON, K2H 5B7
Phone: 905-213-4752 Fax: 613-592-9600
Reports to be sent to:
1. Email: Daniel.Stabile@WSP.com
2. Email: Ben.Waechter@WSP.com

Project Information:

Project: 21494078- 1047 Richmond Tengate
Site Location: 1047 Richmond Rd
Sampled By: Ben Waechter
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company: WSP-Golder
Contact: Daniel Stabile
Address: 1931 Robertson Rd. Nepean, ON.
Email: daniel.stabile@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com ☑ Res/Park ☐ Agriculture
Soil Texture (Check One): ☐ Coarse ☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)
☐ Regulation 558
☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
____ (Region)
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): ____

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
MW 22-01	26 May 22	13:05 AM/PM	8	GW			✓		✓				✓			✓		
MW 22-02		12:55 AM/PM	8	GW			✓		✓				✓			✓		
MW 22-03		11:08 AM/PM	8	GW			✓		✓				✓			✓		
MW 22-04		1:52 AM/PM	8	GW			✓		✓				✓			✓		
MW 22-05		1:12 AM/PM	8	GW			✓		✓				✓			✓		
MW 21-04		4:02 AM/PM	8	GW			✓		✓				✓			✓		
MW 21-14		2:48 AM/PM	8	GW			✓		✓				✓			✓		
MW 21-14 DUP		2:48 AM/PM	8	GW			✓		✓				✓			✓		
Field Blank	26 May 22	1:14 AM/PM	8	GW	Distilled Water		✓		✓				✓			✓		
Trip Blanks		AM/PM											✓					
		AM/PM																

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Ben Waechter	27 May 22	09:10	Troy Burgins	05/27/22	9:35 AM
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
			Anthony Davis		
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

22MAY30 9:38AM

Page ____ of ____

N°: T 132679

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

AGAT Laboratories

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CLIENT NAME: GOLDER ASSOCIATES LTD.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727

ATTENTION TO: Daniel Stabile

PROJECT: 21494078

AGAT WORK ORDER: 22Z970560

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Nov 24, 2022

PAGES (INCLUDING COVER): 9

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 22Z970560

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2022-11-16

DATE REPORTED: 2022-11-24

SAMPLE DESCRIPTION:				22-8	21-14	21-4	dup 2	22-1	22-2	22-4	trip blank
SAMPLE TYPE:				Water	Water	Water	Water	Water	Water	Water	Water
DATE SAMPLED:				2022-11-15 13:50	2022-11-15 13:50	2022-11-15 15:40	2022-11-15 15:40	2022-11-16 11:00	2022-11-16 12:45	2022-11-16 13:30	2022-11-15 13:50
Parameter	Unit	G / S	RDL	4531761	4531768	4531770	4531771	4531772	4531773	4531774	4531775
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	1.45	7.67	7.39	<0.20	7.69	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	0.54	3.98	3.98	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Certified By: N Popowkolof

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories
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TEL (905)712-5100
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Certificate of Analysis

AGAT WORK ORDER: 22Z970560

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2022-11-16

DATE REPORTED: 2022-11-24

		SAMPLE DESCRIPTION:		22-8	21-14	21-4	dup 2	22-1	22-2	22-4	trip blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2022-11-15 13:50	2022-11-15 13:50	2022-11-15 15:40	2022-11-15 15:40	2022-11-16 11:00	2022-11-16 12:45	2022-11-16 13:30	2022-11-15 13:50
Parameter	Unit	G / S	RDL	4531761	4531768	4531770	4531771	4531772	4531773	4531774	4531775
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	43	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10	<0.10	1.59	5.13	4.99	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits									
Toluene-d8	% Recovery	50-140		96	99	100	105	128	117	120	101
4-Bromofluorobenzene	% Recovery	50-140		87	83	87	86	86	84	87	84

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

4531761-4531775 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Exceedance Summary

AGAT WORK ORDER: 22Z970560

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
4531768	21-14	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	1.45
4531770	21-4	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	7.67
4531771	dup 2	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	7.39
4531773	22-2	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	7.69

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd

AGAT WORK ORDER: 22Z970560
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

Trace Organics Analysis

RPT Date: Nov 24, 2022

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	4535302		<0.40	<0.40	NA	< 0.40	115%	50%	140%	113%	50%	140%	115%	50%	140%
Vinyl Chloride	4535302		<0.17	<0.17	NA	< 0.17	115%	50%	140%	112%	50%	140%	82%	50%	140%
Bromomethane	4535302		<0.20	<0.20	NA	< 0.20	119%	50%	140%	107%	50%	140%	103%	50%	140%
Trichlorofluoromethane	4535302		<0.40	<0.40	NA	< 0.40	106%	50%	140%	101%	50%	140%	117%	50%	140%
Acetone	4535302		<1.0	<1.0	NA	< 1.0	100%	50%	140%	116%	50%	140%	112%	50%	140%
1,1-Dichloroethylene	4535302		<0.30	<0.30	NA	< 0.30	96%	50%	140%	87%	60%	130%	93%	50%	140%
Methylene Chloride	4535302		<0.30	<0.30	NA	< 0.30	77%	50%	140%	115%	60%	130%	104%	50%	140%
trans- 1,2-Dichloroethylene	4535302		<0.20	<0.20	NA	< 0.20	99%	50%	140%	91%	60%	130%	89%	50%	140%
Methyl tert-butyl ether	4535302		<0.20	<0.20	NA	< 0.20	110%	50%	140%	102%	60%	130%	95%	50%	140%
1,1-Dichloroethane	4535302		<0.30	<0.30	NA	< 0.30	111%	50%	140%	101%	60%	130%	94%	50%	140%
Methyl Ethyl Ketone	4535302		<1.0	<1.0	NA	< 1.0	99%	50%	140%	117%	50%	140%	109%	50%	140%
cis- 1,2-Dichloroethylene	4535302		<0.20	<0.20	NA	< 0.20	102%	50%	140%	97%	60%	130%	93%	50%	140%
Chloroform	4535302		<0.20	<0.20	NA	< 0.20	105%	50%	140%	118%	60%	130%	112%	50%	140%
1,2-Dichloroethane	4535302		<0.20	<0.20	NA	< 0.20	115%	50%	140%	109%	60%	130%	101%	50%	140%
1,1,1-Trichloroethane	4535302		<0.30	<0.30	NA	< 0.30	95%	50%	140%	90%	60%	130%	80%	50%	140%
Carbon Tetrachloride	4535302		<0.20	<0.20	NA	< 0.20	85%	50%	140%	80%	60%	130%	79%	50%	140%
Benzene	4535302		<0.20	<0.20	NA	< 0.20	104%	50%	140%	97%	60%	130%	94%	50%	140%
1,2-Dichloropropane	4535302		<0.20	<0.20	NA	< 0.20	105%	50%	140%	104%	60%	130%	84%	50%	140%
Trichloroethylene	4535302		<0.20	<0.20	NA	< 0.20	101%	50%	140%	90%	60%	130%	89%	50%	140%
Bromodichloromethane	4535302		<0.20	<0.20	NA	< 0.20	109%	50%	140%	107%	60%	130%	90%	50%	140%
Methyl Isobutyl Ketone	4535302		<1.0	<1.0	NA	< 1.0	91%	50%	140%	100%	50%	140%	105%	50%	140%
1,1,2-Trichloroethane	4535302		<0.20	<0.20	NA	< 0.20	112%	50%	140%	107%	60%	130%	117%	50%	140%
Toluene	4535302		<0.20	<0.20	NA	< 0.20	109%	50%	140%	87%	60%	130%	109%	50%	140%
Dibromochloromethane	4535302		<0.10	<0.10	NA	< 0.10	109%	50%	140%	97%	60%	130%	110%	50%	140%
Ethylene Dibromide	4535302		<0.10	<0.10	NA	< 0.10	118%	50%	140%	105%	60%	130%	111%	50%	140%
Tetrachloroethylene	4535302		<0.20	<0.20	NA	< 0.20	100%	50%	140%	89%	60%	130%	111%	50%	140%
1,1,1,2-Tetrachloroethane	4535302		<0.10	<0.10	NA	< 0.10	101%	50%	140%	89%	60%	130%	112%	50%	140%
Chlorobenzene	4535302		<0.10	<0.10	NA	< 0.10	107%	50%	140%	93%	60%	130%	113%	50%	140%
Ethylbenzene	4535302		<0.10	<0.10	NA	< 0.10	120%	50%	140%	104%	60%	130%	115%	50%	140%
m & p-Xylene	4535302		<0.20	<0.20	NA	< 0.20	110%	50%	140%	114%	60%	130%	110%	50%	140%
Bromoform	4535302		<0.10	<0.10	NA	< 0.10	101%	50%	140%	101%	60%	130%	118%	50%	140%
Styrene	4535302		<0.10	<0.10	NA	< 0.10	115%	50%	140%	95%	60%	130%	107%	50%	140%
1,1,2,2-Tetrachloroethane	4535302		<0.10	<0.10	NA	< 0.10	113%	50%	140%	108%	60%	130%	114%	50%	140%
o-Xylene	4535302		<0.10	<0.10	NA	< 0.10	109%	50%	140%	103%	60%	130%	102%	50%	140%
1,3-Dichlorobenzene	4535302		<0.10	<0.10	NA	< 0.10	107%	50%	140%	88%	60%	130%	114%	50%	140%
1,4-Dichlorobenzene	4535302		<0.10	<0.10	NA	< 0.10	109%	50%	140%	89%	60%	130%	114%	50%	140%
1,2-Dichlorobenzene	4535302		<0.10	<0.10	NA	< 0.10	113%	50%	140%	90%	60%	130%	119%	50%	140%
n-Hexane	4535302		<0.20	<0.20	NA	< 0.20	108%	50%	140%	94%	60%	130%	77%	50%	140%
Toluene-d8	4535302		100	103	3.2%	< 1	NA			NA			96%		

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 22Z970560

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

Trace Organics Analysis (Continued)

RPT Date: Nov 24, 2022			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Certified By:

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 22Z970560

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 22Z970560

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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webearth.agatlabs.com

Chain of Custody Record

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

Laboratory Use Only
Work Order #: 22797056O
Cooler Quantity: one - on ice
Arrival Temperatures: 5.8 5.7 5.7 / 2.8 2.3 2.5
Custody Seal Intact: ☐Yes ☐No ☐N/A
Notes: Bagged ice.

Report Information:
Company: Golder
Contact: Daniel Stabile
Address:
Phone: Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email:

Regulatory Requirements:
(Please check all applicable boxes)
☒ Regulation 153/04 — Table 7 (Indicate One) — ☐Ind/Com ☒Res/Park ☐Agriculture
Soil Texture (Check One): ☒Coarse ☐Fine
☐ Excess Soils R406 — Table (Indicate One)
☐ Regulation 558
☐ CCME
☐ Sewer Use ☐Sanitary ☐Storm (Region)
☐ Prov. Water Quality Objectives (PWQO)
☐ Other (Indicate One)

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No
Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

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

Project Information:
Project: 21494078
Site Location: 1047 Richmond Rd.
Sampled By: Ryan Francis
AGAT ID #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:
Bill To Same: Yes ☐ No ☐
Company: Golder
Contact: Daniel Stabile
Address: PO# 21494078
Email: daniel.stabile@wsp.com

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVi, DOC Y/N	O. Reg 153: Metals & Inorganics	Metals - ☐CrVi, ☐Hg, ☐HWSB	BTEX, F1-F4 PHCs Analyze F4G if required ☐Yes ☐No	PAHs	Total PCBs ☐Aroclor	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐M&I ☐VOCs ☐ABNs ☐B(a)P ☐PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐Metals ☐VOCs ☐SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
22-05	Nov 15/22	1:50 PM	3	GW								✓					N
21-14	↓	1:50 PM	3	GW								✓					Y
DUP 1		1:50 PM	3	GW	Please hold							✓					Y
21-4		3:40 PM	3	GW								✓					N
DUP 2	↓	3:40 PM	3	GW								✓					N
22-1	Nov 16/22	11:00 PM	3	GW								✓					N
22-2	↓	12:45 PM	3	GW								✓					N
22-4	↓	1:30 PM	3	GW								✓					Y
Trip Blank			3	GW								✓					
		AM PM															
		AM PM															
		AM PM															

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Ryan Francis	Nov 16/22	3:30	Ben Thelet	22-11-16	15h38
Carlo Pinto	NOV 17 2022	16h00	Sana Qureshi	16 Nov/22	9:10am
	Date	Time	Samples Received By (Print Name and Sign)	Date	Time

Page 1 of 1
N°: T 122894

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600
ATTENTION TO: Daniel Stabile
PROJECT: 21494078
AGAT WORK ORDER: 23Z996204
TRACE ORGANICS REVIEWED BY: Radhika Chakraberty, Trace Organics Lab Manager
DATE REPORTED: Feb 15, 2023
PAGES (INCLUDING COVER): 9
VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z996204
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-02-09

DATE REPORTED: 2023-02-15

		SAMPLE DESCRIPTION:		MW22-02	DUP-1
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2023-02-09 13:20	2023-02-09 13:20
Parameter	Unit	G / S	RDL	4762797	4762799
Dichlorodifluoromethane	µg/L	3500	0.80	<0.80	<0.80
Vinyl Chloride	µg/L	0.5	0.34	<0.34	<0.34
Bromomethane	µg/L	0.89	0.40	<0.40	<0.40
Trichlorofluoromethane	µg/L	2000	0.80	<0.80	<0.80
Acetone	µg/L	100000	2.0	<2.0	<2.0
1,1-Dichloroethylene	µg/L	0.5	0.60	<0.60	<0.60
Methylene Chloride	µg/L	26	0.60	<0.60	<0.60
trans- 1,2-Dichloroethylene	µg/L	1.6	0.40	<0.40	<0.40
Methyl tert-butyl ether	µg/L	15	0.40	<0.40	<0.40
1,1-Dichloroethane	µg/L	11	0.60	<0.60	<0.60
Methyl Ethyl Ketone	µg/L	21000	2.0	<2.0	<2.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.40	<0.40	<0.40
Chloroform	µg/L	2	0.40	<0.40	<0.40
1,2-Dichloroethane	µg/L	0.5	0.40	2.48	2.58
1,1,1-Trichloroethane	µg/L	23	0.60	<0.60	<0.60
Carbon Tetrachloride	µg/L	0.2	0.40	<0.40	<0.40
Benzene	µg/L	0.5	0.40	<0.40	<0.40
1,2-Dichloropropane	µg/L	0.58	0.40	<0.40	<0.40
Trichloroethylene	µg/L	0.5	0.40	<0.40	<0.40
Bromodichloromethane	µg/L	67000	0.40	<0.40	<0.40
Methyl Isobutyl Ketone	µg/L	5200	2.0	<2.0	<2.0
1,1,2-Trichloroethane	µg/L	0.5	0.40	<0.40	<0.40
Toluene	µg/L	320	0.40	<0.40	<0.40
Dibromochloromethane	µg/L	65000	0.20	<0.20	<0.20
Ethylene Dibromide	µg/L	0.2	0.20	<0.20	<0.20
Tetrachloroethylene	µg/L	0.5	0.40	<0.40	<0.40
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.20	<0.20	<0.20
Chlorobenzene	µg/L	140	0.20	<0.20	<0.20
Ethylbenzene	µg/L	54	0.20	<0.20	<0.20

Certified By: R. Chakraberty

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Certificate of Analysis

AGAT WORK ORDER: 23Z996204
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-02-09

DATE REPORTED: 2023-02-15

				SAMPLE DESCRIPTION:	MW22-02	DUP-1
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2023-02-09 13:20	2023-02-09 13:20
Parameter	Unit	G / S	RDL		4762797	4762799
m & p-Xylene	µg/L		0.40		<0.40	<0.40
Bromoform	µg/L	5	0.20		<0.20	<0.20
Styrene	µg/L	43	0.20		<0.20	<0.20
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.20		<0.20	<0.20
o-Xylene	µg/L		0.20		<0.20	<0.20
1,3-Dichlorobenzene	µg/L	7600	0.20		<0.20	<0.20
1,4-Dichlorobenzene	µg/L	0.5	0.20		<0.20	<0.20
1,2-Dichlorobenzene	µg/L	150	0.20		<0.20	<0.20
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20
n-Hexane	µg/L	5	0.40		<0.40	<0.40
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140			112	108
4-Bromofluorobenzene	% Recovery	50-140			81	81

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

4762797-4762799 Dilution factor=2
VOC-The sample was diluted because it was foamy. The reporting detection limit has been corrected for the dilution factor used.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

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Exceedance Summary

AGAT WORK ORDER: 23Z996204

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
4762797	MW22-02	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	2.48
4762799	DUP-1	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	2.58

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd

AGAT WORK ORDER: 23Z996204
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

Trace Organics Analysis

RPT Date: Feb 15, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	4765688		<0.40	<0.40	NA	< 0.40	109%	50%	140%	98%	50%	140%	112%	50%	140%
Vinyl Chloride	4765688		<0.17	<0.17	NA	< 0.17	79%	50%	140%	106%	50%	140%	82%	50%	140%
Bromomethane	4765688		<0.20	<0.20	NA	< 0.20	115%	50%	140%	94%	50%	140%	97%	50%	140%
Trichlorofluoromethane	4765688		<0.40	<0.40	NA	< 0.40	103%	50%	140%	105%	50%	140%	90%	50%	140%
Acetone	4765688		<1.0	<1.0	NA	< 1.0	97%	50%	140%	103%	50%	140%	106%	50%	140%
1,1-Dichloroethylene	4765688		<0.30	<0.30	NA	< 0.30	89%	50%	140%	98%	60%	130%	74%	50%	140%
Methylene Chloride	4765688		<0.30	<0.30	NA	< 0.30	97%	50%	140%	95%	60%	130%	80%	50%	140%
trans- 1,2-Dichloroethylene	4765688		<0.20	<0.20	NA	< 0.20	98%	50%	140%	104%	60%	130%	76%	50%	140%
Methyl tert-butyl ether	4765688		<0.20	<0.20	NA	< 0.20	93%	50%	140%	88%	60%	130%	80%	50%	140%
1,1-Dichloroethane	4765688		<0.30	<0.30	NA	< 0.30	97%	50%	140%	105%	60%	130%	80%	50%	140%
Methyl Ethyl Ketone	4765688		<1.0	<1.0	NA	< 1.0	99%	50%	140%	97%	50%	140%	84%	50%	140%
cis- 1,2-Dichloroethylene	4765688		<0.20	<0.20	NA	< 0.20	105%	50%	140%	89%	60%	130%	83%	50%	140%
Chloroform	4765688		<0.20	<0.20	NA	< 0.20	111%	50%	140%	118%	60%	130%	94%	50%	140%
1,2-Dichloroethane	4765688		<0.20	<0.20	NA	< 0.20	114%	50%	140%	117%	60%	130%	91%	50%	140%
1,1,1-Trichloroethane	4765688		<0.30	<0.30	NA	< 0.30	84%	50%	140%	97%	60%	130%	108%	50%	140%
Carbon Tetrachloride	4765688		<0.20	<0.20	NA	< 0.20	88%	50%	140%	79%	60%	130%	75%	50%	140%
Benzene	4765688		<0.20	<0.20	NA	< 0.20	105%	50%	140%	111%	60%	130%	85%	50%	140%
1,2-Dichloropropane	4765688		<0.20	<0.20	NA	< 0.20	109%	50%	140%	114%	60%	130%	84%	50%	140%
Trichloroethylene	4765688		<0.20	<0.20	NA	< 0.20	78%	50%	140%	79%	60%	130%	84%	50%	140%
Bromodichloromethane	4765688		<0.20	<0.20	NA	< 0.20	76%	50%	140%	85%	60%	130%	70%	50%	140%
Methyl Isobutyl Ketone	4765688		<1.0	<1.0	NA	< 1.0	86%	50%	140%	113%	50%	140%	111%	50%	140%
1,1,2-Trichloroethane	4765688		<0.20	<0.20	NA	< 0.20	102%	50%	140%	108%	60%	130%	113%	50%	140%
Toluene	4765688		<0.20	<0.20	NA	< 0.20	86%	50%	140%	100%	60%	130%	100%	50%	140%
Dibromochloromethane	4765688		<0.10	<0.10	NA	< 0.10	72%	50%	140%	76%	60%	130%	94%	50%	140%
Ethylene Dibromide	4765688		<0.10	<0.10	NA	< 0.10	98%	50%	140%	99%	60%	130%	105%	50%	140%
Tetrachloroethylene	4765688		<0.20	<0.20	NA	< 0.20	80%	50%	140%	99%	60%	130%	90%	50%	140%
1,1,1,2-Tetrachloroethane	4765688		<0.10	<0.10	NA	< 0.10	92%	50%	140%	105%	60%	130%	89%	50%	140%
Chlorobenzene	4765688		<0.10	<0.10	NA	< 0.10	90%	50%	140%	101%	60%	130%	102%	50%	140%
Ethylbenzene	4765688		<0.10	<0.10	NA	< 0.10	81%	50%	140%	96%	60%	130%	94%	50%	140%
m & p-Xylene	4765688		<0.20	<0.20	NA	< 0.20	83%	50%	140%	96%	60%	130%	94%	50%	140%
Bromoform	4765688		<0.10	<0.10	NA	< 0.10	75%	50%	140%	75%	60%	130%	75%	50%	140%
Styrene	4765688		<0.10	<0.10	NA	< 0.10	82%	50%	140%	89%	60%	130%	90%	50%	140%
1,1,2,2-Tetrachloroethane	4765688		<0.10	<0.10	NA	< 0.10	106%	50%	140%	102%	60%	130%	115%	50%	140%
o-Xylene	4765688		<0.10	<0.10	NA	< 0.10	86%	50%	140%	99%	60%	130%	99%	50%	140%
1,3-Dichlorobenzene	4765688		<0.10	<0.10	NA	< 0.10	92%	50%	140%	94%	60%	130%	101%	50%	140%
1,4-Dichlorobenzene	4765688		<0.10	<0.10	NA	< 0.10	94%	50%	140%	96%	60%	130%	98%	50%	140%
1,2-Dichlorobenzene	4765688		<0.10	<0.10	NA	< 0.10	96%	50%	140%	97%	60%	130%	100%	50%	140%
n-Hexane	4765688		<0.20	<0.20	NA	< 0.20	87%	50%	140%	92%	60%	130%	81%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 21494078

SAMPLING SITE:1047 Richmond Rd

AGAT WORK ORDER: 23Z996204

ATTENTION TO: Daniel Stabile

SAMPLED BY:Ryan Francis

Trace Organics Analysis (Continued)

RPT Date: Feb 15, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Certified By: R. Chakraberty

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z996204

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z996204

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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WORK ORDER

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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 2379962O4

Cooler Quantity: one - loose ice.

Arrival Temperatures: 4.1 | 4.0 | 4.1

LT 6.1 | 4.4 | 5.9

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes:

Report Information:

Company: WSP Canada Inc.
Contact: Daniel Stabile
Address: 1931 Robertson Rd.
Ottawa, ON
Phone: 905 723 2727 Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email:

Project Information:

Project: 21494078
Site Location: 1047 Richmond Rd
Sampled By: Ryan Francis
AGAT Quote #: PO: Competitive 2023 quote
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company:
Contact:
Address:
Email: gld-canada_accountspayableinvoices@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 7 (Indicate One)
☑ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture (Check One)
☑ Coarse
☐ Fine

☐ Excess Soils R406
Table (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
(Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
(Indicate One)

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 153: Aroclors	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: Include Moisture ☐ Sulphide ☐	Potentially Hazardous or High Concentration (Y/N)
MW 22-02	Feb 9/23	1:29 AM/PM	3	GW		N							✓						
DUP-1	Feb 9/23	1:20 AM/PM	3	GW		N							✓						
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Ryan Francis	Feb 9/23	2:45	C. Christian	FEB 09 2023	4:56
C. Christian	FEB 09 2023	16:00	M. GRASIC	Feb 10	8:45

Page 1 of 1

N°: T - 139028

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http://www.agatlabs.com

CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600
ATTENTION TO: Daniel Stabile
PROJECT: 21494078
AGAT WORK ORDER: 23Z006506
TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist
DATE REPORTED: Mar 22, 2023
PAGES (INCLUDING COVER): 9
VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 23Z006506

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-03-16

DATE REPORTED: 2023-03-22

		SAMPLE DESCRIPTION:		MW 22-02	DUP-1
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2023-03-16 15:20	2023-03-16 15:20
Parameter	Unit	G / S	RDL	4860658	4860659
Dichlorodifluoromethane	µg/L	3500	0.80	<0.80	<0.80
Vinyl Chloride	µg/L	0.5	0.34	<0.34	<0.34
Bromomethane	µg/L	0.89	0.40	<0.40	<0.40
Trichlorofluoromethane	µg/L	2000	0.80	<0.80	<0.80
Acetone	µg/L	100000	2.0	<2.0	<2.0
1,1-Dichloroethylene	µg/L	0.5	0.60	<0.60	<0.60
Methylene Chloride	µg/L	26	0.60	<0.60	<0.60
trans- 1,2-Dichloroethylene	µg/L	1.6	0.40	<0.40	<0.40
Methyl tert-butyl ether	µg/L	15	0.40	<0.40	<0.40
1,1-Dichloroethane	µg/L	11	0.60	<0.60	<0.60
Methyl Ethyl Ketone	µg/L	21000	2.0	<2.0	<2.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.40	<0.40	<0.40
Chloroform	µg/L	2	0.40	<0.40	<0.40
1,2-Dichloroethane	µg/L	0.5	0.40	5.03	5.17
1,1,1-Trichloroethane	µg/L	23	0.60	<0.60	<0.60
Carbon Tetrachloride	µg/L	0.2	0.40	<0.40	<0.40
Benzene	µg/L	0.5	0.40	<0.40	<0.40
1,2-Dichloropropane	µg/L	0.58	0.40	<0.40	<0.40
Trichloroethylene	µg/L	0.5	0.40	<0.40	<0.40
Bromodichloromethane	µg/L	67000	0.40	<0.40	<0.40
Methyl Isobutyl Ketone	µg/L	5200	2.0	<2.0	<2.0
1,1,2-Trichloroethane	µg/L	0.5	0.40	<0.40	<0.40
Toluene	µg/L	320	0.40	<0.40	<0.40
Dibromochloromethane	µg/L	65000	0.20	<0.20	<0.20
Ethylene Dibromide	µg/L	0.2	0.20	<0.20	<0.20
Tetrachloroethylene	µg/L	0.5	0.40	<0.40	<0.40
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.20	<0.20	<0.20
Chlorobenzene	µg/L	140	0.20	<0.20	<0.20
Ethylbenzene	µg/L	54	0.20	<0.20	<0.20

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 23Z006506

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-03-16

DATE REPORTED: 2023-03-22

				SAMPLE DESCRIPTION:	MW 22-02	DUP-1
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2023-03-16 15:20	2023-03-16 15:20
Parameter	Unit	G / S	RDL		4860658	4860659
m & p-Xylene	µg/L		0.40		<0.40	<0.40
Bromoform	µg/L	5	0.20		<0.20	<0.20
Styrene	µg/L	43	0.20		<0.20	<0.20
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.20		<0.20	<0.20
o-Xylene	µg/L		0.20		<0.20	<0.20
1,3-Dichlorobenzene	µg/L	7600	0.20		<0.20	<0.20
1,4-Dichlorobenzene	µg/L	0.5	0.20		<0.20	<0.20
1,2-Dichlorobenzene	µg/L	150	0.20		<0.20	<0.20
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20
n-Hexane	µg/L	5	0.40		<0.40	<0.40
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140			100	100
4-Bromofluorobenzene	% Recovery	50-140			81	83

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

4860658-4860659 Dilution factor=2
VOC-The sample was diluted because it was foamy. The reporting detection limit has been corrected for the dilution factor used.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

Results relate only to the items tested. Results apply to samples as received.

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Exceedance Summary

AGAT WORK ORDER: 23Z006506

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
4860658	MW 22-02	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	5.03
4860659	DUP-1	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	5.17

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z006506

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:Ryan Francis

Trace Organics Analysis

RPT Date: Mar 22, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	4857271		<0.40	<0.40	NA	< 0.40	72%	50%	140%	73%	50%	140%	90%	50%	140%
Vinyl Chloride	4857271		<0.17	<0.17	NA	< 0.17	90%	50%	140%	99%	50%	140%	107%	50%	140%
Bromomethane	4857271		<0.20	<0.20	NA	< 0.20	70%	50%	140%	72%	50%	140%	99%	50%	140%
Trichlorofluoromethane	4857271		<0.40	<0.40	NA	< 0.40	78%	50%	140%	77%	50%	140%	111%	50%	140%
Acetone	4857271		<1.0	<1.0	NA	< 1.0	90%	50%	140%	95%	50%	140%	106%	50%	140%
1,1-Dichloroethylene	4857271		<0.30	<0.30	NA	< 0.30	72%	50%	140%	76%	60%	130%	91%	50%	140%
Methylene Chloride	4857271		<0.30	<0.30	NA	< 0.30	78%	50%	140%	115%	60%	130%	111%	50%	140%
trans- 1,2-Dichloroethylene	4857271		<0.20	<0.20	NA	< 0.20	112%	50%	140%	73%	60%	130%	72%	50%	140%
Methyl tert-butyl ether	4857271		<0.20	<0.20	NA	< 0.20	77%	50%	140%	78%	60%	130%	89%	50%	140%
1,1-Dichloroethane	4857271		<0.30	<0.30	NA	< 0.30	88%	50%	140%	76%	60%	130%	83%	50%	140%
Methyl Ethyl Ketone	4857271		<1.0	<1.0	NA	< 1.0	88%	50%	140%	83%	50%	140%	100%	50%	140%
cis- 1,2-Dichloroethylene	4857271		1.99	1.89	5.2%	< 0.20	88%	50%	140%	77%	60%	130%	80%	50%	140%
Chloroform	4857271		<0.20	<0.20	NA	< 0.20	108%	50%	140%	91%	60%	130%	79%	50%	140%
1,2-Dichloroethane	4857271		<0.20	<0.20	NA	< 0.20	116%	50%	140%	95%	60%	130%	96%	50%	140%
1,1,1-Trichloroethane	4857271		<0.30	<0.30	NA	< 0.30	75%	50%	140%	105%	60%	130%	104%	50%	140%
Carbon Tetrachloride	4857271		<0.20	<0.20	NA	< 0.20	83%	50%	140%	71%	60%	130%	76%	50%	140%
Benzene	4857271		<0.20	<0.20	NA	< 0.20	92%	50%	140%	76%	60%	130%	76%	50%	140%
1,2-Dichloropropane	4857271		<0.20	<0.20	NA	< 0.20	95%	50%	140%	77%	60%	130%	79%	50%	140%
Trichloroethylene	4857271		3.56	3.45	3.1%	< 0.20	92%	50%	140%	73%	60%	130%	100%	50%	140%
Bromodichloromethane	4857271		<0.20	<0.20	NA	< 0.20	81%	50%	140%	75%	60%	130%	117%	50%	140%
Methyl Isobutyl Ketone	4857271		<1.0	<1.0	NA	< 1.0	94%	50%	140%	86%	50%	140%	86%	50%	140%
1,1,2-Trichloroethane	4857271		<0.20	<0.20	NA	< 0.20	104%	50%	140%	103%	60%	130%	92%	50%	140%
Toluene	4857271		<0.20	<0.20	NA	< 0.20	120%	50%	140%	89%	60%	130%	83%	50%	140%
Dibromochloromethane	4857271		<0.10	<0.10	NA	< 0.10	93%	50%	140%	86%	60%	130%	75%	50%	140%
Ethylene Dibromide	4857271		<0.10	<0.10	NA	< 0.10	118%	50%	140%	92%	60%	130%	83%	50%	140%
Tetrachloroethylene	4857271		23.9	22.8	4.8%	< 0.20	104%	50%	140%	85%	60%	130%	84%	50%	140%
1,1,1,2-Tetrachloroethane	4857271		<0.10	<0.10	NA	< 0.10	119%	50%	140%	93%	60%	130%	80%	50%	140%
Chlorobenzene	4857271		<0.10	<0.10	NA	< 0.10	103%	50%	140%	92%	60%	130%	87%	50%	140%
Ethylbenzene	4857271		<0.10	<0.10	NA	< 0.10	111%	50%	140%	75%	60%	130%	76%	50%	140%
m & p-Xylene	4857271		<0.20	<0.20	NA	< 0.20	108%	50%	140%	118%	60%	130%	101%	50%	140%
Bromoform	4857271		<0.10	<0.10	NA	< 0.10	87%	50%	140%	71%	60%	130%	82%	50%	140%
Styrene	4857271		<0.10	<0.10	NA	< 0.10	100%	50%	140%	84%	60%	130%	82%	50%	140%
1,1,2,2-Tetrachloroethane	4857271		<0.10	<0.10	NA	< 0.10	117%	50%	140%	104%	60%	130%	79%	50%	140%
o-Xylene	4857271		<0.10	<0.10	NA	< 0.10	112%	50%	140%	80%	60%	130%	74%	50%	140%
1,3-Dichlorobenzene	4857271		<0.10	<0.10	NA	< 0.10	119%	50%	140%	92%	60%	130%	89%	50%	140%
1,4-Dichlorobenzene	4857271		<0.10	<0.10	NA	< 0.10	113%	50%	140%	94%	60%	130%	90%	50%	140%
1,2-Dichlorobenzene	4857271		<0.10	<0.10	NA	< 0.10	112%	50%	140%	92%	60%	130%	85%	50%	140%
n-Hexane	4857271		<0.20	<0.20	NA	< 0.20	96%	50%	140%	100%	60%	130%	105%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z006506

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:Ryan Francis

Trace Organics Analysis (Continued)

RPT Date: Mar 22, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Certified By:

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z006506

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

5835 COOPERS AVENUE
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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z006506

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories — Work Order

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

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 23700650

Cooler Quantity: one - 100se ice.

Arrival Temperatures: 6.4 16.2 16.3 3 7 13.9 14.1

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes:

Report Information:

Company: WSP Canada Inc.
Contact: Daniel Stabile
Address: 1931 Robertson Rd Ottawa, ON. K2H 5B7
Phone: Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email:

Project Information:

Project: 21494078
Site Location:
Sampled By: Ryan Francis
AGAT Quote #: MSA AGAT-WSP.735800-2023 Ottawa PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: WSP Canada Inc.
Contact: Daniel Stabile
Address: Project #: 21494078
Email: daniel.stabile@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture

Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
____ (Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	PAHs	PCBs	VOC	Aroclors	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: Include Moisture ☐ Sulphide ☐	Potentially Hazardous or High Concentration (Y/N)
MW 22-02	March 16/23	3:20 AM PM	3	GW								✓						
DUP-1	March 16/23	3:20 AM PM	3	GW								✓						
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																

Samples Relinquished By (Print Name and Sign): Ryan Francis	Date: March 16/23	Time: 4:30	Samples Received By (Print Name and Sign):	Date: MAR 16 2023 Time: 16h35
Samples Relinquished By (Print Name and Sign):	Date: MAR 17 2023	Time: 16h00	Samples Received By (Print Name and Sign):	Date: Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date: Time:

'23MAR 18 10:38 AM

Page 1 of 1

N°: T-139995

Document ID: DIV-78-1511.022

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

AGAT Laboratories

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CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600

ATTENTION TO: Brian Henderson

PROJECT: 21494078

AGAT WORK ORDER: 23Z029521

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Jun 02, 2023

PAGES (INCLUDING COVER): 8

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.

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Certificate of Analysis

AGAT WORK ORDER: 23Z029521
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Brian Henderson
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-29

DATE REPORTED: 2023-06-02

SAMPLE DESCRIPTION:				Trip Blank	Field Blank	22-10D	22-10S	22-09D	22-09S	DUP2
SAMPLE TYPE:				VOCs	VOCs	Water	Water	Water	Water	Water
DATE SAMPLED:				Water	Water	2023-05-29 09:50	2023-05-29 10:15	2023-05-29 11:48	2023-05-29 12:20	2023-05-29 11:48
Parameter	Unit	G / S	RDL	2023-05-29 5025065	2023-05-29 12:20 5025070	5025071	5025072	5025073	5025074	5025075
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Certified By: N Popowkolof

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z029521

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Brian Henderson

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-29

DATE REPORTED: 2023-06-02

SAMPLE DESCRIPTION:				Trip Blank VOCs	Field Blank VOCs	22-10D	22-10S	22-09D	22-09S	DUP2
SAMPLE TYPE:				Water	Water	Water	Water	Water	Water	Water
DATE SAMPLED:				2023-05-29	2023-05-29 12:20	2023-05-29 09:50	2023-05-29 10:15	2023-05-29 11:48	2023-05-29 12:20	2023-05-29 11:48
Parameter	Unit	G / S	RDL	5025065	5025070	5025071	5025072	5025073	5025074	5025075
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	43	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits								
Toluene-d8	% Recovery	50-140		103	101	103	100	99	103	104
4-Bromofluorobenzene	% Recovery	50-140		86	86	92	90	87	90	89

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5025065-5025075 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z029521
ATTENTION TO: Brian Henderson
SAMPLED BY:Rob Ireland

Trace Organics Analysis

RPT Date: Jun 02, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	5027165		<0.40	<0.40	NA	< 0.40	108%	50%	140%	80%	50%	140%	100%	50%	140%
Vinyl Chloride	5027165		<0.17	<0.17	NA	< 0.17	111%	50%	140%	105%	50%	140%	111%	50%	140%
Bromomethane	5027165		<0.20	<0.20	NA	< 0.20	112%	50%	140%	115%	50%	140%	97%	50%	140%
Trichlorofluoromethane	5027165		<0.40	<0.40	NA	< 0.40	104%	50%	140%	106%	50%	140%	115%	50%	140%
Acetone	5027165		<1.0	<1.0	NA	< 1.0	103%	50%	140%	98%	50%	140%	90%	50%	140%
1,1-Dichloroethylene	5027165		<0.30	<0.30	NA	< 0.30	81%	50%	140%	78%	60%	130%	101%	50%	140%
Methylene Chloride	5027165		<0.30	<0.30	NA	< 0.30	71%	50%	140%	111%	60%	130%	105%	50%	140%
trans- 1,2-Dichloroethylene	5027165		<0.20	<0.20	NA	< 0.20	104%	50%	140%	119%	60%	130%	102%	50%	140%
Methyl tert-butyl ether	5027165		<0.20	<0.20	NA	< 0.20	106%	50%	140%	82%	60%	130%	93%	50%	140%
1,1-Dichloroethane	5027165		<0.30	<0.30	NA	< 0.30	90%	50%	140%	97%	60%	130%	114%	50%	140%
Methyl Ethyl Ketone	5027165		<1.0	<1.0	NA	< 1.0	98%	50%	140%	101%	50%	140%	84%	50%	140%
cis- 1,2-Dichloroethylene	5027165		<0.20	<0.20	NA	< 0.20	78%	50%	140%	112%	60%	130%	116%	50%	140%
Chloroform	5027165		<0.20	<0.20	NA	< 0.20	80%	50%	140%	104%	60%	130%	114%	50%	140%
1,2-Dichloroethane	5027165		<0.20	<0.20	NA	< 0.20	77%	50%	140%	88%	60%	130%	104%	50%	140%
1,1,1-Trichloroethane	5027165		<0.30	<0.30	NA	< 0.30	82%	50%	140%	88%	60%	130%	104%	50%	140%
Carbon Tetrachloride	5027165		<0.20	<0.20	NA	< 0.20	87%	50%	140%	83%	60%	130%	105%	50%	140%
Benzene	5027165		<0.20	<0.20	NA	< 0.20	86%	50%	140%	119%	60%	130%	103%	50%	140%
1,2-Dichloropropane	5027165		<0.20	<0.20	NA	< 0.20	110%	50%	140%	107%	60%	130%	109%	50%	140%
Trichloroethylene	5027165		<0.20	<0.20	NA	< 0.20	103%	50%	140%	116%	60%	130%	117%	50%	140%
Bromodichloromethane	5027165		<0.20	<0.20	NA	< 0.20	93%	50%	140%	71%	60%	130%	87%	50%	140%
Methyl Isobutyl Ketone	5027165		<1.0	<1.0	NA	< 1.0	84%	50%	140%	80%	50%	140%	83%	50%	140%
1,1,2-Trichloroethane	5027165		<0.20	<0.20	NA	< 0.20	105%	50%	140%	108%	60%	130%	111%	50%	140%
Toluene	5027165		<0.20	<0.20	NA	< 0.20	116%	50%	140%	117%	60%	130%	104%	50%	140%
Dibromochloromethane	5027165		<0.10	<0.10	NA	< 0.10	74%	50%	140%	72%	60%	130%	77%	50%	140%
Ethylene Dibromide	5027165		<0.10	<0.10	NA	< 0.10	89%	50%	140%	98%	60%	130%	106%	50%	140%
Tetrachloroethylene	5027165		<0.20	<0.20	NA	< 0.20	117%	50%	140%	113%	60%	130%	113%	50%	140%
1,1,1,2-Tetrachloroethane	5027165		<0.10	<0.10	NA	< 0.10	90%	50%	140%	96%	60%	130%	110%	50%	140%
Chlorobenzene	5027165		<0.10	<0.10	NA	< 0.10	110%	50%	140%	120%	60%	130%	107%	50%	140%
Ethylbenzene	5027165		<0.10	<0.10	NA	< 0.10	112%	50%	140%	119%	60%	130%	112%	50%	140%
m & p-Xylene	5027165		<0.20	<0.20	NA	< 0.20	115%	50%	140%	109%	60%	130%	100%	50%	140%
Bromoform	5027165		<0.10	<0.10	NA	< 0.10	75%	50%	140%	87%	60%	130%	90%	50%	140%
Styrene	5027165		<0.10	<0.10	NA	< 0.10	99%	50%	140%	108%	60%	130%	108%	50%	140%
1,1,2,2-Tetrachloroethane	5027165		<0.10	<0.10	NA	< 0.10	102%	50%	140%	109%	60%	130%	115%	50%	140%
o-Xylene	5027165		<0.10	<0.10	NA	< 0.10	114%	50%	140%	111%	60%	130%	102%	50%	140%
1,3-Dichlorobenzene	5027165		<0.10	<0.10	NA	< 0.10	119%	50%	140%	114%	60%	130%	108%	50%	140%
1,4-Dichlorobenzene	5027165		<0.10	<0.10	NA	< 0.10	118%	50%	140%	112%	60%	130%	96%	50%	140%
1,2-Dichlorobenzene	5027165		<0.10	<0.10	NA	< 0.10	112%	50%	140%	110%	60%	130%	118%	50%	140%
n-Hexane	5027165		<0.20	<0.20	NA	< 0.20	80%	50%	140%	92%	60%	130%	88%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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http://www.agatlabs.com

Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 21494078

SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z029521

ATTENTION TO: Brian Henderson

SAMPLED BY:Rob Ireland

Trace Organics Analysis (Continued)

RPT Date: Jun 02, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Certified By: N Popowkolof

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z029521

PROJECT: 21494078

ATTENTION TO: Brian Henderson

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z029521

PROJECT: 21494078

ATTENTION TO: Brian Henderson

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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WORK ORDER

Chain of Custody Record

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

Report Information:

Company: WSP
Contact: Daniel Stabile / Paul Hurst
Address: 1931 Robertson Rd
Ottawa, Ont. K2H 5B7
Phone: 613-592-9600 Fax: 613-592-9601
Reports to be sent to:
1. Email: Daniel.Stabile@wsp.com
2. Email: Paul.Hurst@wsp.com

Project Information:

Project: 21494078
Site Location: 1047 Richmond Rd
Sampled By: Rob Ireland
AGAT Quote #: 2023 Golder - AGAT MSA 735000EB
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: WSP
Contact: Daniele Stabile/Paul Hurst
Address:
Email: AP-CustomerService@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

- ☒ Regulation 153/04 — Table 7 (Indicate One) — ☐ Ind/Com ☒ Res/Park ☐ Agriculture
- Soil Texture (Check One): ☐ Coarse ☐ Fine
- ☐ Excess Soils R406 — Table ____ (Indicate One)
- ☐ Regulation 558
- ☐ CCME
- ☐ Sewer Use ☐ Sanitary ☐ Storm — ____ Region
- ☐ Prov. Water Quality Objectives (PWQO)
- ☐ Other ____ Indicate One

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 23T02952|

Cooler Quantity: one-ice,
Arrival Temperatures: 9.8 | 10.2 | 10.5
7.4 | 2.9 | 3.7
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Ice Pack

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply): ____
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg ☐ HWSB	BTEX, F1-F4 PHCs Analyze F4G if required ☐ Yes ☐ No	PAHs	PCBs	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
Trip blank VOC's		AM PM	3		Lab Supplied							✓				
Field Blank VOC's	2023-05-29	17:20 PM	3	DI Water	Lab supplied DI water							✓				
22-101D	2023-05-29	9:50 AM	3	GW								✓				
22-10S	2023-05-29	10:15 AM	3	GW								✓				
22-091D	2023-05-29	11:48 AM	3	GW								✓				
22-09S	2023-05-29	12:20 AM	3	GW								✓				
Dup 2	2023-05-29	11:48 AM	3	GW								✓				
		AM PM														
		AM PM			EQUIS EDD											
		AM PM			Facility #											
		AM PM			2303660930											

'23 MAY 30 8:38 AM

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Rob Ireland	2023-05-29	15:00	Bentheleft/Rob	2023/05/29	15h00
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
CB/RO Hurst	23/05/29	16h00	A. Ferreira	May 30/23	8:36
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1

№: T 129230

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Document ID: DIV 78 1511 021

Date Issued: March 9, 2021

AGAT Laboratories

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CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600

ATTENTION TO: Daniel Stabile

PROJECT: 21494078

AGAT WORK ORDER: 23Z045388

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Jul 13, 2023

PAGES (INCLUDING COVER): 13

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 23Z045388
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis / Rob Ireland

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

DATE RECEIVED: 2023-07-11

DATE REPORTED: 2023-07-13

SAMPLE DESCRIPTION:				MW22-04	DUP-2	MW22-01		MW22-02		21-14	MW21-04
SAMPLE TYPE:				Water	Water	Water		Water		Water	Water
DATE SAMPLED:				2023-07-07 14:45	2023-07-07 14:45	2023-07-07 13:50		2023-07-07 13:30		2023-07-07 11:53	2023-07-07 14:45
Parameter	Unit	G / S	RDL	5133118	5133134	5133135	RDL	5133136	RDL	5133137	5133138
F1 (C6 - C10)	µg/L		25	<25	<25	<25	25	<25	25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25	<25	25	<25	25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100	100	<100	100	<100	<100
F3 (C16 to C34)	µg/L	500	100	542	569	<100	100	<100	100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	100	<100	100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA	500	NA	500	NA	NA
Sediment				1	1	3		1		1	1
Surrogate	Unit	Acceptable Limits									
Toluene-d8	%	50-140		97	96	97	2	97	1	94	95
Terphenyl	% Recovery	60-140		66	75	72	1	66	1	82	74

SAMPLE DESCRIPTION:				Dup 1	
SAMPLE TYPE:				Water	
DATE SAMPLED:				2023-07-07 14:45	
Parameter	Unit	G / S	RDL	5133139	
F1 (C6 - C10)	µg/L		25	<25	
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	
F2 (C10 to C16)	µg/L	150	100	<100	
F3 (C16 to C34)	µg/L	500	100	<100	
F4 (C34 to C50)	µg/L	500	100	<100	
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	
Sediment				1	
Surrogate	Unit	Acceptable Limits			
Toluene-d8	%	50-140		94	
Terphenyl	% Recovery	60-140		102	

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

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

DATE RECEIVED: 2023-07-11

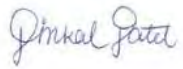
DATE REPORTED: 2023-07-13

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5133118-5133139 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: 

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Certificate of Analysis

AGAT WORK ORDER: 23Z045388
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis / Rob Ireland

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

DATE RECEIVED: 2023-07-11

DATE REPORTED: 2023-07-13

SAMPLE DESCRIPTION:				MW22-04	DUP-2	MW22-01		MW22-02		21-14	MW21-04
SAMPLE TYPE:				Water	Water	Water		Water		Water	Water
DATE SAMPLED:				2023-07-07 14:45	2023-07-07 14:45	2023-07-07 13:50		2023-07-07 13:30		2023-07-07 11:53	2023-07-07 14:45
Parameter	Unit	G / S	RDL	5133118	5133134	5133135	RDL	5133136	RDL	5133137	5133138
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40	<0.40	<0.40	0.80	<0.80	0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	0.34	<0.34	0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	<0.40	0.80	<0.80	0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	<1.0	2.0	<2.0	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	0.50	<0.50	0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	<0.30	0.60	<0.60	0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	<0.30	0.60	<0.60	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	<1.0	2.0	<2.0	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	0.40	4.26	0.20	<0.20	4.11
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	<0.30	0.60	<0.60	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20	0.20	<0.20	0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	<1.0	2.0	<2.0	1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10

Certified By: Jinkal Patel

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

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

DATE RECEIVED: 2023-07-11

DATE REPORTED: 2023-07-13

		SAMPLE DESCRIPTION:		MW22-04	DUP-2	MW22-01		MW22-02		21-14	MW21-04
		SAMPLE TYPE:		Water	Water	Water		Water		Water	Water
		DATE SAMPLED:		2023-07-07 14:45	2023-07-07 14:45	2023-07-07 13:50		2023-07-07 13:30		2023-07-07 11:53	2023-07-07 14:45
Parameter	Unit	G / S	RDL	5133118	5133134	5133135	RDL	5133136	RDL	5133137	5133138
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
Styrene	µg/L	43	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10	<0.10	<0.10	<0.10	0.20	<0.20	0.10	0.53	2.50
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	0.30	<0.30	0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20	0.20	<0.20	0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20	<0.20	0.40	<0.40	0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits									
Toluene-d8	% Recovery	50-140		97	96	97	2	97	1	94	95
4-Bromofluorobenzene	% Recovery	50-140		86	92	77	2	83	1	77	81

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

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

DATE RECEIVED: 2023-07-11

DATE REPORTED: 2023-07-13

				SAMPLE DESCRIPTION:	Dup 1
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-07-07 14:45
Parameter	Unit	G / S	RDL		5133139
Dichlorodifluoromethane	µg/L	3500	0.40		<0.40
Vinyl Chloride	µg/L	0.5	0.17		<0.17
Bromomethane	µg/L	0.89	0.20		<0.20
Trichlorofluoromethane	µg/L	2000	0.40		<0.40
Acetone	µg/L	100000	1.0		<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30		<0.30
Methylene Chloride	µg/L	26	0.30		<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20		<0.20
Methyl tert-butyl ether	µg/L	15	0.20		<0.20
1,1-Dichloroethane	µg/L	11	0.30		<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0		<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20		<0.20
Chloroform	µg/L	2	0.20		<0.20
1,2-Dichloroethane	µg/L	0.5	0.20		<0.20
1,1,1-Trichloroethane	µg/L	23	0.30		<0.30
Carbon Tetrachloride	µg/L	0.2	0.20		<0.20
Benzene	µg/L	0.5	0.20		<0.20
1,2-Dichloropropane	µg/L	0.58	0.20		<0.20
Trichloroethylene	µg/L	0.5	0.20		<0.20
Bromodichloromethane	µg/L	67000	0.20		<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0		<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20		<0.20
Toluene	µg/L	320	0.20		<0.20
Dibromochloromethane	µg/L	65000	0.10		<0.10
Ethylene Dibromide	µg/L	0.2	0.10		<0.10
Tetrachloroethylene	µg/L	0.5	0.20		<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10		<0.10
Chlorobenzene	µg/L	140	0.10		<0.10
Ethylbenzene	µg/L	54	0.10		<0.10

Certified By: Jinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

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

DATE RECEIVED: 2023-07-11

DATE REPORTED: 2023-07-13

				SAMPLE DESCRIPTION:	Dup 1
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-07-07 14:45
Parameter	Unit	G / S	RDL		5133139
m & p-Xylene	µg/L		0.20		<0.20
Bromoform	µg/L	5	0.10		<0.10
Styrene	µg/L	43	0.10		<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10
o-Xylene	µg/L		0.10		<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		0.58
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20
n-Hexane	µg/L	5	0.20		<0.20
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140			94
4-Bromofluorobenzene	% Recovery	50-140			89

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5133118-5133135 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

5133136 Dilution factor=2
VOC-The sample was diluted because it was foamy. The reporting detection limit has been corrected for the dilution factor used.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

5133137-5133139 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

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Exceedance Summary

AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5133118	MW22-04	ON T7 NPGW CT	O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)	F3 (C16 to C34)	µg/L	500	542
5133134	DUP-2	ON T7 NPGW CT	O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)	F3 (C16 to C34)	µg/L	500	569
5133136	MW22-02	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (with PHC) (Water)	1,2-Dichloroethane	µg/L	0.5	4.26
5133138	MW21-04	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (with PHC) (Water)	1,2-Dichloroethane	µg/L	0.5	4.11

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

Trace Organics Analysis

RPT Date: Jul 13, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)															
F1 (C6 - C10)	5128709		<25	<25	NA	< 25	95%	60%	140%	80%	60%	140%	88%	60%	140%
F2 (C10 to C16)	5127761		<100	<100	NA	< 100	86%	60%	140%	80%	60%	140%	77%	60%	140%
F3 (C16 to C34)	5127761		<100	<100	NA	< 100	92%	60%	140%	103%	60%	140%	93%	60%	140%
F4 (C34 to C50)	5127761		<100	<100	NA	< 100	86%	60%	140%	131%	60%	140%	105%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5133138	5133138	<0.40	<0.40	NA	< 0.40	80%	50%	140%	75%	50%	140%	92%	50%	140%
Vinyl Chloride	5133138	5133138	<0.17	<0.17	NA	< 0.17	111%	50%	140%	105%	50%	140%	90%	50%	140%
Bromomethane	5133138	5133138	<0.20	<0.20	NA	< 0.20	104%	50%	140%	90%	50%	140%	82%	50%	140%
Trichlorofluoromethane	5133138	5133138	<0.40	<0.40	NA	< 0.40	89%	50%	140%	80%	50%	140%	83%	50%	140%
Acetone	5133138	5133138	<1.0	<1.0	NA	< 1.0	92%	50%	140%	97%	50%	140%	88%	50%	140%
1,1-Dichloroethylene	5133138	5133138	<0.30	<0.30	NA	< 0.30	76%	50%	140%	113%	60%	130%	94%	50%	140%
Methylene Chloride	5133138	5133138	<0.30	<0.30	NA	< 0.30	92%	50%	140%	113%	60%	130%	104%	50%	140%
trans- 1,2-Dichloroethylene	5133138	5133138	<0.20	<0.20	NA	< 0.20	72%	50%	140%	97%	60%	130%	73%	50%	140%
Methyl tert-butyl ether	5133138	5133138	<0.20	<0.20	NA	< 0.20	83%	50%	140%	83%	60%	130%	72%	50%	140%
1,1-Dichloroethane	5133138	5133138	<0.30	<0.30	NA	< 0.30	83%	50%	140%	96%	60%	130%	75%	50%	140%
Methyl Ethyl Ketone	5133138	5133138	<1.0	<1.0	NA	< 1.0	85%	50%	140%	86%	50%	140%	86%	50%	140%
cis- 1,2-Dichloroethylene	5133138	5133138	<0.20	<0.20	NA	< 0.20	85%	50%	140%	94%	60%	130%	73%	50%	140%
Chloroform	5133138	5133138	<0.20	<0.20	NA	< 0.20	97%	50%	140%	96%	60%	130%	79%	50%	140%
1,2-Dichloroethane	5133138	5133138	4.11	3.78	8.4%	< 0.20	105%	50%	140%	95%	60%	130%	78%	50%	140%
1,1,1-Trichloroethane	5133138	5133138	<0.30	<0.30	NA	< 0.30	87%	50%	140%	98%	60%	130%	78%	50%	140%
Carbon Tetrachloride	5133138	5133138	<0.20	<0.20	NA	< 0.20	80%	50%	140%	90%	60%	130%	72%	50%	140%
Benzene	5133138	5133138	<0.20	<0.20	NA	< 0.20	89%	50%	140%	92%	60%	130%	73%	50%	140%
1,2-Dichloropropane	5133138	5133138	<0.20	<0.20	NA	< 0.20	92%	50%	140%	87%	60%	130%	98%	50%	140%
Trichloroethylene	5133138	5133138	<0.20	<0.20	NA	< 0.20	95%	50%	140%	97%	60%	130%	77%	50%	140%
Bromodichloromethane	5133138	5133138	<0.20	<0.20	NA	< 0.20	95%	50%	140%	90%	60%	130%	80%	50%	140%
Methyl Isobutyl Ketone	5133138	5133138	<1.0	<1.0	NA	< 1.0	104%	50%	140%	82%	50%	140%	75%	50%	140%
1,1,2-Trichloroethane	5133138	5133138	<0.20	<0.20	NA	< 0.20	113%	50%	140%	100%	60%	130%	79%	50%	140%
Toluene	5133138	5133138	<0.20	<0.20	NA	< 0.20	107%	50%	140%	103%	60%	130%	81%	50%	140%
Dibromochloromethane	5133138	5133138	<0.10	<0.10	NA	< 0.10	104%	50%	140%	96%	60%	130%	80%	50%	140%
Ethylene Dibromide	5133138	5133138	<0.10	<0.10	NA	< 0.10	104%	50%	140%	91%	60%	130%	76%	50%	140%
Tetrachloroethylene	5133138	5133138	<0.20	<0.20	NA	< 0.20	105%	50%	140%	109%	60%	130%	88%	50%	140%
1,1,1,2-Tetrachloroethane	5133138	5133138	<0.10	<0.10	NA	< 0.10	105%	50%	140%	97%	60%	130%	80%	50%	140%
Chlorobenzene	5133138	5133138	<0.10	<0.10	NA	< 0.10	113%	50%	140%	100%	60%	130%	78%	50%	140%
Ethylbenzene	5133138	5133138	<0.10	<0.10	NA	< 0.10	106%	50%	140%	100%	60%	130%	75%	50%	140%
m & p-Xylene	5133138	5133138	<0.20	<0.20	NA	< 0.20	105%	50%	140%	101%	60%	130%	78%	50%	140%
Bromoform	5133138	5133138	<0.10	<0.10	NA	< 0.10	111%	50%	140%	89%	60%	130%	79%	50%	140%
Styrene	5133138	5133138	<0.10	<0.10	NA	< 0.10	92%	50%	140%	84%	60%	130%	70%	50%	140%
1,1,2,2-Tetrachloroethane	5133138	5133138	<0.10	<0.10	NA	< 0.10	116%	50%	140%	93%	60%	130%	78%	50%	140%
o-Xylene	5133138	5133138	<0.10	<0.10	NA	< 0.10	109%	50%	140%	99%	60%	130%	78%	50%	140%

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

Trace Organics Analysis (Continued)

RPT Date: Jul 13, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5133138	5133138	<0.10	<0.10	NA	< 0.10	107%	50%	140%	95%	60%	130%	77%	50%	140%
1,4-Dichlorobenzene	5133138	5133138	<0.10	<0.10	NA	< 0.10	110%	50%	140%	101%	60%	130%	81%	50%	140%
1,2-Dichlorobenzene	5133138	5133138	2.50	2.40	4.1%	< 0.10	113%	50%	140%	98%	60%	130%	77%	50%	140%
n-Hexane	5133138	5133138	<0.20	<0.20	NA	< 0.20	98%	50%	140%	76%	60%	130%	74%	50%	140%

Certified By:

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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TEL (905)712-5100
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http://www.agatlabs.com

Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 - C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Sediment			N/A
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z045388

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis / Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 23Z045388

Cooler Quantity: One - loose ice packs

Arrival Temperatures: 9.9 | 9.6 | 9.4 / 4.4 | 5.3 | 5.1

Custody Seal Intact: ☐ Yes ☐ No ☒ N/A

Notes: B

Report Information:

Company: WSP Canada Inc.
Contact: Daniel Stabile
Address: 1931 Robertson Rd. Ottawa, ON K2H 5B7
Phone: Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 — Table 7 (Indicate One) — ☐ Ind/Com ☒ Res/Park ☐ Agriculture
Soil Texture (Check One): ☒ Coarse ☐ Fine

☐ Excess Soils R406 — Table ____ (Indicate One)
☐ Regulation 558
☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm — ____ (Region)
☐ Prov. Water Quality Objectives (PWQO)
☐ Other ____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): ____

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

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

Project Information:

Project: 21494078
Site Location: 1047 Richmond Rd
Sampled By: Ryan Francis / Rob Ireland
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company: WSP Canada Inc
Contact: Daniel Stabile
Address:
Email: CA payables invoice@wsp.com

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 153: Aroclors	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach: SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package: pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: Include Moisture ☐ Sulphide ☐	Potentially Hazardous or High Concentration (Y/N)
MW22-04	July 7/23	2:45 PM	5	GW					✓			✓						Y
DUP-2		2:45 PM	5	GW					✓			✓						
MW22-01		1:50 PM	5	GW					✓			✓						
MW22-02		1:30 PM	5	GW					✓			✓						
21-14		11:53 AM	5	GW					✓			✓						
MW21-04		12:35 PM	5	GW					✓			✓						
Dup 1		11:53 AM	5	GW	Extract and Hold				✓			✓						
VOC Trip Blank		AM PM										✓						
		AM PM																
		AM PM																
		AM PM																

Samples Relinquished By (Print Name and Sign): Ryan Francis	Date: July 10/23	Time: 5:15	Samples Received By (Print Name and Sign): C. Griffith	Date: JUL 11 2023	Time: 08h30
Samples Relinquished By (Print Name and Sign): ~~JUL 11 2023~~	Date:	Time: 5:20	Samples Received By (Print Name and Sign): Michael Diotto	Date: Jul 12/23	Time: 8:40am
Samples Relinquished By (Print Name and Sign): CA to Pick	Date: JUL 11 2023	Time: 15h30	Samples Received By (Print Name and Sign):	Date:	Time:

Page 1 of 1

N°: T - 142651

Document ID: DIV-78-3511.022

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Date Issued: April 21, 2022

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CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600
ATTENTION TO: Daniel Stabile
PROJECT: 21494078
AGAT WORK ORDER: 23Z049375
TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist
DATE REPORTED: Jul 24, 2023
PAGES (INCLUDING COVER): 9
VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z049375

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-20

DATE REPORTED: 2023-07-24

				SAMPLE DESCRIPTION:	MW22-8
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-07-19 16:15
Parameter	Unit	G / S	RDL		5157690
F1 (C6 - C10)	µg/L		25		<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25
F2 (C10 to C16)	µg/L	150	100		<100
F3 (C16 to C34)	µg/L	500	100		<100
F4 (C34 to C50)	µg/L	500	100		<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA
Sediment					1
Surrogate	Unit	Acceptable Limits			
Toluene-d8	%	50-140			106
Terphenyl	% Recovery	60-140			80

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5157690 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkof

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z049375
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-20

DATE REPORTED: 2023-07-24

		SAMPLE DESCRIPTION:		MW22-8
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2023-07-19 16:15
Parameter	Unit	G / S	RDL	5157690
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20
Toluene	µg/L	320	0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 23Z049375

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-20

DATE REPORTED: 2023-07-24

				SAMPLE DESCRIPTION:	MW22-8
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-07-19 16:15
Parameter	Unit	G / S	RDL	5157690	
m & p-Xylene	µg/L		0.20	<0.20	
Bromoform	µg/L	5	0.10	<0.10	
Styrene	µg/L	43	0.10	<0.10	
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	
o-Xylene	µg/L		0.10	<0.10	
1,3-Dichlorobenzene	µg/L	7600	0.10	<0.10	
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	
1,2-Dichlorobenzene	µg/L	150	0.10	<0.10	
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	
Xylenes (Total)	µg/L	72	0.20	<0.20	
n-Hexane	µg/L	5	0.20	<0.20	
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140		106	
4-Bromofluorobenzene	% Recovery	50-140		88	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5157690 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd

AGAT WORK ORDER: 23Z049375
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

Trace Organics Analysis

RPT Date: Jul 24, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)															
F1 (C6 - C10)	5156928		<25	<25	NA	< 25	96%	60%	140%	81%	60%	140%	101%	60%	140%
F2 (C10 to C16)	5147573		<100	<100	NA	< 100	102%	60%	140%	70%	60%	140%	62%	60%	140%
F3 (C16 to C34)	5147573		<100	<100	NA	< 100	105%	60%	140%	82%	60%	140%	72%	60%	140%
F4 (C34 to C50)	5147573		<100	<100	NA	< 100	76%	60%	140%	87%	60%	140%	68%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5156928		<0.40	<0.40	NA	< 0.40	81%	50%	140%	98%	50%	140%	79%	50%	140%
Vinyl Chloride	5156928		<0.17	<0.17	NA	< 0.17	101%	50%	140%	104%	50%	140%	85%	50%	140%
Bromomethane	5156928		<0.20	<0.20	NA	< 0.20	86%	50%	140%	97%	50%	140%	84%	50%	140%
Trichlorofluoromethane	5156928		<0.40	<0.40	NA	< 0.40	83%	50%	140%	114%	50%	140%	87%	50%	140%
Acetone	5156928		<1.0	<1.0	NA	< 1.0	92%	50%	140%	84%	50%	140%	104%	50%	140%
1,1-Dichloroethylene	5156928		<0.30	<0.30	NA	< 0.30	98%	50%	140%	91%	60%	130%	85%	50%	140%
Methylene Chloride	5156928		<0.30	<0.30	NA	< 0.30	114%	50%	140%	112%	60%	130%	93%	50%	140%
trans- 1,2-Dichloroethylene	5156928		<0.20	<0.20	NA	< 0.20	110%	50%	140%	96%	60%	130%	79%	50%	140%
Methyl tert-butyl ether	5156928		<0.20	<0.20	NA	< 0.20	84%	50%	140%	84%	60%	130%	101%	50%	140%
1,1-Dichloroethane	5156928		<0.30	<0.30	NA	< 0.30	79%	50%	140%	77%	60%	130%	87%	50%	140%
Methyl Ethyl Ketone	5156928		<1.0	<1.0	NA	< 1.0	85%	50%	140%	80%	50%	140%	106%	50%	140%
cis- 1,2-Dichloroethylene	5156928		<0.20	<0.20	NA	< 0.20	85%	50%	140%	82%	60%	130%	89%	50%	140%
Chloroform	5156928		<0.20	<0.20	NA	< 0.20	83%	50%	140%	81%	60%	130%	110%	50%	140%
1,2-Dichloroethane	5156928		<0.20	<0.20	NA	< 0.20	86%	50%	140%	71%	60%	130%	73%	50%	140%
1,1,1-Trichloroethane	5156928		<0.30	<0.30	NA	< 0.30	80%	50%	140%	75%	60%	130%	85%	50%	140%
Carbon Tetrachloride	5156928		<0.20	<0.20	NA	< 0.20	92%	50%	140%	89%	60%	130%	82%	50%	140%
Benzene	5156928		<0.20	<0.20	NA	< 0.20	97%	50%	140%	92%	60%	130%	71%	50%	140%
1,2-Dichloropropane	5156928		<0.20	<0.20	NA	< 0.20	79%	50%	140%	75%	60%	130%	85%	50%	140%
Trichloroethylene	5156928		<0.20	<0.20	NA	< 0.20	89%	50%	140%	79%	60%	130%	95%	50%	140%
Bromodichloromethane	5156928		<0.20	<0.20	NA	< 0.20	81%	50%	140%	77%	60%	130%	92%	50%	140%
Methyl Isobutyl Ketone	5156928		<1.0	<1.0	NA	< 1.0	106%	50%	140%	84%	50%	140%	83%	50%	140%
1,1,2-Trichloroethane	5156928		<0.20	<0.20	NA	< 0.20	96%	50%	140%	97%	60%	130%	89%	50%	140%
Toluene	5156928		<0.20	<0.20	NA	< 0.20	102%	50%	140%	100%	60%	130%	82%	50%	140%
Dibromochloromethane	5156928		<0.10	<0.10	NA	< 0.10	90%	50%	140%	93%	60%	130%	84%	50%	140%
Ethylene Dibromide	5156928		<0.10	<0.10	NA	< 0.10	92%	50%	140%	97%	60%	130%	91%	50%	140%
Tetrachloroethylene	5156928		<0.20	<0.20	NA	< 0.20	95%	50%	140%	88%	60%	130%	79%	50%	140%
1,1,1,2-Tetrachloroethane	5156928		<0.10	<0.10	NA	< 0.10	86%	50%	140%	88%	60%	130%	75%	50%	140%
Chlorobenzene	5156928		<0.10	<0.10	NA	< 0.10	97%	50%	140%	92%	60%	130%	81%	50%	140%
Ethylbenzene	5156928		<0.10	<0.10	NA	< 0.10	94%	50%	140%	91%	60%	130%	75%	50%	140%
m & p-Xylene	5156928		<0.20	<0.20	NA	< 0.20	91%	50%	140%	88%	60%	130%	74%	50%	140%
Bromoform	5156928		<0.10	<0.10	NA	< 0.10	82%	50%	140%	88%	60%	130%	79%	50%	140%
Styrene	5156928		<0.10	<0.10	NA	< 0.10	73%	50%	140%	90%	60%	130%	79%	50%	140%
1,1,2,2-Tetrachloroethane	5156928		<0.10	<0.10	NA	< 0.10	90%	50%	140%	101%	60%	130%	84%	50%	140%
o-Xylene	5156928		<0.10	<0.10	NA	< 0.10	90%	50%	140%	88%	60%	130%	75%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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http://www.agatlabs.com

Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z049375

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

Trace Organics Analysis (Continued)

RPT Date: Jul 24, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5156928		<0.10	<0.10	NA	< 0.10	82%	50%	140%	79%	60%	130%	75%	50%	140%
1,4-Dichlorobenzene	5156928		<0.10	<0.10	NA	< 0.10	83%	50%	140%	79%	60%	130%	78%	50%	140%
1,2-Dichlorobenzene	5156928		<0.10	<0.10	NA	< 0.10	83%	50%	140%	81%	60%	130%	77%	50%	140%
n-Hexane	5156928		<0.20	<0.20	NA	< 0.20	93%	50%	140%	76%	60%	130%	84%	50%	140%

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

Certified By: N Popnikolof

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Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z049375

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 - C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Sediment			N/A
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z049375

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

RUSH!

5835 Coopers Avenue
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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 23T049375

Cooler Quantity: One - Ice | Packs

Arrival Temperatures: 7.0 | 6.7 | 6.6 | 8.3 | 8.1 | 8.0

Custody Seal Intact: ☐ Yes ☐ No ☒ N/A

Notes: bagged ice

Report Information:

Company: WSP Canada Inc
Contact: Daniel Stabile
Address: 1931 Robertson Rd. Ottawa, ON K2H 5B7
Phone: Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email:

Project Information:

Project: 21494078
Site Location: 1047 Richmond Rd
Sampled By: Ryan Francis
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company: WSP Canada Inc
Contact: Daniel Stabile
Address:
Email: CA.Payables.Invoice@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)
☐ Regulation 558
☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
____ (Region)
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☒ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): _____

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs, Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
MW22-3	July 19/23	4:15 AM/PM	8	GW					✓			✓					
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Ryan Francis / [signature]	July 20/23	2:44	C. Griffiths JUL	JUL 20 2023	14h45
CA to Penco JUL	20 2023	15h30	T-R	July 21	8:40AM

Page 1 of 1

Nº: T 129261

Document ID: DIV 78 1511_021

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Date Issued: March 9, 2021

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600

ATTENTION TO: Daniel Stabile; Kristina Small

PROJECT: 21494078

AGAT WORK ORDER: 23Z058034

TRACE ORGANICS REVIEWED BY: Radhika Chakraberty, Trace Organics Lab Manager

DATE REPORTED: Aug 17, 2023

PAGES (INCLUDING COVER): 9

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 23Z058034
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Robertson Rd

ATTENTION TO: Daniel Stabile; Kristina Small
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-08-15 DATE REPORTED: 2023-08-17

				SAMPLE DESCRIPTION:	Z2-04
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-08-15 14:15
Parameter	Unit	G / S	RDL		5217525
F1 (C6 - C10)	µg/L		25		<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25
F2 (C10 to C16)	µg/L	150	100		<100
F3 (C16 to C34)	µg/L	500	100		<100
F4 (C34 to C50)	µg/L	500	100		<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA
Sediment					1
Surrogate	Unit	Acceptable Limits			
Toluene-d8	%	50-140			101
Terphenyl	% Recovery	60-140			93

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5217525 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z058034

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile; Kristina Small

SAMPLING SITE:1047 Robertson Rd

SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-08-15

DATE REPORTED: 2023-08-17

				SAMPLE DESCRIPTION:	Z2-04
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-08-15 14:15
Parameter	Unit	G / S	RDL		5217525
Dichlorodifluoromethane	µg/L	3500	0.40		<0.40
Vinyl Chloride	µg/L	0.5	0.17		<0.17
Bromomethane	µg/L	0.89	0.20		<0.20
Trichlorofluoromethane	µg/L	2000	0.40		<0.40
Acetone	µg/L	100000	1.0		<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30		<0.30
Methylene Chloride	µg/L	26	0.30		<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20		<0.20
Methyl tert-butyl ether	µg/L	15	0.20		<0.20
1,1-Dichloroethane	µg/L	11	0.30		<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0		<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20		<0.20
Chloroform	µg/L	2	0.20		<0.20
1,2-Dichloroethane	µg/L	0.5	0.20		<0.20
1,1,1-Trichloroethane	µg/L	23	0.30		<0.30
Carbon Tetrachloride	µg/L	0.2	0.20		<0.20
Benzene	µg/L	0.5	0.20		<0.20
1,2-Dichloropropane	µg/L	0.58	0.20		<0.20
Trichloroethylene	µg/L	0.5	0.20		<0.20
Bromodichloromethane	µg/L	67000	0.20		<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0		<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20		<0.20
Toluene	µg/L	320	0.20		<0.20
Dibromochloromethane	µg/L	65000	0.10		<0.10
Ethylene Dibromide	µg/L	0.2	0.10		<0.10
Tetrachloroethylene	µg/L	0.5	0.20		<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10		<0.10
Chlorobenzene	µg/L	140	0.10		<0.10
Ethylbenzene	µg/L	54	0.10		<0.10

Certified By: R. Chakraberty

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Certificate of Analysis

AGAT WORK ORDER: 23Z058034
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Robertson Rd

ATTENTION TO: Daniel Stabile; Kristina Small
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-08-15 DATE REPORTED: 2023-08-17

				SAMPLE DESCRIPTION:	Z2-04
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-08-15 14:15
Parameter	Unit	G / S	RDL		5217525
m & p-Xylene	µg/L		0.20		<0.20
Bromoform	µg/L	5	0.10		<0.10
Styrene	µg/L	43	0.10		<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10
o-Xylene	µg/L		0.10		<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20
n-Hexane	µg/L	5	0.20		<0.20
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140			101
4-Bromofluorobenzene	% Recovery	50-140			92

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5217525 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 21494078

SAMPLING SITE:1047 Robertson Rd

AGAT WORK ORDER: 23Z058034

ATTENTION TO: Daniel Stabile; Kristina Small

SAMPLED BY:Rob Ireland

Trace Organics Analysis

RPT Date: Aug 17, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)															
F1 (C6 - C10)	5206742		<25	<25	NA	< 25	99%	60%	140%	79%	60%	140%	84%	60%	140%
F2 (C10 to C16)	5212514		<100	<100	NA	< 100	88%	60%	140%	63%	60%	140%	62%	60%	140%
F3 (C16 to C34)	5212514		<100	<100	NA	< 100	98%	60%	140%	60%	60%	140%	75%	60%	140%
F4 (C34 to C50)	5212514		<100	<100	NA	< 100	87%	60%	140%	93%	60%	140%	85%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5206742		<0.40	<0.40	NA	< 0.40	96%	50%	140%	91%	50%	140%	84%	50%	140%
Vinyl Chloride	5206742		<0.17	<0.17	NA	< 0.17	97%	50%	140%	96%	50%	140%	101%	50%	140%
Bromomethane	5206742		<0.20	<0.20	NA	< 0.20	105%	50%	140%	95%	50%	140%	85%	50%	140%
Trichlorofluoromethane	5206742		<0.40	<0.40	NA	< 0.40	95%	50%	140%	92%	50%	140%	101%	50%	140%
Acetone	5206742		<1.0	<1.0	NA	< 1.0	100%	50%	140%	118%	50%	140%	97%	50%	140%
1,1-Dichloroethylene	5206742		<0.30	<0.30	NA	< 0.30	99%	50%	140%	110%	60%	130%	108%	50%	140%
Methylene Chloride	5206742		<0.30	<0.30	NA	< 0.30	108%	50%	140%	109%	60%	130%	108%	50%	140%
trans- 1,2-Dichloroethylene	5206742		<0.20	<0.20	NA	< 0.20	97%	50%	140%	106%	60%	130%	99%	50%	140%
Methyl tert-butyl ether	5206742		<0.20	<0.20	NA	< 0.20	106%	50%	140%	100%	60%	130%	101%	50%	140%
1,1-Dichloroethane	5206742		<0.30	<0.30	NA	< 0.30	104%	50%	140%	115%	60%	130%	109%	50%	140%
Methyl Ethyl Ketone	5206742		<1.0	<1.0	NA	< 1.0	86%	50%	140%	98%	50%	140%	89%	50%	140%
cis- 1,2-Dichloroethylene	5206742		1.66	1.49	10.8%	< 0.20	101%	50%	140%	103%	60%	130%	68%	50%	140%
Chloroform	5206742		<0.20	<0.20	NA	< 0.20	103%	50%	140%	93%	60%	130%	102%	50%	140%
1,2-Dichloroethane	5206742		<0.20	<0.20	NA	< 0.20	88%	50%	140%	86%	60%	130%	102%	50%	140%
1,1,1-Trichloroethane	5206742		<0.30	<0.30	NA	< 0.30	105%	50%	140%	114%	60%	130%	94%	50%	140%
Carbon Tetrachloride	5206742		<0.20	<0.20	NA	< 0.20	92%	50%	140%	104%	60%	130%	80%	50%	140%
Benzene	5206742		<0.20	<0.20	NA	< 0.20	100%	50%	140%	103%	60%	130%	99%	50%	140%
1,2-Dichloropropane	5206742		<0.20	<0.20	NA	< 0.20	99%	50%	140%	102%	60%	130%	96%	50%	140%
Trichloroethylene	5206742		<0.20	<0.20	NA	< 0.20	101%	50%	140%	110%	60%	130%	104%	50%	140%
Bromodichloromethane	5206742		<0.20	<0.20	NA	< 0.20	97%	50%	140%	96%	60%	130%	89%	50%	140%
Methyl Isobutyl Ketone	5206742		<1.0	<1.0	NA	< 1.0	90%	50%	140%	101%	50%	140%	100%	50%	140%
1,1,2-Trichloroethane	5206742		<0.20	<0.20	NA	< 0.20	105%	50%	140%	111%	60%	130%	119%	50%	140%
Toluene	5206742		0.44	0.43	NA	< 0.20	107%	50%	140%	118%	60%	130%	107%	50%	140%
Dibromochloromethane	5206742		<0.10	<0.10	NA	< 0.10	108%	50%	140%	116%	60%	130%	108%	50%	140%
Ethylene Dibromide	5206742		<0.10	<0.10	NA	< 0.10	102%	50%	140%	109%	60%	130%	104%	50%	140%
Tetrachloroethylene	5206742		<0.20	<0.20	NA	< 0.20	115%	50%	140%	105%	60%	130%	115%	50%	140%
1,1,1,2-Tetrachloroethane	5206742		<0.10	<0.10	NA	< 0.10	101%	50%	140%	113%	60%	130%	88%	50%	140%
Chlorobenzene	5206742		<0.10	<0.10	NA	< 0.10	95%	50%	140%	113%	60%	130%	102%	50%	140%
Ethylbenzene	5206742		<0.10	<0.10	NA	< 0.10	97%	50%	140%	118%	60%	130%	92%	50%	140%
m & p-Xylene	5206742		<0.20	<0.20	NA	< 0.20	104%	50%	140%	109%	60%	130%	103%	50%	140%
Bromoform	5206742		<0.10	<0.10	NA	< 0.10	101%	50%	140%	105%	60%	130%	93%	50%	140%
Styrene	5206742		<0.10	<0.10	NA	< 0.10	110%	50%	140%	117%	60%	130%	91%	50%	140%
1,1,2,2-Tetrachloroethane	5206742		<0.10	<0.10	NA	< 0.10	97%	50%	140%	106%	60%	130%	100%	50%	140%
o-Xylene	5206742		<0.10	<0.10	NA	< 0.10	95%	50%	140%	111%	60%	130%	98%	50%	140%

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 21494078

SAMPLING SITE:1047 Robertson Rd

AGAT WORK ORDER: 23Z058034

ATTENTION TO: Daniel Stabile; Kristina Small

SAMPLED BY:Rob Ireland

Trace Organics Analysis (Continued)

RPT Date: Aug 17, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5206742		<0.10	<0.10	NA	< 0.10	110%	50%	140%	103%	60%	130%	103%	50%	140%
1,4-Dichlorobenzene	5206742		<0.10	<0.10	NA	< 0.10	115%	50%	140%	104%	60%	130%	110%	50%	140%
1,2-Dichlorobenzene	5206742		<0.10	<0.10	NA	< 0.10	114%	50%	140%	104%	60%	130%	107%	50%	140%
n-Hexane	5206742		<0.20	<0.20	NA	< 0.20	101%	50%	140%	103%	60%	130%	77%	50%	140%

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

Certified By: R. Chakraberty

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z058034

PROJECT: 21494078

ATTENTION TO: Daniel Stabile; Kristina Small

SAMPLING SITE:1047 Robertson Rd

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 - C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Sediment			N/A
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z058034

PROJECT: 21494078

ATTENTION TO: Daniel Stabile; Kristina Small

SAMPLING SITE:1047 Robertson Rd

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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AGAT Laboratories

Have feedback? Scan here for a quick survey!

RUSH!

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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 23Z058034

Cooler Quantity: One-Bagged Ice

Arrival Temperatures: 17.0 | 17.4 | 17.1
5.2 | 5.5 | 5.1

Custody Seal Intact: ☐ Yes ☐ No ☒ N/A

Notes: bagged ice

Report Information:

Company: WSP
Contact: Daniel Stabile / Kristina Small
Address: 1931 Robertson Rd
Ottawa, ON K2H 5B7
Phone: 613-592-9600 Fax: 613-592-9601
Reports to be sent to:
1. Email: Daniel.Stabile@wsp.com
2. Email: Kristina.Small@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture (Check One)
☐ Coarse
☐ Fine

☐ Regulation 406
Table ____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
____ (Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☒ Next Business Day

OR Date Required (Rush Surcharges May Apply): ____

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

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

Project Information:

Project: 21494078
Site Location: 1042 Robertson Rd
Sampled By: Rob Ireland
AGAT Quote #: 2023 Golder - AGAT MSA 735906 EB
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: WSP
Contact: Daniel Stabile / Kristina Small
Address:
Email: AP-CustomerService@wsp.com

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. ~~22-04~~	2023-08-15	14:15 AM/PM	8	GW					✓	✓								
2. ~~Dup~~ Dup 1	2023-08-15	14:15 AM/PM	8	GW	HOLD													
3.		AM/PM																
4.		AM/PM																
5.		AM/PM																
6.		AM/PM																
7.		AM/PM																
8.		AM/PM																
9.		AM/PM																
10.		AM/PM																
11.		AM/PM																

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Rob Ireland	2023-08-15	15:25	C. Griffith	08/15/23	15h30
CC to Pam	08/16/23	15h30		Aug 17	8:50

Page 1 of 1

N°: T-146541

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

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AGAT Laboratories

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CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600

ATTENTION TO: Daniel Stabile

PROJECT: 21494078

AGAT WORK ORDER: 23Z048562

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Oct 02, 2023

PAGES (INCLUDING COVER): 9

VERSION*: 1

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

*Notes

VERSION 1:Client ID updated as per request. 08/17

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 23Z048562
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd, Ottawa

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-18

DATE REPORTED: 2023-10-02

		SAMPLE DESCRIPTION:		MW22-06
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2023-07-18
Parameter	Unit	G / S	RDL	5155137
F1 (C6 - C10)	µg/L		25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25
F2 (C10 to C16)	µg/L	150	100	<100
F3 (C16 to C34)	µg/L	500	100	<100
F4 (C34 to C50)	µg/L	500	100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA
Sediment				1
Surrogate	Unit	Acceptable Limits		
Toluene-d8	%	50-140		96
Terphenyl	% Recovery	60-140		63

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5155137 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 23Z048562
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd, Ottawa

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-18

DATE REPORTED: 2023-10-02

		SAMPLE DESCRIPTION:		MW22-06
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2023-07-18
Parameter	Unit	G / S	RDL	5155137
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20
Toluene	µg/L	320	0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 23Z048562
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd, Ottawa

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-18

DATE REPORTED: 2023-10-02

		SAMPLE DESCRIPTION:		MW22-06
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2023-07-18
Parameter	Unit	G / S	RDL	5155137
Bromoform	µg/L	5	0.10	<0.10
Styrene	µg/L	43	0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10
o-Xylene	µg/L		0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		96
4-Bromofluorobenzene	% Recovery	50-140		92

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5155137 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z048562

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa

SAMPLED BY:Ryan Francis

Trace Organics Analysis

RPT Date: Oct 02, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)															
F1 (C6 - C10)	5152353		<25	<25	NA	< 25	99%	60%	140%	108%	60%	140%	96%	60%	140%
F2 (C10 to C16)	5144964		< 100	< 100	NA	< 100	103%	60%	140%	62%	60%	140%	79%	60%	140%
F3 (C16 to C34)	5144964		< 100	< 100	NA	< 100	96%	60%	140%	62%	60%	140%	62%	60%	140%
F4 (C34 to C50)	5144964		< 100	< 100	NA	< 100	65%	60%	140%	86%	60%	140%	80%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5152353		<0.40	<0.40	NA	< 0.40	98%	50%	140%	110%	50%	140%	80%	50%	140%
Vinyl Chloride	5152353		<0.17	<0.17	NA	< 0.17	86%	50%	140%	101%	50%	140%	99%	50%	140%
Bromomethane	5152353		<0.20	<0.20	NA	< 0.20	76%	50%	140%	102%	50%	140%	82%	50%	140%
Trichlorofluoromethane	5152353		<0.40	<0.40	NA	< 0.40	78%	50%	140%	95%	50%	140%	96%	50%	140%
Acetone	5152353		<1.0	<1.0	NA	< 1.0	96%	50%	140%	84%	50%	140%	89%	50%	140%
1,1-Dichloroethylene	5152353		<0.30	<0.30	NA	< 0.30	103%	50%	140%	84%	60%	130%	80%	50%	140%
Methylene Chloride	5152353		<0.30	<0.30	NA	< 0.30	112%	50%	140%	113%	60%	130%	119%	50%	140%
trans- 1,2-Dichloroethylene	5152353		<0.20	<0.20	NA	< 0.20	114%	50%	140%	99%	60%	130%	84%	50%	140%
Methyl tert-butyl ether	5152353		<0.20	<0.20	NA	< 0.20	75%	50%	140%	82%	60%	130%	91%	50%	140%
1,1-Dichloroethane	5152353		<0.30	<0.30	NA	< 0.30	75%	50%	140%	72%	60%	130%	98%	50%	140%
Methyl Ethyl Ketone	5152353		<1.0	<1.0	NA	< 1.0	94%	50%	140%	80%	50%	140%	91%	50%	140%
cis- 1,2-Dichloroethylene	5152353		<0.20	<0.20	NA	< 0.20	78%	50%	140%	79%	60%	130%	78%	50%	140%
Chloroform	5152353		<0.20	<0.20	NA	< 0.20	83%	50%	140%	77%	60%	130%	74%	50%	140%
1,2-Dichloroethane	5152353		<0.20	<0.20	NA	< 0.20	72%	50%	140%	76%	60%	130%	78%	50%	140%
1,1,1-Trichloroethane	5152353		<0.30	<0.30	NA	< 0.30	73%	50%	140%	71%	60%	130%	75%	50%	140%
Carbon Tetrachloride	5152353		<0.20	<0.20	NA	< 0.20	90%	50%	140%	88%	60%	130%	85%	50%	140%
Benzene	5152353		<0.20	<0.20	NA	< 0.20	82%	50%	140%	79%	60%	130%	83%	50%	140%
1,2-Dichloropropane	5152353		<0.20	<0.20	NA	< 0.20	78%	50%	140%	83%	60%	130%	82%	50%	140%
Trichloroethylene	5152353		<0.20	<0.20	NA	< 0.20	82%	50%	140%	76%	60%	130%	73%	50%	140%
Bromodichloromethane	5152353		<0.20	<0.20	NA	< 0.20	82%	50%	140%	78%	60%	130%	75%	50%	140%
Methyl Isobutyl Ketone	5152353		<1.0	<1.0	NA	< 1.0	76%	50%	140%	83%	50%	140%	90%	50%	140%
1,1,2-Trichloroethane	5152353		<0.20	<0.20	NA	< 0.20	82%	50%	140%	93%	60%	130%	89%	50%	140%
Toluene	5152353		<0.20	<0.20	NA	< 0.20	85%	50%	140%	90%	60%	130%	85%	50%	140%
Dibromochloromethane	5152353		<0.10	<0.10	NA	< 0.10	84%	50%	140%	95%	60%	130%	80%	50%	140%
Ethylene Dibromide	5152353		<0.10	<0.10	NA	< 0.10	84%	50%	140%	95%	60%	130%	90%	50%	140%
Tetrachloroethylene	5152353		<0.20	<0.20	NA	< 0.20	79%	50%	140%	84%	60%	130%	73%	50%	140%
1,1,1,2-Tetrachloroethane	5152353		<0.10	<0.10	NA	< 0.10	78%	50%	140%	86%	60%	130%	76%	50%	140%
Chlorobenzene	5152353		<0.10	<0.10	NA	< 0.10	84%	50%	140%	90%	60%	130%	76%	50%	140%
Ethylbenzene	5152353		<0.10	<0.10	NA	< 0.10	81%	50%	140%	86%	60%	130%	76%	50%	140%
m & p-Xylene	5152353		<0.20	<0.20	NA	< 0.20	77%	50%	140%	83%	60%	130%	79%	50%	140%
Bromoform	5152353		<0.10	<0.10	NA	< 0.10	80%	50%	140%	90%	60%	130%	71%	50%	140%
Styrene	5152353		<0.10	<0.10	NA	< 0.10	81%	50%	140%	76%	60%	130%	81%	50%	140%
1,1,2,2-Tetrachloroethane	5152353		<0.10	<0.10	NA	< 0.10	92%	50%	140%	100%	60%	130%	94%	50%	140%
o-Xylene	5152353		<0.10	<0.10	NA	< 0.10	76%	50%	140%	83%	60%	130%	77%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z048562

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa

SAMPLED BY:Ryan Francis

Trace Organics Analysis (Continued)

RPT Date: Oct 02, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5152353		<0.10	<0.10	NA	< 0.10	75%	50%	140%	80%	60%	130%	73%	50%	140%
1,4-Dichlorobenzene	5152353		<0.10	<0.10	NA	< 0.10	73%	50%	140%	81%	60%	130%	75%	50%	140%
1,2-Dichlorobenzene	5152353		<0.10	<0.10	NA	< 0.10	76%	50%	140%	80%	60%	130%	75%	50%	140%
n-Hexane	5152353		<0.20	<0.20	NA	< 0.20	108%	50%	140%	79%	60%	130%	76%	50%	140%

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

Certified By: NPopowkolof

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CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z048562

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 - C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Sediment			N/A
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z048562

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ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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AGAT Laboratories

RUSH!

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

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 2320485620

Cooler Quantity: one - loose ice

Arrival Temperatures: 19.9 | 19.8 | 19.8
8.2 | 8.0 | 8.5

Custody Seal Intact: ☐ Yes ☐ No ☒ N/A

Notes: bagged ice

Report Information:

Company: WSP Canada Inc
Contact: Daniel Stabile
Address: 1931 Robertson Rd, Ottawa, ON, K2H 5B7
Phone: Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email:

Project Information:

Project: 21494078
Site Location: 1947 Richmond Rd, Ottawa
Sampled By: Ryan Francis
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company: WSP Canada Inc
Contact: Daniel Stabile
Address:
Email: CAPayableInvoice@WSP.com

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
____ (Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☐ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☒ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs Analyze F4G if required ☐ Yes ☐ No	PHCs	PCBs	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
MW22-08	July 18/23	2:45 AM/PM	5	GW					✓			✓					
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Ryan Francis / [signature]	July 18/23	4:45	C. Griffith	07/18/23	16h50
[signature] to Amo	07/19/23	15h30	[signature]	July 20	9:35 am
	Date	Time	Samples Received By (Print Name and Sign)	Date	Time

Page 1 of 1

N°: T 129258

Document ID: DIV 78 1511 021

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Document Updated: March 9, 2021

AGAT Laboratories

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CLIENT NAME: WSP CANADA INC.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727

ATTENTION TO: Daniel Stabile

PROJECT: 21404978

AGAT WORK ORDER: 23Z095888

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Nov 27, 2023

PAGES (INCLUDING COVER): 10

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z095888

PROJECT: 21404978

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:B Jelly

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

DATE RECEIVED: 2023-11-21

DATE REPORTED: 2023-11-27

				SAMPLE DESCRIPTION:	MW 22-04	MW 22-08	DUP-GW
				SAMPLE TYPE:	Water	Water	Water
				DATE SAMPLED:	2023-11-21 15:26	2023-11-21 13:45	2023-11-21
Parameter	Unit	G / S	RDL		5485598	5485600	5485601
F1 (C6 to C10)	µg/L		25		<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25	<25	<25
F2 (C10 to C16)	µg/L	150	100		214	<100	<100
F3 (C16 to C34)	µg/L	500	100		2840	<100	<100
F4 (C34 to C50)	µg/L	500	100		<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA
Sediment					1	1	1
Surrogate	Unit	Acceptable Limits					
Toluene-d8	%	50-140			99	93	102
Terphenyl	% Recovery	60-140			67	84	76

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5485598-5485601 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z095888

PROJECT: 21404978

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:B Jelly

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

DATE RECEIVED: 2023-11-21

DATE REPORTED: 2023-11-27

		SAMPLE DESCRIPTION:		MW 22-04	MW 22-08	DUP-GW
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-11-21 15:26	2023-11-21 13:45	2023-11-21
Parameter	Unit	G / S	RDL	5485598	5485600	5485601
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	<0.10

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 23Z095888

PROJECT: 21404978

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:B Jelly

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

DATE RECEIVED: 2023-11-21

DATE REPORTED: 2023-11-27

				SAMPLE DESCRIPTION:	MW 22-04	MW 22-08	DUP-GW
				SAMPLE TYPE:	Water	Water	Water
				DATE SAMPLED:	2023-11-21 15:26	2023-11-21 13:45	2023-11-21
Parameter	Unit	G / S	RDL		5485598	5485600	5485601
m & p-Xylene	µg/L		0.20		<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10		<0.10	<0.10	<0.10
Styrene	µg/L	43	0.10		<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10		<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20		<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140			99	93	102
4-Bromofluorobenzene	% Recovery	50-140			88	83	70

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5485598-5485601 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Exceedance Summary

AGAT WORK ORDER: 23Z095888

PROJECT: 21404978

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5485598	MW 22-04	ON T7 NPGW CT	O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)	F2 (C10 to C16)	µg/L	150	214
5485598	MW 22-04	ON T7 NPGW CT	O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)	F3 (C16 to C34)	µg/L	500	2840

Results relate only to the items tested. Results apply to samples as received.

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TEL (905)712-5100
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http://www.agatlabs.com

Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21404978
SAMPLING SITE:

AGAT WORK ORDER: 23Z095888
ATTENTION TO: Daniel Stabile
SAMPLED BY:B Jelly

Trace Organics Analysis

RPT Date: Nov 27, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)															
F1 (C6 to C10)	5483060		37	36	NA	< 25	97%	60%	140%	88%	60%	140%	84%	60%	140%
F2 (C10 to C16)	5476835		< 100	< 100	NA	< 100	113%	60%	140%	66%	60%	140%	70%	60%	140%
F3 (C16 to C34)	5476835		< 100	< 100	NA	< 100	107%	60%	140%	64%	60%	140%	68%	60%	140%
F4 (C34 to C50)	5476835		< 100	< 100	NA	< 100	74%	60%	140%	76%	60%	140%	97%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5483060		<0.40	<0.40	NA	< 0.40	87%	50%	140%	101%	50%	140%	89%	50%	140%
Vinyl Chloride	5483060		<0.17	<0.17	NA	< 0.17	102%	50%	140%	101%	50%	140%	88%	50%	140%
Bromomethane	5483060		<0.20	<0.20	NA	< 0.20	107%	50%	140%	104%	50%	140%	94%	50%	140%
Trichlorofluoromethane	5483060		<0.40	<0.40	NA	< 0.40	103%	50%	140%	109%	50%	140%	86%	50%	140%
Acetone	5483060		<1.0	<1.0	NA	< 1.0	96%	50%	140%	81%	50%	140%	112%	50%	140%
1,1-Dichloroethylene	5483060		<0.30	<0.30	NA	< 0.30	93%	50%	140%	98%	60%	130%	105%	50%	140%
Methylene Chloride	5483060		<0.30	<0.30	NA	< 0.30	91%	50%	140%	96%	60%	130%	105%	50%	140%
trans- 1,2-Dichloroethylene	5483060		<0.20	<0.20	NA	< 0.20	102%	50%	140%	107%	60%	130%	109%	50%	140%
Methyl tert-butyl ether	5483060		<0.20	<0.20	NA	< 0.20	107%	50%	140%	112%	60%	130%	72%	50%	140%
1,1-Dichloroethane	5483060		<0.30	<0.30	NA	< 0.30	116%	50%	140%	94%	60%	130%	118%	50%	140%
Methyl Ethyl Ketone	5483060		<1.0	<1.0	NA	< 1.0	98%	50%	140%	106%	50%	140%	111%	50%	140%
cis- 1,2-Dichloroethylene	5483060		<0.20	<0.20	NA	< 0.20	113%	50%	140%	114%	60%	130%	118%	50%	140%
Chloroform	5483060		<0.20	<0.20	NA	< 0.20	106%	50%	140%	108%	60%	130%	102%	50%	140%
1,2-Dichloroethane	5483060		<0.20	<0.20	NA	< 0.20	95%	50%	140%	88%	60%	130%	100%	50%	140%
1,1,1-Trichloroethane	5483060		<0.30	<0.30	NA	< 0.30	108%	50%	140%	107%	60%	130%	111%	50%	140%
Carbon Tetrachloride	5483060		<0.20	<0.20	NA	< 0.20	107%	50%	140%	103%	60%	130%	115%	50%	140%
Benzene	5483060		1.31	1.60	19.9%	< 0.20	103%	50%	140%	85%	60%	130%	115%	50%	140%
1,2-Dichloropropane	5483060		<0.20	<0.20	NA	< 0.20	99%	50%	140%	110%	60%	130%	106%	50%	140%
Trichloroethylene	5483060		<0.20	<0.20	NA	< 0.20	78%	50%	140%	79%	60%	130%	85%	50%	140%
Bromodichloromethane	5483060		<0.20	<0.20	NA	< 0.20	112%	50%	140%	113%	60%	130%	117%	50%	140%
Methyl Isobutyl Ketone	5483060		<1.0	<1.0	NA	< 1.0	101%	50%	140%	94%	50%	140%	88%	50%	140%
1,1,2-Trichloroethane	5483060		<0.20	<0.20	NA	< 0.20	104%	50%	140%	104%	60%	130%	117%	50%	140%
Toluene	5483060		24.1	22.0	9.5%	< 0.20	98%	50%	140%	100%	60%	130%	116%	50%	140%
Dibromochloromethane	5483060		<0.10	<0.10	NA	< 0.10	107%	50%	140%	97%	60%	130%	117%	50%	140%
Ethylene Dibromide	5483060		<0.10	<0.10	NA	< 0.10	114%	50%	140%	116%	60%	130%	96%	50%	140%
Tetrachloroethylene	5483060		<0.20	<0.20	NA	< 0.20	92%	50%	140%	96%	60%	130%	94%	50%	140%
1,1,1,2-Tetrachloroethane	5483060		<0.10	<0.10	NA	< 0.10	110%	50%	140%	106%	60%	130%	117%	50%	140%
Chlorobenzene	5483060		<0.10	<0.10	NA	< 0.10	92%	50%	140%	93%	60%	130%	103%	50%	140%
Ethylbenzene	5483060		1.97	2.20	11.0%	< 0.10	104%	50%	140%	109%	60%	130%	113%	50%	140%
m & p-Xylene	5483060		8.70	9.98	13.7%	< 0.20	103%	50%	140%	109%	60%	130%	108%	50%	140%
Bromoform	5483060		<0.10	<0.10	NA	< 0.10	112%	50%	140%	113%	60%	130%	114%	50%	140%
Styrene	5483060		<0.10	<0.10	NA	< 0.10	107%	50%	140%	120%	60%	130%	104%	50%	140%
1,1,2,2-Tetrachloroethane	5483060		<0.10	<0.10	NA	< 0.10	118%	50%	140%	114%	60%	130%	97%	50%	140%
o-Xylene	5483060		3.61	4.08	12.2%	< 0.10	115%	50%	140%	116%	60%	130%	104%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z095888

PROJECT: 21404978

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:B Jelly

Trace Organics Analysis (Continued)

RPT Date: Nov 27, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5483060		<0.10	<0.10	NA	< 0.10	95%	50%	140%	93%	60%	130%	102%	50%	140%
1,4-Dichlorobenzene	5483060		<0.10	<0.10	NA	< 0.10	96%	50%	140%	92%	60%	130%	103%	50%	140%
1,2-Dichlorobenzene	5483060		<0.10	<0.10	NA	< 0.10	95%	50%	140%	91%	60%	130%	100%	50%	140%
n-Hexane	5483060		<0.20	<0.20	NA	< 0.20	109%	50%	140%	117%	60%	130%	102%	50%	140%

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

Certified By:

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Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z095888

PROJECT: 21404978

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:B Jelly

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 to C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Sediment			N/A
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z095888

PROJECT: 21404978

ATTENTION TO: Daniel Stabile

SAMPLING SITE:

SAMPLED BY:B Jelly

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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AGAT Laboratories

Have feedback? Scan here for a quick survey!

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webearth.agatlabs.com

Chain of Custody Record

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

Report Information:

Company: WSP GLOBAL
Contact: DANIEL STABILE
Address: 100 SCOTIA COURT WHITBY ON L1N 8Y8
Phone: 1905 213 4732 Fax:
Reports to be sent to:
1. Email: DANIEL.STABILE@WSP.COM
2. Email:

Project Information:

Project: 21404978
Site Location:
Sampled By: B JELLY
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 *Indicate One*
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☒ Coarse
☐ Fine

☐ Regulation 406
Table _____ *Indicate One*

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
_____ *Region*

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
_____ *Indicate One*

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 23T095888

Cooler Quantity: one - no ice packs
Arrival Temperatures: 1.0 | 1.1 | 1.5
1.5 | 1.1 | 1.2
Custody Seal Intact: ☐Yes ☐No ☐N/A
Notes:

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	VOC	PAHs	PCBs	PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	VOC, PHC F1-F4						Potentially Hazardous or High Concentration (Y/N)
1. MW 22-04	11/21/23	3:26 AM/PM	4	GW														X						
2. MW 22-08	11/21/23	1:45 AM/PM	4	GW														X						
3. DUP-GW	11/21/23	AM/PM	4	GW														X						
4.		AM/PM																						
5.		AM/PM																						
6.		AM/PM																						
7.		AM/PM																						
8.		AM/PM																						
9.		AM/PM																						
10.		AM/PM																						
11.		AM/PM																						

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
BRYNT JELLY	11/21/23			11/21/23	16:17
	11/22/23	15:30		NOV 23	8:55

Page 1 of 1

N°: T-150455

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Document ID: DW-78-1511-022

AGAT Laboratories

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CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600

ATTENTION TO: Daniel Stabile

PROJECT: 21494078

AGAT WORK ORDER: 23Z029406

TRACE ORGANICS REVIEWED BY: Radhika Chakraberty, Trace Organics Lab Manager

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Jun 06, 2023

PAGES (INCLUDING COVER): 20

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

				SAMPLE DESCRIPTION:	23-1	23-2	DUP 1	23-3
				SAMPLE TYPE:	Water	Water	Water	Water
				DATE SAMPLED:	2023-05-25 14:15	2023-05-26 10:00	2023-05-26 10:00	2023-05-26 13:20
Parameter	Unit	G / S	RDL		5025522	5025526	5025527	5025528
Naphthalene	µg/L	7	0.20		<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20		<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	17	0.20		<0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	290	0.20		<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	380	0.10		<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	1	0.10		<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	44	0.20		<0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	5.7	0.20		<0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	1.8	0.20		<0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	0.7	0.10		<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.75	0.10		<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.4	0.10		<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.81	0.01		<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20		<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.4	0.20		<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20		<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	1500	0.20		<0.20	<0.20	<0.20	<0.20
Sediment					1	1	1	1
Surrogate	Unit	Acceptable Limits						
Naphthalene-d8	%	50-140			105	107	106	109
Acridine-d9	%	50-140			90	97	92	95
Terphenyl-d14	%	50-140			85	93	86	90

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5025522-5025528 Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

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AGAT Laboratories

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AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

				SAMPLE DESCRIPTION:	23-1	23-2	DUP 1	23-3
				SAMPLE TYPE:	Water	Water	Water	Water
				DATE SAMPLED:	2023-05-25 14:15	2023-05-26 10:00	2023-05-26 10:00	2023-05-26 13:20
Parameter	Unit	G / S	RDL		5025522	5025526	5025527	5025528
F1 (C6-C10)	µg/L		25		<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100		<100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100		<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100		<100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100		<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100		<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA	NA
Sediment					1	1	1	1
Surrogate	Unit	Acceptable Limits						
Toluene-d8	%	50-140			105	105	103	102
Terphenyl	% Recovery	60-140			61	67	81	92

Certified By: R. Chakraberty

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Certificate of Analysis

AGAT WORK ORDER: 23Z029406
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2023-05-26 DATE REPORTED: 2023-06-06

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5025522-5025528 The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

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AGAT WORK ORDER: 23Z029406
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

				SAMPLE DESCRIPTION:	VOC Field Blank	VOC Trip Blank
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2023-05-26 13:20	
Parameter	Unit	G / S	RDL		5025530	5025531
Dichlorodifluoromethane	µg/L	3500	0.40		<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17		<0.17	<0.17
Bromomethane	µg/L	0.89	0.20		<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40		<0.40	<0.40
Acetone	µg/L	100000	1.0		<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30		<0.30	<0.30
Methylene Chloride	µg/L	26	0.30		<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20		<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20		<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30		<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0		<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20		<0.20	<0.20
Chloroform	µg/L	2	0.20		<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20		<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30		<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20		<0.20	<0.20
Benzene	µg/L	0.5	0.20		<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20		<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20		<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20		<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0		<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20		<0.20	<0.20
Toluene	µg/L	320	0.20		<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10		<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10		<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20		<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10		<0.10	<0.10
Chlorobenzene	µg/L	140	0.10		<0.10	<0.10
Ethylbenzene	µg/L	54	0.10		<0.10	<0.10

Certified By: R. Chakraberty

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AGAT WORK ORDER: 23Z029406
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

				SAMPLE DESCRIPTION:	VOC Field Blank	VOC Trip Blank
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2023-05-26 13:20	
Parameter	Unit	G / S	RDL		5025530	5025531
m & p-Xylene	µg/L		0.20		<0.20	<0.20
Bromoform	µg/L	5	0.10		<0.10	<0.10
Styrene	µg/L	43	0.10		<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10	<0.10
o-Xylene	µg/L		0.10		<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20
n-Hexane	µg/L	5	0.20		<0.20	<0.20
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140			106	90
4-Bromofluorobenzene	% Recovery	50-140			83	88

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5025530-5025531 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

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AGAT WORK ORDER: 23Z029406
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

		SAMPLE DESCRIPTION:		23-1	23-2	DUP 1	23-3
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2023-05-25 14:15	2023-05-26 10:00	2023-05-26 10:00	2023-05-26 13:20
Parameter	Unit	G / S	RDL	5025522	5025526	5025527	5025528
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	100000	1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	26	0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	11	0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	67000	0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	320	0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	65000	0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	140	0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	54	0.10	<0.10	<0.10	<0.10	<0.10

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z029406
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

				SAMPLE DESCRIPTION:	23-1	23-2	DUP 1	23-3
				SAMPLE TYPE:	Water	Water	Water	Water
				DATE SAMPLED:	2023-05-25 14:15	2023-05-26 10:00	2023-05-26 10:00	2023-05-26 13:20
Parameter	Unit	G / S	RDL		5025522	5025526	5025527	5025528
m & p-Xylene	µg/L		0.20		<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	5	0.10		<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	43	0.10		<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10		<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10		<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10		<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10		<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10		<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20		<0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits						
Toluene-d8	% Recovery	50-140			105	105	103	102
4-Bromofluorobenzene	% Recovery	50-140			91	84	80	90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5025522-5025528 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

SAMPLE DESCRIPTION:				23-1	23-2	DUP 1	23-3
SAMPLE TYPE:				Water	Water	Water	Water
DATE SAMPLED:				2023-05-25 14:15	2023-05-26 10:00	2023-05-26 10:00	2023-05-26 13:20
Parameter	Unit	G / S	RDL	5025522	5025526	5025527	5025528
Dissolved Antimony	µg/L	16000	1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	1500	1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Barium	µg/L	23000	2.0	162	168	165	152
Dissolved Beryllium	µg/L	53	0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	36000	10.0	337	582	558	308
Dissolved Cadmium	µg/L	2.1	0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	640	2.0	<2.0	<2.0	<2.0	3.4
Dissolved Cobalt	µg/L	52	0.50	1.80	2.19	2.22	2.68
Dissolved Copper	µg/L	69	1.0	1.0	<1.0	1.1	1.1
Dissolved Lead	µg/L	20	0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	7300	0.50	<0.50	0.75	0.57	<0.50
Dissolved Nickel	µg/L	390	1.0	3.6	4.1	4.6	3.1
Dissolved Selenium	µg/L	50	1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Silver	µg/L	1.2	0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	400	0.30	<0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	330	0.50	1.07	1.52	1.53	0.76
Dissolved Vanadium	µg/L	200	0.40	<0.40	<0.40	<0.40	<0.40
Dissolved Zinc	µg/L	890	5.0	<5.0	<5.0	<5.0	<5.0
Mercury	µg/L	0.1	0.02	<0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L	110	2.000	<2.000	<2.000	<2.000	<2.000
Cyanide, WAD	µg/L	52	2	<2	<2	<2	<2
Dissolved Sodium	µg/L	1800000	100	444000	488000	477000	381000
Chloride	µg/L	1800000	100	972000	1110000	1110000	832000
Electrical Conductivity	uS/cm	NA	2	3740	4220	4230	3300
pH	pH Units		NA	7.65	7.59	7.62	7.68

Certified By: Iris Verástegui

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-26

DATE REPORTED: 2023-06-06

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5025522-5025528 Metals analysis completed on a filtered sample.
Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Iris Verástegui

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z029406
ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

Trace Organics Analysis

RPT Date: Jun 06, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	5021359		<0.40	<0.40	NA	< 0.40	87%	50%	140%	106%	50%	140%	108%	50%	140%
Vinyl Chloride	5021359		<0.17	<0.17	NA	< 0.17	106%	50%	140%	101%	50%	140%	81%	50%	140%
Bromomethane	5021359		<0.20	<0.20	NA	< 0.20	111%	50%	140%	93%	50%	140%	80%	50%	140%
Trichlorofluoromethane	5021359		<0.40	<0.40	NA	< 0.40	117%	50%	140%	108%	50%	140%	115%	50%	140%
Acetone	5021359		<1.0	<1.0	NA	< 1.0	101%	50%	140%	118%	50%	140%	105%	50%	140%
1,1-Dichloroethylene	5021359		<0.30	<0.30	NA	< 0.30	112%	50%	140%	89%	60%	130%	83%	50%	140%
Methylene Chloride	5021359		<0.30	<0.30	NA	< 0.30	99%	50%	140%	85%	60%	130%	96%	50%	140%
trans- 1,2-Dichloroethylene	5021359		<0.20	<0.20	NA	< 0.20	111%	50%	140%	88%	60%	130%	98%	50%	140%
Methyl tert-butyl ether	5021359		<0.20	<0.20	NA	< 0.20	78%	50%	140%	90%	60%	130%	70%	50%	140%
1,1-Dichloroethane	5021359		<0.30	<0.30	NA	< 0.30	103%	50%	140%	88%	60%	130%	80%	50%	140%
Methyl Ethyl Ketone	5021359		<1.0	<1.0	NA	< 1.0	87%	50%	140%	91%	50%	140%	80%	50%	140%
cis- 1,2-Dichloroethylene	5021359		<0.20	<0.20	NA	< 0.20	91%	50%	140%	103%	60%	130%	109%	50%	140%
Chloroform	5021359		<0.20	<0.20	NA	< 0.20	101%	50%	140%	103%	60%	130%	105%	50%	140%
1,2-Dichloroethane	5021359		<0.20	<0.20	NA	< 0.20	108%	50%	140%	117%	60%	130%	101%	50%	140%
1,1,1-Trichloroethane	5021359		<0.30	<0.30	NA	< 0.30	98%	50%	140%	86%	60%	130%	91%	50%	140%
Carbon Tetrachloride	5021359		<0.20	<0.20	NA	< 0.20	109%	50%	140%	79%	60%	130%	94%	50%	140%
Benzene	5021359		<0.20	<0.20	NA	< 0.20	82%	50%	140%	102%	60%	130%	96%	50%	140%
1,2-Dichloropropane	5021359		<0.20	<0.20	NA	< 0.20	78%	50%	140%	84%	60%	130%	81%	50%	140%
Trichloroethylene	5021359		<0.20	<0.20	NA	< 0.20	113%	50%	140%	95%	60%	130%	96%	50%	140%
Bromodichloromethane	5021359		<0.20	<0.20	NA	< 0.20	115%	50%	140%	93%	60%	130%	85%	50%	140%
Methyl Isobutyl Ketone	5021359		<1.0	<1.0	NA	< 1.0	85%	50%	140%	99%	50%	140%	82%	50%	140%
1,1,2-Trichloroethane	5021359		<0.20	<0.20	NA	< 0.20	97%	50%	140%	98%	60%	130%	104%	50%	140%
Toluene	5021359		<0.20	<0.20	NA	< 0.20	84%	50%	140%	105%	60%	130%	104%	50%	140%
Dibromochloromethane	5021359		<0.10	<0.10	NA	< 0.10	96%	50%	140%	114%	60%	130%	119%	50%	140%
Ethylene Dibromide	5021359		<0.10	<0.10	NA	< 0.10	89%	50%	140%	106%	60%	130%	108%	50%	140%
Tetrachloroethylene	5021359		<0.20	<0.20	NA	< 0.20	89%	50%	140%	97%	60%	130%	112%	50%	140%
1,1,1,2-Tetrachloroethane	5021359		<0.10	<0.10	NA	< 0.10	96%	50%	140%	99%	60%	130%	104%	50%	140%
Chlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	98%	50%	140%	116%	60%	130%	90%	50%	140%
Ethylbenzene	5021359		<0.10	<0.10	NA	< 0.10	100%	50%	140%	101%	60%	130%	83%	50%	140%
m & p-Xylene	5021359		<0.20	<0.20	NA	< 0.20	105%	50%	140%	89%	60%	130%	112%	50%	140%
Bromoform	5021359		<0.10	<0.10	NA	< 0.10	102%	50%	140%	102%	60%	130%	117%	50%	140%
Styrene	5021359		<0.10	<0.10	NA	< 0.10	94%	50%	140%	95%	60%	130%	122%	50%	140%
1,1,2,2-Tetrachloroethane	5021359		<0.10	<0.10	NA	< 0.10	94%	50%	140%	85%	60%	130%	85%	50%	140%
o-Xylene	5021359		<0.10	<0.10	NA	< 0.10	100%	50%	140%	103%	60%	130%	114%	50%	140%
1,3-Dichlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	112%	50%	140%	115%	60%	130%	97%	50%	140%
1,4-Dichlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	97%	50%	140%	115%	60%	130%	86%	50%	140%
1,2-Dichlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	119%	50%	140%	113%	60%	130%	108%	50%	140%
n-Hexane	5021359		<0.20	<0.20	NA	< 0.20	117%	50%	140%	73%	60%	130%	91%	50%	140%

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z029406
ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

Trace Organics Analysis (Continued)

RPT Date: Jun 06, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)															
F1 (C6-C10)	5021359		<25	<25	NA	< 25	100%	60%	140%	119%	60%	140%	93%	60%	140%
F2 (C10 to C16)	5027965		< 100	< 100	NA	< 100	110%	60%	140%	110%	60%	140%	77%	60%	140%
F3 (C16 to C34)	5027965		< 100	< 100	NA	< 100	110%	60%	140%	99%	60%	140%	72%	60%	140%
F4 (C34 to C50)	5027965		< 100	< 100	NA	< 100	87%	60%	140%	72%	60%	140%	97%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5021359		<0.40	<0.40	NA	< 0.40	87%	50%	140%	106%	50%	140%	108%	50%	140%
Vinyl Chloride	5021359		<0.17	<0.17	NA	< 0.17	106%	50%	140%	101%	50%	140%	81%	50%	140%
Bromomethane	5021359		<0.20	<0.20	NA	< 0.20	111%	50%	140%	93%	50%	140%	80%	50%	140%
Trichlorofluoromethane	5021359		<0.40	<0.40	NA	< 0.40	117%	50%	140%	108%	50%	140%	115%	50%	140%
Acetone	5021359		<1.0	<1.0	NA	< 1.0	101%	50%	140%	118%	50%	140%	105%	50%	140%
1,1-Dichloroethylene	5021359		<0.30	<0.30	NA	< 0.30	112%	50%	140%	89%	60%	130%	83%	50%	140%
Methylene Chloride	5021359		<0.30	<0.30	NA	< 0.30	99%	50%	140%	85%	60%	130%	96%	50%	140%
trans- 1,2-Dichloroethylene	5021359		<0.20	<0.20	NA	< 0.20	111%	50%	140%	88%	60%	130%	98%	50%	140%
Methyl tert-butyl ether	5021359		<0.20	<0.20	NA	< 0.20	78%	50%	140%	90%	60%	130%	70%	50%	140%
1,1-Dichloroethane	5021359		<0.30	<0.30	NA	< 0.30	103%	50%	140%	88%	60%	130%	80%	50%	140%
Methyl Ethyl Ketone	5021359		<1.0	<1.0	NA	< 1.0	87%	50%	140%	91%	50%	140%	80%	50%	140%
cis- 1,2-Dichloroethylene	5021359		<0.20	<0.20	NA	< 0.20	91%	50%	140%	103%	60%	130%	109%	50%	140%
Chloroform	5021359		<0.20	<0.20	NA	< 0.20	101%	50%	140%	103%	60%	130%	105%	50%	140%
1,2-Dichloroethane	5021359		<0.20	<0.20	NA	< 0.20	108%	50%	140%	117%	60%	130%	101%	50%	140%
1,1,1-Trichloroethane	5021359		<0.30	<0.30	NA	< 0.30	98%	50%	140%	86%	60%	130%	91%	50%	140%
Carbon Tetrachloride	5021359		<0.20	<0.20	NA	< 0.20	109%	50%	140%	79%	60%	130%	94%	50%	140%
Benzene	5021359		<0.20	<0.20	NA	< 0.20	82%	50%	140%	102%	60%	130%	96%	50%	140%
1,2-Dichloropropane	5021359		<0.20	<0.20	NA	< 0.20	78%	50%	140%	84%	60%	130%	81%	50%	140%
Trichloroethylene	5021359		<0.20	<0.20	NA	< 0.20	113%	50%	140%	95%	60%	130%	96%	50%	140%
Bromodichloromethane	5021359		<0.20	<0.20	NA	< 0.20	115%	50%	140%	93%	60%	130%	85%	50%	140%
Methyl Isobutyl Ketone	5021359		<1.0	<1.0	NA	< 1.0	85%	50%	140%	99%	50%	140%	82%	50%	140%
1,1,2-Trichloroethane	5021359		<0.20	<0.20	NA	< 0.20	97%	50%	140%	98%	60%	130%	104%	50%	140%
Toluene	5021359		<0.20	<0.20	NA	< 0.20	84%	50%	140%	105%	60%	130%	104%	50%	140%
Dibromochloromethane	5021359		<0.10	<0.10	NA	< 0.10	96%	50%	140%	114%	60%	130%	119%	50%	140%
Ethylene Dibromide	5021359		<0.10	<0.10	NA	< 0.10	89%	50%	140%	106%	60%	130%	108%	50%	140%
Tetrachloroethylene	5021359		<0.20	<0.20	NA	< 0.20	89%	50%	140%	97%	60%	130%	112%	50%	140%
1,1,1,2-Tetrachloroethane	5021359		<0.10	<0.10	NA	< 0.10	96%	50%	140%	99%	60%	130%	104%	50%	140%
Chlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	98%	50%	140%	116%	60%	130%	90%	50%	140%
Ethylbenzene	5021359		<0.10	<0.10	NA	< 0.10	100%	50%	140%	101%	60%	130%	83%	50%	140%
m & p-Xylene	5021359		<0.20	<0.20	NA	< 0.20	105%	50%	140%	89%	60%	130%	112%	50%	140%
Bromoform	5021359		<0.10	<0.10	NA	< 0.10	102%	50%	140%	102%	60%	130%	117%	50%	140%
Styrene	5021359		<0.10	<0.10	NA	< 0.10	94%	50%	140%	95%	60%	130%	122%	50%	140%
1,1,2,2-Tetrachloroethane	5021359		<0.10	<0.10	NA	< 0.10	94%	50%	140%	85%	60%	130%	85%	50%	140%
o-Xylene	5021359		<0.10	<0.10	NA	< 0.10	100%	50%	140%	103%	60%	130%	114%	50%	140%

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z029406
ATTENTION TO: Daniel Stabile
SAMPLED BY:Rob Ireland

Trace Organics Analysis (Continued)

RPT Date: Jun 06, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	112%	50%	140%	115%	60%	130%	97%	50%	140%
1,4-Dichlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	97%	50%	140%	115%	60%	130%	86%	50%	140%
1,2-Dichlorobenzene	5021359		<0.10	<0.10	NA	< 0.10	119%	50%	140%	113%	60%	130%	108%	50%	140%
n-Hexane	5021359		<0.20	<0.20	NA	< 0.20	117%	50%	140%	73%	60%	130%	91%	50%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene	5020802		<0.20	<0.20	NA	< 0.20	109%	50%	140%	95%	50%	140%	98%	50%	140%
Acenaphthylene	5020802		<0.20	<0.20	NA	< 0.20	111%	50%	140%	91%	50%	140%	94%	50%	140%
Acenaphthene	5020802		<0.20	<0.20	NA	< 0.20	93%	50%	140%	71%	50%	140%	71%	50%	140%
Fluorene	5020802		<0.20	<0.20	NA	< 0.20	117%	50%	140%	90%	50%	140%	89%	50%	140%
Phenanthrene	5020802		<0.10	<0.10	NA	< 0.10	117%	50%	140%	93%	50%	140%	91%	50%	140%
Anthracene	5020802		<0.10	<0.10	NA	< 0.10	101%	50%	140%	83%	50%	140%	80%	50%	140%
Fluoranthene	5020802		<0.20	<0.20	NA	< 0.20	116%	50%	140%	96%	50%	140%	94%	50%	140%
Pyrene	5020802		<0.20	<0.20	NA	< 0.20	118%	50%	140%	102%	50%	140%	100%	50%	140%
Benzo(a)anthracene	5020802		<0.20	<0.20	NA	< 0.20	112%	50%	140%	99%	50%	140%	89%	50%	140%
Chrysene	5020802		<0.10	<0.10	NA	< 0.10	103%	50%	140%	90%	50%	140%	96%	50%	140%
Benzo(b)fluoranthene	5020802		<0.10	<0.10	NA	< 0.10	113%	50%	140%	82%	50%	140%	78%	50%	140%
Benzo(k)fluoranthene	5020802		<0.10	<0.10	NA	< 0.10	114%	50%	140%	87%	50%	140%	91%	50%	140%
Benzo(a)pyrene	5020802		<0.01	<0.01	NA	< 0.01	100%	50%	140%	80%	50%	140%	86%	50%	140%
Indeno(1,2,3-cd)pyrene	5020802		<0.20	<0.20	NA	< 0.20	102%	50%	140%	81%	50%	140%	73%	50%	140%
Dibenz(a,h)anthracene	5020802		<0.20	<0.20	NA	< 0.20	100%	50%	140%	77%	50%	140%	70%	50%	140%
Benzo(g,h,i)perylene	5020802		<0.20	<0.20	NA	< 0.20	117%	50%	140%	81%	50%	140%	86%	50%	140%

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

Certified By: R. Chakraberty

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

Water Analysis

RPT Date: Jun 06, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Water)															
Dissolved Antimony	5025522	5025522	<1.0	<1.0	NA	< 1.0	106%	70%	130%	107%	80%	120%	103%	70%	130%
Dissolved Arsenic	5025522	5025522	<1.0	<1.0	NA	< 1.0	100%	70%	130%	107%	80%	120%	111%	70%	130%
Dissolved Barium	5025522	5025522	162	161	0.6%	< 2.0	92%	70%	130%	95%	80%	120%	121%	70%	130%
Dissolved Beryllium	5025522	5025522	<0.50	<0.50	NA	< 0.50	108%	70%	130%	115%	80%	120%	107%	70%	130%
Dissolved Boron	5025522	5025522	337	333	1.2%	< 10.0	99%	70%	130%	107%	80%	120%	100%	70%	130%
Dissolved Cadmium	5025522	5025522	<0.20	<0.20	NA	< 0.20	100%	70%	130%	101%	80%	120%	103%	70%	130%
Dissolved Chromium	5025522	5025522	<2.0	<2.0	NA	< 2.0	95%	70%	130%	98%	80%	120%	104%	70%	130%
Dissolved Cobalt	5025522	5025522	1.80	1.79	NA	< 0.50	95%	70%	130%	99%	80%	120%	100%	70%	130%
Dissolved Copper	5025522	5025522	1.0	<1.0	NA	< 1.0	98%	70%	130%	95%	80%	120%	93%	70%	130%
Dissolved Lead	5025522	5025522	<0.50	<0.50	NA	< 0.50	100%	70%	130%	100%	80%	120%	90%	70%	130%
Dissolved Molybdenum	5025522	5025522	<0.50	<0.50	NA	< 0.50	101%	70%	130%	105%	80%	120%	110%	70%	130%
Dissolved Nickel	5025522	5025522	3.6	3.3	NA	< 1.0	96%	70%	130%	97%	80%	120%	95%	70%	130%
Dissolved Selenium	5025522	5025522	<1.0	<1.0	NA	< 1.0	106%	70%	130%	113%	80%	120%	109%	70%	130%
Dissolved Silver	5025522	5025522	<0.20	<0.20	NA	< 0.20	97%	70%	130%	98%	80%	120%	92%	70%	130%
Dissolved Thallium	5025522	5025522	<0.30	<0.30	NA	< 0.30	101%	70%	130%	101%	80%	120%	97%	70%	130%
Dissolved Uranium	5025522	5025522	1.07	1.07	NA	< 0.50	99%	70%	130%	108%	80%	120%	109%	70%	130%
Dissolved Vanadium	5025522	5025522	<0.40	<0.40	NA	< 0.40	99%	70%	130%	101%	80%	120%	110%	70%	130%
Dissolved Zinc	5025522	5025522	<5.0	<5.0	NA	< 5.0	101%	70%	130%	97%	80%	120%	98%	70%	130%
Mercury	5025055		<0.02	<0.02	NA	< 0.02	103%	70%	130%	101%	80%	120%	94%	70%	130%
Chromium VI	5025055		<2.000	<2.000	NA	< 2	101%	70%	130%	107%	80%	120%	116%	70%	130%
Cyanide, WAD	5025055		<2	<2	NA	< 2	107%	70%	130%	106%	80%	120%	104%	70%	130%
Dissolved Sodium	5025522	5025522	444000	423000	4.8%	< 50	108%	70%	130%	114%	80%	120%	NA	70%	130%
Chloride	5016529		196000	195000	0.5%	< 100	94%	70%	130%	99%	80%	120%	NA	70%	130%
Electrical Conductivity	5026053		309	309	0.0%	< 2	102%	90%	110%						
pH	5026053		7.66	7.70	0.5%	NA	99%	90%	110%						

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.
Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

Certified By: Iris Verástegui

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			N/A
F1 (C6-C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

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AGAT WORK ORDER: 23Z029406

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ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z029406

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6073	modified from SM 3500-CR B	LACHAT FIA
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Dissolved Sodium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP/MS
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE

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AGAT Laboratories WORK ORDER

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

Chain of Custody Record

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

Report Information:

Company: WSP
Contact: Daniel Stabile / Paul Hurst
Address: 1931 Robertson Rd
Ottawa, Ont - K2H 5B7
Phone: 613-592-9600 Fax: 613-592-9601
Reports to be sent to:
1. Email: Daniel.Stabile@wsp.com
2. Email: Paul.Hurst@wsp.com

Project Information:

Project: 21494078
Site Location: 1647 Richmond Rd.
Sampled By: Rob Ireland
AGAT Quote #: 2023 Golder-AGAT MSA 735000E13
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: WSP
Contact: Daniel Stabile / Paul Hurst
Address:
Email: AP-CustomerService@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 *Indicate One*
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☐ Fine

☐ Excess Soils R406
Table _____ *Indicate One*

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
_____ *Region*

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
_____ *Indicate One*

Is this submission for a Record of Site Condition? ☒ Yes ☐ No

Report Guideline on Certificate of Analysis ☒ Yes ☐ No

Laboratory Use Only

Work Order #: 23Z029406

Cooler Quantity: one-bagged ice
Arrival Temperatures: 9.8 | 9.6 | 9.6
8.9 | 12.1 | 6.2
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Melted ice

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	Metals - ☒ CrVI, ☒ Hg (HWSB)	BTEX, F1-F4 PHCs	PAHs	PCBs	VOC	Aroclors	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: Include Moisture ☐ Sulphide ☐	Potentially Hazardous or High Concentration (Y/N)
23-1	2023-05-25	14:15 AM/PM	16	GW		Y	✓	✓	✓	✓		✓						
23-2	2023-05-26	10:00 AM/PM	16	GW		Y	✓	✓	✓	✓		✓						
Dup 1	2023-05-26	10:00 AM/PM	16	GW		Y	✓	✓	✓	✓		✓						
23-3	2023-05-26	13:20 AM/PM	16	GW		Y	✓	✓	✓	✓		✓						
VOC Field Blank	2023-05-26	13:20 AM/PM	3	DI-Water		N						✓						
VOC Trip Blank		AM/PM	3		Lab supplied	/						✓						
		AM/PM																
		AM/PM																
		AM/PM																
		AM/PM			Emails EDD Facility # 230360930													
		AM/PM																
		AM/PM																

'23 MAY 30 8:28 AM

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Rob Ireland	2023-05-26	15:47	C. Guthrie	MAY 26 2023	15h50
~~C. Guthrie~~ Ottawa	2023/05/29	16h00	L. Ferreira	May 30/23	8:30
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1

N°: T - 139514

AGAT Laboratories

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CLIENT NAME: WSP CANADA INC.
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600
ATTENTION TO: Daniel Stabile; Paul Hurst
PROJECT: 21494078
AGAT WORK ORDER: 23Z026646
SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer
TRACE ORGANICS REVIEWED BY: Radhika Chakraberty, Trace Organics Lab Manager
DATE REPORTED: Jun 28, 2023
PAGES (INCLUDING COVER): 20
VERSION*: 1

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

*Notes

VERSION 1:Revised report with Metals scan reported as per request. 06/28

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 23Z026646
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

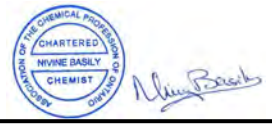
O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2023-05-19

DATE REPORTED: 2023-06-28

		SAMPLE DESCRIPTION:		23-1 SA1	23-1 SA11	23-2 SA2	23-3 SA2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-05-17 11:50	2023-05-17 11:50	2023-05-17 15:10	2023-05-15 10:15
Parameter	Unit	G / S	RDL	5003726	5003727	5003728	5003729
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	<1	<1	2	<1
Barium	µg/g	390	2.0	25.6	27.8	288	153
Beryllium	µg/g	4	0.5	<0.5	<0.5	0.5	0.7
Boron	µg/g	120	5	<5	<5	17	20
Boron (Hot Water Soluble)	µg/g	1.5	0.10	<0.10	<0.10	0.40	0.77
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	10	10	36	42
Cobalt	µg/g	22	0.8	3.2	3.4	18.8	25.5
Copper	µg/g	140	1.0	8.2	9.0	15.8	27.4
Lead	µg/g	120	1	3	3	10	34
Molybdenum	µg/g	6.9	0.5	<0.5	<0.5	<0.5	<0.5
Nickel	µg/g	100	1	5	6	35	32
Selenium	µg/g	2.4	0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	20	0.5	<0.5	<0.5	<0.5	3.3
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	0.51	0.56	<0.50	<0.50
Vanadium	µg/g	86	2.0	20.9	19.8	34.7	33.7
Zinc	µg/g	340	5	16	17	54	60
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.116	0.121	0.154	0.266
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.180	0.827	0.699	0.663
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.37	7.34	7.32	7.15

Certified By:



Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z026646
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-19 DATE REPORTED: 2023-06-28

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5003726-5003729 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z026646
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2023-05-19 DATE REPORTED: 2023-06-28

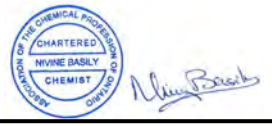
				SAMPLE DESCRIPTION:	23-3 SA2
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2023-05-15 10:15
Parameter	Unit	G / S	RDL	5003729	
Antimony	µg/g	7.5	0.8	<0.8	
Arsenic	µg/g	18	1	1	
Barium	µg/g	390	2.0	151	
Beryllium	µg/g	4	0.5	0.9	
Boron	µg/g	120	5	18	
Cadmium	µg/g	1.2	0.5	<0.5	
Chromium	µg/g	160	5	42	
Cobalt	µg/g	22	0.8	29.5	
Copper	µg/g	140	1.0	27.7	
Lead	µg/g	120	1	62	
Molybdenum	µg/g	6.9	0.5	<0.5	
Nickel	µg/g	100	1	33	
Selenium	µg/g	2.4	0.8	<0.8	
Silver	µg/g	20	0.5	4.9	
Thallium	µg/g	1	0.5	<0.5	
Uranium	µg/g	23	0.50	0.53	
Vanadium	µg/g	86	2.0	31.8	
Zinc	µg/g	340	5	68	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5003729 Analysis was performed from different jar.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z026646
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-19

DATE REPORTED: 2023-06-28

				SAMPLE DESCRIPTION:	23-1 SA1	23-1 SA11	23-2 SA2	23-3 SA2
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2023-05-17 11:50	2023-05-17 11:50	2023-05-17 15:10	2023-05-15 10:15
Parameter	Unit	G / S	RDL		5003726	5003727	5003728	5003729
Naphthalene	µg/g	0.6	0.05		<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05		<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	7.9	0.05		<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05		<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	6.2	0.05		<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05		<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05		<0.05	<0.05	<0.05	0.10
Pyrene	µg/g	78	0.05		<0.05	<0.05	<0.05	0.09
Benz(a)anthracene	µg/g	0.5	0.05		<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	7	0.05		<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05		<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05		<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05		<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05		<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05		<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05		<0.05	<0.05	<0.05	<0.05
1 and 2 Methlynaphthalene	µg/g	0.99	0.05		<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1		5.3	5.7	16.0	20.8
Surrogate	Unit	Acceptable Limits						
Naphthalene-d8	%	50-140			106	79	116	99
Acridine-d9	%	50-140			89	85	85	105
Terphenyl-d14	%	50-140			85	84	84	79

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5003726-5003729 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z026646
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2023-05-19

DATE REPORTED: 2023-06-28

				SAMPLE DESCRIPTION:	23-1 SA1	23-1 SA11	23-2 SA2	23-3 SA2
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2023-05-17 11:50	2023-05-17 11:50	2023-05-17 15:10	2023-05-15 10:15
Parameter	Unit	G / S	RDL		5003726	5003727	5003728	5003729
F1 (C6 - C10)	µg/g		5		<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5	<5	<5	<5
F2 (C10 to C16)	µg/g	98	10		<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10		<10	<10	<10	<10
F3 (C16 to C34)	µg/g	300	50		<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50		<50	<50	<50	<50
F4 (C34 to C50)	µg/g	2800	50		<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50		NA	NA	NA	NA
Moisture Content	%		0.1		5.3	5.7	16.0	20.8
Surrogate	Unit	Acceptable Limits						
Toluene-d8	%	50-140			82	79	78	78
Terphenyl	%	60-140			71	65	74	68

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5003726-5003729 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

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Certificate of Analysis

AGAT WORK ORDER: 23Z026646
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-19

DATE REPORTED: 2023-06-28

SAMPLE DESCRIPTION:				23-1 SA1	23-1 SA11	23-2 SA2	23-3 SA2
SAMPLE TYPE:				Soil	Soil	Soil	Soil
DATE SAMPLED:				2023-05-17 11:50	2023-05-17 11:50	2023-05-17 15:10	2023-05-15 10:15
Parameter	Unit	G / S	RDL	5003726	5003727	5003728	5003729
Dichlorodifluoromethane	µg/g	16	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
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	3.5	0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	3.4	0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.38	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
Benzene	ug/g	0.21	0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.061	0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	13	0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	1.7	0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	2.3	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
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.28	0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	2	0.05	<0.05	<0.05	<0.05	<0.05

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z026646
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

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

DATE RECEIVED: 2023-05-19

DATE REPORTED: 2023-06-28

				SAMPLE DESCRIPTION:	23-1 SA1	23-1 SA11	23-2 SA2	23-3 SA2
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2023-05-17 11:50	2023-05-17 11:50	2023-05-17 15:10	2023-05-15 10:15
Parameter	Unit	G / S	RDL		5003726	5003727	5003728	5003729
m & p-Xylene	ug/g		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
Styrene	ug/g	0.7	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
o-Xylene	ug/g		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
1,4-Dichlorobenzene	ug/g	0.083	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
Xylenes (Total)	ug/g	3.1	0.05		<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05		<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	2.8	0.05		<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1		5.3	5.7	16.0	20.8
Surrogate	Unit	Acceptable Limits						
Toluene-d8	% Recovery	50-140			82	79	78	78
4-Bromofluorobenzene	% Recovery	50-140			101	103	98	98

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5003726-5003729 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

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Exceedance Summary

AGAT WORK ORDER: 23Z026646

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile; Paul Hurst

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5003729	23-3 SA2	ON T7 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Cobalt	µg/g	22	25.5
5003729	23-3 SA2	ON T7 S RPI CT	O. Reg. 153(511) - Metals (Including Hydrides) (Soil)	Cobalt	µg/g	22	29.5

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z026646
ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

Soil Analysis

RPT Date: Jun 28, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	5003269		<0.8	<0.8	NA	< 0.8	122%	70%	130%	102%	80%	120%	77%	70%	130%
Arsenic	5003269		6	6	0.0%	< 1	120%	70%	130%	100%	80%	120%	101%	70%	130%
Barium	5003269		139	138	0.7%	< 2.0	105%	70%	130%	106%	80%	120%	106%	70%	130%
Beryllium	5003269		0.5	0.5	NA	< 0.5	96%	70%	130%	89%	80%	120%	97%	70%	130%
Boron	5003269		10	10	NA	< 5	83%	70%	130%	91%	80%	120%	91%	70%	130%
Boron (Hot Water Soluble)	5005899		0.37	0.38	NA	< 0.10	109%	60%	140%	100%	70%	130%	88%	60%	140%
Cadmium	5003269		<0.5	<0.5	NA	< 0.5	101%	70%	130%	102%	80%	120%	101%	70%	130%
Chromium	5003269		22	23	NA	< 5	101%	70%	130%	106%	80%	120%	105%	70%	130%
Cobalt	5003269		11.6	11.8	1.7%	< 0.8	100%	70%	130%	105%	80%	120%	100%	70%	130%
Copper	5003269		28.7	30.4	5.8%	< 1.0	93%	70%	130%	105%	80%	120%	98%	70%	130%
Lead	5003269		14	14	0.0%	< 1	98%	70%	130%	100%	80%	120%	97%	70%	130%
Molybdenum	5003269		<0.5	<0.5	NA	< 0.5	112%	70%	130%	108%	80%	120%	109%	70%	130%
Nickel	5003269		23	24	4.3%	< 1	99%	70%	130%	104%	80%	120%	95%	70%	130%
Selenium	5003269		<0.8	<0.8	NA	< 0.8	83%	70%	130%	99%	80%	120%	100%	70%	130%
Silver	5003269		<0.5	<0.5	NA	< 0.5	111%	70%	130%	104%	80%	120%	102%	70%	130%
Thallium	5003269		<0.5	<0.5	NA	< 0.5	102%	70%	130%	99%	80%	120%	98%	70%	130%
Uranium	5003269		0.67	0.70	NA	< 0.50	104%	70%	130%	104%	80%	120%	106%	70%	130%
Vanadium	5003269		31.7	33.1	4.3%	< 2.0	104%	70%	130%	104%	80%	120%	103%	70%	130%
Zinc	5003269		56	58	3.5%	< 5	98%	70%	130%	102%	80%	120%	108%	70%	130%
Chromium, Hexavalent	5002535		<0.2	<0.2	NA	< 0.2	107%	70%	130%	98%	80%	120%	87%	70%	130%
Cyanide, WAD	5005899		<0.040	<0.040	NA	< 0.040	91%	70%	130%	111%	80%	120%	86%	70%	130%
Mercury	5003269		<0.10	<0.10	NA	< 0.10	103%	70%	130%	101%	80%	120%	99%	70%	130%
Electrical Conductivity (2:1)	5005899		0.842	0.781	7.5%	< 0.005	87%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	5005899		6.56	6.60	0.6%	NA									
pH, 2:1 CaCl2 Extraction	5002650		6.70	6.96	3.8%	NA	102%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	5087504		<0.8	<0.8	NA	< 0.8	116%	70%	130%	102%	80%	120%	87%	70%	130%
Arsenic	5087504		3	3	NA	< 1	121%	70%	130%	105%	80%	120%	106%	70%	130%
Barium	5087504		42.8	48.2	11.9%	< 2.0	104%	70%	130%	100%	80%	120%	97%	70%	130%
Beryllium	5087504		<0.5	<0.5	NA	< 0.5	89%	70%	130%	100%	80%	120%	102%	70%	130%
Boron	5087504		7	8	NA	< 5	82%	70%	130%	99%	80%	120%	106%	70%	130%
Cadmium	5087504		<0.5	<0.5	NA	< 0.5	93%	70%	130%	104%	80%	120%	103%	70%	130%
Chromium	5087504		14	15	NA	< 5	109%	70%	130%	112%	80%	120%	123%	70%	130%
Cobalt	5087504		5.3	5.6	4.9%	< 0.8	108%	70%	130%	104%	80%	120%	106%	70%	130%
Copper	5087504		11.9	12.6	5.5%	< 1.0	102%	70%	130%	108%	80%	120%	102%	70%	130%

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z026646

PROJECT: 21494078

ATTENTION TO: Daniel Stabile; Paul Hurst

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

Soil Analysis (Continued)

RPT Date: Jun 28, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Lead	5087504		8	8	4.6%	< 1	110%	70%	130%	106%	80%	120%	101%	70%	130%
Molybdenum	5087504		<0.5	<0.5	NA	< 0.5	117%	70%	130%	110%	80%	120%	115%	70%	130%
Nickel	5087504		11	11	4.2%	< 1	107%	70%	130%	101%	80%	120%	99%	70%	130%
Selenium	5087504		<0.8	<0.8	NA	< 0.8	98%	70%	130%	108%	80%	120%	109%	70%	130%
Silver	5087504		<0.5	<0.5	NA	< 0.5	103%	70%	130%	103%	80%	120%	96%	70%	130%
Thallium	5087504		<0.5	<0.5	NA	< 0.5	98%	70%	130%	100%	80%	120%	97%	70%	130%
Uranium	5087504		0.53	0.55	NA	< 0.50	121%	70%	130%	101%	80%	120%	106%	70%	130%
Vanadium	5087504		24.7	26.2	5.9%	< 2.0	111%	70%	130%	106%	80%	120%	115%	70%	130%
Zinc	5087504		45	40	10.2%	< 5	109%	70%	130%	109%	80%	120%	104%	70%	130%
Mercury	5087504		<0.10	<0.10	NA	< 0.10	111%	70%	130%	100%	80%	120%	99%	70%	130%

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

Antimony	5087504		<0.8	<0.8	NA	< 0.8	116%	70%	130%	102%	80%	120%	87%	70%	130%
Arsenic	5087504		3	3	NA	< 1	121%	70%	130%	105%	80%	120%	106%	70%	130%
Barium	5087504		42.8	48.2	11.9%	< 2.0	104%	70%	130%	100%	80%	120%	97%	70%	130%
Beryllium	5087504		<0.5	<0.5	NA	< 0.5	89%	70%	130%	100%	80%	120%	102%	70%	130%
Boron	5087504		7	8	NA	< 5	82%	70%	130%	99%	80%	120%	106%	70%	130%
Cadmium	5087504		<0.5	<0.5	NA	< 0.5	93%	70%	130%	104%	80%	120%	103%	70%	130%
Chromium	5087504		14	15	NA	< 5	109%	70%	130%	112%	80%	120%	123%	70%	130%
Cobalt	5087504		5.3	5.6	5.5%	< 0.8	108%	70%	130%	104%	80%	120%	106%	70%	130%
Copper	5087504		11.9	12.6	5.7%	< 1.0	102%	70%	130%	108%	80%	120%	102%	70%	130%
Lead	5087504		8	8	0.0%	< 1	110%	70%	130%	106%	80%	120%	101%	70%	130%
Molybdenum	5087504		<0.5	<0.5	NA	< 0.5	117%	70%	130%	110%	80%	120%	115%	70%	130%
Nickel	5087504		11	11	0.0%	< 1	107%	70%	130%	101%	80%	120%	99%	70%	130%
Selenium	5087504		<0.8	<0.8	NA	< 0.8	132%	70%	130%	108%	80%	120%	109%	70%	130%
Silver	5087504		<0.5	<0.5	NA	< 0.5	103%	70%	130%	103%	80%	120%	96%	70%	130%
Thallium	5087504		<0.5	<0.5	NA	< 0.5	98%	70%	130%	100%	80%	120%	97%	70%	130%
Uranium	5087504		0.53	0.55	NA	< 0.50	121%	70%	130%	101%	80%	120%	106%	70%	130%
Vanadium	5087504		24.7	26.2	5.9%	< 2.0	111%	70%	130%	106%	80%	120%	115%	70%	130%
Zinc	5087504		45	40	11.8%	< 5	109%	70%	130%	109%	80%	120%	104%	70%	130%

Comments: NA Signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

PROJECT: 21494078

SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z026646

ATTENTION TO: Daniel Stabile; Paul Hurst

SAMPLED BY:Rob Ireland

Soil Analysis (Continued)

RPT Date: Jun 28, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Certified By:

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PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z026646
ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

Trace Organics Analysis

RPT Date: Jun 28, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)															
F1 (C6 - C10)	5003729	5003729	<5	<5	NA	< 5	126%	60%	140%	113%	60%	140%	83%	60%	140%
F2 (C10 to C16)	5003729	5003729	< 10	< 10	NA	< 10	108%	60%	140%	121%	60%	140%	121%	60%	140%
F3 (C16 to C34)	5003729	5003729	< 50	< 50	NA	< 50	108%	60%	140%	105%	60%	140%	104%	60%	140%
F4 (C34 to C50)	5003729	5003729	< 50	< 50	NA	< 50	82%	60%	140%	104%	60%	140%	82%	60%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	5003729	5003729	<0.05	<0.05	NA	< 0.05	101%	50%	140%	88%	50%	140%	105%	50%	140%
Acenaphthylene	5003729	5003729	<0.05	<0.05	NA	< 0.05	104%	50%	140%	100%	50%	140%	100%	50%	140%
Acenaphthene	5003729	5003729	<0.05	<0.05	NA	< 0.05	114%	50%	140%	90%	50%	140%	105%	50%	140%
Fluorene	5003729	5003729	<0.05	<0.05	NA	< 0.05	114%	50%	140%	98%	50%	140%	100%	50%	140%
Phenanthrene	5003729	5003729	<0.05	<0.05	NA	< 0.05	122%	50%	140%	93%	50%	140%	108%	50%	140%
Anthracene	5003729	5003729	<0.05	<0.05	NA	< 0.05	113%	50%	140%	98%	50%	140%	95%	50%	140%
Fluoranthene	5003729	5003729	0.10	0.09	NA	< 0.05	107%	50%	140%	100%	50%	140%	95%	50%	140%
Pyrene	5003729	5003729	0.09	0.09	NA	< 0.05	114%	50%	140%	100%	50%	140%	95%	50%	140%
Benz(a)anthracene	5003729	5003729	<0.05	<0.05	NA	< 0.05	113%	50%	140%	93%	50%	140%	90%	50%	140%
Chrysene	5003729	5003729	<0.05	<0.05	NA	< 0.05	107%	50%	140%	75%	50%	140%	80%	50%	140%
Benzo(b)fluoranthene	5003729	5003729	<0.05	<0.05	NA	< 0.05	63%	50%	140%	93%	50%	140%	75%	50%	140%
Benzo(k)fluoranthene	5003729	5003729	<0.05	<0.05	NA	< 0.05	87%	50%	140%	80%	50%	140%	100%	50%	140%
Benzo(a)pyrene	5003729	5003729	<0.05	<0.05	NA	< 0.05	66%	50%	140%	70%	50%	140%	78%	50%	140%
Indeno(1,2,3-cd)pyrene	5003729	5003729	<0.05	<0.05	NA	< 0.05	71%	50%	140%	73%	50%	140%	80%	50%	140%
Dibenz(a,h)anthracene	5003729	5003729	<0.05	<0.05	NA	< 0.05	62%	50%	140%	85%	50%	140%	103%	50%	140%
Benzo(g,h,i)perylene	5003729	5003729	<0.05	<0.05	NA	< 0.05	68%	50%	140%	105%	50%	140%	78%	50%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	5003729	5003729	<0.05	<0.05	NA	< 0.05	114%	50%	140%	100%	50%	140%	102%	50%	140%
Vinyl Chloride	5003729	5003729	<0.02	<0.02	NA	< 0.02	100%	50%	140%	109%	50%	140%	90%	50%	140%
Bromomethane	5003729	5003729	<0.05	<0.05	NA	< 0.05	105%	50%	140%	80%	50%	140%	75%	50%	140%
Trichlorofluoromethane	5003729	5003729	<0.05	<0.05	NA	< 0.05	104%	50%	140%	111%	50%	140%	114%	50%	140%
Acetone	5003729	5003729	<0.50	<0.50	NA	< 0.50	86%	50%	140%	83%	50%	140%	74%	50%	140%
1,1-Dichloroethylene	5003729	5003729	<0.05	<0.05	NA	< 0.05	94%	50%	140%	105%	60%	130%	84%	50%	140%
Methylene Chloride	5003729	5003729	<0.05	<0.05	NA	< 0.05	74%	50%	140%	77%	60%	130%	74%	50%	140%
Trans- 1,2-Dichloroethylene	5003729	5003729	<0.05	<0.05	NA	< 0.05	113%	50%	140%	114%	60%	130%	70%	50%	140%
Methyl tert-butyl Ether	5003729	5003729	<0.05	<0.05	NA	< 0.05	95%	50%	140%	98%	60%	130%	80%	50%	140%
1,1-Dichloroethane	5003729	5003729	<0.02	<0.02	NA	< 0.02	85%	50%	140%	104%	60%	130%	76%	50%	140%
Methyl Ethyl Ketone	5003729	5003729	<0.50	<0.50	NA	< 0.50	110%	50%	140%	100%	50%	140%	72%	50%	140%
Cis- 1,2-Dichloroethylene	5003729	5003729	<0.02	<0.02	NA	< 0.02	85%	50%	140%	110%	60%	130%	87%	50%	140%
Chloroform	5003729	5003729	<0.04	<0.04	NA	< 0.04	100%	50%	140%	104%	60%	130%	88%	50%	140%
1,2-Dichloroethane	5003729	5003729	<0.03	<0.03	NA	< 0.03	102%	50%	140%	101%	60%	130%	119%	50%	140%
1,1,1-Trichloroethane	5003729	5003729	<0.05	<0.05	NA	< 0.05	99%	50%	140%	95%	60%	130%	90%	50%	140%
Carbon Tetrachloride	5003729	5003729	<0.05	<0.05	NA	< 0.05	108%	50%	140%	83%	60%	130%	79%	50%	140%

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 23Z026646
ATTENTION TO: Daniel Stabile; Paul Hurst
SAMPLED BY:Rob Ireland

Trace Organics Analysis (Continued)

RPT Date: Jun 28, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzene	5003729	5003729	<0.02	<0.02	NA	< 0.02	93%	50%	140%	81%	60%	130%	71%	50%	140%
1,2-Dichloropropane	5003729	5003729	<0.03	<0.03	NA	< 0.03	83%	50%	140%	79%	60%	130%	75%	50%	140%
Trichloroethylene	5003729	5003729	<0.03	<0.03	NA	< 0.03	117%	50%	140%	99%	60%	130%	74%	50%	140%
Bromodichloromethane	5003729	5003729	<0.05	<0.05	NA	< 0.05	104%	50%	140%	95%	60%	130%	100%	50%	140%
Methyl Isobutyl Ketone	5003729	5003729	<0.50	<0.50	NA	< 0.50	73%	50%	140%	93%	50%	140%	108%	50%	140%
1,1,2-Trichloroethane	5003729	5003729	<0.04	<0.04	NA	< 0.04	117%	50%	140%	88%	60%	130%	106%	50%	140%
Toluene	5003729	5003729	<0.05	<0.05	NA	< 0.05	117%	50%	140%	93%	60%	130%	70%	50%	140%
Dibromochloromethane	5003729	5003729	<0.05	<0.05	NA	< 0.05	115%	50%	140%	93%	60%	130%	118%	50%	140%
Ethylene Dibromide	5003729	5003729	<0.04	<0.04	NA	< 0.04	96%	50%	140%	115%	60%	130%	99%	50%	140%
Tetrachloroethylene	5003729	5003729	<0.05	<0.05	NA	< 0.05	83%	50%	140%	113%	60%	130%	82%	50%	140%
1,1,1,2-Tetrachloroethane	5003729	5003729	<0.04	<0.04	NA	< 0.04	71%	50%	140%	103%	60%	130%	81%	50%	140%
Chlorobenzene	5003729	5003729	<0.05	<0.05	NA	< 0.05	91%	50%	140%	104%	60%	130%	75%	50%	140%
Ethylbenzene	5003729	5003729	<0.05	<0.05	NA	< 0.05	90%	50%	140%	107%	60%	130%	77%	50%	140%
m & p-Xylene	5003729	5003729	<0.05	<0.05	NA	< 0.05	106%	50%	140%	118%	60%	130%	90%	50%	140%
Bromoform	5003729	5003729	<0.05	<0.05	NA	< 0.05	107%	50%	140%	83%	60%	130%	61%	50%	140%
Styrene	5003729	5003729	<0.05	<0.05	NA	< 0.05	91%	50%	140%	110%	60%	130%	80%	50%	140%
1,1,2,2-Tetrachloroethane	5003729	5003729	<0.05	<0.05	NA	< 0.05	108%	50%	140%	85%	60%	130%	85%	50%	140%
o-Xylene	5003729	5003729	<0.05	<0.05	NA	< 0.05	105%	50%	140%	119%	60%	130%	88%	50%	140%
1,3-Dichlorobenzene	5003729	5003729	<0.05	<0.05	NA	< 0.05	76%	50%	140%	88%	60%	130%	72%	50%	140%
1,4-Dichlorobenzene	5003729	5003729	<0.05	<0.05	NA	< 0.05	71%	50%	140%	90%	60%	130%	72%	50%	140%
1,2-Dichlorobenzene	5003729	5003729	<0.05	<0.05	NA	< 0.05	89%	50%	140%	94%	60%	130%	73%	50%	140%
n-Hexane	5003729	5003729	<0.05	<0.05	NA	< 0.05	89%	50%	140%	89%	60%	130%	103%	50%	140%

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

Certified By: R. Chakraberty

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Results relate only to the items tested. Results apply to samples as received.

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http://www.agatlabs.com

QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z026646

PROJECT: 21494078

ATTENTION TO: Daniel Stabile; Paul Hurst

RPT Date: Jun 28, 2023

PARAMETER	Sample Id	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Soil)										
Selenium		132%	70%	130%	108%	80%	120%	109%	70%	130%

Comments: NA Signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z026646

PROJECT: 21494078

ATTENTION TO: Daniel Stabile; Paul Hurst

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z026646

PROJECT: 21494078

ATTENTION TO: Daniel Stabile; Paul Hurst

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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ATTENTION TO: Daniel Stabile; Paul Hurst

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:Rob Ireland

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

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WORK ORDER

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

Chain of Custody Record

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

Report Information:

Company: WSP
Contact: Daniel Stabile / Paul Hurst.
Address: 1931 Robertson Rd.
Ottawa, Ont. K2H 5B7
Phone: 613-592-9600 Fax: 613-592-9601
Reports to be sent to:
1. Email: Daniel.Stabile@wsp.com
2. Email: Paul.Hurst@wsp.com

Project Information:

Project: 21494078
Site Location: 1047 Richmond Rd.
Sampled By: Rob Ireland
AGAT Quote #: 2023 Golder - AGAT: MSA 735000 EB
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐
Company: WSP
Contact: Daniel Stabile / Paul Hurst.
Address: Same
Email: AP_CustomerService@wsp.com.

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
Region

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
Indicate One

Is this submission for a Record of Site Condition? ☒ Yes ☐ No

Report Guideline on Certificate of Analysis ☒ Yes ☐ No

Laboratory Use Only

Work Order #: 23702660460
Cooler Quantity: one - bagged ice
Arrival Temperatures: 5.3 6.4 6.3 / 3.4 3.1 3.0
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes:

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	Metals - ☒ CrVI, ☒ Hg, ☒ HWSB	~~BTEX~~, F1-F4 PHCs	PAHs	PCBs	VOC	Aroclors	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: Include Moisture ☐ Sulphide ☐	Potentially Hazardous or High Concentration (Y/N)
23-1 SA1	2023-05-17	11:50 AM/PM	4	Soil			✓	✓	✓	✓		✓						
23-1 SA11	2023-05-17	11:50 AM/PM	3	Soil			✓	✓	✓	✓		✓						
23-2 SA2	2023-05-17	15:[illegible] AM/PM	4	Soil			✓	✓	✓	✓		✓						
23-3 SA2	2023-05-15	10.15 AM/PM	4	Soil			✓	✓	✓	✓		✓						
		AM/PM																
		AM/PM																
		AM/PM																
		AM/PM			EQuIS EDD													
		AM/PM			Facility # 220360930													
		AM/PM																
		AM/PM																

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Rob Ireland	2023-05-19	12:20	C. Griffiths	MAY 19 2023	12h20
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Cato Duro	MAY 19 2023	16h00	GWYNET VOJ	05/20/23	10:35
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1

N°: T - 139468

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CLIENT NAME: WSP CANADA INC.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727

ATTENTION TO: Daniel Stabile

PROJECT: 21494078 Fengate Ph Two

AGAT WORK ORDER: 23Z094471

SOIL ANALYSIS REVIEWED BY: Sukhwinder Randhawa, Inorganic Team Lead

DATE REPORTED: Nov 28, 2023

PAGES (INCLUDING COVER): 11

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

Ignitability in Soil

DATE RECEIVED: 2023-11-17

DATE REPORTED: 2023-11-28

				SAMPLE DESCRIPTION:	TCLP1
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2023-11-17 10:50
Parameter	Unit	G / S	RDL	5471058	
Ignitability				N	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5471058 N = Non-Flammable Solid

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2023-11-17

DATE REPORTED: 2023-11-28

SAMPLE DESCRIPTION:				SA1A	SA1A Dup	SA2A	SA3A	SA4A
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2023-11-17 10:30	2023-11-17 10:30	2023-11-17 10:35	2023-11-17 10:40	2023-11-17 10:45
Parameter	Unit	G / S	RDL	5471044	5471049	5471054	5471056	5471057
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	2	1	<1	1	2
Barium	µg/g	390	2.0	143	102	25.4	148	119
Beryllium	µg/g	4	0.5	0.7	<0.5	<0.5	0.8	0.6
Boron	µg/g	120	5	15	10	<5	14	9
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.34	0.30	0.10	0.34	0.29
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	30	21	10	32	26
Cobalt	µg/g	22	0.8	21.2	12.4	4.2	21.2	17.3
Copper	µg/g	140	1.0	24.9	21.2	5.6	25.1	27.8
Lead	µg/g	120	1	28	30	4	22	34
Molybdenum	µg/g	6.9	0.5	<0.5	<0.5	<0.5	<0.5	0.5
Nickel	µg/g	100	1	27	18	7	31	25
Selenium	µg/g	2.4	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	<0.50	0.51	<0.50	<0.50	<0.50
Vanadium	µg/g	86	2.0	28.9	24.2	18.6	26.7	25.4
Zinc	µg/g	340	5	74	58	24	68	73
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.504	0.327	0.218	0.399	0.361
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.543	0.662	0.465	0.536	0.550
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.42	7.31	7.40	7.20	7.25

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AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2023-11-17

DATE REPORTED: 2023-11-28

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5471044-5471057 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

O. Reg. 558 - Metals & Inorganics

DATE RECEIVED: 2023-11-17

DATE REPORTED: 2023-11-28

				SAMPLE DESCRIPTION:	TCLP1
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2023-11-17 10:50
Parameter	Unit	G / S	RDL	5471058	
Arsenic Leachate	mg/L	2.5	0.010	0.022	
Barium Leachate	mg/L	100	0.020	0.356	
Boron Leachate	mg/L	500	0.050	<0.050	
Cadmium Leachate	mg/L	0.5	0.010	<0.010	
Chromium Leachate	mg/L	5	0.050	<0.050	
Lead Leachate	mg/L	5	0.010	0.016	
Mercury Leachate	mg/L	0.1	0.01	<0.01	
Selenium Leachate	mg/L	1	0.020	0.041	
Silver Leachate	mg/L	5	0.010	<0.010	
Uranium Leachate	mg/L	10	0.050	<0.050	
Fluoride Leachate	mg/L	150	0.10	<0.10	
Cyanide Leachate	mg/L	20	0.05	<0.05	
(Nitrate + Nitrite) as N Leachate	mg/L	1000	0.70	<0.70	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg. 558 - Schedule IV Leachate Quality Criteria
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078 Fengate Ph Two
SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

AGAT WORK ORDER: 23Z094471
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ben Waechter

Soil Analysis

RPT Date: Nov 28, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	5474728		<0.8	<0.8	NA	< 0.8	114%	70%	130%	81%	80%	120%	97%	70%	130%
Arsenic	5474728		3	3	NA	< 1	119%	70%	130%	100%	80%	120%	105%	70%	130%
Barium	5474728		38.6	39.3	1.8%	< 2.0	100%	70%	130%	103%	80%	120%	109%	70%	130%
Beryllium	5474728		<0.5	<0.5	NA	< 0.5	105%	70%	130%	102%	80%	120%	107%	70%	130%
Boron	5474728		<5	<5	NA	< 5	79%	70%	130%	95%	80%	120%	91%	70%	130%
Boron (Hot Water Soluble)	5479563		<0.10	<0.10	NA	< 0.10	94%	60%	140%	97%	70%	130%	102%	60%	140%
Cadmium	5474728		<0.5	<0.5	NA	< 0.5	108%	70%	130%	106%	80%	120%	109%	70%	130%
Chromium	5474728		14	15	NA	< 5	106%	70%	130%	93%	80%	120%	100%	70%	130%
Cobalt	5474728		5.0	5.1	2.0%	< 0.8	97%	70%	130%	95%	80%	120%	103%	70%	130%
Copper	5474728		10.3	10.1	2.0%	< 1.0	99%	70%	130%	95%	80%	120%	94%	70%	130%
Lead	5474728		10	10	0.0%	< 1	97%	70%	130%	90%	80%	120%	88%	70%	130%
Molybdenum	5474728		<0.5	<0.5	NA	< 0.5	108%	70%	130%	110%	80%	120%	113%	70%	130%
Nickel	5474728		11	12	8.7%	< 1	104%	70%	130%	105%	80%	120%	106%	70%	130%
Selenium	5474728		<0.8	<0.8	NA	< 0.8	70%	70%	130%	104%	80%	120%	110%	70%	130%
Silver	5474728		<0.5	<0.5	NA	< 0.5	90%	70%	130%	95%	80%	120%	93%	70%	130%
Thallium	5474728		<0.5	<0.5	NA	< 0.5	89%	70%	130%	101%	80%	120%	101%	70%	130%
Uranium	5474728		<0.50	<0.50	NA	< 0.50	94%	70%	130%	91%	80%	120%	94%	70%	130%
Vanadium	5474728		22.3	22.7	1.8%	< 2.0	105%	70%	130%	88%	80%	120%	112%	70%	130%
Zinc	5474728		43	44	2.3%	< 5	122%	70%	130%	107%	80%	120%	113%	70%	130%
Chromium, Hexavalent	5469552		<0.2	<0.2	NA	< 0.2	99%	70%	130%	92%	80%	120%	98%	70%	130%
Cyanide, WAD	5477741		<0.040	<0.040	NA	< 0.040	99%	70%	130%	95%	80%	120%	96%	70%	130%
Mercury	5474728		<0.10	<0.10	NA	< 0.10	103%	70%	130%	105%	80%	120%	107%	70%	130%
Electrical Conductivity (2:1)	5476277		0.560	0.591	5.4%	< 0.005	105%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	5469752		7.36	7.26	1.4%	NA									
pH, 2:1 CaCl2 Extraction	5469358		11.7	11.8	0.9%	NA	102%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Ignitability in Soil															
Ignitability	5471058	5471058	N	N	NA	NA									
O. Reg. 558 - Metals & Inorganics															
Arsenic Leachate	5471058	5471058	0.022	<0.010	NA	< 0.010	100%	70%	130%	106%	80%	120%	112%	70%	130%
Barium Leachate	5471058	5471058	0.356	0.341	4.3%	< 0.020	100%	70%	130%	100%	80%	120%	83%	70%	130%
Boron Leachate	5471058	5471058	<0.050	<0.050	NA	< 0.050	101%	70%	130%	98%	80%	120%	108%	70%	130%
Cadmium Leachate	5471058	5471058	<0.010	<0.010	NA	< 0.010	101%	70%	130%	103%	80%	120%	100%	70%	130%
Chromium Leachate	5471058	5471058	<0.050	<0.050	NA	< 0.050	101%	70%	130%	94%	80%	120%	92%	70%	130%

Comments: N = Non-Flammable Solid
NA = Not Applicable

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078 Fengate Ph Two
SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

AGAT WORK ORDER: 23Z094471
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ben Waechter

Soil Analysis (Continued)

RPT Date: Nov 28, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Lead Leachate	5471058	5471058	0.016	<0.010	NA	< 0.010	87%	70%	130%	85%	80%	120%	79%	70%	130%
Mercury Leachate	5471058	5471058	<0.01	<0.01	NA	< 0.01	106%	70%	130%	106%	80%	120%	68%	70%	130%
Selenium Leachate	5471058	5471058	0.041	<0.020	NA	< 0.020	101%	70%	130%	119%	80%	120%	121%	70%	130%
Silver Leachate	5471058	5471058	<0.010	<0.010	NA	< 0.010	101%	70%	130%	99%	80%	120%	94%	70%	130%
Uranium Leachate	5471058	5471058	<0.050	<0.050	NA	< 0.050	98%	70%	130%	85%	80%	120%	81%	70%	130%
Fluoride Leachate	5471058	5471058	<0.10	<0.10	NA	< 0.10	102%	90%	110%	101%	90%	110%	101%	70%	130%
Cyanide Leachate	5471058	5471058	<0.05	<0.05	NA	< 0.05	90%	70%	130%	108%	80%	120%	109%	70%	130%
(Nitrate + Nitrite) as N Leachate	5471058	5471058	<0.70	<0.70	NA	< 0.70	101%	80%	120%	98%	80%	120%	99%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Certified By:

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QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

ATTENTION TO: Daniel Stabile

RPT Date: Nov 28, 2023

PARAMETER	Sample Id	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 558 - Metals & Inorganics										
Mercury Leachate	5471058	106%	70%	130%	106%	80%	120%	68%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Ignitability	INOR-93-6063	EPA SW-846 1030	BURN MOLD
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE
Arsenic Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Barium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Boron Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Cadmium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS

Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chromium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Lead Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Mercury Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Selenium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Silver Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Uranium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Fluoride Leachate	INOR-93-6000	EPA SW 846-1311; SM 4500F-C	ION SELECTIVE ELECTRODE
Cyanide Leachate	INOR-93-6052	EPA 1311 modified from MOE 3015 SM 4500 CN-I,G387	SEGMENTED FLOW ANALYSIS
(Nitrate + Nitrite) as N Leachate	INOR-93-6053	EPA SW 846-1311 & modified from SM 4500 - NO3- I	LACHAT FIA

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 23709447 1

Cooler Quantity: one - loose ice.

Arrival Temperatures: 6.0 | 5.9 | 5.9 | 1.1 | 2.3 | 1.8

Custody Seal Intact: ☐ Yes ☐ No ☑ N/A

Notes: Bagged ice

Report Information:

Company: WSP Canada Inc.
Contact: Daniel Stabile
Address: 701 Rossland Rd E #201, Whitby, ON L1N 8Y9
Phone: +1 905-213-4732 Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email: Ben.Waechter@wsp.com

Project Information:

Project: 21494078 Fengate Ph Two
Site Location: 1047 Richmond Rd, Ottawa, ON
Sampled By: Ben Waechter
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company: WSP Canada Inc
Contact: Daniel Stabile
Address: 701 Rossland Rd E #201 Whitby, ON.
Email: daniel.stabile@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☑ Res/Park
☐ Agriculture
Soil Texture (Check One)
☑ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
____ (Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): ____

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ ABNs ☐ B(a)P ☐ PCBs ☐ VOCs ☐ F1-F4 & BTEX	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
SA1A	17 Nov 2023	10:30 AM/PM	3	S		N	✓										
SA1A Dup		10:30 AM/PM	3				✓										
SA2A		10:35 AM/PM	5				✓										
SA3A		10:40 AM/PM	5				✓										
SA4A		10:45 AM/PM	5			✓	✓										
TCLP1		10:50 AM/PM	2		Ignitability & metals								✓				
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Ben Waechter	17 Nov 2023			11/17/23	13h26
	11/17/23	15h30		11/18/23	10:25AM

Page ____ of ____

N°: T 129389

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: WSP CANADA INC.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727

ATTENTION TO: Daniel Stabile

PROJECT: 21494078

AGAT WORK ORDER: 23Z051494

SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

TRACE ORGANICS REVIEWED BY: Radhika Chakraberty, Trace Organics Lab Manager

DATE REPORTED: Aug 03, 2023

PAGES (INCLUDING COVER): 14

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.

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Certificate of Analysis

AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

O. Reg. 558 Metals and Inorganics

DATE RECEIVED: 2023-07-26

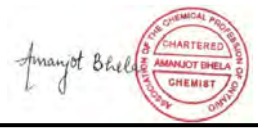
DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		TCLP
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2023-07-26
Parameter	Unit	G / S	RDL	5169651
Arsenic Leachate	mg/L	2.5	0.010	<0.010
Barium Leachate	mg/L	100	0.020	2.32
Boron Leachate	mg/L	500	0.050	0.066
Cadmium Leachate	mg/L	0.5	0.010	<0.010
Chromium Leachate	mg/L	5	0.050	<0.050
Lead Leachate	mg/L	5	0.010	0.134
Mercury Leachate	mg/L	0.1	0.01	<0.01
Selenium Leachate	mg/L	1	0.020	<0.020
Silver Leachate	mg/L	5	0.010	<0.010
Uranium Leachate	mg/L	10	0.050	<0.050
Fluoride Leachate	mg/L	150	0.10	0.11
Cyanide Leachate	mg/L	20	0.05	<0.05
(Nitrate + Nitrite) as N Leachate	mg/L	1000	0.70	<0.70

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg. 558 - Schedule IV Leachate Quality Criteria
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z051494
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		EW-SA5	WW-SA7	SW-SA4	TP-SA11	DUP-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-25	2023-07-25	2023-07-25	2023-07-26	2023-07-26
Parameter	Unit	G / S	RDL	5169635	5169637	5169638	5169639	5169649
Naphthalene	µg/g	0.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	7.9	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	6.2	0.05	0.08	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	0.24	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	78	0.05	0.16	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.5	0.05	0.06	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1 and 2 Methlynaphthalene	µg/g	0.99	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	12.8	14.8	10.6	15.3	13.6
Surrogate	Unit	Acceptable Limits						
Naphthalene-d8	%	50-140		90	90	95	90	85
Acridine-d9	%	50-140		115	115	115	90	90
Terphenyl-d14	%	50-140		80	90	70	115	75

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5169635-5169649 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		EW-SA5	WW-SA7	SW-SA4	TP-SA11	DUP-3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-25	2023-07-25	2023-07-25	2023-07-26	2023-07-26
Parameter	Unit	G / S	RDL	5169635	5169637	5169638	5169639	5169649
Benzene	µg/g	0.21	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	µg/g	3.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g		5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	98	10	<10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	300	50	51	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	2800	50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50	NA	NA	NA	NA	NA
Moisture Content	%		0.1	12.8	14.8	10.6	15.3	13.6
Surrogate	Unit	Acceptable Limits						
Toluene-d8	% Recovery	60-140		114	103	94	79	84
Terphenyl	%	60-140		71	81	84	84	88

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

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

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-08-03

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5169635-5169649 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

O. Reg. 558 - Benzo(a) pyrene

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		TCLP
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2023-07-26
Parameter	Unit	G / S	RDL	5169651
Benzo(a)pyrene Leachate	mg/L	0.001	0.001	<0.001
Surrogate	Unit	Acceptable Limits		
Acridine-d9	%	50-140		95
Naphthalene-d8	%	50-140		75
Terphenyl-d14	%	50-140		81

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg. 558 - Schedule IV Leachate Quality Criteria
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5169651 The sample was leached according to Regulation 558 protocol. Analysis was performed on the leachate.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z051494
PROJECT: 21494078

CLIENT NAME: WSP CANADA INC.
SAMPLING SITE:1047 Richmond Rd

ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

O. Reg. 558 - VOCs

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		TCLP
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2023-07-26
Parameter	Unit	G / S	RDL	5169651
Vinyl Chloride Leachate	mg/L	0.2	0.030	<0.030
1,1 Dichloroethene Leachate	mg/L	1.4	0.020	<0.020
Dichloromethane Leachate	mg/L	5.0	0.030	<0.030
Methyl Ethyl Ketone Leachate	mg/L	200	0.090	<0.090
Chloroform Leachate	mg/L	10.0	0.020	<0.020
1,2-Dichloroethane Leachate	mg/L	0.5	0.020	<0.020
Carbon Tetrachloride Leachate	mg/L	0.5	0.020	<0.020
Benzene Leachate	mg/L	0.5	0.020	<0.020
Trichloroethene Leachate	mg/L	5.0	0.020	<0.020
Tetrachloroethene Leachate	mg/L	3.0	0.050	<0.050
Chlorobenzene Leachate	mg/L	8.0	0.010	<0.010
1,2-Dichlorobenzene Leachate	mg/L	20.0	0.010	<0.010
1,4-Dichlorobenzene Leachate	mg/L	0.5	0.010	<0.010
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140		117
4-Bromofluorobenzene	% Recovery	50-140		84

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg. 558 - Schedule IV Leachate Quality Criteria
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5169651 Sample was prepared using Regulation 558 protocol and a zero headspace extractor.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

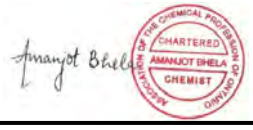
SAMPLED BY:Ryan Francis

Soil Analysis

RPT Date: Aug 03, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 558 Metals and Inorganics															
Arsenic Leachate	5165829		<0.010	<0.010	NA	< 0.010	89%	70%	130%	95%	80%	120%	129%	70%	130%
Barium Leachate	5165829		0.479	0.471	1.7%	< 0.020	99%	70%	130%	100%	80%	120%	108%	70%	130%
Boron Leachate	5165829		0.063	0.057	NA	< 0.050	101%	70%	130%	98%	80%	120%	79%	70%	130%
Cadmium Leachate	5165829		<0.010	<0.010	NA	< 0.010	100%	70%	130%	107%	80%	120%	98%	70%	130%
Chromium Leachate	5165829		<0.050	<0.050	NA	< 0.050	100%	70%	130%	105%	80%	120%	99%	70%	130%
Lead Leachate	5165829		0.012	0.012	NA	< 0.010	98%	70%	130%	103%	80%	120%	101%	70%	130%
Mercury Leachate	5165829		<0.01	<0.01	NA	< 0.01	98%	70%	130%	98%	80%	120%	85%	70%	130%
Selenium Leachate	5165829		<0.020	<0.020	NA	< 0.020	101%	70%	130%	112%	80%	120%	111%	70%	130%
Silver Leachate	5165829		<0.010	<0.010	NA	< 0.010	96%	70%	130%	114%	80%	120%	104%	70%	130%
Uranium Leachate	5165829		<0.050	<0.050	NA	< 0.050	97%	70%	130%	104%	80%	120%	113%	70%	130%
Fluoride Leachate	5165829		0.13	0.14	NA	< 0.10	107%	90%	110%	103%	90%	110%	115%	70%	130%
Cyanide Leachate	5165829		<0.05	<0.05	NA	< 0.05	92%	70%	130%	103%	80%	120%	103%	70%	130%
(Nitrate + Nitrite) as N Leachate	5165829		<0.70	<0.70	NA	< 0.70	102%	80%	120%	99%	80%	120%	96%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By:



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AGAT Laboratories
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http://www.agatlabs.com

Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd

AGAT WORK ORDER: 23Z051494
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ryan Francis

Trace Organics Analysis

RPT Date: Aug 03, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	5159475		<0.05	<0.05	NA	< 0.05	109%	50%	140%	83%	50%	140%	83%	50%	140%
Acenaphthylene	5159475		<0.05	<0.05	NA	< 0.05	79%	50%	140%	78%	50%	140%	80%	50%	140%
Acenaphthene	5159475		<0.05	<0.05	NA	< 0.05	95%	50%	140%	98%	50%	140%	85%	50%	140%
Fluorene	5159475		<0.05	<0.05	NA	< 0.05	104%	50%	140%	88%	50%	140%	83%	50%	140%
Phenanthrene	5159475		<0.05	<0.05	NA	< 0.05	100%	50%	140%	110%	50%	140%	78%	50%	140%
Anthracene	5159475		<0.05	<0.05	NA	< 0.05	102%	50%	140%	88%	50%	140%	83%	50%	140%
Fluoranthene	5159475		0.10	0.11	NA	< 0.05	113%	50%	140%	75%	50%	140%	65%	50%	140%
Pyrene	5159475		0.08	0.10	NA	< 0.05	105%	50%	140%	85%	50%	140%	73%	50%	140%
Benz(a)anthracene	5159475		<0.05	<0.05	NA	< 0.05	78%	50%	140%	103%	50%	140%	105%	50%	140%
Chrysene	5159475		<0.05	<0.05	NA	< 0.05	98%	50%	140%	113%	50%	140%	113%	50%	140%
Benzo(b)fluoranthene	5159475		<0.05	<0.05	NA	< 0.05	95%	50%	140%	85%	50%	140%	90%	50%	140%
Benzo(k)fluoranthene	5159475		<0.05	<0.05	NA	< 0.05	110%	50%	140%	80%	50%	140%	85%	50%	140%
Benzo(a)pyrene	5159475		<0.05	<0.05	NA	< 0.05	78%	50%	140%	90%	50%	140%	88%	50%	140%
Indeno(1,2,3-cd)pyrene	5159475		<0.05	<0.05	NA	< 0.05	71%	50%	140%	110%	50%	140%	100%	50%	140%
Dibenz(a,h)anthracene	5159475		<0.05	<0.05	NA	< 0.05	66%	50%	140%	83%	50%	140%	83%	50%	140%
Benzo(g,h,i)perylene	5159475		<0.05	<0.05	NA	< 0.05	71%	50%	140%	80%	50%	140%	78%	50%	140%
O. Reg. 558 - VOCs															
Vinyl Chloride Leachate	5178215		< 0.030	< 0.030	NA	< 0.030	97%	50%	140%	97%	50%	140%	107%	50%	140%
1,1 Dichloroethene Leachate	5178215		< 0.020	< 0.020	NA	< 0.020	76%	50%	140%	98%	60%	130%	75%	50%	140%
Dichloromethane Leachate	5178215		< 0.030	< 0.030	NA	< 0.030	82%	50%	140%	91%	60%	130%	77%	50%	140%
Methyl Ethyl Ketone Leachate	5178215		< 0.090	< 0.090	NA	< 0.090	90%	50%	140%	81%	50%	140%	90%	50%	140%
Chloroform Leachate	5178215		< 0.020	< 0.020	NA	< 0.020	95%	50%	140%	83%	60%	130%	99%	50%	140%
1,2-Dichloroethane Leachate	5178215		< 0.020	< 0.020	NA	< 0.020	108%	50%	140%	93%	60%	130%	90%	50%	140%
Carbon Tetrachloride Leachate	5178215		< 0.020	< 0.020	NA	< 0.020	102%	50%	140%	99%	60%	130%	101%	50%	140%
Benzene Leachate	5178215		< 0.020	< 0.020	NA	< 0.020	76%	50%	140%	99%	60%	130%	74%	50%	140%
Trichloroethene Leachate	5178215		< 0.020	< 0.020	NA	< 0.020	88%	50%	140%	101%	60%	130%	94%	50%	140%
Tetrachloroethene Leachate	5178215		< 0.050	< 0.050	NA	< 0.050	83%	50%	140%	119%	60%	130%	69%	50%	140%
Chlorobenzene Leachate	5178215		< 0.010	< 0.010	NA	< 0.010	88%	50%	140%	106%	60%	130%	77%	50%	140%
1,2-Dichlorobenzene Leachate	5178215		< 0.010	< 0.010	NA	< 0.010	93%	50%	140%	98%	60%	130%	82%	50%	140%
1,4-Dichlorobenzene Leachate	5178215		< 0.010	< 0.010	NA	< 0.010	94%	50%	140%	103%	60%	130%	83%	50%	140%
O. Reg. 558 - Benzo(a) pyrene															
Benzo(a)pyrene Leachate	5137581		< 0.001	< 0.001	NA	< 0.001	76%	50%	140%	90%	50%	140%	84%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)															
Benzene	5168927		< 0.02	< 0.02	NA	< 0.02	74%	60%	140%	84%	60%	140%	74%	60%	140%
Toluene	5168927		< 0.05	< 0.05	NA	< 0.05	93%	60%	140%	68%	60%	140%	96%	60%	140%
Ethylbenzene	5168927		< 0.05	< 0.05	NA	< 0.05	95%	60%	140%	78%	60%	140%	100%	60%	140%
m & p-Xylene	5168927		< 0.05	< 0.05	NA	< 0.05	106%	60%	140%	108%	60%	140%	96%	60%	140%

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Quality Assurance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

Trace Organics Analysis (Continued)

RPT Date: Aug 03, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
o-Xylene	5168927		< 0.05	< 0.05	NA	< 0.05	106%	60%	140%	75%	60%	140%	118%	60%	140%
F1 (C6 - C10)	5168927		< 5	< 5	NA	< 5	110%	60%	140%	112%	60%	140%	100%	60%	140%
F2 (C10 to C16)	5165429		<10	<10	NA	< 10	101%	60%	140%	120%	60%	140%	92%	60%	140%
F3 (C16 to C34)	5165429		<50	<50	NA	< 50	98%	60%	140%	109%	60%	140%	90%	60%	140%
F4 (C34 to C50)	5165429		<50	<50	NA	< 50	84%	60%	140%	113%	60%	140%	103%	60%	140%

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

Certified By: R. Chakraberty

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Method Summary

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AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Arsenic Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Barium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Boron Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Cadmium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Chromium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Lead Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Mercury Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Selenium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Silver Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Uranium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Fluoride Leachate	INOR-93-6000	EPA SW 846-1311; SM 4500F-C	ION SELECTIVE ELECTRODE
Cyanide Leachate	INOR-93-6052	EPA 1311 modified from MOE 3015 SM 4500 CN-I,G387	SEGMENTED FLOW ANALYSIS
(Nitrate + Nitrite) as N Leachate	INOR-93-6053	EPA SW 846-1311 & modified from SM 4500 - NO3- I	LACHAT FIA

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Method Summary

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AGAT WORK ORDER: 23Z051494

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd

SAMPLED BY:Ryan Francis

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Benzo(a)pyrene Leachate	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Vinyl Chloride Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
1,1 Dichloroethene Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Dichloromethane Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Chloroform Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Benzene Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Trichloroethene Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Tetrachloroethene Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Chlorobenzene Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene Leachate	VOL-91-5001	EPA 1311, modified from EPA 5030C & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 2320514 94

Cooler Quantity: one - melteeze

Arrival Temperatures: 24.5 | 24.4 | 24.5 / 3.4 | 3.7 | 4.0

Custody Seal Intact: ☐ Yes ☐ No ☒ N/A

Notes: baggedice

Report Information:

Company: WSP Canada Inc
Contact: Daniel Stabile
Address: 1931 Robertson Rd. Ottawa, ON, K2H 5B7
Phone: (905) 213-4732 Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
Region

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
Indicate One

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☒ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 21494078
Site Location: 1047 Richmond Rd
Sampled By: Ryan Francis
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company: WSP Canada Inc
Contact: Daniel Stabile
Address:
Email: CAPayablesInvoice@WSP.com

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs, Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	TCLP							Potentially Hazardous or High Concentration (Y/N)
EW-SA5	July 25/23	12:55 AM/PM	2	S					✓															
WW-SA7	July 25/23	1:35 AM/PM	2	S					✓															
SW-SA4	July 25/23	1:55 AM/PM	2	S					✓															
TP-SA11	July 26/23	11:35 AM/PM	2	S					✓															
DUP-3	July 26/23	11:35 AM/PM	2	S													✓							
TCLP	July 26/23	2:40 AM/PM	3	S																				Y
EW-SA12	July 27/23	2:30 AM/PM	2	S					✓															
WW-SA13	July 27/23	2:35 AM/PM	2	S					✓															

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Ryan Francis	July 26, 2023		C. Griffiths	26 2023	15h00
CA to Pick-up	JUL 26 2023	15h30	T. K	July 27	8:40 AM

Page 1 of 1

N°: T 129276

Document ID: DIV-78-1511-021

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Date Issued: March 9, 2021

Your Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Your C.O.C. #: C#998599-01-01

Attention: Keith Brown

Terrapex Environmental Ltd
1-20 Gurdwara Rd.
Ottawa, ON
CANADA K2E 8B3

Report Date: 2025/08/11
Report #: R8591546
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C4J8739
Received: 2024/06/28, 15:41

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
1,3-Dichloropropene Sum	5	N/A	2024/07/03		EPA 8260C m
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2024/07/02	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	1	2024/06/30	2024/07/01	CAM SOP-00316	CCME PHC-CWS m
Polychlorinated Biphenyl in Water	1	2024/07/04	2024/07/04	CAM SOP-00309	EPA 8082A m
pH (2)	1	2024/06/29	2024/06/29	CAM SOP-00413	SM 24th - 4500H+ B
Total Kjeldahl Nitrogen in Water	1	2024/07/02	2024/07/02	CAM SOP-00938	OMOE E3516 m
Total Phosphorus (Colourimetric)	1	2024/07/02	2024/07/02	CAM SOP-00407	SM 24 4500-P I
Total Suspended Solids	1	2024/06/29	2024/07/02	CAM SOP-00428	SM 24 2540D m
Volatile Organic Compounds and F1 PHCs	5	N/A	2024/07/03	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following “Alberta Environment’s

Your Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Your C.O.C. #: C#998599-01-01

Attention: Keith Brown

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Ottawa, ON
CANADA K2E 8B3

Report Date: 2025/08/11
Report #: R8591546
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C4J8739

Received: 2024/06/28, 15:41

Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(2) "The CCME method and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) holding time. Bureau Veritas endeavors to analyze samples as soon as possible after receipt."

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Katherine Szozda, Project Manager
Email: Katherine.Szozda@bureauveritas.com
Phone# (613)274-0573 Ext:7063633

==========

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

Bureau Veritas Job #: C4J8739
Report Date: 2025/08/11

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Sampler Initials: EB

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		ZPF090			ZPF090	
Sampling Date		2024/06/27 15:45			2024/06/27 15:45	
COC Number		C#998599-01-01			C#998599-01-01	
	UNITS	**BH22-04**	**RDL**	**QC Batch**	**BH22-04 Lab-Dup**	**QC Batch**
Inorganics						
Total Kjeldahl Nitrogen (TKN)	mg/L	0.47	0.10	9489004		
pH	pH	7.22		9487646	7.22	9487646
Total Phosphorus	mg/L	0.072	0.020	9488971		
Total Suspended Solids	mg/L	51	10	9487214		

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

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

VOLATILE ORGANICS BY GC/MS (WATER)

Bureau Veritas ID		ZPF090	ZPF091	ZPF092	ZPF093		
Sampling Date		2024/06/27 15:45	2024/06/27 15:45	2024/06/27 14:30	2024/06/27 15:00		
COC Number		C#998599-01-01	C#998599-01-01	C#998599-01-01	C#998599-01-01		
	UNITS	**BH22-04**	**BH22-114**	**BH21-14**	**BH22-03**	**RDL**	**QC Batch**
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9487076
Volatile Organics							
Acetone (2-Propanone)	ug/L	13	11	<10	<10	10	9488077
Benzene	ug/L	<0.17	<0.17	<0.17	<0.17	0.17	9488077
Bromodichloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
Bromoform	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	9488077
Bromomethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
Carbon Tetrachloride	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
Chlorobenzene	ug/L	0.22	0.22	<0.20	<0.20	0.20	9488077
Chloroform	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
Dibromochloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
1,2-Dichlorobenzene	ug/L	0.61	0.64	<0.50	<0.50	0.50	9488077
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	9488077
1,1-Dichloroethane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
1,2-Dichloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
1,1-Dichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
1,2-Dichloropropane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	<0.30	<0.30	0.30	9488077
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9488077
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
Ethylene Dibromide	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
Hexane	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	9488077
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	9488077
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	<10	<10	10	9488077
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	9488077
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
Styrene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C4J8739
Report Date: 2025/08/11

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Sampler Initials: EB

VOLATILE ORGANICS BY GC/MS (WATER)

Bureau Veritas ID		ZPF090	ZPF091	ZPF092	ZPF093		
Sampling Date		2024/06/27 15:45	2024/06/27 15:45	2024/06/27 14:30	2024/06/27 15:00		
COC Number		C#998599-01-01	C#998599-01-01	C#998599-01-01	C#998599-01-01		
	UNITS	**BH22-04**	**BH22-114**	**BH21-14**	**BH22-03**	**RDL**	**QC Batch**
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
Tetrachloroethylene	ug/L	0.22	0.23	<0.20	<0.20	0.20	9488077
Toluene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
Trichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
Vinyl Chloride	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
p+m-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
o-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
Total Xylenes	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
F1 (C6-C10)	ug/L	59	110	<25	<25	25	9488077
F1 (C6-C10) - BTEX	ug/L	59	110	<25	<25	25	9488077
Surrogate Recovery (%)							
4-Bromofluorobenzene	%	101	103	95	93		9488077
D4-1,2-Dichloroethane	%	129	122	119	120		9488077
D8-Toluene	%	86	87	87	88		9488077

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

VOLATILE ORGANICS BY GC/MS (WATER)

Bureau Veritas ID		ZPF096		
Sampling Date		2024/06/27 16:00		
COC Number		C#998599-01-01		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	0.50	9487076
Volatile Organics				
Acetone (2-Propanone)	ug/L	<10	10	9488077
Benzene	ug/L	<0.17	0.17	9488077
Bromodichloromethane	ug/L	<0.50	0.50	9488077
Bromoform	ug/L	<1.0	1.0	9488077
Bromomethane	ug/L	<0.50	0.50	9488077
Carbon Tetrachloride	ug/L	<0.20	0.20	9488077
Chlorobenzene	ug/L	<0.20	0.20	9488077
Chloroform	ug/L	<0.20	0.20	9488077
Dibromochloromethane	ug/L	<0.50	0.50	9488077
1,2-Dichlorobenzene	ug/L	<0.50	0.50	9488077
1,3-Dichlorobenzene	ug/L	<0.50	0.50	9488077
1,4-Dichlorobenzene	ug/L	<0.50	0.50	9488077
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	1.0	9488077
1,1-Dichloroethane	ug/L	<0.20	0.20	9488077
1,2-Dichloroethane	ug/L	<0.50	0.50	9488077
1,1-Dichloroethylene	ug/L	<0.20	0.20	9488077
cis-1,2-Dichloroethylene	ug/L	<0.50	0.50	9488077
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	9488077
1,2-Dichloropropane	ug/L	<0.20	0.20	9488077
cis-1,3-Dichloropropene	ug/L	<0.30	0.30	9488077
trans-1,3-Dichloropropene	ug/L	<0.40	0.40	9488077
Ethylbenzene	ug/L	<0.20	0.20	9488077
Ethylene Dibromide	ug/L	<0.20	0.20	9488077
Hexane	ug/L	<1.0	1.0	9488077
Methylene Chloride(Dichloromethane)	ug/L	<2.0	2.0	9488077
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	10	9488077
Methyl Isobutyl Ketone	ug/L	<5.0	5.0	9488077
Methyl t-butyl ether (MTBE)	ug/L	<0.50	0.50	9488077
Styrene	ug/L	<0.50	0.50	9488077

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C4J8739
Report Date: 2025/08/11

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Sampler Initials: EB

VOLATILE ORGANICS BY GC/MS (WATER)

Bureau Veritas ID		ZPF096		
Sampling Date		2024/06/27 16:00		
COC Number		C#998599-01-01		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
1,1,1,2-Tetrachloroethane	ug/L	<0.50	0.50	9488077
1,1,2,2-Tetrachloroethane	ug/L	<0.50	0.50	9488077
Tetrachloroethylene	ug/L	<0.20	0.20	9488077
Toluene	ug/L	<0.20	0.20	9488077
1,1,1-Trichloroethane	ug/L	<0.20	0.20	9488077
1,1,2-Trichloroethane	ug/L	<0.50	0.50	9488077
Trichloroethylene	ug/L	<0.20	0.20	9488077
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	0.50	9488077
Vinyl Chloride	ug/L	<0.20	0.20	9488077
p+m-Xylene	ug/L	<0.20	0.20	9488077
o-Xylene	ug/L	<0.20	0.20	9488077
Total Xylenes	ug/L	<0.20	0.20	9488077
F1 (C6-C10)	ug/L	<25	25	9488077
F1 (C6-C10) - BTEX	ug/L	<25	25	9488077
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	95		9488077
D4-1,2-Dichloroethane	%	118		9488077
D8-Toluene	%	89		9488077

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C4J8739
Report Date: 2025/08/11

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Sampler Initials: EB

PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		ZPF090			ZPF095		
Sampling Date		2024/06/27 15:45			2024/06/17 16:00		
COC Number		C#998599-01-01			C#998599-01-01		
	UNITS	**BH22-04**	**RDL**	**QC Batch**	**TRIP SPIKE**	**RDL**	**QC Batch**
BTEX & F1 Hydrocarbons							
Benzene	ug/L				94	0.20	9487687
Toluene	ug/L				90	0.20	9487687
Ethylbenzene	ug/L				88	0.20	9487687
o-Xylene	ug/L				86	0.20	9487687
p+m-Xylene	ug/L				93	0.40	9487687
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/L	8100	100	9487970			
F3 (C16-C34 Hydrocarbons)	ug/L	100000	200	9487970			
F4 (C34-C50 Hydrocarbons)	ug/L	18000	200	9487970			
Reached Baseline at C50	ug/L	Yes		9487970			
Surrogate Recovery (%)							
1,4-Difluorobenzene	%				99		9487687
4-Bromofluorobenzene	%				98		9487687
D10-o-Xylene	%				93		9487687
D4-1,2-Dichloroethane	%				94		9487687
o-Terphenyl	%	104		9487970			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C4J8739
Report Date: 2025/08/11

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Sampler Initials: EB

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Bureau Veritas ID		ZPF090		
Sampling Date		2024/06/27 15:45		
COC Number		C#998599-01-01		
	UNITS	**BH22-04**	**RDL**	**QC Batch**
PCBs				
Aroclor 1242	ug/L	<0.5	0.5	9493852
Aroclor 1248	ug/L	<0.5	0.5	9493852
Aroclor 1254	ug/L	<0.5	0.5	9493852
Aroclor 1260	ug/L	<0.5	0.5	9493852
Total PCB	ug/L	<0.5	0.5	9493852
Surrogate Recovery (%)				
Decachlorobiphenyl	%	63		9493852

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C4J8739
Report Date: 2025/08/11

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Sampler Initials: EB

TEST SUMMARY

Bureau Veritas ID: ZPF090
Sample ID: BH22-04
Matrix: Water

Collected: 2024/06/27
Shipped:
Received: 2024/06/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9487076	N/A	2024/07/03	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9487970	2024/06/30	2024/07/01	Mohammed Abdul Nafay Shoeb
Polychlorinated Biphenyl in Water	GC/ECD	9493852	2024/07/04	2024/07/04	Svitlana Shaula
pH	AT	9487646	2024/06/29	2024/06/29	Nachiketa Gohil
Total Kjeldahl Nitrogen in Water	SKAL	9489004	2024/07/02	2024/07/02	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9488971	2024/07/02	2024/07/02	Sachi Patel
Total Suspended Solids	BAL	9487214	2024/06/29	2024/07/02	Razieh Tabesh
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9488077	N/A	2024/07/03	Juan Pangilinan

Bureau Veritas ID: ZPF090 Dup
Sample ID: BH22-04
Matrix: Water

Collected: 2024/06/27
Shipped:
Received: 2024/06/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH	AT	9487646	2024/06/29	2024/06/29	Nachiketa Gohil

Bureau Veritas ID: ZPF091
Sample ID: BH22-114
Matrix: Water

Collected: 2024/06/27
Shipped:
Received: 2024/06/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9487076	N/A	2024/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9488077	N/A	2024/07/03	Juan Pangilinan

Bureau Veritas ID: ZPF092
Sample ID: BH21-14
Matrix: Water

Collected: 2024/06/27
Shipped:
Received: 2024/06/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9487076	N/A	2024/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9488077	N/A	2024/07/03	Juan Pangilinan

Bureau Veritas ID: ZPF093
Sample ID: BH22-03
Matrix: Water

Collected: 2024/06/27
Shipped:
Received: 2024/06/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9487076	N/A	2024/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9488077	N/A	2024/07/03	Juan Pangilinan

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C4J8739
Report Date: 2025/08/11

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Sampler Initials: EB

TEST SUMMARY

Bureau Veritas ID: ZPF095
Sample ID: TRIP SPIKE
Matrix: Water

Collected: 2024/06/17
Shipped:
Received: 2024/06/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	9487687	N/A	2024/07/02	Domnica Andronescu

Bureau Veritas ID: ZPF096
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2024/06/27
Shipped:
Received: 2024/06/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9487076	N/A	2024/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9488077	N/A	2024/07/03	Juan Pangilinan

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GENERAL COMMENTS

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

Package 1	4.7°C

Revised Report [2025/08/11]: Split report issued per client request.
Revised Report [2024/07/26]:Split report issued as per request.

Sample ZPF090 [BH22-04] : PCB analysis: Due to the nature of the sample matrix, a smaller portion of the sample was extracted. DLs were adjusted accordingly.

Sample ZPF095 [TRIP SPIKE] : F1/BTEX Analysis: Trip spike results are expressed as percent recovery.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9487214	RTB	Spiked Blank	Total Suspended Solids	2024/07/02		100	%	80 - 120
9487214	RTB	Method Blank	Total Suspended Solids	2024/07/02	<10		mg/L	
9487214	RTB	RPD	Total Suspended Solids	2024/07/02	NC		%	20
9487646	NGI	Spiked Blank	pH	2024/06/29		102	%	98 - 103
9487646	NGI	RPD [ZPF090-03]	pH	2024/06/29	0.11		%	N/A
9487687	DAN	Matrix Spike	1,4-Difluorobenzene	2024/07/02		105	%	70 - 130
			4-Bromofluorobenzene	2024/07/02		106	%	70 - 130
			D10-o-Xylene	2024/07/02		106	%	70 - 130
			D4-1,2-Dichloroethane	2024/07/02		95	%	70 - 130
			Benzene	2024/07/02		103	%	50 - 140
			Toluene	2024/07/02		94	%	50 - 140
			Ethylbenzene	2024/07/02		113	%	50 - 140
			o-Xylene	2024/07/02		107	%	50 - 140
			p+m-Xylene	2024/07/02		107	%	50 - 140
9487687	DAN	Spiked Blank	1,4-Difluorobenzene	2024/07/02		104	%	70 - 130
			4-Bromofluorobenzene	2024/07/02		105	%	70 - 130
			D10-o-Xylene	2024/07/02		103	%	70 - 130
			D4-1,2-Dichloroethane	2024/07/02		98	%	70 - 130
			Benzene	2024/07/02		105	%	50 - 140
			Toluene	2024/07/02		94	%	50 - 140
			Ethylbenzene	2024/07/02		111	%	50 - 140
			o-Xylene	2024/07/02		107	%	50 - 140
			p+m-Xylene	2024/07/02		106	%	50 - 140
9487687	DAN	Method Blank	1,4-Difluorobenzene	2024/07/02		109	%	70 - 130
			4-Bromofluorobenzene	2024/07/02		82	%	70 - 130
			D10-o-Xylene	2024/07/02		101	%	70 - 130
			D4-1,2-Dichloroethane	2024/07/02		102	%	70 - 130
			Benzene	2024/07/02	<0.20		ug/L	
			Toluene	2024/07/02	<0.20		ug/L	
			Ethylbenzene	2024/07/02	<0.20		ug/L	
			o-Xylene	2024/07/02	<0.20		ug/L	
			p+m-Xylene	2024/07/02	<0.40		ug/L	
9487687	DAN	RPD	Benzene	2024/07/02	2.3		%	30
			Toluene	2024/07/02	NC		%	30
			Ethylbenzene	2024/07/02	3.1		%	30
			o-Xylene	2024/07/02	1.0		%	30
			p+m-Xylene	2024/07/02	1.7		%	30
			Total Xylenes	2024/07/02	1.6		%	30
9487970	MSZ	Matrix Spike	o-Terphenyl	2024/07/01		101	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/07/01		98	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2024/07/01		101	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2024/07/01		92	%	60 - 140
9487970	MSZ	Spiked Blank	o-Terphenyl	2024/07/01		100	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/07/01		98	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2024/07/01		102	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2024/07/01		93	%	60 - 140
9487970	MSZ	Method Blank	o-Terphenyl	2024/07/01		99	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/07/01	<100		ug/L	
			F3 (C16-C34 Hydrocarbons)	2024/07/01	<200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2024/07/01	<200		ug/L	
9487970	MSZ	RPD	F2 (C10-C16 Hydrocarbons)	2024/07/01	NC		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F3 (C16-C34 Hydrocarbons)	2024/07/01	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2024/07/01	NC		%	30
9488077	JPN	Matrix Spike	4-Bromofluorobenzene	2024/07/02		101	%	70 - 130
			D4-1,2-Dichloroethane	2024/07/02		120	%	70 - 130
			D8-Toluene	2024/07/02		109	%	70 - 130
			Acetone (2-Propanone)	2024/07/02		124	%	60 - 140
			Benzene	2024/07/02		107	%	70 - 130
			Bromodichloromethane	2024/07/02		114	%	70 - 130
			Bromoform	2024/07/02		113	%	70 - 130
			Bromomethane	2024/07/02		101	%	60 - 140
			Carbon Tetrachloride	2024/07/02		103	%	70 - 130
			Chlorobenzene	2024/07/02		94	%	70 - 130
			Chloroform	2024/07/02		113	%	70 - 130
			Dibromochloromethane	2024/07/02		110	%	70 - 130
			1,2-Dichlorobenzene	2024/07/02		96	%	70 - 130
			1,3-Dichlorobenzene	2024/07/02		88	%	70 - 130
			1,4-Dichlorobenzene	2024/07/02		90	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2024/07/02		99	%	60 - 140
			1,1-Dichloroethane	2024/07/02		120	%	70 - 130
			1,2-Dichloroethane	2024/07/02		112	%	70 - 130
			1,1-Dichloroethylene	2024/07/02		109	%	70 - 130
			cis-1,2-Dichloroethylene	2024/07/02		109	%	70 - 130
			trans-1,2-Dichloroethylene	2024/07/02		110	%	70 - 130
			1,2-Dichloropropane	2024/07/02		118	%	70 - 130
			cis-1,3-Dichloropropene	2024/07/02		105	%	70 - 130
			trans-1,3-Dichloropropene	2024/07/02		110	%	70 - 130
			Ethylbenzene	2024/07/02		87	%	70 - 130
			Ethylene Dibromide	2024/07/02		109	%	70 - 130
			Hexane	2024/07/02		121	%	70 - 130
			Methylene Chloride(Dichloromethane)	2024/07/02		116	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2024/07/02		127	%	60 - 140
			Methyl Isobutyl Ketone	2024/07/02		92	%	70 - 130
			Methyl t-butyl ether (MTBE)	2024/07/02		95	%	70 - 130
			Styrene	2024/07/02		73	%	70 - 130
			1,1,1,2-Tetrachloroethane	2024/07/02		107	%	70 - 130
			1,1,2,2-Tetrachloroethane	2024/07/02		122	%	70 - 130
			Tetrachloroethylene	2024/07/02		96	%	70 - 130
			Toluene	2024/07/02		96	%	70 - 130
			1,1,1-Trichloroethane	2024/07/02		103	%	70 - 130
			1,1,2-Trichloroethane	2024/07/02		118	%	70 - 130
			Trichloroethylene	2024/07/02		98	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2024/07/02		108	%	70 - 130
			Vinyl Chloride	2024/07/02		120	%	70 - 130
			p+m-Xylene	2024/07/02		85	%	70 - 130
			o-Xylene	2024/07/02		92	%	70 - 130
			F1 (C6-C10)	2024/07/02		93	%	60 - 140
9488077	JPN	Spiked Blank	4-Bromofluorobenzene	2024/07/02		100	%	70 - 130
			D4-1,2-Dichloroethane	2024/07/02		114	%	70 - 130
			D8-Toluene	2024/07/02		108	%	70 - 130
			Acetone (2-Propanone)	2024/07/02		115	%	60 - 140
			Benzene	2024/07/02		104	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Bromodichloromethane	2024/07/02		108	%	70 - 130
			Bromoform	2024/07/02		107	%	70 - 130
			Bromomethane	2024/07/02		96	%	60 - 140
			Carbon Tetrachloride	2024/07/02		98	%	70 - 130
			Chlorobenzene	2024/07/02		92	%	70 - 130
			Chloroform	2024/07/02		107	%	70 - 130
			Dibromochloromethane	2024/07/02		105	%	70 - 130
			1,2-Dichlorobenzene	2024/07/02		95	%	70 - 130
			1,3-Dichlorobenzene	2024/07/02		89	%	70 - 130
			1,4-Dichlorobenzene	2024/07/02		89	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2024/07/02		93	%	60 - 140
			1,1-Dichloroethane	2024/07/02		115	%	70 - 130
			1,2-Dichloroethane	2024/07/02		105	%	70 - 130
			1,1-Dichloroethylene	2024/07/02		104	%	70 - 130
			cis-1,2-Dichloroethylene	2024/07/02		104	%	70 - 130
			trans-1,2-Dichloroethylene	2024/07/02		106	%	70 - 130
			1,2-Dichloropropane	2024/07/02		113	%	70 - 130
			cis-1,3-Dichloropropene	2024/07/02		102	%	70 - 130
			trans-1,3-Dichloropropene	2024/07/02		106	%	70 - 130
			Ethylbenzene	2024/07/02		88	%	70 - 130
			Ethylene Dibromide	2024/07/02		104	%	70 - 130
			Hexane	2024/07/02		117	%	70 - 130
			Methylene Chloride(Dichloromethane)	2024/07/02		110	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2024/07/02		120	%	60 - 140
			Methyl Isobutyl Ketone	2024/07/02		89	%	70 - 130
			Methyl t-butyl ether (MTBE)	2024/07/02		91	%	70 - 130
			Styrene	2024/07/02		74	%	70 - 130
			1,1,1,2-Tetrachloroethane	2024/07/02		102	%	70 - 130
			1,1,2,2-Tetrachloroethane	2024/07/02		115	%	70 - 130
			Tetrachloroethylene	2024/07/02		95	%	70 - 130
			Toluene	2024/07/02		94	%	70 - 130
			1,1,1-Trichloroethane	2024/07/02		98	%	70 - 130
			1,1,2-Trichloroethane	2024/07/02		110	%	70 - 130
			Trichloroethylene	2024/07/02		95	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2024/07/02		102	%	70 - 130
			Vinyl Chloride	2024/07/02		115	%	70 - 130
			p+m-Xylene	2024/07/02		86	%	70 - 130
			o-Xylene	2024/07/02		93	%	70 - 130
			F1 (C6-C10)	2024/07/02		90	%	60 - 140
9488077	JPN	Method Blank	4-Bromofluorobenzene	2024/07/02		96	%	70 - 130
			D4-1,2-Dichloroethane	2024/07/02		113	%	70 - 130
			D8-Toluene	2024/07/02		90	%	70 - 130
			Acetone (2-Propanone)	2024/07/02	<10		ug/L	
			Benzene	2024/07/02	<0.17		ug/L	
			Bromodichloromethane	2024/07/02	<0.50		ug/L	
			Bromoform	2024/07/02	<1.0		ug/L	
			Bromomethane	2024/07/02	<0.50		ug/L	
			Carbon Tetrachloride	2024/07/02	<0.20		ug/L	
			Chlorobenzene	2024/07/02	<0.20		ug/L	
			Chloroform	2024/07/02	<0.20		ug/L	
			Dibromochloromethane	2024/07/02	<0.50		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,2-Dichlorobenzene	2024/07/02	<0.50		ug/L	
			1,3-Dichlorobenzene	2024/07/02	<0.50		ug/L	
			1,4-Dichlorobenzene	2024/07/02	<0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2024/07/02	<1.0		ug/L	
			1,1-Dichloroethane	2024/07/02	<0.20		ug/L	
			1,2-Dichloroethane	2024/07/02	<0.50		ug/L	
			1,1-Dichloroethylene	2024/07/02	<0.20		ug/L	
			cis-1,2-Dichloroethylene	2024/07/02	<0.50		ug/L	
			trans-1,2-Dichloroethylene	2024/07/02	<0.50		ug/L	
			1,2-Dichloropropane	2024/07/02	<0.20		ug/L	
			cis-1,3-Dichloropropene	2024/07/02	<0.30		ug/L	
			trans-1,3-Dichloropropene	2024/07/02	<0.40		ug/L	
			Ethylbenzene	2024/07/02	<0.20		ug/L	
			Ethylene Dibromide	2024/07/02	<0.20		ug/L	
			Hexane	2024/07/02	<1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2024/07/02	<2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2024/07/02	<10		ug/L	
			Methyl Isobutyl Ketone	2024/07/02	<5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2024/07/02	<0.50		ug/L	
			Styrene	2024/07/02	<0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2024/07/02	<0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2024/07/02	<0.50		ug/L	
			Tetrachloroethylene	2024/07/02	<0.20		ug/L	
			Toluene	2024/07/02	<0.20		ug/L	
			1,1,1-Trichloroethane	2024/07/02	<0.20		ug/L	
			1,1,2-Trichloroethane	2024/07/02	<0.50		ug/L	
			Trichloroethylene	2024/07/02	<0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2024/07/02	<0.50		ug/L	
			Vinyl Chloride	2024/07/02	<0.20		ug/L	
			p+m-Xylene	2024/07/02	<0.20		ug/L	
			o-Xylene	2024/07/02	<0.20		ug/L	
			Total Xylenes	2024/07/02	<0.20		ug/L	
			F1 (C6-C10)	2024/07/02	<25		ug/L	
			F1 (C6-C10) - BTEX	2024/07/02	<25		ug/L	
9488077	JPN	RPD	Acetone (2-Propanone)	2024/07/02	NC		%	30
			Benzene	2024/07/02	NC		%	30
			Bromodichloromethane	2024/07/02	NC		%	30
			Bromoform	2024/07/02	NC		%	30
			Bromomethane	2024/07/02	NC		%	30
			Carbon Tetrachloride	2024/07/02	NC		%	30
			Chlorobenzene	2024/07/02	NC		%	30
			Chloroform	2024/07/02	NC		%	30
			Dibromochloromethane	2024/07/02	NC		%	30
			1,2-Dichlorobenzene	2024/07/02	NC		%	30
			1,3-Dichlorobenzene	2024/07/02	NC		%	30
			1,4-Dichlorobenzene	2024/07/02	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2024/07/02	NC		%	30
			1,1-Dichloroethane	2024/07/02	NC		%	30
			1,2-Dichloroethane	2024/07/02	NC		%	30
			1,1-Dichloroethylene	2024/07/02	NC		%	30
			cis-1,2-Dichloroethylene	2024/07/02	NC		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			trans-1,2-Dichloroethylene	2024/07/02	NC		%	30
			1,2-Dichloropropane	2024/07/02	NC		%	30
			cis-1,3-Dichloropropene	2024/07/02	NC		%	30
			trans-1,3-Dichloropropene	2024/07/02	NC		%	30
			Ethylbenzene	2024/07/02	NC		%	30
			Ethylene Dibromide	2024/07/02	NC		%	30
			Hexane	2024/07/02	NC		%	30
			Methylene Chloride(Dichloromethane)	2024/07/02	NC		%	30
			Methyl Ethyl Ketone (2-Butanone)	2024/07/02	NC		%	30
			Methyl Isobutyl Ketone	2024/07/02	NC		%	30
			Methyl t-butyl ether (MTBE)	2024/07/02	NC		%	30
			Styrene	2024/07/02	NC		%	30
			1,1,1,2-Tetrachloroethane	2024/07/02	NC		%	30
			1,1,2,2-Tetrachloroethane	2024/07/02	NC		%	30
			Tetrachloroethylene	2024/07/02	NC		%	30
			Toluene	2024/07/02	NC		%	30
			1,1,1-Trichloroethane	2024/07/02	NC		%	30
			1,1,2-Trichloroethane	2024/07/02	NC		%	30
			Trichloroethylene	2024/07/02	NC		%	30
			Trichlorofluoromethane (FREON 11)	2024/07/02	NC		%	30
			Vinyl Chloride	2024/07/02	NC		%	30
			p+m-Xylene	2024/07/02	NC		%	30
			o-Xylene	2024/07/02	NC		%	30
			Total Xylenes	2024/07/02	NC		%	30
			F1 (C6-C10)	2024/07/02	NC		%	30
			F1 (C6-C10) - BTEX	2024/07/02	NC		%	30
9488971	SPC	Matrix Spike	Total Phosphorus	2024/07/02		98	%	80 - 120
9488971	SPC	QC Standard	Total Phosphorus	2024/07/02		104	%	80 - 120
9488971	SPC	Spiked Blank	Total Phosphorus	2024/07/02		102	%	80 - 120
9488971	SPC	Method Blank	Total Phosphorus	2024/07/02	<0.020		mg/L	
9488971	SPC	RPD	Total Phosphorus	2024/07/02	4.6		%	20
9489004	RTY	Matrix Spike	Total Kjeldahl Nitrogen (TKN)	2024/07/02		96	%	80 - 120
9489004	RTY	QC Standard	Total Kjeldahl Nitrogen (TKN)	2024/07/02		103	%	80 - 120
9489004	RTY	Spiked Blank	Total Kjeldahl Nitrogen (TKN)	2024/07/02		96	%	80 - 120
9489004	RTY	Method Blank	Total Kjeldahl Nitrogen (TKN)	2024/07/02	<0.10		mg/L	
9489004	RTY	RPD	Total Kjeldahl Nitrogen (TKN)	2024/07/02	NC		%	20
9493852	SVS	Matrix Spike	Decachlorobiphenyl	2024/07/04		83	%	60 - 130
			Aroclor 1260	2024/07/04		85	%	60 - 130
			Total PCB	2024/07/04		85	%	60 - 130
9493852	SVS	Spiked Blank	Decachlorobiphenyl	2024/07/04		81	%	60 - 130
			Aroclor 1260	2024/07/04		79	%	60 - 130
			Total PCB	2024/07/04		79	%	60 - 130
9493852	SVS	Method Blank	Decachlorobiphenyl	2024/07/04		80	%	60 - 130
			Aroclor 1242	2024/07/04	<0.05		ug/L	
			Aroclor 1248	2024/07/04	<0.05		ug/L	
			Aroclor 1254	2024/07/04	<0.05		ug/L	
			Aroclor 1260	2024/07/04	<0.05		ug/L	
			Total PCB	2024/07/04	<0.05		ug/L	
9493852	SVS	RPD	Aroclor 1242	2024/07/04	NC		%	30
			Aroclor 1248	2024/07/04	NC		%	30
			Aroclor 1254	2024/07/04	NC		%	30

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

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Aroclor 1260	2024/07/04	NC		%	30
			Total PCB	2024/07/04	NC		%	40

N/A = Not Applicable

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

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

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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

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

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

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

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VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Supervisor-Afternoon Shift

Cristina Carriere, Senior Scientific Specialist

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

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Bureau Veritas
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RUSH

NONT-2024-06-3214

Page 1 of 1

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#12638 Terrapex Environmental Ltd	Company Name:		Quotation #:	C35707
Attention:	Accounts Payable	Attention:	Keith Brown	P.O. #:	
Address:	1-20 Gurdwara Rd.	Address:		Project:	CO972.00
	Ottawa ON K2E 8B3			Project Name:	
Tel:	(613) 745-6471 Fax: (613) 745-0796	Tel:	(613) 745-6471 Ext: 225 Fax: (613) 745-0796	Site #:	1047 Richmond Road
Email:	accounts.payable@terrapex.com	Email:	k.brown@terrapex.com	Sampled By:	EB

Bottle Order #: 998599

COC #: C#998599-01-01

Project Manager: Katherine Szozda

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

Regulation 153 (2011)
- [ ] Table 1 [X] Res/Park [ ] Medium/Fine
- [ ] Table 2 [ ] Ind/Comm [ ] Coarse
- [ ] Table 3 [ ] Agri/Other [X] For RSC
- [X] Table 7

Other Regulations
- [ ] CCME [ ] Sanitary Sewer Bylaw
- [ ] Reg 558 [ ] Storm Sewer Bylaw
- [ ] MISA Municipality
- [ ] PWQO [ ] Reg 406 Table
- [ ] Other

Special Instructions

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

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

Regular (Standard) TAT: [ ]
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: July 5. 24 Time Required: 3 da. [X]
Rush Confirmation Number: (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O Reg 153 VOCs by HS & F1-F4	Total Suspended Solids	Total Kjeldahl Nitrogen in Water	O Reg 153 PCBs (Water)	Total Phosphorus (Colourimetric)	pH	O Reg 153 VOCs by HS (Water)	Volatile Organic Compounds and F1 PHCs	BTEX	# of Bottles	Comments
1		BH22-04	Jun 27/24	15:45	GW	N	X	X	X	X	X	X	X			9	
2		BH22-114	"	15:45	GW	N								X		2	
3		BH21-14	"	14:30	GW	N								X		2	
4		BH22-03	"	15:00	GW	N								X		2	
5		BH21-04	↓	13:48	GW	N								X		2	
6		Trip Spike	Jun 17 2024	4pm	-	N									X	2	TSPK-VOC-24-0617
7		Trip Blank	Jun 27/24	16:00	-	N								X		2	TBLK-VOC/FIBTEX-24-0603
8																	
9																	Received in Ottawa
10																	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Keith Brown	24/06/28	3:45pm	Dinesh Kanawee	2024/06/28	15:41	
				2024/06/29	08:25	

Laboratory Use Only ICE

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	5 4 5	Present		
		Intact		

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

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

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

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

White: Bureau Veritas Yellow: Client

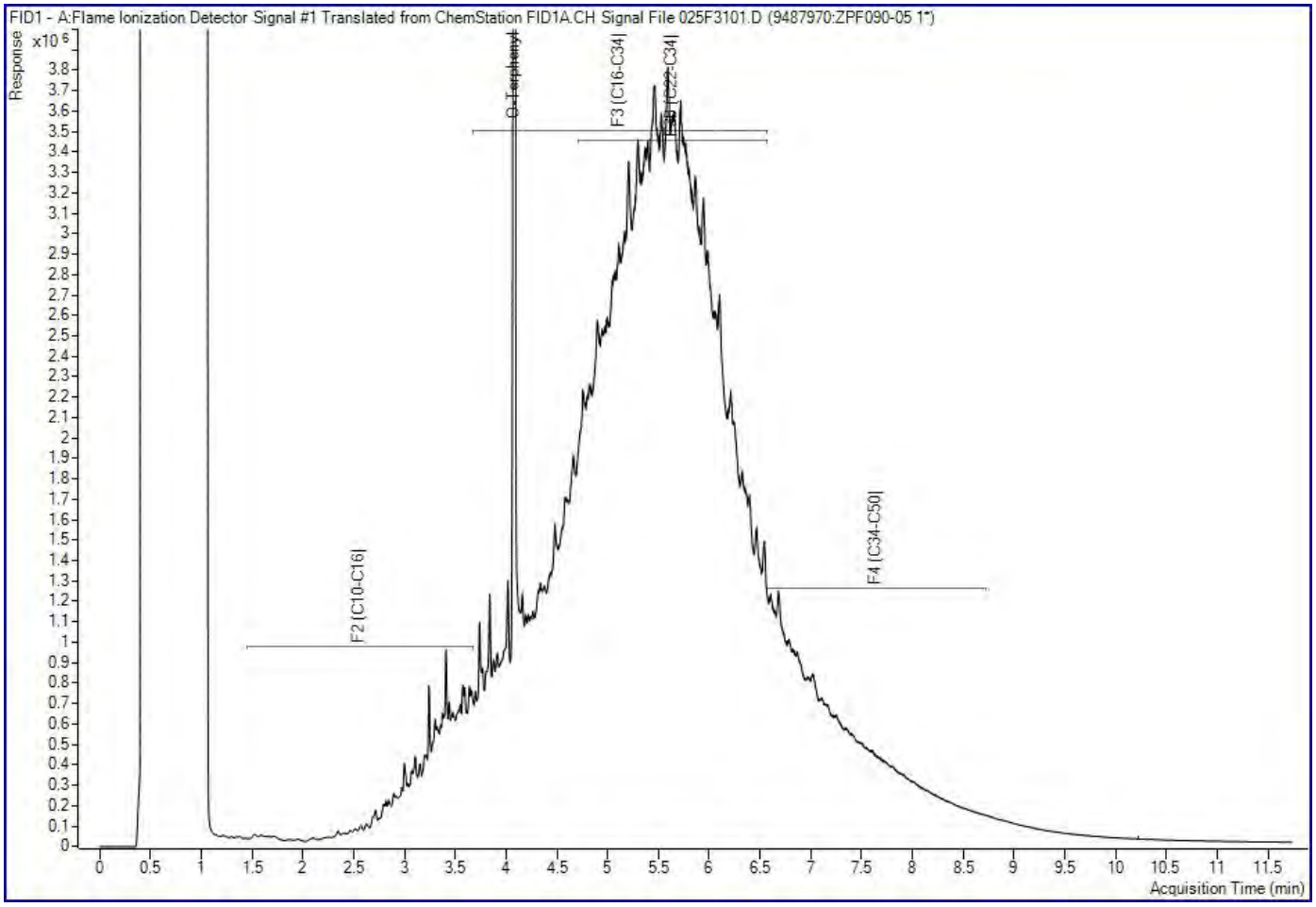
Bureau Veritas Canada (2019) Inc.

3/4/13 ON WW 201 STATION

Bureau Veritas Job #: C4J8739
Report Date: 2025/08/11
Bureau Veritas Sample: ZPF090

Terrapex Environmental Ltd
Client Project #: CO972.00
Project name: 1047 RICHMOND ROAD
Client ID: BH22-04

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: CO972.00
Site#: 1047 Richmond Road
Site Location: FEREATE RICHMOND
Your C.O.C. #: #1028251-01-01

Attention: Keith Brown

Terrapex Environmental Ltd
1-20 Gurdwara Rd.
Ottawa, ON
CANADA K2E 8B3

Report Date: 2025/08/14
Report #: R8593817
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C4BO251
Received: 2024/12/19, 16:40

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
1,3-Dichloropropene Sum	1	N/A	2024/12/30		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Water (1)	1	2024/12/28	2024/12/29	CAM SOP-00316	CCME PHC-CWS m
Volatile Organic Compounds and F1 PHCs	2	N/A	2024/12/27	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds in Water	1	N/A	2024/12/23	CAM SOP-00228	EPA 8260D

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

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

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

Your Project #: CO972.00
Site#: 1047 Richmond Road
Site Location: FEREATE RICHMOND
Your C.O.C. #: #1028251-01-01

Attention: Keith Brown

Terrapex Environmental Ltd
1-20 Gurdwara Rd.
Ottawa, ON
CANADA K2E 8B3

Report Date: 2025/08/14
Report #: R8593817
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C4BO251
Received: 2024/12/19, 16:40

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Katherine Szozda, Project Manager
Email: Katherine.Szozda@bureauveritas.com
Phone# (613)274-0573 Ext:7063633
==========

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

Bureau Veritas Job #: C4BO251
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FEREATE RICHMOND
Sampler Initials: SP

VOLATILE ORGANICS BY GC/MS (WATER)

Bureau Veritas ID		AMIG63			AMIG64			AMIG65		
Sampling Date		2024/12/19 12:00			2024/12/19 12:40			2024/12/19 12:40		
COC Number		#1028251-01-01			#1028251-01-01			#1028251-01-01		
	UNITS	**MW202**	**RDL**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**	**TRIP SPIKE**	**RDL**	**QC Batch**
Calculated Parameters										
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	0.50	9840494						
Volatile Organics										
Acetone (2-Propanone)	ug/L	<10	10	9843323	<10	10	9843323	98	10	9842957
Benzene	ug/L	<0.17	0.17	9843323	<0.17	0.17	9843323	100	0.20	9842957
Bromodichloromethane	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	110	0.50	9842957
Bromoform	ug/L	<1.0	1.0	9843323	<1.0	1.0	9843323	130	1.0	9842957
Bromomethane	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	87	0.50	9842957
Carbon Tetrachloride	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	120	0.19	9842957
Chlorobenzene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	95	0.20	9842957
Chloroform	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	110	0.20	9842957
Dibromochloromethane	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	120	0.50	9842957
1,2-Dichlorobenzene	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	100	0.40	9842957
1,3-Dichlorobenzene	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	98	0.40	9842957
1,4-Dichlorobenzene	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	98	0.40	9842957
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	1.0	9843323	<1.0	1.0	9843323	84	1.0	9842957
1,1-Dichloroethane	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	97	0.20	9842957
1,2-Dichloroethane	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	100	0.49	9842957
1,1-Dichloroethylene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	95	0.20	9842957
cis-1,2-Dichloroethylene	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	110	0.50	9842957
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	110	0.50	9842957
1,2-Dichloropropane	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	100	0.20	9842957
cis-1,3-Dichloropropene	ug/L	<0.30	0.30	9843323	<0.30	0.30	9843323	93	0.30	9842957
trans-1,3-Dichloropropene	ug/L	<0.40	0.40	9843323	<0.40	0.40	9843323	97	0.40	9842957
Ethylbenzene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	90	0.20	9842957
Ethylene Dibromide	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	110	0.19	9842957
Hexane	ug/L	<1.0	1.0	9843323	<1.0	1.0	9843323	61	1.0	9842957
Methylene Chloride(Dichloromethane)	ug/L	<2.0	2.0	9843323	<2.0	2.0	9843323	120	2.0	9842957
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	10	9843323	<10	10	9843323	98	10	9842957
Methyl Isobutyl Ketone	ug/L	<5.0	5.0	9843323	<5.0	5.0	9843323	93	5.0	9842957
Methyl t-butyl ether (MTBE)	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	100	0.50	9842957
Styrene	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	88	0.40	9842957

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C4BO251
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FEREATE RICHMOND
Sampler Initials: SP

VOLATILE ORGANICS BY GC/MS (WATER)

Bureau Veritas ID		AMIG63			AMIG64			AMIG65		
Sampling Date		2024/12/19 12:00			2024/12/19 12:40			2024/12/19 12:40		
COC Number		#1028251-01-01			#1028251-01-01			#1028251-01-01		
	UNITS	**MW202**	**RDL**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**	**TRIP SPIKE**	**RDL**	**QC Batch**
1,1,1,2-Tetrachloroethane	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	120	0.50	9842957
1,1,2,2-Tetrachloroethane	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	110	0.40	9842957
Tetrachloroethylene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	95	0.20	9842957
Toluene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	96	0.20	9842957
1,1,1-Trichloroethane	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	100	0.20	9842957
1,1,2-Trichloroethane	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	110	0.40	9842957
Trichloroethylene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	110	0.20	9842957
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	100	0.50	9842957
Vinyl Chloride	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	93	0.20	9842957
p+m-Xylene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	85	0.20	9842957
o-Xylene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	94	0.20	9842957
Total Xylenes	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	180	0.20	9842957
F1 (C6-C10)	ug/L	<25	25	9843323	<25	25	9843323			
F1 (C6-C10) - BTEX	ug/L	<25	25	9843323	<25	25	9843323			
Surrogate Recovery (%)										
4-Bromofluorobenzene	%	101		9843323	100		9843323			
D4-1,2-Dichloroethane	%	103		9843323	102		9843323			
D8-Toluene	%	99		9843323	100		9843323			
4-Bromofluorobenzene	%							100		9842957
D4-1,2-Dichloroethane	%							101		9842957
D8-Toluene	%							96		9842957

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C4BO251
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FEREATE RICHMOND
Sampler Initials: SP

PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		AMIG63		
Sampling Date		2024/12/19 12:00		
COC Number		#1028251-01-01		
	UNITS	**MW202**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/L	<90	90	9849225
F3 (C16-C34 Hydrocarbons)	ug/L	<200	200	9849225
F4 (C34-C50 Hydrocarbons)	ug/L	<200	200	9849225
Reached Baseline at C50	ug/L	Yes		9849225
Surrogate Recovery (%)				
o-Terphenyl	%	97		9849225

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C4BO251
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FEREATE RICHMOND
Sampler Initials: SP

TEST SUMMARY

Bureau Veritas ID: AMIG63
Sample ID: MW202
Matrix: Water

Collected: 2024/12/19
Shipped:
Received: 2024/12/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9840494	N/A	2024/12/30	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9849225	2024/12/28	2024/12/29	Mohammed Abdul Nafay Shoeb
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9843323	N/A	2024/12/27	Xueming Jiang

Bureau Veritas ID: AMIG64
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2024/12/19
Shipped:
Received: 2024/12/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9843323	N/A	2024/12/27	Xueming Jiang

Bureau Veritas ID: AMIG65
Sample ID: TRIP SPIKE
Matrix: Water

Collected: 2024/12/19
Shipped:
Received: 2024/12/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds in Water	GC/MS	9842957	N/A	2024/12/23	Noel Ramos

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

GENERAL COMMENTS

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

Package 1	5.0°C

Revised Report [2025/08/14]: Split report requested by client.

Sample AMIG65 [TRIP SPIKE] : VOC Analysis: Trip Spike results are expressed as percent recoveries.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9842957	NRA	Matrix Spike	4-Bromofluorobenzene	2024/12/23		100	%	70 - 130
			D4-1,2-Dichloroethane	2024/12/23		98	%	70 - 130
			D8-Toluene	2024/12/23		99	%	70 - 130
			Acetone (2-Propanone)	2024/12/23		98	%	60 - 140
			Benzene	2024/12/23		107	%	70 - 130
			Bromodichloromethane	2024/12/23		112	%	70 - 130
			Bromoform	2024/12/23		133 (1)	%	70 - 130
			Bromomethane	2024/12/23		107	%	60 - 140
			Carbon Tetrachloride	2024/12/23		124	%	70 - 130
			Chlorobenzene	2024/12/23		100	%	70 - 130
			Chloroform	2024/12/23		109	%	70 - 130
			Dibromochloromethane	2024/12/23		124	%	70 - 130
			1,2-Dichlorobenzene	2024/12/23		108	%	70 - 130
			1,3-Dichlorobenzene	2024/12/23		109	%	70 - 130
			1,4-Dichlorobenzene	2024/12/23		108	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2024/12/23		132	%	60 - 140
			1,1-Dichloroethane	2024/12/23		98	%	70 - 130
			1,2-Dichloroethane	2024/12/23		103	%	70 - 130
			1,1-Dichloroethylene	2024/12/23		96	%	70 - 130
			cis-1,2-Dichloroethylene	2024/12/23		114	%	70 - 130
			trans-1,2-Dichloroethylene	2024/12/23		115	%	70 - 130
			1,2-Dichloropropane	2024/12/23		104	%	70 - 130
			cis-1,3-Dichloropropene	2024/12/23		106	%	70 - 130
			trans-1,3-Dichloropropene	2024/12/23		116	%	70 - 130
			Ethylbenzene	2024/12/23		101	%	70 - 130
			Ethylene Dibromide	2024/12/23		109	%	70 - 130
			Hexane	2024/12/23		109	%	70 - 130
			Methylene Chloride(Dichloromethane)	2024/12/23		113	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2024/12/23		102	%	60 - 140
			Methyl Isobutyl Ketone	2024/12/23		102	%	70 - 130
			Methyl t-butyl ether (MTBE)	2024/12/23		100	%	70 - 130
			Styrene	2024/12/23		104	%	70 - 130
			1,1,1,2-Tetrachloroethane	2024/12/23		122	%	70 - 130
			1,1,2,2-Tetrachloroethane	2024/12/23		106	%	70 - 130
			Tetrachloroethylene	2024/12/23		103	%	70 - 130
			Toluene	2024/12/23		102	%	70 - 130
			1,1,1-Trichloroethane	2024/12/23		106	%	70 - 130
			1,1,2-Trichloroethane	2024/12/23		107	%	70 - 130
			Trichloroethylene	2024/12/23		113	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2024/12/23		105	%	70 - 130
			Vinyl Chloride	2024/12/23		102	%	70 - 130
			p+m-Xylene	2024/12/23		97	%	70 - 130
			o-Xylene	2024/12/23		104	%	70 - 130
9842957	NRA	Spiked Blank	4-Bromofluorobenzene	2024/12/23		100	%	70 - 130
			D4-1,2-Dichloroethane	2024/12/23		99	%	70 - 130
			D8-Toluene	2024/12/23		99	%	70 - 130
			Acetone (2-Propanone)	2024/12/23		93	%	60 - 140
			Benzene	2024/12/23		100	%	70 - 130
			Bromodichloromethane	2024/12/23		106	%	70 - 130
			Bromoform	2024/12/23		126	%	70 - 130
			Bromomethane	2024/12/23		97	%	60 - 140

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Carbon Tetrachloride	2024/12/23		115	%	70 - 130
			Chlorobenzene	2024/12/23		94	%	70 - 130
			Chloroform	2024/12/23		102	%	70 - 130
			Dibromochloromethane	2024/12/23		118	%	70 - 130
			1,2-Dichlorobenzene	2024/12/23		102	%	70 - 130
			1,3-Dichlorobenzene	2024/12/23		103	%	70 - 130
			1,4-Dichlorobenzene	2024/12/23		101	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2024/12/23		123	%	60 - 140
			1,1-Dichloroethane	2024/12/23		92	%	70 - 130
			1,2-Dichloroethane	2024/12/23		96	%	70 - 130
			1,1-Dichloroethylene	2024/12/23		90	%	70 - 130
			cis-1,2-Dichloroethylene	2024/12/23		107	%	70 - 130
			trans-1,2-Dichloroethylene	2024/12/23		107	%	70 - 130
			1,2-Dichloropropane	2024/12/23		98	%	70 - 130
			cis-1,3-Dichloropropene	2024/12/23		96	%	70 - 130
			trans-1,3-Dichloropropene	2024/12/23		103	%	70 - 130
			Ethylbenzene	2024/12/23		96	%	70 - 130
			Ethylene Dibromide	2024/12/23		104	%	70 - 130
			Hexane	2024/12/23		99	%	70 - 130
			Methylene Chloride(Dichloromethane)	2024/12/23		106	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2024/12/23		98	%	60 - 140
			Methyl Isobutyl Ketone	2024/12/23		99	%	70 - 130
			Methyl t-butyl ether (MTBE)	2024/12/23		94	%	70 - 130
			Styrene	2024/12/23		99	%	70 - 130
			1,1,1,2-Tetrachloroethane	2024/12/23		115	%	70 - 130
			1,1,2,2-Tetrachloroethane	2024/12/23		101	%	70 - 130
			Tetrachloroethylene	2024/12/23		96	%	70 - 130
			Toluene	2024/12/23		96	%	70 - 130
			1,1,1-Trichloroethane	2024/12/23		99	%	70 - 130
			1,1,2-Trichloroethane	2024/12/23		102	%	70 - 130
			Trichloroethylene	2024/12/23		105	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2024/12/23		98	%	70 - 130
			Vinyl Chloride	2024/12/23		96	%	70 - 130
			p+m-Xylene	2024/12/23		91	%	70 - 130
			o-Xylene	2024/12/23		101	%	70 - 130
9842957	NRA	Method Blank	4-Bromofluorobenzene	2024/12/23		100	%	70 - 130
			D4-1,2-Dichloroethane	2024/12/23		98	%	70 - 130
			D8-Toluene	2024/12/23		95	%	70 - 130
			Acetone (2-Propanone)	2024/12/23	<10		ug/L	
			Benzene	2024/12/23	<0.20		ug/L	
			Bromodichloromethane	2024/12/23	<0.50		ug/L	
			Bromoform	2024/12/23	<1.0		ug/L	
			Bromomethane	2024/12/23	<0.50		ug/L	
			Carbon Tetrachloride	2024/12/23	<0.19		ug/L	
			Chlorobenzene	2024/12/23	<0.20		ug/L	
			Chloroform	2024/12/23	<0.20		ug/L	
			Dibromochloromethane	2024/12/23	<0.50		ug/L	
			1,2-Dichlorobenzene	2024/12/23	<0.40		ug/L	
			1,3-Dichlorobenzene	2024/12/23	<0.40		ug/L	
			1,4-Dichlorobenzene	2024/12/23	<0.40		ug/L	
			Dichlorodifluoromethane (FREON 12)	2024/12/23	<1.0		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,1-Dichloroethane	2024/12/23	<0.20		ug/L	
			1,2-Dichloroethane	2024/12/23	<0.49		ug/L	
			1,1-Dichloroethylene	2024/12/23	<0.20		ug/L	
			cis-1,2-Dichloroethylene	2024/12/23	<0.50		ug/L	
			trans-1,2-Dichloroethylene	2024/12/23	<0.50		ug/L	
			1,2-Dichloropropane	2024/12/23	<0.20		ug/L	
			cis-1,3-Dichloropropene	2024/12/23	<0.30		ug/L	
			trans-1,3-Dichloropropene	2024/12/23	<0.40		ug/L	
			Ethylbenzene	2024/12/23	<0.20		ug/L	
			Ethylene Dibromide	2024/12/23	<0.19		ug/L	
			Hexane	2024/12/23	<1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2024/12/23	<2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2024/12/23	<10		ug/L	
			Methyl Isobutyl Ketone	2024/12/23	<5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2024/12/23	<0.50		ug/L	
			Styrene	2024/12/23	<0.40		ug/L	
			1,1,1,2-Tetrachloroethane	2024/12/23	<0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2024/12/23	<0.40		ug/L	
			Tetrachloroethylene	2024/12/23	<0.20		ug/L	
			Toluene	2024/12/23	<0.20		ug/L	
			1,1,1-Trichloroethane	2024/12/23	<0.20		ug/L	
			1,1,2-Trichloroethane	2024/12/23	<0.40		ug/L	
			Trichloroethylene	2024/12/23	<0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2024/12/23	<0.50		ug/L	
			Vinyl Chloride	2024/12/23	<0.20		ug/L	
			p+m-Xylene	2024/12/23	<0.20		ug/L	
			o-Xylene	2024/12/23	<0.20		ug/L	
			Total Xylenes	2024/12/23	<0.20		ug/L	
9842957	NRA	RPD	Acetone (2-Propanone)	2024/12/23	NC		%	30
			Benzene	2024/12/23	NC		%	30
			Bromodichloromethane	2024/12/23	NC		%	30
			Bromoform	2024/12/23	NC		%	30
			Bromomethane	2024/12/23	NC		%	30
			Carbon Tetrachloride	2024/12/23	NC		%	30
			Chlorobenzene	2024/12/23	NC		%	30
			Chloroform	2024/12/23	NC		%	30
			Dibromochloromethane	2024/12/23	NC		%	30
			1,2-Dichlorobenzene	2024/12/23	NC		%	30
			1,3-Dichlorobenzene	2024/12/23	NC		%	30
			1,4-Dichlorobenzene	2024/12/23	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2024/12/23	NC		%	30
			1,1-Dichloroethane	2024/12/23	NC		%	30
			1,2-Dichloroethane	2024/12/23	NC		%	30
			1,1-Dichloroethylene	2024/12/23	NC		%	30
			cis-1,2-Dichloroethylene	2024/12/23	NC		%	30
			trans-1,2-Dichloroethylene	2024/12/23	NC		%	30
			1,2-Dichloropropane	2024/12/23	NC		%	30
			cis-1,3-Dichloropropene	2024/12/23	NC		%	30
			trans-1,3-Dichloropropene	2024/12/23	NC		%	30
			Ethylbenzene	2024/12/23	NC		%	30
			Ethylene Dibromide	2024/12/23	NC		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Hexane	2024/12/23	NC		%	30
			Methylene Chloride(Dichloromethane)	2024/12/23	NC		%	30
			Methyl Ethyl Ketone (2-Butanone)	2024/12/23	NC		%	30
			Methyl Isobutyl Ketone	2024/12/23	NC		%	30
			Methyl t-butyl ether (MTBE)	2024/12/23	NC		%	30
			Styrene	2024/12/23	NC		%	30
			1,1,1,2-Tetrachloroethane	2024/12/23	NC		%	30
			1,1,2,2-Tetrachloroethane	2024/12/23	NC		%	30
			Tetrachloroethylene	2024/12/23	NC		%	30
			Toluene	2024/12/23	2.8		%	30
			1,1,1-Trichloroethane	2024/12/23	NC		%	30
			1,1,2-Trichloroethane	2024/12/23	NC		%	30
			Trichloroethylene	2024/12/23	NC		%	30
			Trichlorofluoromethane (FREON 11)	2024/12/23	NC		%	30
			Vinyl Chloride	2024/12/23	NC		%	30
			p+m-Xylene	2024/12/23	NC		%	30
			o-Xylene	2024/12/23	NC		%	30
			Total Xylenes	2024/12/23	NC		%	30
9843323	XJI	Matrix Spike [AMIG61-02]	4-Bromofluorobenzene	2024/12/27		102	%	70 - 130
			D4-1,2-Dichloroethane	2024/12/27		102	%	70 - 130
			D8-Toluene	2024/12/27		100	%	70 - 130
			Acetone (2-Propanone)	2024/12/27		95	%	60 - 140
			Benzene	2024/12/27		89	%	70 - 130
			Bromodichloromethane	2024/12/27		89	%	70 - 130
			Bromoform	2024/12/27		98	%	70 - 130
			Bromomethane	2024/12/27		84	%	60 - 140
			Carbon Tetrachloride	2024/12/27		94	%	70 - 130
			Chlorobenzene	2024/12/27		84	%	70 - 130
			Chloroform	2024/12/27		90	%	70 - 130
			Dibromochloromethane	2024/12/27		95	%	70 - 130
			1,2-Dichlorobenzene	2024/12/27		93	%	70 - 130
			1,3-Dichlorobenzene	2024/12/27		93	%	70 - 130
			1,4-Dichlorobenzene	2024/12/27		95	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2024/12/27		94	%	60 - 140
			1,1-Dichloroethane	2024/12/27		86	%	70 - 130
			1,2-Dichloroethane	2024/12/27		95	%	70 - 130
			1,1-Dichloroethylene	2024/12/27		88	%	70 - 130
			cis-1,2-Dichloroethylene	2024/12/27		92	%	70 - 130
			trans-1,2-Dichloroethylene	2024/12/27		92	%	70 - 130
			1,2-Dichloropropane	2024/12/27		89	%	70 - 130
			cis-1,3-Dichloropropene	2024/12/27		84	%	70 - 130
			trans-1,3-Dichloropropene	2024/12/27		93	%	70 - 130
			Ethylbenzene	2024/12/27		89	%	70 - 130
			Ethylene Dibromide	2024/12/27		93	%	70 - 130
			Hexane	2024/12/27		97	%	70 - 130
			Methylene Chloride(Dichloromethane)	2024/12/27		88	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2024/12/27		104	%	60 - 140
			Methyl Isobutyl Ketone	2024/12/27		95	%	70 - 130
			Methyl t-butyl ether (MTBE)	2024/12/27		89	%	70 - 130
			Styrene	2024/12/27		90	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,1,1,2-Tetrachloroethane	2024/12/27		98	%	70 - 130
			1,1,2,2-Tetrachloroethane	2024/12/27		90	%	70 - 130
			Tetrachloroethylene	2024/12/27		88	%	70 - 130
			Toluene	2024/12/27		92	%	70 - 130
			1,1,1-Trichloroethane	2024/12/27		86	%	70 - 130
			1,1,2-Trichloroethane	2024/12/27		96	%	70 - 130
			Trichloroethylene	2024/12/27		91	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2024/12/27		86	%	70 - 130
			Vinyl Chloride	2024/12/27		85	%	70 - 130
			p+m-Xylene	2024/12/27		89	%	70 - 130
			o-Xylene	2024/12/27		94	%	70 - 130
			F1 (C6-C10)	2024/12/27		94	%	60 - 140
9843323	XJI	Spiked Blank	4-Bromofluorobenzene	2024/12/27		100	%	70 - 130
			D4-1,2-Dichloroethane	2024/12/27		99	%	70 - 130
			D8-Toluene	2024/12/27		101	%	70 - 130
			Acetone (2-Propanone)	2024/12/27		97	%	60 - 140
			Benzene	2024/12/27		97	%	70 - 130
			Bromodichloromethane	2024/12/27		94	%	70 - 130
			Bromoform	2024/12/27		98	%	70 - 130
			Bromomethane	2024/12/27		94	%	60 - 140
			Carbon Tetrachloride	2024/12/27		103	%	70 - 130
			Chlorobenzene	2024/12/27		91	%	70 - 130
			Chloroform	2024/12/27		97	%	70 - 130
			Dibromochloromethane	2024/12/27		100	%	70 - 130
			1,2-Dichlorobenzene	2024/12/27		99	%	70 - 130
			1,3-Dichlorobenzene	2024/12/27		100	%	70 - 130
			1,4-Dichlorobenzene	2024/12/27		102	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2024/12/27		119	%	60 - 140
			1,1-Dichloroethane	2024/12/27		94	%	70 - 130
			1,2-Dichloroethane	2024/12/27		100	%	70 - 130
			1,1-Dichloroethylene	2024/12/27		98	%	70 - 130
			cis-1,2-Dichloroethylene	2024/12/27		100	%	70 - 130
			trans-1,2-Dichloroethylene	2024/12/27		101	%	70 - 130
			1,2-Dichloropropane	2024/12/27		95	%	70 - 130
			cis-1,3-Dichloropropene	2024/12/27		90	%	70 - 130
			trans-1,3-Dichloropropene	2024/12/27		99	%	70 - 130
			Ethylbenzene	2024/12/27		97	%	70 - 130
			Ethylene Dibromide	2024/12/27		97	%	70 - 130
			Hexane	2024/12/27		110	%	70 - 130
			Methylene Chloride(Dichloromethane)	2024/12/27		95	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2024/12/27		106	%	60 - 140
			Methyl Isobutyl Ketone	2024/12/27		97	%	70 - 130
			Methyl t-butyl ether (MTBE)	2024/12/27		97	%	70 - 130
			Styrene	2024/12/27		97	%	70 - 130
			1,1,1,2-Tetrachloroethane	2024/12/27		104	%	70 - 130
			1,1,2,2-Tetrachloroethane	2024/12/27		91	%	70 - 130
			Tetrachloroethylene	2024/12/27		96	%	70 - 130
			Toluene	2024/12/27		101	%	70 - 130
			1,1,1-Trichloroethane	2024/12/27		94	%	70 - 130
			1,1,2-Trichloroethane	2024/12/27		101	%	70 - 130
			Trichloroethylene	2024/12/27		99	%	70 - 130

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Trichlorofluoromethane (FREON 11)	2024/12/27		98	%	70 - 130
			Vinyl Chloride	2024/12/27		99	%	70 - 130
			p+m-Xylene	2024/12/27		98	%	70 - 130
			o-Xylene	2024/12/27		101	%	70 - 130
			F1 (C6-C10)	2024/12/27		92	%	60 - 140
9843323	XJI	Method Blank	4-Bromofluorobenzene	2024/12/27		100	%	70 - 130
			D4-1,2-Dichloroethane	2024/12/27		98	%	70 - 130
			D8-Toluene	2024/12/27		100	%	70 - 130
			Acetone (2-Propanone)	2024/12/27	<10		ug/L	
			Benzene	2024/12/27	<0.17		ug/L	
			Bromodichloromethane	2024/12/27	<0.50		ug/L	
			Bromoform	2024/12/27	<1.0		ug/L	
			Bromomethane	2024/12/27	<0.50		ug/L	
			Carbon Tetrachloride	2024/12/27	<0.20		ug/L	
			Chlorobenzene	2024/12/27	<0.20		ug/L	
			Chloroform	2024/12/27	<0.20		ug/L	
			Dibromochloromethane	2024/12/27	<0.50		ug/L	
			1,2-Dichlorobenzene	2024/12/27	<0.50		ug/L	
			1,3-Dichlorobenzene	2024/12/27	<0.50		ug/L	
			1,4-Dichlorobenzene	2024/12/27	<0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2024/12/27	<1.0		ug/L	
			1,1-Dichloroethane	2024/12/27	<0.20		ug/L	
			1,2-Dichloroethane	2024/12/27	<0.50		ug/L	
			1,1-Dichloroethylene	2024/12/27	<0.20		ug/L	
			cis-1,2-Dichloroethylene	2024/12/27	<0.50		ug/L	
			trans-1,2-Dichloroethylene	2024/12/27	<0.50		ug/L	
			1,2-Dichloropropane	2024/12/27	<0.20		ug/L	
			cis-1,3-Dichloropropene	2024/12/27	<0.30		ug/L	
			trans-1,3-Dichloropropene	2024/12/27	<0.40		ug/L	
			Ethylbenzene	2024/12/27	<0.20		ug/L	
			Ethylene Dibromide	2024/12/27	<0.20		ug/L	
			Hexane	2024/12/27	<1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2024/12/27	<2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2024/12/27	<10		ug/L	
			Methyl Isobutyl Ketone	2024/12/27	<5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2024/12/27	<0.50		ug/L	
			Styrene	2024/12/27	<0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2024/12/27	<0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2024/12/27	<0.50		ug/L	
			Tetrachloroethylene	2024/12/27	<0.20		ug/L	
			Toluene	2024/12/27	<0.20		ug/L	
			1,1,1-Trichloroethane	2024/12/27	<0.20		ug/L	
			1,1,2-Trichloroethane	2024/12/27	<0.50		ug/L	
			Trichloroethylene	2024/12/27	<0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2024/12/27	<0.50		ug/L	
			Vinyl Chloride	2024/12/27	<0.20		ug/L	
			p+m-Xylene	2024/12/27	<0.20		ug/L	
			o-Xylene	2024/12/27	<0.20		ug/L	
			Total Xylenes	2024/12/27	<0.20		ug/L	
			F1 (C6-C10)	2024/12/27	<25		ug/L	
			F1 (C6-C10) - BTEX	2024/12/27	<25		ug/L	

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9843323	XJI	RPD [AMIG61-02]	Acetone (2-Propanone)	2024/12/27	NC		%	30
			Benzene	2024/12/27	NC		%	30
			Bromodichloromethane	2024/12/27	NC		%	30
			Bromoform	2024/12/27	NC		%	30
			Bromomethane	2024/12/27	NC		%	30
			Carbon Tetrachloride	2024/12/27	NC		%	30
			Chlorobenzene	2024/12/27	NC		%	30
			Chloroform	2024/12/27	NC		%	30
			Dibromochloromethane	2024/12/27	NC		%	30
			1,2-Dichlorobenzene	2024/12/27	NC		%	30
			1,3-Dichlorobenzene	2024/12/27	NC		%	30
			1,4-Dichlorobenzene	2024/12/27	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2024/12/27	NC		%	30
			1,1-Dichloroethane	2024/12/27	NC		%	30
			1,2-Dichloroethane	2024/12/27	NC		%	30
			1,1-Dichloroethylene	2024/12/27	NC		%	30
			cis-1,2-Dichloroethylene	2024/12/27	NC		%	30
			trans-1,2-Dichloroethylene	2024/12/27	NC		%	30
			1,2-Dichloropropane	2024/12/27	NC		%	30
			cis-1,3-Dichloropropene	2024/12/27	NC		%	30
			trans-1,3-Dichloropropene	2024/12/27	NC		%	30
			Ethylbenzene	2024/12/27	NC		%	30
			Ethylene Dibromide	2024/12/27	NC		%	30
			Hexane	2024/12/27	NC		%	30
			Methylene Chloride(Dichloromethane)	2024/12/27	NC		%	30
			Methyl Ethyl Ketone (2-Butanone)	2024/12/27	NC		%	30
			Methyl Isobutyl Ketone	2024/12/27	NC		%	30
			Methyl t-butyl ether (MTBE)	2024/12/27	NC		%	30
			Styrene	2024/12/27	NC		%	30
			1,1,1,2-Tetrachloroethane	2024/12/27	NC		%	30
			1,1,2,2-Tetrachloroethane	2024/12/27	NC		%	30
			Tetrachloroethylene	2024/12/27	NC		%	30
			Toluene	2024/12/27	NC		%	30
			1,1,1-Trichloroethane	2024/12/27	NC		%	30
			1,1,2-Trichloroethane	2024/12/27	NC		%	30
			Trichloroethylene	2024/12/27	NC		%	30
			Trichlorofluoromethane (FREON 11)	2024/12/27	NC		%	30
			Vinyl Chloride	2024/12/27	NC		%	30
			p+m-Xylene	2024/12/27	NC		%	30
			o-Xylene	2024/12/27	NC		%	30
			Total Xylenes	2024/12/27	NC		%	30
			F1 (C6-C10)	2024/12/27	NC		%	30
			F1 (C6-C10) - BTEX	2024/12/27	NC		%	30
9849225	MSZ	Matrix Spike	o-Terphenyl	2024/12/29		99	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/12/29		94	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2024/12/29		99	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2024/12/29		90	%	60 - 140
9849225	MSZ	Spiked Blank	o-Terphenyl	2024/12/29		99	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/12/29		97	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2024/12/29		102	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2024/12/29		92	%	60 - 140

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9849225	MSZ	Method Blank	o-Terphenyl	2024/12/29		99	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/12/29	<90		ug/L	
			F3 (C16-C34 Hydrocarbons)	2024/12/29	<200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2024/12/29	<200		ug/L	
9849225	MSZ	RPD	F2 (C10-C16 Hydrocarbons)	2024/12/29	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2024/12/29	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2024/12/29	NC		%	30

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

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

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

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

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

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

(1) The recovery was above the upper control limit. This may represent a high bias in some results for this specific analyte. For results that were not detected (ND), this potential bias has no impact.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C4BO251
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FEREATE RICHMOND
Sampler Initials: SP

VALIDATION SIGNATURE PAGE

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

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

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

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

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

C4BO251
2024/12/19 16:40

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

Page 1 of 1

NONT-2024-12-4358

INVOICE TO:		REPORT TO:		PROJECT INFORMATION	
Company Name:	#12638 Terrapex Environmental Ltd	Company Name:	Terrapex	Quotation #:	C35707
Attention:	Accounts Payable	Attention:	Keith Brown	P.O. #:	
Address:	1-20 Gurdwara Rd. Ottawa ON K2E 8B3	Address:	1-20 Gurdwara Rd, Nepean, ON	Project:	CO972.00
Tel:	(613) 745-6471 Fax: (613) 745-0796	Tel:	(613) 745-6471 Ext: 225 Fax: (613) 745-0796	Project Name:	Fairdale Richmond
Email:	accounts.payable@terrapex.com	Email:	k.brown@terrapex.com; e.boonstra@terrapex.com	Site #:	1047 Richmond Road
				Sampled By:	SP

Lab Use Only: Bottle Order #: 1028251 | COC #: C#1028251-01-01 | Project Manager: Katherine Szozda

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

Regulation 153 (2011): ☐ Table 1 ☒ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☒ Coarse ☐ Table 3 ☐ Agri/Other ☒ For RSC ☒ Table Z

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Reg 406 Table ☐ Other

Special Instructions:

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

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

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

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

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O Reg 153 VOCs by HS & F1-F4	VOC F1	VOC	# of Bottles	Comments
1		MW201	19/12/2024	12:40	GW	N	✓			4	
2		MW2000	"	12:40	GW	N	✓			4	
3		MW202	"	12:00	GW	N	✓			4	
4		TRIP BLANK	"	12:40	—	N	✓			2	TBLK-VOC/F1BTEX-24-1120
5		TRIP SPIKE	"	12:40	—	N		✓		2	TSPK-VOC-24-1209
6											
7											
8											
9											
10											

Received in Ottawa

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
SREE	2024/12/19	13:30	Pedro da Silva	2024/12/19	16:40	
			S. L. Salvati	2024/12/20	08:54	

Laboratory Use Only: Time Sensitive | Temperature (°C) on Recei: 4/5/6 (ICE) | Custody Seal: Present ✓ Intact ✓ | Yes | No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS. C/O/2

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

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

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

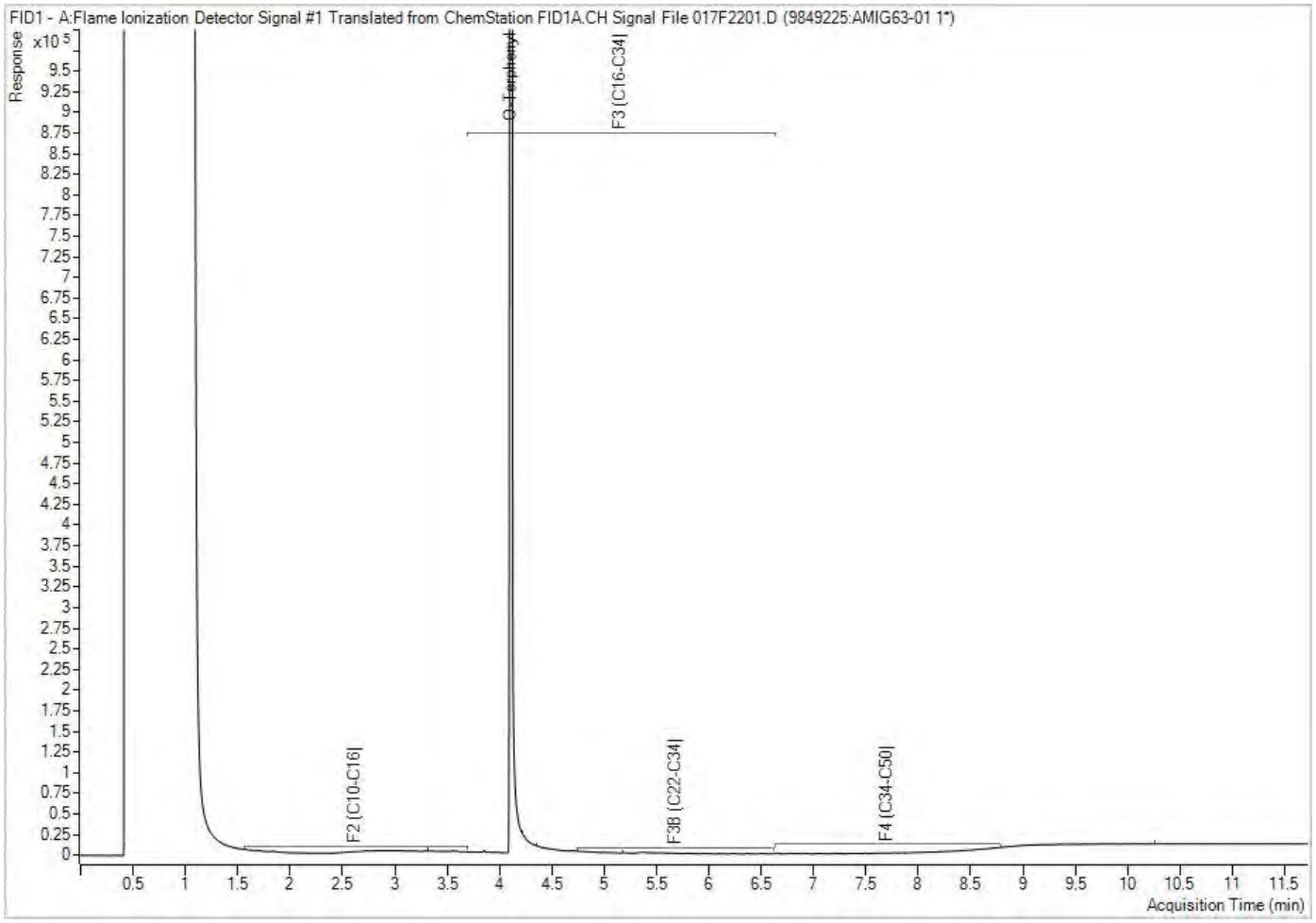
White: Bureau Veritas Yellow: Client
Custody Seal Present ✓ Intact
Cooling Media Yes No

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C4BO251
Report Date: 2025/08/14
Bureau Veritas Sample: AMIG63

Terrapex Environmental Ltd
Client Project #: CO972.00
Project name: FEREATE RICHMOND
Client ID: MW202

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: CO972.00
Site#: 1047 RICHMOND RD
Site Location: FENGATE RICHMOND
Your C.O.C. #: C#1038047-01-01

Attention: Keith Brown

Terrapex Environmental Ltd
1-20 Gurdwara Rd.
Ottawa, ON
CANADA K2E 8B3

Report Date: 2025/08/14
Report #: R8593836
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C529307
Received: 2025/03/18, 16:20

Sample Matrix: Ground Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
1,3-Dichloropropene Sum	1	N/A	2025/03/24		EPA 8260C m
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2025/03/21	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	1	2025/03/21	2025/03/21	CAM SOP-00316	CCME PHC-CWS m
Volatile Organic Compounds and F1 PHCs	1	N/A	2025/03/21	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following “Alberta Environment’s Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003”. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Your Project #: CO972.00
Site#: 1047 RICHMOND RD
Site Location: FENGATE RICHMOND
Your C.O.C. #: C#1038047-01-01

Attention: Keith Brown

Terrapex Environmental Ltd
1-20 Gurdwara Rd.
Ottawa, ON
CANADA K2E 8B3

Report Date: 2025/08/14
Report #: R8593836
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C529307
Received: 2025/03/18, 16:20

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Katherine Szozda, Project Manager
Email: Katherine.Szozda@bureauveritas.com
Phone# (613)274-0573 Ext:7063633

==========

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

VOLATILE ORGANICS BY GC/MS (GROUND WATER)

Bureau Veritas ID		APAL86		
Sampling Date		2025/03/18 11:00		
COC Number		C#1038047-01-01		
	UNITS	**MW202**	**RDL**	**QC Batch**
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	0.50	9893540
Volatile Organics				
Acetone (2-Propanone)	ug/L	<10	10	9894662
Benzene	ug/L	<0.17	0.17	9894662
Bromodichloromethane	ug/L	<0.50	0.50	9894662
Bromoform	ug/L	<1.0	1.0	9894662
Bromomethane	ug/L	<0.50	0.50	9894662
Carbon Tetrachloride	ug/L	<0.20	0.20	9894662
Chlorobenzene	ug/L	<0.20	0.20	9894662
Chloroform	ug/L	<0.20	0.20	9894662
Dibromochloromethane	ug/L	<0.50	0.50	9894662
1,2-Dichlorobenzene	ug/L	<0.50	0.50	9894662
1,3-Dichlorobenzene	ug/L	<0.50	0.50	9894662
1,4-Dichlorobenzene	ug/L	<0.50	0.50	9894662
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	1.0	9894662
1,1-Dichloroethane	ug/L	<0.20	0.20	9894662
1,2-Dichloroethane	ug/L	<0.50	0.50	9894662
1,1-Dichloroethylene	ug/L	<0.20	0.20	9894662
cis-1,2-Dichloroethylene	ug/L	<0.50	0.50	9894662
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	9894662
1,2-Dichloropropane	ug/L	<0.20	0.20	9894662
cis-1,3-Dichloropropene	ug/L	<0.30	0.30	9894662
trans-1,3-Dichloropropene	ug/L	<0.40	0.40	9894662
Ethylbenzene	ug/L	<0.20	0.20	9894662
Ethylene Dibromide	ug/L	<0.20	0.20	9894662
Hexane	ug/L	<1.0	1.0	9894662
Methylene Chloride(Dichloromethane)	ug/L	<2.0	2.0	9894662
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	10	9894662
Methyl Isobutyl Ketone	ug/L	<5.0	5.0	9894662
Methyl t-butyl ether (MTBE)	ug/L	<0.50	0.50	9894662
Styrene	ug/L	<0.50	0.50	9894662

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C529307
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FENGATE RICHMOND
Sampler Initials: EB

VOLATILE ORGANICS BY GC/MS (GROUND WATER)

Bureau Veritas ID		APAL86		
Sampling Date		2025/03/18 11:00		
COC Number		C#1038047-01-01		
	UNITS	**MW202**	**RDL**	**QC Batch**
1,1,1,2-Tetrachloroethane	ug/L	<0.50	0.50	9894662
1,1,2,2-Tetrachloroethane	ug/L	<0.50	0.50	9894662
Tetrachloroethylene	ug/L	<0.20	0.20	9894662
Toluene	ug/L	<0.20	0.20	9894662
1,1,1-Trichloroethane	ug/L	<0.20	0.20	9894662
1,1,2-Trichloroethane	ug/L	<0.50	0.50	9894662
Trichloroethylene	ug/L	<0.20	0.20	9894662
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	0.50	9894662
Vinyl Chloride	ug/L	<0.20	0.20	9894662
p+m-Xylene	ug/L	<0.20	0.20	9894662
o-Xylene	ug/L	<0.20	0.20	9894662
Total Xylenes	ug/L	<0.20	0.20	9894662
F1 (C6-C10)	ug/L	<25	25	9894662
F1 (C6-C10) - BTEX	ug/L	<25	25	9894662
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	92		9894662
D4-1,2-Dichloroethane	%	113		9894662
D8-Toluene	%	98		9894662

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C529307
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FENGATE RICHMOND
Sampler Initials: EB

PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		APAL84			APAL86		
Sampling Date		2025/03/18 11:30			2025/03/18 11:00		
COC Number		C#1038047-01-01			C#1038047-01-01		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**	**MW202**	**RDL**	**QC Batch**
BTEX & F1 Hydrocarbons							
Benzene	ug/L	<0.20	0.20	9895846			
Toluene	ug/L	<0.20	0.20	9895846			
Ethylbenzene	ug/L	<0.20	0.20	9895846			
o-Xylene	ug/L	<0.20	0.20	9895846			
p+m-Xylene	ug/L	<0.40	0.40	9895846			
Total Xylenes	ug/L	<0.40	0.40	9895846			
F1 (C6-C10)	ug/L	<25	25	9895846			
F1 (C6-C10) - BTEX	ug/L	<25	25	9895846			
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/L				<90	90	9895172
F3 (C16-C34 Hydrocarbons)	ug/L				<200	200	9895172
F4 (C34-C50 Hydrocarbons)	ug/L				<200	200	9895172
Reached Baseline at C50	ug/L				Yes		9895172
Surrogate Recovery (%)							
1,4-Difluorobenzene	%	107		9895846			
4-Bromofluorobenzene	%	92		9895846			
D10-o-Xylene	%	107		9895846			
D4-1,2-Dichloroethane	%	109		9895846			
o-Terphenyl	%				97		9895172

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C529307
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FENGATE RICHMOND
Sampler Initials: EB

TEST SUMMARY

Bureau Veritas ID: APAL84
Sample ID: TRIP BLANK
Matrix: Ground Water

Collected: 2025/03/18
Shipped:
Received: 2025/03/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	9895846	N/A	2025/03/21	Georgeta Rusu

Bureau Veritas ID: APAL86
Sample ID: MW202
Matrix: Ground Water

Collected: 2025/03/18
Shipped:
Received: 2025/03/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9893540	N/A	2025/03/24	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9895172	2025/03/21	2025/03/21	(Kent) Maolin Li
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9894662	N/A	2025/03/21	Cheng-Yu Sha

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GENERAL COMMENTS

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

Package 1	12.7°C
Package 2	2.7°C
Package 3	11.7°C

Revised Report [2025/08/14]: Split report requested by client.

Results relate only to the items tested.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9894662	CYS	Matrix Spike	4-Bromofluorobenzene	2025/03/21		97	%	70 - 130
			D4-1,2-Dichloroethane	2025/03/21		117	%	70 - 130
			D8-Toluene	2025/03/21		99	%	70 - 130
			Acetone (2-Propanone)	2025/03/21		111	%	60 - 140
			Benzene	2025/03/21		103	%	70 - 130
			Bromodichloromethane	2025/03/21		106	%	70 - 130
			Bromoform	2025/03/21		101	%	70 - 130
			Bromomethane	2025/03/21		104	%	60 - 140
			Carbon Tetrachloride	2025/03/21		102	%	70 - 130
			Chlorobenzene	2025/03/21		95	%	70 - 130
			Chloroform	2025/03/21		102	%	70 - 130
			Dibromochloromethane	2025/03/21		106	%	70 - 130
			1,2-Dichlorobenzene	2025/03/21		102	%	70 - 130
			1,3-Dichlorobenzene	2025/03/21		101	%	70 - 130
			1,4-Dichlorobenzene	2025/03/21		102	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2025/03/21		103	%	60 - 140
			1,1-Dichloroethane	2025/03/21		101	%	70 - 130
			1,2-Dichloroethane	2025/03/21		121	%	70 - 130
			1,1-Dichloroethylene	2025/03/21		102	%	70 - 130
			cis-1,2-Dichloroethylene	2025/03/21		110	%	70 - 130
			trans-1,2-Dichloroethylene	2025/03/21		104	%	70 - 130
			1,2-Dichloropropane	2025/03/21		108	%	70 - 130
			cis-1,3-Dichloropropene	2025/03/21		106	%	70 - 130
			trans-1,3-Dichloropropene	2025/03/21		120	%	70 - 130
			Ethylbenzene	2025/03/21		100	%	70 - 130
			Ethylene Dibromide	2025/03/21		107	%	70 - 130
			Hexane	2025/03/21		120	%	70 - 130
			Methylene Chloride(Dichloromethane)	2025/03/21		105	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2025/03/21		120	%	60 - 140
			Methyl Isobutyl Ketone	2025/03/21		120	%	70 - 130
			Methyl t-butyl ether (MTBE)	2025/03/21		107	%	70 - 130
			Styrene	2025/03/21		98	%	70 - 130
			1,1,1,2-Tetrachloroethane	2025/03/21		109	%	70 - 130
			1,1,2,2-Tetrachloroethane	2025/03/21		104	%	70 - 130
			Tetrachloroethylene	2025/03/21		89	%	70 - 130
			Toluene	2025/03/21		100	%	70 - 130
			1,1,1-Trichloroethane	2025/03/21		98	%	70 - 130
			1,1,2-Trichloroethane	2025/03/21		116	%	70 - 130
			Trichloroethylene	2025/03/21		99	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2025/03/21		96	%	70 - 130
			Vinyl Chloride	2025/03/21		96	%	70 - 130
			p+m-Xylene	2025/03/21		95	%	70 - 130
			o-Xylene	2025/03/21		105	%	70 - 130
			F1 (C6-C10)	2025/03/21		90	%	60 - 140
9894662	CYS	Spiked Blank	4-Bromofluorobenzene	2025/03/21		96	%	70 - 130
			D4-1,2-Dichloroethane	2025/03/21		104	%	70 - 130
			D8-Toluene	2025/03/21		102	%	70 - 130
			Acetone (2-Propanone)	2025/03/21		99	%	60 - 140
			Benzene	2025/03/21		102	%	70 - 130
			Bromodichloromethane	2025/03/21		100	%	70 - 130
			Bromoform	2025/03/21		93	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Bromomethane	2025/03/21		105	%	60 - 140
			Carbon Tetrachloride	2025/03/21		108	%	70 - 130
			Chlorobenzene	2025/03/21		96	%	70 - 130
			Chloroform	2025/03/21		103	%	70 - 130
			Dibromochloromethane	2025/03/21		100	%	70 - 130
			1,2-Dichlorobenzene	2025/03/21		103	%	70 - 130
			1,3-Dichlorobenzene	2025/03/21		105	%	70 - 130
			1,4-Dichlorobenzene	2025/03/21		106	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2025/03/21		112	%	60 - 140
			1,1-Dichloroethane	2025/03/21		101	%	70 - 130
			1,2-Dichloroethane	2025/03/21		109	%	70 - 130
			1,1-Dichloroethylene	2025/03/21		105	%	70 - 130
			cis-1,2-Dichloroethylene	2025/03/21		106	%	70 - 130
			trans-1,2-Dichloroethylene	2025/03/21		107	%	70 - 130
			1,2-Dichloropropane	2025/03/21		104	%	70 - 130
			cis-1,3-Dichloropropene	2025/03/21		101	%	70 - 130
			trans-1,3-Dichloropropene	2025/03/21		117	%	70 - 130
			Ethylbenzene	2025/03/21		106	%	70 - 130
			Ethylene Dibromide	2025/03/21		98	%	70 - 130
			Hexane	2025/03/21		122	%	70 - 130
			Methylene Chloride(Dichloromethane)	2025/03/21		99	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2025/03/21		104	%	60 - 140
			Methyl Isobutyl Ketone	2025/03/21		104	%	70 - 130
			Methyl t-butyl ether (MTBE)	2025/03/21		102	%	70 - 130
			Styrene	2025/03/21		100	%	70 - 130
			1,1,1,2-Tetrachloroethane	2025/03/21		110	%	70 - 130
			1,1,2,2-Tetrachloroethane	2025/03/21		94	%	70 - 130
			Tetrachloroethylene	2025/03/21		97	%	70 - 130
			Toluene	2025/03/21		101	%	70 - 130
			1,1,1-Trichloroethane	2025/03/21		102	%	70 - 130
			1,1,2-Trichloroethane	2025/03/21		108	%	70 - 130
			Trichloroethylene	2025/03/21		101	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2025/03/21		101	%	70 - 130
			Vinyl Chloride	2025/03/21		99	%	70 - 130
			p+m-Xylene	2025/03/21		101	%	70 - 130
			o-Xylene	2025/03/21		110	%	70 - 130
			F1 (C6-C10)	2025/03/21		98	%	60 - 140
9894662	CYS	Method Blank	4-Bromofluorobenzene	2025/03/21		95	%	70 - 130
			D4-1,2-Dichloroethane	2025/03/21		104	%	70 - 130
			D8-Toluene	2025/03/21		99	%	70 - 130
			Acetone (2-Propanone)	2025/03/21	<10		ug/L	
			Benzene	2025/03/21	<0.17		ug/L	
			Bromodichloromethane	2025/03/21	<0.50		ug/L	
			Bromoform	2025/03/21	<1.0		ug/L	
			Bromomethane	2025/03/21	<0.50		ug/L	
			Carbon Tetrachloride	2025/03/21	<0.20		ug/L	
			Chlorobenzene	2025/03/21	<0.20		ug/L	
			Chloroform	2025/03/21	<0.20		ug/L	
			Dibromochloromethane	2025/03/21	<0.50		ug/L	
			1,2-Dichlorobenzene	2025/03/21	<0.50		ug/L	
			1,3-Dichlorobenzene	2025/03/21	<0.50		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,4-Dichlorobenzene	2025/03/21	<0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2025/03/21	<1.0		ug/L	
			1,1-Dichloroethane	2025/03/21	<0.20		ug/L	
			1,2-Dichloroethane	2025/03/21	<0.50		ug/L	
			1,1-Dichloroethylene	2025/03/21	<0.20		ug/L	
			cis-1,2-Dichloroethylene	2025/03/21	<0.50		ug/L	
			trans-1,2-Dichloroethylene	2025/03/21	<0.50		ug/L	
			1,2-Dichloropropane	2025/03/21	<0.20		ug/L	
			cis-1,3-Dichloropropene	2025/03/21	<0.30		ug/L	
			trans-1,3-Dichloropropene	2025/03/21	<0.40		ug/L	
			Ethylbenzene	2025/03/21	<0.20		ug/L	
			Ethylene Dibromide	2025/03/21	<0.20		ug/L	
			Hexane	2025/03/21	<1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2025/03/21	<2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2025/03/21	<10		ug/L	
			Methyl Isobutyl Ketone	2025/03/21	<5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2025/03/21	<0.50		ug/L	
			Styrene	2025/03/21	<0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2025/03/21	<0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2025/03/21	<0.50		ug/L	
			Tetrachloroethylene	2025/03/21	<0.20		ug/L	
			Toluene	2025/03/21	<0.20		ug/L	
			1,1,1-Trichloroethane	2025/03/21	<0.20		ug/L	
			1,1,2-Trichloroethane	2025/03/21	<0.50		ug/L	
			Trichloroethylene	2025/03/21	<0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2025/03/21	<0.50		ug/L	
			Vinyl Chloride	2025/03/21	<0.20		ug/L	
			p+m-Xylene	2025/03/21	<0.20		ug/L	
			o-Xylene	2025/03/21	<0.20		ug/L	
			Total Xylenes	2025/03/21	<0.20		ug/L	
			F1 (C6-C10)	2025/03/21	<25		ug/L	
			F1 (C6-C10) - BTEX	2025/03/21	<25		ug/L	
9894662	CYS	RPD	Acetone (2-Propanone)	2025/03/21	5.6		%	30
			Benzene	2025/03/21	NC		%	30
			Bromodichloromethane	2025/03/21	NC		%	30
			Bromoform	2025/03/21	NC		%	30
			Bromomethane	2025/03/21	NC		%	30
			Carbon Tetrachloride	2025/03/21	NC		%	30
			Chlorobenzene	2025/03/21	NC		%	30
			Chloroform	2025/03/21	1.9		%	30
			Dibromochloromethane	2025/03/21	NC		%	30
			1,2-Dichlorobenzene	2025/03/21	NC		%	30
			1,3-Dichlorobenzene	2025/03/21	NC		%	30
			1,4-Dichlorobenzene	2025/03/21	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2025/03/21	NC		%	30
			1,1-Dichloroethane	2025/03/21	NC		%	30
			1,2-Dichloroethane	2025/03/21	NC		%	30
			1,1-Dichloroethylene	2025/03/21	NC		%	30
			cis-1,2-Dichloroethylene	2025/03/21	NC		%	30
			trans-1,2-Dichloroethylene	2025/03/21	NC		%	30
			1,2-Dichloropropane	2025/03/21	NC		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			cis-1,3-Dichloropropene	2025/03/21	NC		%	30
			trans-1,3-Dichloropropene	2025/03/21	NC		%	30
			Ethylbenzene	2025/03/21	NC		%	30
			Ethylene Dibromide	2025/03/21	NC		%	30
			Hexane	2025/03/21	NC		%	30
			Methylene Chloride(Dichloromethane)	2025/03/21	NC		%	30
			Methyl Ethyl Ketone (2-Butanone)	2025/03/21	NC		%	30
			Methyl Isobutyl Ketone	2025/03/21	NC		%	30
			Methyl t-butyl ether (MTBE)	2025/03/21	NC		%	30
			Styrene	2025/03/21	NC		%	30
			1,1,1,2-Tetrachloroethane	2025/03/21	NC		%	30
			1,1,2,2-Tetrachloroethane	2025/03/21	NC		%	30
			Tetrachloroethylene	2025/03/21	NC		%	30
			Toluene	2025/03/21	2.6		%	30
			1,1,1-Trichloroethane	2025/03/21	NC		%	30
			1,1,2-Trichloroethane	2025/03/21	NC		%	30
			Trichloroethylene	2025/03/21	NC		%	30
			Trichlorofluoromethane (FREON 11)	2025/03/21	NC		%	30
			Vinyl Chloride	2025/03/21	NC		%	30
			p+m-Xylene	2025/03/21	3.4		%	30
			o-Xylene	2025/03/21	2.1		%	30
			Total Xylenes	2025/03/21	2.9		%	30
			F1 (C6-C10)	2025/03/21	NC		%	30
			F1 (C6-C10) - BTEX	2025/03/21	NC		%	30
9895172	KLI	Matrix Spike	o-Terphenyl	2025/03/21		98	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/03/21		NC	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2025/03/21		105	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2025/03/21		98	%	60 - 140
9895172	KLI	Spiked Blank	o-Terphenyl	2025/03/21		97	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/03/21		98	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2025/03/21		107	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2025/03/21		99	%	60 - 140
9895172	KLI	Method Blank	o-Terphenyl	2025/03/21		96	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/03/21	<90		ug/L	
			F3 (C16-C34 Hydrocarbons)	2025/03/21	<200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2025/03/21	<200		ug/L	
9895172	KLI	RPD	F2 (C10-C16 Hydrocarbons)	2025/03/21	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2025/03/21	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2025/03/21	NC		%	30
9895846	GRU	Matrix Spike	1,4-Difluorobenzene	2025/03/21		102	%	70 - 130
			4-Bromofluorobenzene	2025/03/21		104	%	70 - 130
			D10-o-Xylene	2025/03/21		99	%	70 - 130
			D4-1,2-Dichloroethane	2025/03/21		108	%	70 - 130
			Benzene	2025/03/21		102	%	50 - 140
			Toluene	2025/03/21		95	%	50 - 140
			Ethylbenzene	2025/03/21		106	%	50 - 140
			o-Xylene	2025/03/21		102	%	50 - 140
			p+m-Xylene	2025/03/21		98	%	50 - 140
			F1 (C6-C10)	2025/03/21		113	%	60 - 140
9895846	GRU	Spiked Blank	1,4-Difluorobenzene	2025/03/21		103	%	70 - 130
			4-Bromofluorobenzene	2025/03/21		100	%	70 - 130

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			D10-o-Xylene	2025/03/21		99	%	70 - 130
			D4-1,2-Dichloroethane	2025/03/21		106	%	70 - 130
			Benzene	2025/03/21		99	%	50 - 140
			Toluene	2025/03/21		91	%	50 - 140
			Ethylbenzene	2025/03/21		101	%	50 - 140
			o-Xylene	2025/03/21		98	%	50 - 140
			p+m-Xylene	2025/03/21		94	%	50 - 140
			F1 (C6-C10)	2025/03/21		109	%	60 - 140
9895846	GRU	Method Blank	1,4-Difluorobenzene	2025/03/21		108	%	70 - 130
			4-Bromofluorobenzene	2025/03/21		95	%	70 - 130
			D10-o-Xylene	2025/03/21		97	%	70 - 130
			D4-1,2-Dichloroethane	2025/03/21		113	%	70 - 130
			Benzene	2025/03/21	<0.20		ug/L	
			Toluene	2025/03/21	<0.20		ug/L	
			Ethylbenzene	2025/03/21	<0.20		ug/L	
			o-Xylene	2025/03/21	<0.20		ug/L	
			p+m-Xylene	2025/03/21	<0.40		ug/L	
			Total Xylenes	2025/03/21	<0.40		ug/L	
			F1 (C6-C10)	2025/03/21	<25		ug/L	
			F1 (C6-C10) - BTEX	2025/03/21	<25		ug/L	
9895846	GRU	RPD	Benzene	2025/03/21	NC		%	30
			Toluene	2025/03/21	NC		%	30
			Ethylbenzene	2025/03/21	NC		%	30
			o-Xylene	2025/03/21	NC		%	30
			p+m-Xylene	2025/03/21	NC		%	30
			Total Xylenes	2025/03/21	NC		%	30
			F1 (C6-C10)	2025/03/21	NC		%	30
			F1 (C6-C10) - BTEX	2025/03/21	NC		%	30

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

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

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

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

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

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

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

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Bureau Veritas Job #: C529307
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FENGATE RICHMOND
Sampler Initials: EB

VALIDATION SIGNATURE PAGE

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

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

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

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

C529307
2025/03/18 16:20

Bureau Veritas
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Page 1 of 1

NONT-2025-03-3708

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#12638 Terrapex Environmental Ltd	Company Name:	Terrapex	Quotation #:	C45738
Attention:	Accounts Payable	Attention:	Keith Brown	P.O. #:	
Address:	1-20 Gurdwara Rd. Ottawa ON K2E 8B3	Address:	1-20 Gurdwara Rd, Ottawa ON	Project:	CO972.00
Tel:	(613) 745-6471 Fax: (613) 745-0796	Tel:	(613) 745-6471 Ext: 225 Fax: (613) 745-0796	Project Name:	Forgotte Richmond
Email:	accounts.payable@terrapex.com	Email:	k.brown@terrapex.com	Site #:	1047 Richmond Rd
				Sampled By:	EB

Bottle Order #: 1038047
COC #: C#1038047-01-01
Project Manager: Katherine Szozda

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

Regulation 153 (2011)
- [ ] Table 1 [X] Res/Park [ ] Medium/Fine
- [ ] Table 2 [ ] Ind/Comm [X] Coarse
- [ ] Table 3 [ ] Agr/Other [X] For RSC
- [X] Table 7

Other Regulations
- [ ] CCME [ ] Sanitary Sewer Bylaw
- [ ] Reg 558 [ ] Storm Sewer Bylaw
- [ ] MISA Municipality
- [ ] PWQO [ ] Reg 406 Table
- [ ] Other

Special Instructions

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

Field Filtered (please circle): Metals / Hg / Cr VI

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

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

Regular (Standard) TAT: [X]
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

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

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered	O.Reg 153 VOCs by HS & F1-F4	BTEX-F1	BTEX	# of Bottles	Comments
1		MW201	Mar 18/25	10:32	GW	N	X			4	
2		MW2000	Mar 18/25	10:32	GW	N	X			4	
3		Trip Blank	Mar 18/25	11:30	-	N		X		2	TBLK-VOC/F1BTEX-25-0110
4		Trip Spike	Mar 18/25	2:00	-	N			X	2	TSPK-VOC-25-0310
5		MW202	Mar 18/25	11:00	GW	N	X			4	
6											
7											
8											
9											
10											

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Evie Boonstra	25/03/18	16:00	Jedso da Silva	2025/03/18	16:20	
			Ashita Sukkiwar	2025/03/19	06:40	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	Check ACTR	Present		J
		Intact		J

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

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

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

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

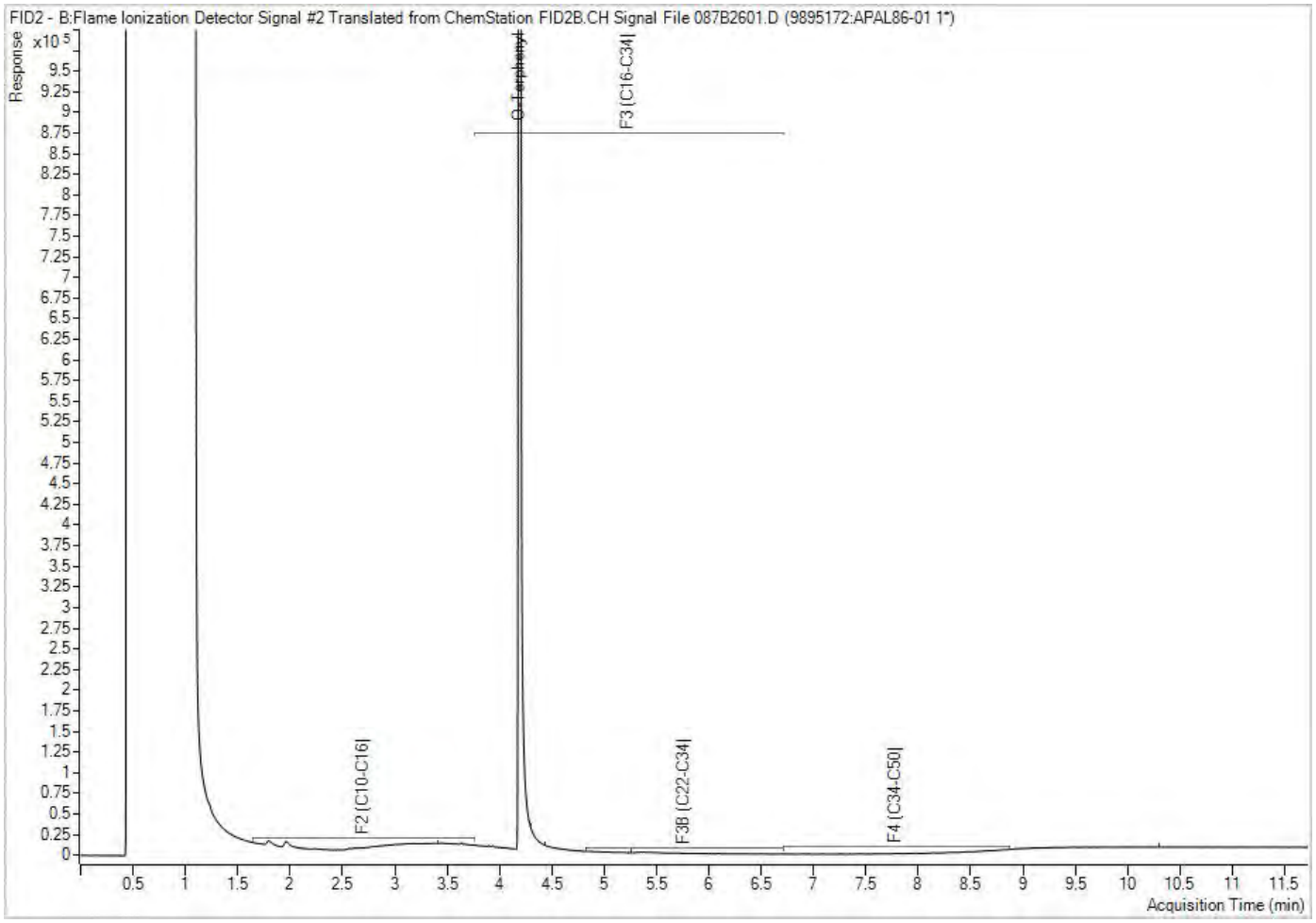
White: Bureau Veritas Yellow: Client
REFER TO ACTR

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C529307
Report Date: 2025/08/14
Bureau Veritas Sample: APAL86

Terrapex Environmental Ltd
Client Project #: CO972.00
Project name: FENGATE RICHMOND
Client ID: MW202

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

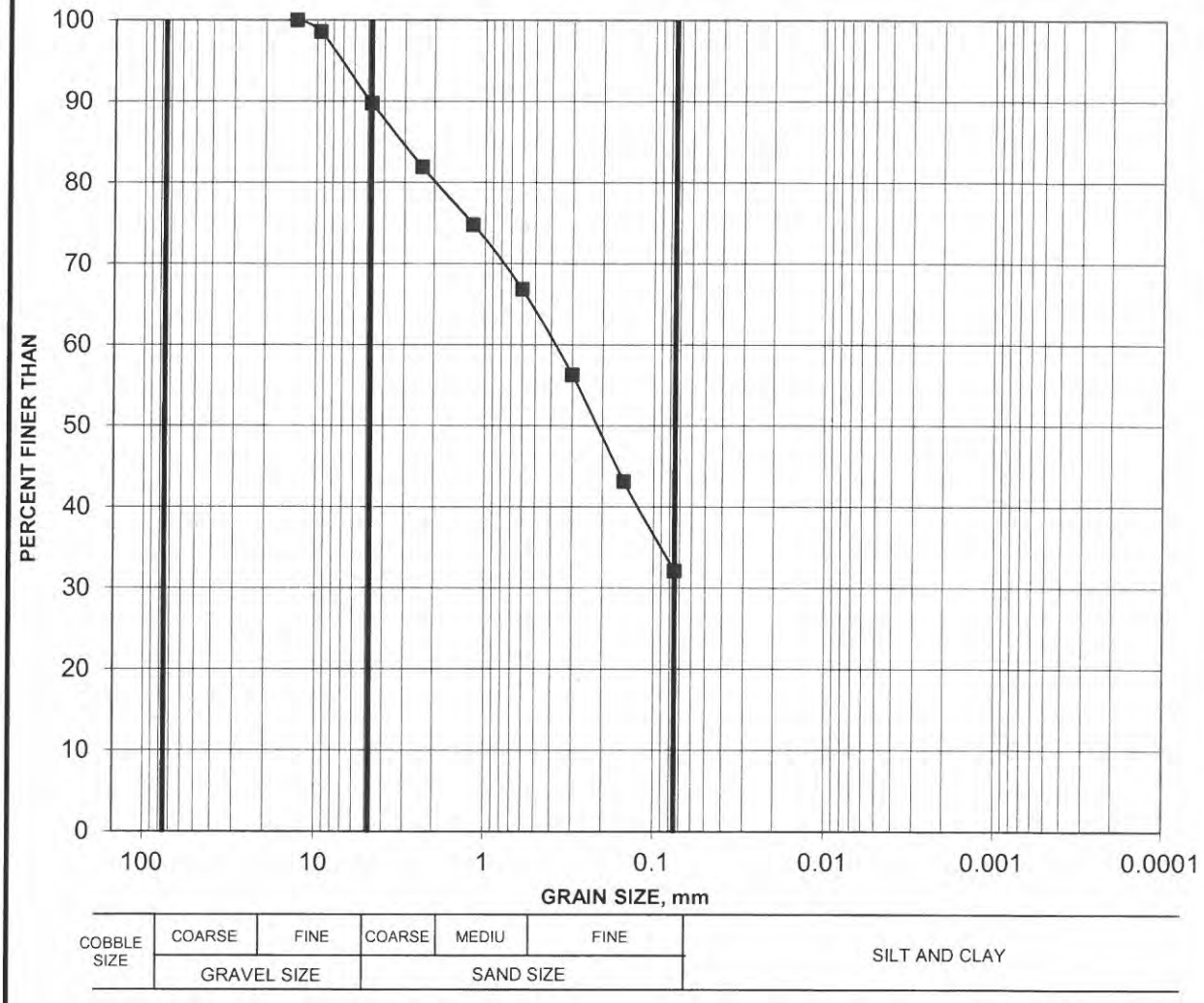


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

APPENDIX VII
GRAIN SIZE ANALYSIS

GRAIN SIZE DISTRIBUTION	FIGURE

ENTER TITLE HERE



	Borehole	Sample	Depth (m)	Constituents (%) Gravel	Sand	Silt	Clay
—■—	21-01	2	0.61-1.22	10	58		32

Project: 21494078/3000

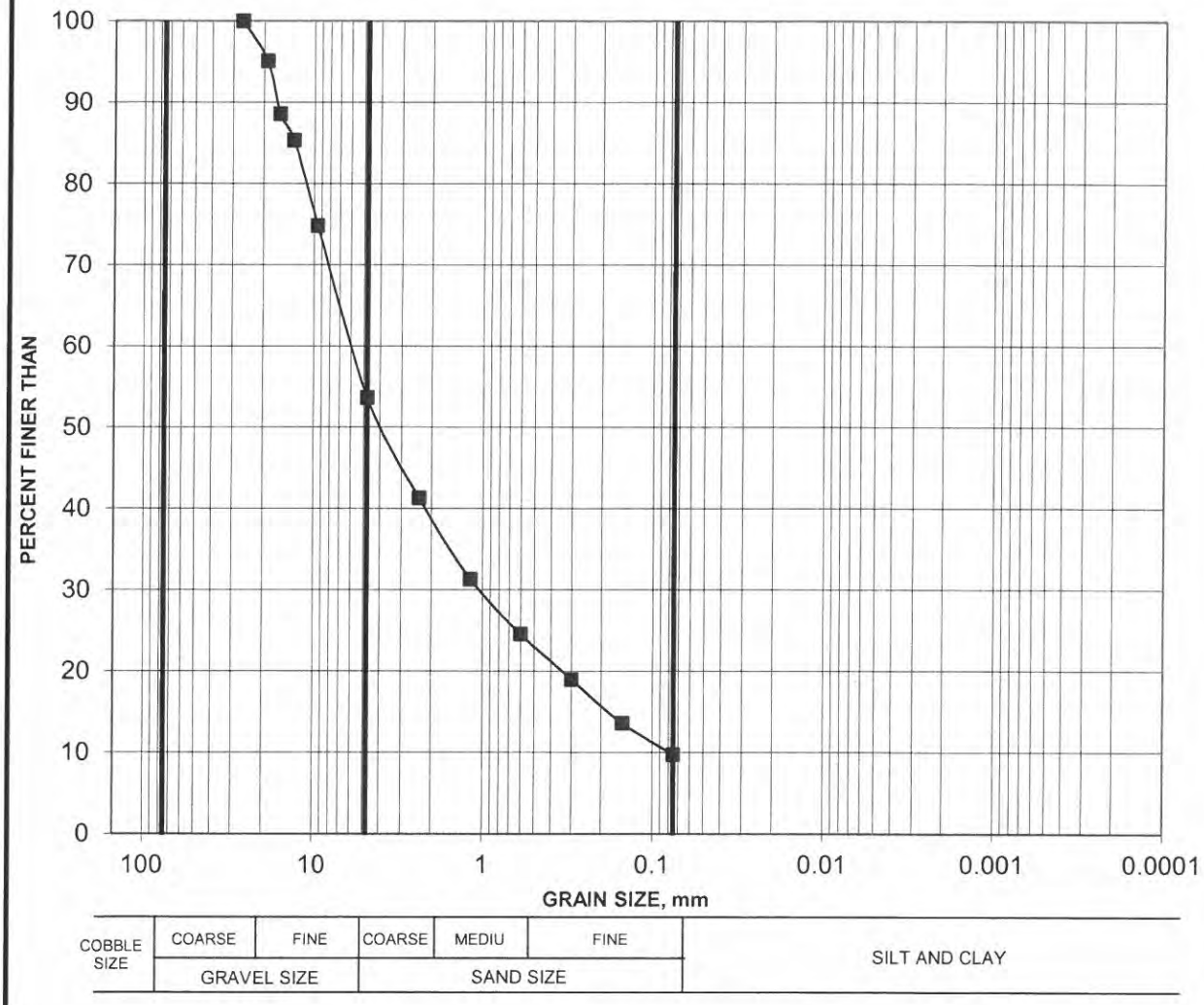
GOLDER
MEMBER OF WSP

Created by:

Checked by: SB

GRAIN SIZE DISTRIBUTION	FIGURE

ENTER TITLE HERE



	Borehole	Sample	Depth (m)	Constituents (%) Gravel	Sand	Silt	Clay
—■—	21-02	3	1.22-1.83	46	44		10

Project: 21494078

GOLDER
MEMBER OF WSP

Created by: CW
Checked by: JB

APPENDIX VIII
PHASE TWO CONCEPTUAL SITE MODEL

PHASE TWO CONCEPTUAL SITE MODEL
1047 RICHMOND ROAD, OTTAWA, ONTARIO

A preliminary conceptual site model (CSM) was developed as part of the Phase One ESA which is discussed in Section 4.3. Following completion of the Phase Two ESA field program, the CSM has been updated to present the Site characteristics (prior to any efforts to reduce contaminant concentrations), identify and evaluate areas of contaminant impact, including their sources, exposure routes, and receptors at risk.

The Phase Two CSM narrative is provided below, illustrated and supported by Figures 1 through 10B (attached).

Requisite Component	Description & Assessment
Section 1. A description and assessment of,	
i. Areas where potentially contaminating activity (PCA) has occurred,	A total of six on-Site and 17 off-Site PCAs are deemed to have potentially affected the property, as summarized in Table 2, appended. The PCA locations are shown in Figure 4.
ii. areas of potential environmental concern (APECs),	A total of seven APECs have been identified associated with the aforementioned on-Site PCAs and one off-Site PCA, as summarised in Table 3 (also appended) and shown on Figure 5A.
iii. any subsurface structures and utilities on, in or under the Phase Two Property that may affect contaminant distribution and transport.	In general, potential migration pathways for subsurface contaminants at the Site would consist of buried services or remnants of former buried services. Locations of former services are provided in Figure 2.
Section 2. Provide a narrative description of and, as appropriate, figures illustrating, the physical setting of the Phase Two Property and any areas under it including,	The Phase Two Property is approximately 6,185.5 m^2 in area. Pertinent current and former site features are summarized in Figure 2. The Phase One Study Area ("surrounding area") covers land uses within a 250 m radius of the Phase Two Property, as shown in Figure 3.
i. stratigraphy from ground surface to the deepest aquifer or aquitard investigated,	Soil sampling lotions are shown on figure 5B. The encountered stratigraphy is illustrated in cross-section in Figure 6A and Figure 6C. As shown, the shallow overburden at the Site generally consists of sand fill or otherwise sandy material overlying limestone bedrock at depths between 0.9 and 3.0 m bg, although some silty clay was also encountered where bedrock was deepest. The surficial bedrock surface was found to be soft in many places becoming more competent with depth.
ii. hydrogeological characteristics, including aquifers, aquitards and, in each hydrostratigraphic unit where one or more contaminants is present at concentrations above the applicable site condition standards, lateral and vertical gradients,	The cobalt concentrations in soi sample MW23-03 SA2, collected between 0.6 and 0.9 m below ground surface (bgs), just above the bedrock interface, in APEC 5, was greater than the applicable SCS. Based on the hydrogeological review of wells in the vicinity, the vertical hydraulic gradient is down and the lateral hydraulic gradient is to the south (toward a transit channel that is deeper than the grade at the Site). Cobalt impacts in groundwater were not identified in the Phase Two ESA. Petroleum hydrocarbon related groundwater impacts were identified in APEC 2 and APEC 3 in monitoring well MW22-04, screened in bedrock at depths between 4.9 and 7.9 m bgs. Based on the hydrogeological review of wells in the vicinity, the vertical hydraulic gradient is down and

Requisite Component	Description & Assessment
	the lateral hydraulic gradient is to the north (as would be anticipated based on the topography at the Site). PHC-related soil impacts were not identified in the Phase Two ESA.
iii. approximate depth to bedrock,	Limestone bedrock was encountered at the Site at depths between 0.9 and 3.0 m bgs. Where impacts were identified, in boreholes MW23-3 (soil) and MW22-04 (groundwater), bedrock was encountered at 0.9 and 2.3 m bgs, respectively.
iv. approximate depth to water table,	The overburden at the Site was found to be dry and three distinct piezometric groundwater horizons were encountered at approximately 62 m (approximately 3 m bgs), 58 m (approximately 7 m bgs), and 53 m (approximately 12 m bgs). The encountered groundwater horizons did not necessarily correlate with screened intervals, an indication that saturated and irregular bedrock fractures, that are not hydraulically connected, dominate the groundwater flow regime rather than through uniform (isotropic) porosity or a well-connected bedrock fracture system. A component of shallow groundwater from the Site is draining toward the transit channel to the south of the Site and areas beyond the influence of the transit channel and dewatering activities are flowing to the north, as would be anticipated based on topography alone. Where impacts were identified, at MW22-04 and MW23-3, the depth to water was approximately 3 m and 12 m bgs, respectively.
v. any respect in which section 35, 41 or 43.1 of the regulation applies to the property,	**Section 35 is not applicable.** The City of Ottawa has provided written confirmation on July 22, 2025 that it does not object to the application of non-potable groundwater Site Condition Standards (SCS) in relation to environmental assessment of the Phase Two Property. **Section 41 is not applicable**. No Areas of Natural Significance were identified on the Phase Two Property, or in the Phase One study area. A total of 19 samples (including 3 duplicates) of surface and subsurface soil were collected from the Phase Two Property at various depths and analyzed for pH. The pH for surface and subsurface soil ranges between 6.97 and 7.68, within acceptable limits. **Section 43.1 is applicable.** The Phase Two Property is considered to be a shallow soil property based on the estimated depth to bedrock. The Phase Two Property does not include, nor is located within, 30 m of a water body.
vi. areas on, in or under the Phase Two Property where excess soil is finally placed, and	Although fill materials exist at the Phase Two Property, no soil has been imported to the Phase Two Property from another property during or subsequent to this Phase Two ESA, with the exception of gravel fill imported during remedial excavation activities from a licensed quarry.
vii. approximate locations, if known, of any proposed buildings and other structures.	Proposed redevelopment of the Site includes a residential tower with underground parking that would extend over the majority of the Site.
Section 3. Provide where a contaminant is present, in or under the Phase Two Property at a concentration greater than the applicable site condition standard, identification of,	The evaluation of impacts in soil and groundwater is based upon all available historical analytical data together with analytical data obtained during this Phase Two ESA. Please refer to Figures 8A through 8H (soil), and 9A through 9G (groundwater) depicting plans and cross-sections of inferred locations and depth ranges of soil and groundwater impacts, based on analytical results compared with the applicable SCS.
i. each area where a contaminant is present on, in or under the Phase Two Property at a concentration greater than the applicable site condition standard,	Figure 5B illustrates sampling locations with respect to the APECs. Figures 8A through 9G depict the sampling locations on the Phase Two Property by analytical method group and delineate the identified areas of impact. As shown, two areas of contaminant impact were identified at the Phase Two Property, described as follows: • Soil sample MW23-3 SA2 had a concentration of cobalt that exceeded the Table 7 SCS for a sample collected between 0.6 and 0.9 m bgs.

Requisite Component	Description & Assessment
	• Groundwater at MW24-02 (screened between 4.9 and 7.9 m bgs) had concentrations of PHC F2, F3 and/or F4 fractions the exceeded the Table 7 SCS for during various sampling events.
ii. the contaminants associated with each of the areas referred to in subparagraph A,	**Impact Area 1** (northern portion of Site): PHC-related groundwater impacts were identified and subsequently remediated in the vicinity of monitoring well MW22-04. **Impact Area 2** (southern portion of Site): Cobalt impacts were identified in soil at MW23-3 and were subsequently remediated.
iii. each medium in which a contaminant associated with an area referred to in subparagraph A is present,	**Impact Area 1** (northern portion of Site): PHC-related groundwater impacts were identified and subsequently remediated. **Impact Area 2** (southern portion of Site): Cobalt impacts were identified in soil and subsequently remediated.
iv. a description and assessment of what is known about each of the areas referred to in subparagraph A,	**Impact Area 1** • The general vicinity and downgradient of a former waste oil storage area with shallow fractured bedrock. PHC-related soil impacts were not identified in any soil samples submitted for analysis. However, PHC-related groundwater impacts were identified in one monitoring well (MW22-04). These impacts were laterally delineated. **Impact Area 2** • Representative soil samples were collected across the Site (APEC 5) to assess the shallow overburden fill material and cobalt impacts in soil were identified in Impact Area 2 (MW23-3). Groundwater impacts were not identified. The extent of soil impact was delineated during subsequent remediation with soil samples (SA1A to SA4A).
v. the distribution, in each of the areas referred to in subparagraph A, of each contaminant present in the area at a concentration greater than the applicable site condition standard, for each medium in which the contaminant is present, together with figures showing the distribution,	Figures 8A-I through 8A-II (soil) and 9F-I to 9F-IV (groundwater) show the distribution of contaminant impacts to soil and groundwater beneath the Phase Two Property. **Impact Area 1 (northern portion)** • PHC-related groundwater impacts in bedrock are anticipated to be limited to the immediate vicinity of former waste oil storage. None were identified in nearby monitoring wells and distribution is anticipated to extend to the northern property limit. Subsequent remediation activity was conducted both on- and off-Ste and follow-up groundwater monitoring has confirmed that groundwater impacts are no longer present (i.e., whatever impacts were present in bedrock fractures have been removed). **Impact Area 2 (southern portion)** • Cobalt impacts in soil were not identified anywhere else on-Site (within APEC 5) and distribution was confirmed to be local during remediation, when the impacts were excavated to the bedrock surface.
vi. Anything known about the reason for the discharge of the contaminants present on, in or under the Phase Two Property at a concentration greater than the applicable site condition standard into the natural environment,	**Impact Area 1** • The PHC-related impacts in groundwater were very likely due to accidental release in the vicinity of the former waste oil storage area, which entered bedrock fractures and intercepted the water table. The point of loss was not identified during the Phase Two activities (no soil impacts were identified). However, the area was subsequently excavated and all overburden and affected bedrock was removed from the Site. **Impact Area 2** • The discharge mechanism for elevated cobalt concentrations in soil are unknown. However, the investigation has determined those identified impacts were limited and have subsequently been removed.

Requisite Component	Description & Assessment
vii. Anything known about migration of the contaminants present on, in or under the Phase Two Property at a concentration greater than the applicable site condition standard away from any area of potential environmental concern, including the identification of any preferential pathways,	Based on subsequent remedial efforts, identified impacts in Area 1 and Area 2 are not migrating.
viii. Climatic or meteorological conditions that may have influenced distribution and migration of the contaminants, such as temporal fluctuations in groundwater levels, and	Based on hydrogeological conditions at the Site, dry overburden overlying fractured bedrock, where surface infiltration would drive mobilization. Meteorological conditions could have an impact on contaminant migration. However, none were observed during the investigation.
ix. If applicable, information concerning soil vapour intrusion of the contaminants into buildings including, (A) relevant construction features of a building, such as a basement or crawl space, (B) building heating, ventilation and air conditioning design and operation, (C) subsurface utilities.	Vapour intrusion is not considered a concern. The PHC-related groundwater impacts were generally limited to low volatility constituents; and, notwithstanding, were removed from the Site.

Requisite Component	Description & Assessment
Section 4. Provide, where contaminants on, in or under the phase two property are present at concentrations greater than the applicable site condition standard, two or more cross-sections showing, by parameter group as defined in the Analytical Protocol for which a contaminant has been analysed, i. the lateral and vertical distribution of each contaminant in each area where the contaminant is present at a concentration greater than the applicable site condition standard in soil, ground water and sediment, ii. approximate depth to water table in each area referred to in subparagraph i, iii. stratigraphy from ground surface to the deepest aquifer or aquitard investigated, and iv. any subsurface structures and utilities that may affect contaminant distribution and transport in each area referred to in subparagraph i.	Figure 5B illustrates sampling locations with respect to the APECs. Figures 8A through 8A-II (soil, Impact Area 2), and 9F to 9F-IV (groundwater, Impact Area 1) show the distribution of contaminant impacts to soil and groundwater beneath the Phase Two Property.
Section 5. Provide, for each area where a contaminant is present on, in or under the property at a concentration greater than the applicable site condition standard for the contaminant, a diagram identifying, with narrative explanatory notes, i. the release mechanisms, ii. contaminant transport pathway, iii. the human and ecological receptors located on, in or under the phase two property, iv. receptor exposure points, and v. routes of exposure.	Impact Area 1 in the northern portion of the site is related to PHC impacts in groundwater likely due to accidental release in the vicinity of the former waste oil storage area, which entered bedrock fractures and intercepted the water table and migration with the groundwater to the north (i.e., in the downgradient direction). The point of loss was not identified during the Phase Two activities (no soil impacts were identified). However, the area in the vicinity of MW22-04 was subsequently excavated and all overburden and affected bedrock was removed from the Site. Impact Area 2 is related to fill material imported to the site. The release mechanism for elevated cobalt concentrations in soil are unknown. However, the investigation has determined those identified impacts were limited and have subsequently been remediated. With regards to human receptors, the residents, property visitors, subsurface workers and outdoor workers are considered to be future users of the site. There is potential exposure to the shallow soils at the site. The lighter, volatile PHC F_2 faction present in the groundwater is considered a viable volatilization mechanism. As the Phase Two Property is located in an urban area where groundwater is not extracted for potable consumption, these pathways are not considered viable. There are no surface water bodies or areas of sediment present on the Phase Two Property, and as such these do not represent contaminant sources.

Requisite Component	Description & Assessment
	The contaminant impacts associated with the two impact areas are transported through one or more of the following release mechanisms and transport pathways: • Contaminant leaching: Contaminants leach from the fill materials into surrounding soils due to water infiltration and moisture movement. • Tank leakage: Fuel leakage from former tanks migrates into the surrounding soil over time and eventually entered bedrock fractures to intercepted the water table. • Soil vapour migration: volatile vapour can move through soil pores depending on soil permeability and vapour pressure. As future land use for the Site includes mixed residential and commercial use, human receptors include resident, property visitor, subsurface worker, outdoor worker, and indoor worker. Complete human health pathways include direct contact with soil and groundwater (for a subsurface worker) via incidental ingestion, dermal contact, and inhalation of particulates, inhalation of CoCs vapour in indoor air, and inhalation of soil CoCs vapour in outdoor / trench air. Based on the proposed mixed residential and commercial use, the anticipated ecological receptors include soil invertebrates and terrestrial plants, mammals and birds, and off-site aquatic receptors. Completed ecological pathways include the following: plants and soil invertebrates may be in direct soil contact (root uptake or dermal and/or ingestion), indirect soil contact (inhalation of particulate in ambient air); mammals and birds may be in direct contact with impacted soil, ingestion of prey items, inhalation of particulates in ambient air. Off-site aquatic reception may be exposed through uptake by aquatic life and/or ingestion or direct contact with impacted surface water. As such, the release mechanisms, contaminant transport pathways, human and ecological receptors, receptor exposure points, and routes of exposure for the four areas are presented in Figures 10A and 10B, respectively.
Section 6. If a non-standard delineation was conducted in accordance with section 7.1 of this Schedule as part of preparing the phase two environmental site assessment report, provide a narrative description of how the non-standard delineation satisfies the requirements in that section.	Not Applicable.
Section 7. If the exemption set out in paragraph 1, 1.1 or 2 of section 49.1 of the regulation is being relied upon, provide a statement as to the reliance upon the exemption and a narrative description of the rationale for relying upon the exemption, which may be based on information gathered during the site investigation.	Section 49.1 provides exemption if applicable site conditions standards are exceeded on the basis that: (1.) substances applied to surfaces for safety of vehicular or pedestrian traffic under conditions of snow or ice or both. (1.1) excess soil deposited at the Phase Two Property for final placement meets the soil quality standards that apply to the Phase Two Property as determined in accordance with the Excess Soil Standards (2.) due to a discharge of drinking water within the meaning of the Safe Drinking Water Act, 2002 **Paragraph 1. of Section 49.1 is being relied upon.** Sodium Adsorption Ratio (SAR) impacts were identified in the shallow soils beneath the Phase Two Property. These impacts are attributed to previous applications of de-icing salt to exterior surfaces generally used as parking lot. As such the Site Condition Standards for SAR are deemed to have been met. **Paragraphs 1.1 and 2 of section 49.1 are not being relied upon.**
Section 8. If the exemption set out in paragraph 3 of section 49.1 of the regulation is being relied upon, provide, i. a statement as to the reliance upon the exemption,	Paragraph 3 of section 49.1 provides exemption if applicable site conditions standards are exceeded on the basis that the concentration of the contaminant does not exceed naturally occurring range of concentrations of that contaminant typically found within the area in which the Phase Two Property is located. **Paragraph 3 of section 49.1 is not being relied upon.**

Requisite Component	Description & Assessment
ii. a narrative description of the rationale for relying upon the exemption, which may be based on information gathered during the site investigation, and iii. one or more cross-sections and one or more figures in plan view of the phase two property that demonstrate, through identification of sample locations, sample depths and contaminant concentrations, the distribution of the contaminant in question laterally and vertically and the range of concentrations of that contaminant on, in or under the phase two property.	

The Phase Two CSM is based on the following Phase Two ESA summary information:

Terrapex was retained by Fengate Asset Management (the Client) to conduct a Phase Two Environmental Site Assessment (ESA) on a portion of the property located at 1047 Richmond Road, Ottawa, ON (the Phase Two Property, hereinafter also referred to as the Site).

It is understood that the Client intends on redeveloping the Site to a more sensitive property use (from commercial to mixed residential and commercial, or parkland use), which will require Phase One and Phase Two Environmental Site Assessments (ESAs) compliant with Ontario Regulation (O. Reg. 153/04) under the Environmental Protection Act (*Records of Site Condition – Part XV.1 of the Act*) such that a Record of Site Condition (RSC) could be filed for the Site.

The date the last work on all of the planning of the site investigation, conducting the site investigation and reviewing and evaluating the information gathered through the site investigation required for the Phase Two ESA (per Section 35.5 (1) (a) of O. Reg. 153/04) is April 4, 2025, the date the last monitoring event was conducted at the Site.

The Certification Date (per Section 17 (3) of O. Reg. 153/04) is March 18, 2025, the last day on which sampling was done that confirmed the property meets the applicable Site Condition Standard, in relation to a contaminant.

A Phase One ESA was completed by Terrapex in June 2025 in accordance with the requirements of O. Reg. 153/04; the date of last work being June 11, 2025. The Phase One ESA identified seven Areas of Potential Environmental Concern (APECs) at the Site, resulting from past uses of the Site as a car dealership and autobody shop. The rationale pertaining to the selection of

contaminants of potential concern (COPCs) relating to each of the identified APECs on the Phase One Property is provided in the following table.

CONTAMINANTS OF POTENTIAL CONCERN (COPC) RATIONALE

APEC	PCA	COPCs	Rationale
APEC 1	PCA 1: 10 - Commercial Autobody Shops	PHCs BTEX VOCs	COPCs related to the historical autobody shop operations at the Site
APEC 2	PCA 2: 28 - Gasoline and Associated Products Storage in Fixed Tanks	PHCs BTEX Metals	COPCs related to the historical storage of waste oil at the Site
APEC 3	PCA 3: 28 - Gasoline and Associated Products Storage in Fixed Tanks	PHCs BTEX Metals	COPCs related to the historical storage of waste oil at the Site
APEC 4	PCA 4: 39 - Paints Manufacturing, Processing and Bulk Storage	VOCs PHCs Metals Hydride-Forming Metals ORPs	COPCs related to the historical paint booth associated with the commercial body shop
APEC 5	PCA 5: 30 - Importation of Fill Material of Unknown Quality	PHCs Metals Hydride-Forming Metals ORPs	COPCs related to fill of unknown quality at the Site
APEC 6	PCA 6: 55 - Transformer Manufacturing, Processing and Use	PHCs PCBs	COPCs related to the former pole-mounted transformer at the Site
APEC 7	PCA 7: Other - De-icing Activities	SAR EC Na Cl	COPCs related to salt use at the Site

The Phase Two ESA was subsequently conducted to investigate the environmental quality of soil and groundwater at and in the vicinity of the APECs identified at the Site. The Phase Two ESA consisted of the completion of one test pit and 15 boreholes to a maximum depth of 14.9 m below ground surface (bgs), installation of 12 groundwater monitoring wells, and the collection of soil and groundwater samples for laboratory analysis of COPCs identified for the Site. A summary of the COPC sampling locations for each APEC and potentially affected media is provided in the table below.

SUMMARY OF SAMPLING LOCATIONS

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SAMPLING LOCATIONS	
			SOIL (SAMPLE DEPTH)	GROUNDWATER (SCREENED INTERVAL)
APEC 1	Soil & Groundwater	PHCs and BTEX	MW21-01 SA3 (1.2- m bgs) MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-03 SA2 (0.6-1.2 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) MW21-19 SA1 (0.2-0.6 m bgs) MW21-20 SA2 (0.8-1.5 m bgs) MW22-05 SA4 (2.4-3.0 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs) MW21-11 (2.5-5.5 m bgs) MW21-19 (2.7-5.1 m bgs) MW21-20 (3.3-5.2 m bgs) MW22-05 (7.6-10.7 m bgs)
		VOCs	MW21-01 SA3 (1.2- m bgs) MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) MW21-19 SA1 (0.2-0.6 m bgs) MW21-20 SA2 (0.8-1.5 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs) MW21-11 (2.5-5.5 m bgs) MW21-19 (2.7-5.1 m bgs) MW21-20 (3.3-5.2 m bgs) MW22-05 (7.6-10.7 m bgs)
APEC 2	Groundwater	PHCs and BTEX	NA	MW21-02 (4.0-7.0 m bgs) MW22-04 (4.9-7.9 m bgs)
		Metals	NA	MW21-02 (4.0-7.0 m bgs)
APEC 3	Soil & Groundwater	PHCs and BTEX	MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-03 SA2 (0.6-1.2 m bgs) MW22-04 SA1 (0-0.8 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs) MW22-04 (4.9-7.9 m bgs) MW202 (6.0-9.0 m bgs)
		Metals	MW21-02 SA2 (0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs) BH21-13 SA2 (0.8-1.5 m bgs) BH21-13 SA3 (1.5-2.1 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs)
APEC 4	Soil & Groundwater	PHCs	MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-19 SA1 (0.2-0.6 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs) MW21-19 (2.7-5.1 m bgs)
		VOCs	MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-19 SA1 (0.2-0.6 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs) MW21-19 (2.7-5.1 m bgs)
		Metals	MW21-02 SA2 0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs)

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SAMPLING LOCATIONS	
			SOIL (SAMPLE DEPTH)	GROUNDWATER (SCREENED INTERVAL)
APEC 4 (cont'd)	Soil & Groundwater	ORPs	MW21-02 SA2 0.6-1.2 m bgs) MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-03 SA2 (0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs)
		Hydride-Forming Metals	MW21-02 SA2 0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs)	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs)
APEC 5	Soil	PHCs and BTEX	MW21-01 SA3 (1.2- 1.8 m bgs) MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-03 SA2 (0.6-1.2 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) MW21-19 SA1 (0.2-0.6 m bgs) MW21-20 SA2 (0.8-1.5 m bgs) BH21-25 SA4 (3.1-3.4 m bgs) MW22-04 SA1 (0-0.8 m bgs) MW22-05 SA4 (2.4-3.0 m bgs) MW23-1 SA1 (0.2-0.6 m bgs) MW23-2 SA2 0.5-1.2 m bgs) MW23-3 SA2 (0.6-0.9 m bgs) TP21-01 (0-0.2 m bgs)	NA
		Metals	MW21-01 SA1 (0.1-0.6 m bgs) MW21-02 SA2 (0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) MW21-11 SA3 (1.5-2.3 m bgs) BH21-12 SA2 (0.6-1.2 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) BH21-13 SA2 (1.5-2.3 m bgs) BH21-13 SA3 (1.5-2.3 m bgs) MW23-1 SA1 (0.2-0.6 m bgs) MW23-2 SA2 0.5-1.2 m bgs) MW23-3 SA2 (0.6-0.9 m bgs) SA1A (0.6-0.9 m bgs) SA2A (0.6-0.9 m bgs) SA3A (0.6-0.9 m bgs) SA4A (0.6-0.9 m bgs)	NA

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SAMPLING LOCATIONS	
			SOIL (SAMPLE DEPTH)	GROUNDWATER (SCREENED INTERVAL)
APEC 5 (cont'd)	Soil	Hydride-Forming Metals	MW21-01 SA1 (0.1-0.6 m bgs) MW21-02 SA2 (0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) MW21-11 SA3 (1.5-2.3 m bgs) BH21-12 SA2 (0.6-1.2 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) BH21-13 SA2 (1.5-2.3 m bgs) BH21-13 SA3 (1.5-2.3 m bgs) MW23-1 SA1 (0.2-0.6 m bgs) MW23-2 SA2 0.5-1.2 m bgs) MW23-3 SA2 (0.6-0.9 m bgs) SA1A (0.6-0.9 m bgs) SA2A (0.6-0.9 m bgs) SA3A (0.6-0.9 m bgs) SA4A (0.6-0.9 m bgs)	NA
		ORPs	MW21-01 SA1 (0.1-0.6 m bgs) MW21-01 SA3 (1.2-1.8 m bgs) MW21-02 SA2 (0.6-1.2 m bgs) MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-03 SA2 (0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) MW21-11 SA3 (1.5-2.3 m bgs) BH21-12 SA2 (0.6-1.2 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) BH21-13 SA2 (0.8-1.5 m bgs) BH21-13 SA3 (1.5-2.1 m bgs) MW23-1 SA1 (0.2-0.6 m bgs) MW23-2 SA2 0.5-1.2 m bgs) MW23-3 SA2 (0.6-0.9 m bgs) SA1A (0.6-0.9 m bgs) SA2A (0.6-0.9 m bgs) SA3A (0.6-0.9 m bgs) SA4A (0.6-0.9 m bgs)	NA
APEC 6	Soil	PHCs	TP21-01 (0.0.2 m bgs)	NA
		PCBs	TP21-01 (0-0.2 m bgs)	NA

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SAMPLING LOCATIONS	
			SOIL (SAMPLE DEPTH)	GROUNDWATER (SCREENED INTERVAL)
APEC 7	Soil & Groundwater	SAR	MW21-01 SA1 (0.1-0.6 m bgs) MW21-01 SA3 (1.2-1.8 m bgs) MW21-02 SA2 (0.6-1.2 m bgs) MW21-02 SA5 (2.4-2.7 m bgs) MW21-03 SA1 (0.1-0.6 m bgs) MW21-03 SA2 (0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) MW21-11 SA3 (1.5-2.3 m bgs) BH21-12 SA2 (0.6-1.2 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) BH21-13 SA2 (0.8-1.5 m bgs) BH21-13 SA3 (1.5-2.1 m bgs) MW23-1 SA1 (0.2-0.6 m bgs) MW23-2 SA2 0.5-1.2 m bgs) MW23-3 SA2 (0.6-0.9 m bgs) SA1A (0.6-0.9 m bgs) SA2A (0.6-0.9 m bgs) SA3A (0.6-0.9 m bgs) SA4A (0.6-0.9 m bgs)	NA
APEC 7 (cont'd)	Soil & Groundwater	EC	MW21-01 SA1 (0.1-0.6 m bgs) MW21-02 SA2 (0.6-1.2 m bgs) MW21-03 SA3 (1.2-1.8 m bgs) MW21-11 SA2 (0.8-1.5 m bgs) MW21-11 SA3 (1.5-2.3 m bgs) BH21-12 SA2 (0.6-1.2 m bgs) BH21-12 SA3 (1.5-2.3 m bgs) BH21-13 SA2 (1.5-2.3 m bgs) BH21-13 SA3 (1.5-2.3 m bgs) MW23-1 SA1 (0.2-0.6 m bgs) MW23-2 SA2 0.5-1.2 m bgs) MW23-3 SA2 (0.6-0.9 m bgs) SA1A (0.6-0.9 m bgs) SA2A (0.6-0.9 m bgs) SA3A (0.6-0.9 m bgs) SA4A (0.6-0.9 m bgs)	NA
		Na	NA	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs) MW21-11 (2.5-5.5 m bgs) MW23-1 (10.2-13.2 m bgs) MW23-2 (11.9-14.9 m bgs) MW23-3 (11.6-14.6 m bgs)

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SAMPLING LOCATIONS	
			SOIL (SAMPLE DEPTH)	GROUNDWATER (SCREENED INTERVAL)
		Cl	NA	MW21-02 (4.0-7.0 m bgs) MW21-03 (4.6-7.6 m bgs) MW21-11 (2.5-5.5 m bgs) MW23-1 (10.2-13.2 m bgs) MW23-2 (11.9-14.9 m bgs) MW23-3 (11.6-14.6 m bgs)

NA: *Not applicable*
BTEX: *Benzene, toluene, ethylbenzene, xylene*
PHCs: *Petroleum hydrocarbons (fractions F1 to F4)*
PAHs: *Polycyclic aromatic hydrocarbons*
VOCs: *Volatile Organic Compounds*
As, Sb, Se: *Hydride forming metals*
EC: *Electrical conductivity*
SAR: *Sodium absorption ratio*
ORPs *Other regulated parameters including Hexavalent Chromium (Cr (VI)), Mercury (Hg), Methyl Mercury, Cyanide (CN-), and the following media-specific parameters:*

- *Soil: hot water soluble Boron (B-HWS), Electrical Conductivity (EC), Sodium Adsorption Ratio (SAR), pH*
- *Groundwater: Sodium (Na), Chloride (Cl-)*

Due to the proposed development of the Site for mixed residential and commercial property use, the generic full-depth Ministry of the Environment, Conservation and Parks (MECP) Site Condition Standards (SCS) applicable to residential property use for shallow soils in a non-potable groundwater condition with coarse-textured soil (Table 7 SCS) was selected to evaluate soil and groundwater quality at the Site.

Based on field observations and an evaluation of soil and groundwater quality data, the following conclusions are provided:

- The stratigraphy encountered in the boreholes generally consisted of sand and silty sand fill overlying limestone bedrock at depths between 0.9 and 3.4 m bgs with some silty clay observed where bedrock was deeper.
- The two groundwater monitoring events that included the most monitoring wells were November 2021 and June 2024. On November 30, 2021, the depth to groundwater was identified between 3.0 m bgs (MW21-11) and 7.63 m bgs (MW21-1). On June 24, 2024, the depth to groundwater ranged between 0.80 m bgs (MW21-3) and 7.52 m bgs (MW22-5).
- The findings of the November 2021 and June 2024 monitoring events indicated that the groundwater flow was generally towards the north/northeast with a component of flow to the southeast. It would be anticipated that groundwater flow would generally be toward the Ottawa River, to the north/northwest of the Site. However, the potential influence from the open transit channel cut into the bedrock immediately south of the Site which could also have temporarily been intensified by active dewatering for construction purposes

during the Phase Two ESA, may also have an impact on the local groundwater flow regime.

- Hydrocarbon sheen was noted at monitoring well MW22-04. WSP reported that sheen was observed at that location during bedrock coring during the installation of the well. Terrapex noted sheen at the well during monitoring and sampling conducted June 27, 2024 (i.e., prior to remediation).
- The majority of the soil samples had concentrations metals, HFMs, ORPs, PAHs, BTEX, PHCs, VOCs, and PCBs that met the applicable Table 7 SCS with the exception of sample MW23-3 SA2 which exceeded the Table 7 SCS for cobalt for a sample collected between 0.6 and 0.9 m bgs.
- The majority of the groundwater samples had concentrations metals, HFMs, ORPs, PAHs, BTEX, PHCs and VOCs that met the applicable Table 7 SCS with the exception of sample at MW24-02 (screened between 4.9 and 7.9 m bgs) which exceeded the Table 7 SCS for PHC F2, F3 and/or F4 fractions during various sampling events.

Based on the findings of the Phase Two ESA, the environmental quality of soil and groundwater beneath the Site did not initially meet the Table 7 SCS. Therefore, a RSC could not be filed for the Site unless a full-depth soil remediation and/or a risk assessment is completed in accordance with the requirements of O. Reg. 153/04.

An excavation to remediate the above soil impacts at MW23-3 was conducted by WSP on November 17, 2023. The remediation activities included the excavation of contaminant-impacted soil and subsequent removal off-site, and verification sampling.

An estimated 8.2 m^3 of impacted soil was excavated and removed from the Phase Two Property on November 17, 2023 (last date of remediation). No soil was treated on the Phase Two Property. Soils were excavated and immediately transported off-site to an approved waste disposal facility. Confirmatory soil samples were collected from the walls of the excavation and were submitted for chemical analysis to confirm the quality of soil remaining on the Phase Two Property.

An area estimated at 9 m^2 was excavated, centered on MW23-3. Five confirmatory soil samples (including one duplicate sample) were collected from the side walls of the remedial excavation. The excavation was extended to bedrock and therefore no floor samples were collected. The samples were submitted to AGAT Laboratories for analyses of metals, HFMs, and ORPs. The final confirmatory soil results were all less than the Table 7 SCS.

An excavation to remediate the above-mentioned groundwater impacts at MW22-04 was conducted by Terrapex between August 19 and September 20, 2024. The excavation centered around monitoring well MW22-04 and was extended to the northwestern and northeastern site boundaries and the next closest sampling locations with soil and/or groundwater concentrations less than the Table 7 SCS (i.e., MW21-02 and MW21-03).

Between August 19 and 28, 2024, soil from the remediation area was excavated and loaded directly onto trucks for transfer off-site. A total of 2,939.97 metric tonnes (MT) was sent for beneficial re-use for an aggregate site rehabilitation at the Lafarge Canada Inc. (Lafarge) quarry located at 5121 Hawthorne Road, Ottawa, Ontario. A total of 23.02 MT of soil was sent off-site for disposal to the Waste Connections of Canada (WCC) landfill located at 3354 Navan Road, Ontario, Ontario.

Bedrock was encountered throughout the remedial area at depths ranging from approximately 1.5 to 2.7 m bgs. To progress the excavation, the bedrock was broken into smaller pieces by blasting to reach the target depth of 9.0 m bgs to excavate the entire screened interval of MW22-04. Based on surveys, it was estimated that 1,719.7 m^3 of rock was removed from the Site. No free-flowing product was observed during or upon completion of the remediation activities. Removal of rock from the Phase Two Property was completed on September 20, 2024. A total of 35,000 L of water was from the excavation was treated as part of the remediation.

Following completing the remedial excavation activities, the excavation was backfilled using imported gravel fill. The gravel fill was new material imported from Lafarge, located 998 Moodie Drive in Ottawa, Ontario. Based on information provided by Taggart, a total of 3,462.95 MT of select subgrade material (SSM) gravel chips, and 1,795.24 MT of 0-5 mm limestone screening material were imported between October 1 and 7, 2024.

On December 2, 2024, new monitoring well MW202 was installed within the excavation to confirm the post-remediation groundwater conditions. Post-remediation groundwater samples were collected from MW202 on December 19, 2024, and March 18, 2025. During both events, concentrations of BTEX, PHC F1-F4 and VOCs in all groundwater samples were less than the Table 7 SCS. Further, all parameters were not detected at the laboratory reportable detection limit (RDL).

The primary exposure pathways for the identified soil and groundwater impacts would be dermal contact, ingestion and inhalation of particles. There is the possibility of inhalation of vapours from the lighter, volatile PHC F2 fraction in the groundwater. As the Phase Two Property is located in an urban area where groundwater is not extracted for potable consumption, these pathways are not considered viable. There are no surface water bodies or areas of sediment present on the Phase Two Property, and as such these do not represent contaminant sources. Completed ecological pathways include the following: plants and soil invertebrates may be in direct soil contact (root uptake or dermal and/or ingestion), indirect soil contact (inhalation of particulate in ambient air); mammals and birds may be in direct contact with impacted soil, ingestion of prey items, inhalation of particulates in ambient air. Off-site aquatic reception may be exposed through uptake by aquatic life and/or ingestion or direct contact with impacted surface water.

As a result of the findings of the Phase Two ESA and subsequent remediation of impacted soil and groundwater, sources of contaminants of concern have been removed, and as such areas of potential environmental concern (APECs) are no longer present at the Phase Two Property. Therefore, release mechanisms and transport pathways are highly unlikely and no appreciable impacts to the subsurface are inferred. Consequently, no further assessment or remedial actions are required at the Phase Two Property in preparation for the proposed redevelopment.

Based on the findings of the Phase Two ESA and the subsequent remediation programs, the environmental quality of soil and groundwater at the Site is deemed to meet the applicable Table 7 SCS. Therefore, a RSC may be filed for the Site in accordance with the requirements of O. Reg. 153/04.

APPENDIX IX
QUALIFICATIONS OF ASSESSORS

KEITH BROWN, P.Eng., QP_{ESA}

Position: Senior Project Manager, Ottawa Office

Qualifications: B.Sc. (Eng) Environmental

Experience:

Terrapex Environmental Ltd.	2003 to present
Terrapex Environnement Ltée.	2000 to 2003
Regional Municipality of Ottawa – Carleton	May to Sep. 1999

Mr. Brown is a senior project manager responsible for supervising site assessments, and remediations for various residential, commercial and petroleum clients. Mr. Brown has conducted numerous Phase I/One Environmental Site Assessments (ESA), including historical research, site inspection and report preparation. Mr. Brown has extensive experience in Phase II/Two ESAs, small- and large-scale site remediations (both in-situ and ex-situ), environmental monitoring programs for sites impacted with petroleum, VOCs, PAHs and/or heavy metals, air sampling, peer reviews, and data interpretation. Mr. Brown is registered with the Ontario Ministry of the Environment, Conservation and Parks (MECP) as a Qualified Person (QP) for undertaking Environmental Site Assessment activities and certifying Records of Site Condition (RSC). He also provides senior technical review on all reports/correspondence issued for his projects. More recently, Mr. Brown has assumed a supervisor role responsible for personnel management, and quality control. His major clients have included Parkland Corp., Valero Energy Inc., Canadian Tire, Tim Hortons, and Minto Properties Inc.

Representative projects include the following:

Parkland Corp. Account Manager and Senior Technical Reviewer. Since 2013, Mr. Brown has been responsible for assigning work requests in Ontario. This includes managing projects (administering budgets, allocating technical resources, arranging subcontractors, and adhering to schedules), regular client updates; conducting data review/analysis; preparing ESA and remediation workplans and budget estimates; data interpretation, overall QA/QC of correspondence and reports, reviewing invoices and liaising with the public and regulatory agencies if required.

Valero Energy Inc. Account Manager and Senior Technical Reviewer. Since 2019, responsible for overseeing compliance sampling, site assessments and site investigations, overall QA/QC of correspondence and reports, and liaising with regulatory agencies if required.

Project Manager, Senior Technical Reviewer and QP for a project to complete a risk assessment and obtain a Record of Site Condition (RSC) of a petroleum hydrocarbon impacted site in Ottawa. This project included a data gap analyses, completion of a Phase One and Two ESA, supplemental investigations to assess soil vapour and sub-slab soil vapour conditions, development of a conceptual site model, preparation of a human health and ecological risk assessment, liaison with the MECP and other stakeholders.

Project Manager, Senior Technical Reviewer and QP for the completion of a multi-stage Phase Two ESA as part of the proposed development of a bulk fuel. Mr. Brown reviewed the previously completed Phase One ESA to identify any data gaps, developed the sampling and analysis plan to assess all the areas of potential environmental concern (APECs) for the identified contaminants of concern (COCs), directed the assessment work, reviewed the analytical results, developed the conceptual site model (CSM) and had overall responsibility for the Phase Two ESA in accordance with the requirements of O. Reg. 153/04.

Project Manager, Senior Technical Reviewer for a remediation project that included the excavation around the perimeter of two adjacent residences to expose the foundation and to allow for removal of a waterproofing membrane previously applied by others that was linked to chemical odours in the residences. It was further determined that during application the waterproofing product had been diluted with a xylene-based solved. The former waterproofing membrane was removed and necessary remediation was conducted, including excavation beneath the footing of one of the residences to excavate contaminated soil. In total 412.12 tonnes of soil and 3,620 L of water was pumped from the excavation as part of the remediation. Terrapex also assist with monitoring vapour concentrations inside the residences over the course of the project (indoor air sampling was conducted by another consultant).

JASON O'BRIGHT, P.Eng.

Position:	Project Engineer, Smithers, BC	
Qualifications:	Professional Engineers of Ontario (PEO) Engineers and Geoscientists British Columbia (EGBC)	
Experience:	Terrapex Environmental Ltd.	2009 to present
	DST Consulting Engineers Inc.	2009

Mr. O'Bright has experience working on all stages of environmental site assessment (ESA) and remediation projects. He is a *Qualified Person* who can file RSCs on the MECP's Brownfields Environmental Site Registry using numerical standards and is Terrapex's *Responsible Registrant* for Professional Practice in British Columbia.

Mr. O'Bright is routinely conducting Phase One and Two ESAs in accordance with the CSA and O.Reg 153/04 standards, including historical records reviews, interviews, site inspections, evaluations and reporting; planning and undertaking detailed site investigations (to develop conceptual site models that fully characterize impacts); evaluating closure objectives and remedial options; supervising small and large scale site remediations (both in-situ and ex-situ) and/or implementing environmental monitoring programs based on project targets and regulatory requirements.

Mr. O'Bright also peer reviews site assessment and remediation work conducted by others.

Representative projects include the following:

Phase One ESA: Mr. O'Bright was responsible for historical research and review, interviews, site inspection, and report preparation in accordance with the requirements of Ontario Regulation (O. Reg.) 153/04 (as amended) under the Environmental Protection Act, *Records of Site Condition - Part XV.1 of the Act*, in order to: determine potential sources of environmental impact; identify contaminants and media in areas of potential environmental concern; and, develop a conceptual site model (CSM) for the site.

Phase Two ESA: Based on a Phase One CSM developed for the site, the initial investigation consisted of drilling boreholes and installing monitoring wells, soil sampling, soil vapour surveying, elevation surveying, and groundwater monitoring and sampling (including from the existing monitoring well network). Based on the monitoring data and analytical results from the initial investigation, additional boreholes were drilled (some completed as monitoring wells or soil vapour probes) to fully delineate identified soil and groundwater impacts at the site. Soil vapour and indoor air samples were also collected. Mr. O'Bright completed the work program and reported the findings of the Phase Two in accordance with O.Reg 153/04. The Phase Two CSM was used as the basis for a Risk Assessment at the site to file a Record of Site Condition with a Certificate of Property Use (CPU).

Designated Substance Survey: Mr. O'Bright completed an inspection, sampling various building materials suspected of containing asbestos, lead, mercury and/or other designated substances as listed in the Ontario Occupational Health and Safety Act (R.S.O. 1990,c.E.19). Mr. O'Bright prepared specifications for contractors in terms of the abatement required to address the identified asbestos- and lead-containing materials during the building demolition.

Assessment and Remediation of Hydrocarbon Impacted Soil: Mr. O'Bright conducted an extensive test pit program to delineate the extent of previously identified hydrocarbon impacted soil at the site, which involved soil sampling, soil vapour surveying, and soil classification. Based on a review of analytical results, Mr. O'Bright determined that there were three distinct zones of impact and estimated total volumes of impacted soil. Mr. O'Bright supervised the excavation of impacted soil and collected confirmatory soil samples at the extent of the excavations. Completed excavations were backfilled with soil deemed suitable for re-use (based on analytical results) and imported fill. Impacted soil was sent off-site to a MECP-licensed facility.

Assessment and Ongoing Groundwater Remediation: As part of an on-going contaminant management plan where the groundwater plume was delineated but was not decreasing in concentration and impacted soil identified could not be removed due to geotechnical limitations. Mr. O'Bright supervised the injection of a chemical oxidant into identified soil impacts in both the saturated and unsaturated zones. Mr. O'Bright conducted several pre- and post-injection groundwater monitoring and sampling events and interpreted several years of monitoring and analytical data. Mr. O'Bright presented a historical trend analysis showing that the oxidant injections have been effective in reducing the groundwater plume concentration.

Peer Review: Mr. O'Bright reviewed affidavits documenting a heating oil loss and the subsequent remedial effort conducted by others. Mr. O'Bright summarized the environmental reports and tabulated the associated costs and presented the summaries in figures, tables, and charts in support of expert witness testimony.

APPENDIX X
REMEDIATION REPORTS

May 29, 2024 Project No. 21494078

1047 Richmond Nominee Inc.
2275 Upper Middle Road East, Suite 700
Oakville, ON
L6H 0C3

REMEDIAL EXCAVATION, 1047 RICHMOND ROAD (PARKLAND), OTTAWA, ONTARIO

WSP Canada Inc. (WSP), was retained by 1047 Richmond Nominee Inc. to complete a Phase Two Environmental Site Assessment (ESA) on a 0.101-hectare portion of the property parcel with municipal address 1047 Richmond Road in Ottawa, Ontario (the Phase Two Property). The Phase Two Property is located on the southern corner of the larger 1047 Richmond Road property. The larger property is eventually going to be redeveloped into a mixed residential-commercial development while the Phase Two Property is to be conveyed to the City of Ottawa for redevelopment as a small municipal park. The Phase Two Property is currently considered commercial property use (a parking lot that was associated with of a former automotive dealership located on the larger parcel) and a Record of Site Condition (RSC) will therefore be required prior to the Phase Two Property being redeveloped as a municipal park.

During the Phase Two ESA investigation, soil with a concentration of cobalt exceeding the applicable MECP[1] Table 7 Generic Site Conditions Standards for Shallow Soils in a Non-Potable Ground Water Condition, residential/parkland/institutional property use, coarse soil texture (MECP Table 7 Standards) was encountered at a borehole advanced on the northeastern area of the Phase Two Property. A remediation was undertaken to address the cobalt exceedance with the object of obtaining a generic RSC.

This letter provides a summary of the remedial excavation and confirmatory sampling conducted on November 17, 2023. No exceedances of MECP Table 7 Standards were identified in the confirmatory samples collected from the extents of the remedial excavation.

Remedial Actions

The cobalt exceedance was identified in a soil sample collected from borehole BH23-03 at a depth of 0.61 to 0.91 meters below ground surface (m bgs). Prior to the remedial actions being undertaken, the monitoring well that was installed into the underlying bedrock at BH23-03 was decommissioned by a licensed well technician employed by Strata Soil (Strata) in accordance with O.Reg. 903: Wells. Decomissioning was conducted under the supervision of WSP field personnel.

[1] MECP – Ministry of Environment, Conservation and Parks. Document titled "*Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, April 15, 2011*"

WSP Canada Inc.
100 Scotia Court Whitby
Ontario L1N 8Y6
T: +1 905 723 2727 F: +1 905 723 2182

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On November 17, 2023 an excavation centred on the former location of BH23-03 was advanced using an excavator supplied and operated by 1047 Richmond Nominee Inc. under the direction of WSP. The excavation was advanced in stages, first to approximate dimensions of 1 m by 1 m centred on BH23-03, then extended to approximate dimensions of 3 m by 3 m. During both stages, the excavation and was advanced to the underlying bedrock surface at a depth of 0.91 m. A total soil volume of approximately 8.2 m^3 was excavated. Excavated materials were deposited directly into a waiting haul truck for transport off Site to an appropriate disposal facility. The final extent of the remedial excavation is shown on Figure 1, after the text.

Confirmatory samples were collected by WSP from the north, east, south, and west walls of the excavation at both the 1 m by 1 m, and 3 m by 3 m stage. Confirmatory samples were obtained from the same depth as the BH23-03 sample, 0.61 to 0.91 m bgs. Vertical delineation was achieved by the presence of shallow bedrock in the area, with no floor samples able to be collected. The four confirmatory soil samples collected from the 1m by 1 m stage of the excavation (SA1A, SA2A, SA3A, and SA4A) and one field duplicate (SA1A Dup) were submitted to AGAT Laboratories (AGAT) for analysis of metals, hydride-forming metals, SAR, EC, pH, mercury, cyanide, and chromium. AGAT is accredited in accordance with the International Standard ISO/IEC 17025 (CALA) (General Requirement for the Competence of Testing and Calibration Laboratories, May 5, 2005, as amended) and the standards for proficiency testing developed by the Standards Council of Canada, the Canadian Association for Laboratory Accreditation or another accreditation body accepted by the MECP. The confirmatory samples collected from the 3 m by 3 m stage of the excavation (SA5A, SA6A, SA7A, and SA8A) were submitted to AGAT on hold pending the analytical results of the 1 m by 1 m confirmatory samples.

Free Flowing Product

No free flowing product was observed in the remedial excavation and no free flowing product is known to exist at the Phase Two Property.

Results of Confirmation Sampling and Analysis

The analytical results for all confirmatory soil samples were compared to MECP Table 7 Standards. The reported concentrations for the confirmatory soil samples in comparison to the MECP Table 7 Standards are summarized in Table 1 following the text of this report. The laboratory certificates of analysis are provided in Attachment A.

The reported concentrations of all contaminants of potential concern in the confirmatory samples collected from the 1 m by 1 m stage of the excavation were below the applicable MECP Table 7 Standards. The confirmatory samples collected from the 3 m by 3 m stage of the excavation were therefore not analysed as all impacted soil was confirmed to have been removed.

The relative percent differences (RPD) of the reported results for the duplicate sample pair SA1A and SA1A Dup were calculated in accordance with the MECP document: *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act,* April 15, 2011. Based on the analytical results of the field duplicate and its parent sample, the RPD are within acceptable control limits (<30% in soil for metals, hydride-forming metals and ORP).

Conclusions

The reported concentrations of all confirmatory soil samples met the applicable MECP Table 7 Standards, therefore, no additional assessment of remediation work is required in support of filing a Record of Site Condition (RSC).

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Limitations

This report was prepared for the exclusive use of 1047 Richmond Nominee Inc. No third parties may rely upon this report. Any use which a third party makes of this report, or any reliance on or decision to be made based on it, is the sole responsibility of such third party. This report is based on data and information collected during this investigation by WSP Canada Inc. in accordance with our proposal and is based solely on-Site conditions encountered at the time of Site characterization activities. Only limited chemical analyses of soil samples were carried out. Regulatory criteria are used for comparison purposes only and are not necessarily enforceable on the Site owner. It should be noted that the results of an investigation of this nature should, in no way, be construed as a warranty that the Site is free from any and all contamination from past or current practices.

If additional information is obtained during future work at the Site, including excavations, borings, or other studies, and/or if conditions exposed during construction are different from those encountered in this assessment, WSP should be requested to re-evaluate the conclusions presented in this report and provide amendments as required.

Closing

We trust this letter is sufficient for your current needs. If you have any questions, please do not hesitate to contact the undersigned.

WSP Canada Inc.

Sofia Herczegh, M.Sc., EPt
Environmental Scientist

Kristina Small, M.Sc., P.Geo., QPESA
Contaminant Hydrogeologist

SH/KS/sg
https://wsponline.sharepoint.com/sites/gld-152441/project files/6 deliverables/ph two conveyed area/appendix f - remedial excavation report/21494078-reva-appfremed-fengate-29may2024.docx

Attachments: Table 1 – Soil Analytical Results – Metals, Hydride-Forming Metals, and Other Regulated Parameters (ORP)
Figure 1 – Final Extents of Remedial Excavation
Attachment A – Certificates of Analysis

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Table

Table 1

Soil Delineation Analytical Results - Metals and Other Regulated Parameters

1047 Richmond Road, Ottawa, Ontario

			Sample Location	SA1A	SA1A Dup	SA2A	SA3A	SA4A
			Sample Date	17-11-2023	17-11-2023	17-11-2023	17-11-2023	17-11-2023
			Sample Depth	0.61 - 0.91 m	0.61 - 0.91 m	0.61 - 0.91 m	0.61 - 0.91 m	0.61 - 0.91 m
Parameter	**REG153 (11) T7-R/P/I SOIL COARSE**	**Unit**		Field Duplicate			
Metals								
Barium	390	ug/g	143	102	25.4	148	119
Beryllium	4	ug/g	0.7	<0.5	<0.5	0.8	0.6
Boron	120	ug/g	15	10	<5	14	9
Cadmium	1.2	ug/g	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	160	ug/g	30	21	10	32	26
Cobalt	22	ug/g	21.2	12.4	4.2	21.2	17.3
Copper	140	ug/g	24.9	21.2	5.6	25.1	27.8
Lead	120	ug/g	28	30	4	22	34
Molybdenum	6.9	ug/g	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel	100	ug/g	27	18	7	31	25
Silver	20	ug/g	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Thallium	1	ug/g	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Uranium	23	ug/g	0.51	0.56	< 0.50	< 0.5	< 0.50
Vanadium	86	ug/g	28.9	24.2	18.6	26.7	25.4
Zinc	340	ug/g	74	58	24	68	73
Metals, Hydride-Forming							
Antimony	7.5	ug/g	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium	2.4	ug/g	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Arsenic	18	ug/g	2	1	<1	1	2
Other Regulated Parameters							
Boron, Hot Water Soluble	1.5	ug/g	0.34	0.30	0.1	0.34	0.29
Hexavalent Chromium	8	ug/g	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Cyanide (WAD)	0.051	ug/g	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Conductivity	0.7	ms/cm	0.504	0.327	0.218	0.399	0.361
Mercury	0.27	ug/g	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium Adsorption Ratio	5	none	0.543	0.662	0.465	0.536	0.55
pH	5 - 9	pH units	7.42	7.31	7.4	7.2	7.25
Moisture, Percent	NV	%	-	-	-	-	-

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Notes:

Bold: Value exceeding Table 7 standards

REG153 (11) T7-R/P/I SOIL COARSE — Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition

ug/g: micrograms per gram

ms/cm: microsiemens per centimeter

%: percentage

NV: No Value

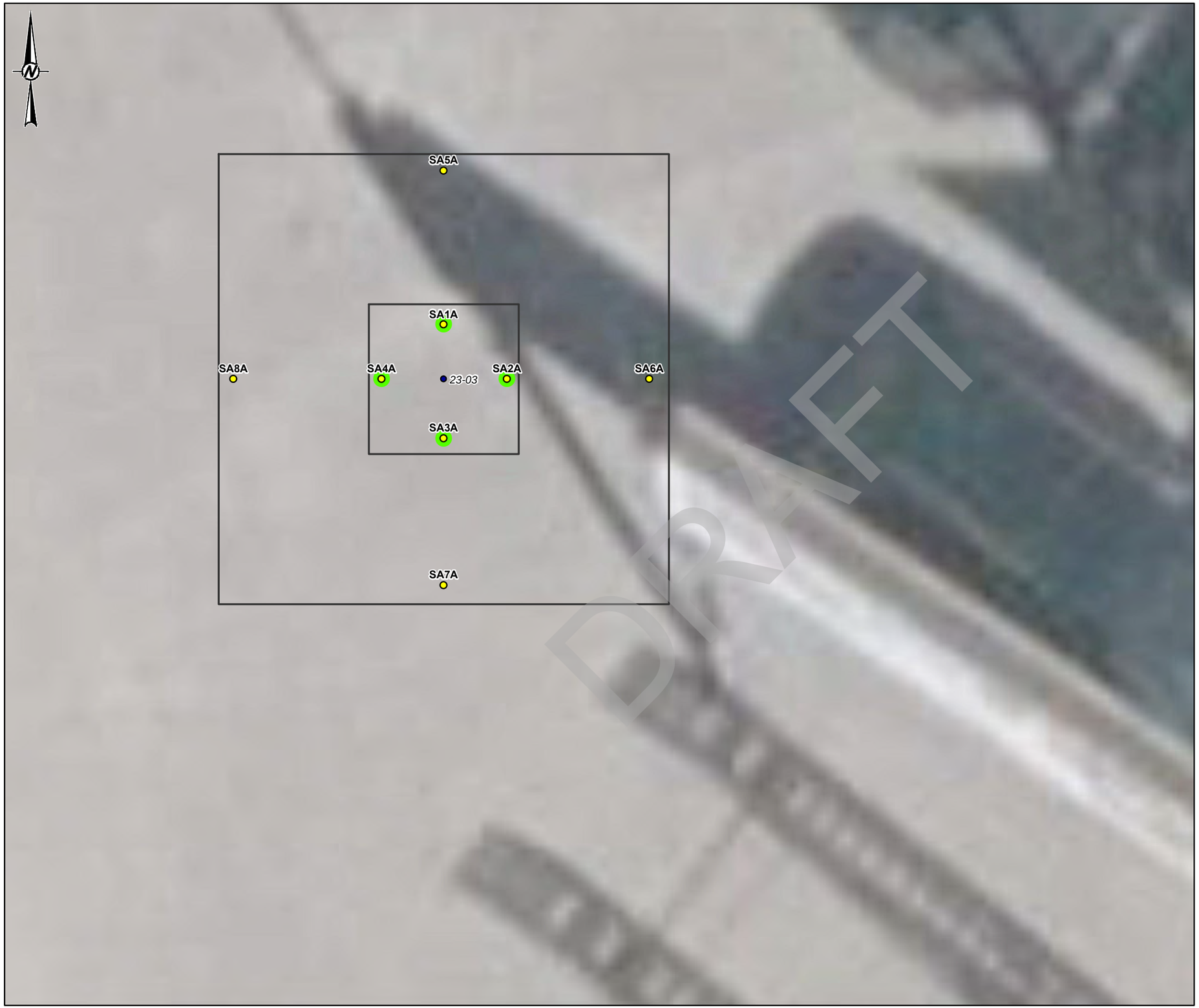
<: Indicates parameter not detected above laboratory method detection limit.

Data Entered By: DS

Checked By: SH

DRAFT

Figure



LEGEND

- BOREHOLE LOCATION
- APPROXIMATE SAMPLE LOCATION
- LOCATIONS WHERE ALL SAMPLES MEET APPLICABLE STANDARDS
- EXCAVATION AREA

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE
2. ALL SAMPLES WERE TAKEN 0.61-0.91 (DEPTH OF EXCAVATION) THEN RESAMPLED AT SAME DEPTH 0.61-0.91.
3. DEPTH 1.22 MBGS (BEDROCK)
4. O.REG 153 (2011) TABLE STANDARDS FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL (R/P/I) PROPERTY USE FOR COARSE TEXTURED SOIL IN GENERIC SITE CONDITION FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION.

REFERENCE(S)

1. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: MTM ZONE 9, VERTICAL DATUM: CGVD28

0 0.325 0.65 1.3

1:26 METRES

CLIENT
LPF DEVELOPMENT FUND 3

PROJECT
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
1047 RICHMOND ROAD, OTTAWA, ONTARIO

TITLE
SITE EXCAVATION AREA AND CONFIRMATORY SAMPLE LOCATIONS

CONSULTANT

YYYY-MM-DD	5/28/2024
DESIGNED	----
PREPARED	RRD
REVIEWED	DS
APPROVED	EH

PROJECT NO.	CONTROL	REV.	FIGURE
21494078	0008	0	**F1**

DRAFT

Path: S:\Clients\Fengate\1047_Richmond_R d99_PRO_02 1494078_Fengate_GeoEnvrc\0008_Excavation\21494078-0008-eHS-0002.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 25mm 0

DRAFT

ATTACHMENT A

Certificates of Analysis

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

CLIENT NAME: WSP CANADA INC.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727
ATTENTION TO: Daniel Stabile
PROJECT: 21494078 Fengate Ph Two
AGAT WORK ORDER: 23Z094471
SOIL ANALYSIS REVIEWED BY: Sukhwinder Randhawa, Inorganic Team Lead
DATE REPORTED: Nov 28, 2023
PAGES (INCLUDING COVER): 11
VERSION*: 1

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

*Notes

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Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.

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Certificate of Analysis

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

Ignitability in Soil

DATE RECEIVED: 2023-11-17

DATE REPORTED: 2023-11-28

				SAMPLE DESCRIPTION:	TCLP1
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2023-11-17 10:50
Parameter	Unit	G / S	RDL	5471058	
Ignitability				N	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5471058 N = Non-Flammable Solid

Analysis performed at AGAT Toronto (unless marked by *)

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Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2023-11-17

DATE REPORTED: 2023-11-28

SAMPLE DESCRIPTION:				SA1A	SA1A Dup	SA2A	SA3A	SA4A
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2023-11-17 10:30	2023-11-17 10:30	2023-11-17 10:35	2023-11-17 10:40	2023-11-17 10:45
Parameter	Unit	G / S	RDL	5471044	5471049	5471054	5471056	5471057
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	2	1	<1	1	2
Barium	µg/g	390	2.0	143	102	25.4	148	119
Beryllium	µg/g	4	0.5	0.7	<0.5	<0.5	0.8	0.6
Boron	µg/g	120	5	15	10	<5	14	9
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.34	0.30	0.10	0.34	0.29
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	30	21	10	32	26
Cobalt	µg/g	22	0.8	21.2	12.4	4.2	21.2	17.3
Copper	µg/g	140	1.0	24.9	21.2	5.6	25.1	27.8
Lead	µg/g	120	1	28	30	4	22	34
Molybdenum	µg/g	6.9	0.5	<0.5	<0.5	<0.5	<0.5	0.5
Nickel	µg/g	100	1	27	18	7	31	25
Selenium	µg/g	2.4	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	<0.50	0.51	<0.50	<0.50	<0.50
Vanadium	µg/g	86	2.0	28.9	24.2	18.6	26.7	25.4
Zinc	µg/g	340	5	74	58	24	68	73
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.504	0.327	0.218	0.399	0.361
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.543	0.662	0.465	0.536	0.550
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.42	7.31	7.40	7.20	7.25

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Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

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

DATE RECEIVED: 2023-11-17

DATE REPORTED: 2023-11-28

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5471044-5471057 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

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Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

CLIENT NAME: WSP CANADA INC.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

O. Reg. 558 - Metals & Inorganics

DATE RECEIVED: 2023-11-17

DATE REPORTED: 2023-11-28

		SAMPLE DESCRIPTION:		TCLP1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2023-11-17 10:50
Parameter	Unit	G / S	RDL	5471058
Arsenic Leachate	mg/L	2.5	0.010	0.022
Barium Leachate	mg/L	100	0.020	0.356
Boron Leachate	mg/L	500	0.050	<0.050
Cadmium Leachate	mg/L	0.5	0.010	<0.010
Chromium Leachate	mg/L	5	0.050	<0.050
Lead Leachate	mg/L	5	0.010	0.016
Mercury Leachate	mg/L	0.1	0.01	<0.01
Selenium Leachate	mg/L	1	0.020	0.041
Silver Leachate	mg/L	5	0.010	<0.010
Uranium Leachate	mg/L	10	0.050	<0.050
Fluoride Leachate	mg/L	150	0.10	<0.10
Cyanide Leachate	mg/L	20	0.05	<0.05
(Nitrate + Nitrite) as N Leachate	mg/L	1000	0.70	<0.70

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg. 558 - Schedule IV Leachate Quality Criteria
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

DRAFT

Certified By:

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078 Fengate Ph Two
SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

AGAT WORK ORDER: 23Z094471
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ben Waechter

Soil Analysis

RPT Date: Nov 28, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	5474728		<0.8	<0.8	NA	< 0.8	114%	70%	130%	81%	80%	120%	97%	70%	130%
Arsenic	5474728		3	3	NA	< 1	119%	70%	130%	100%	80%	120%	105%	70%	130%
Barium	5474728		38.6	39.3	1.8%	< 2.0	100%	70%	130%	103%	80%	120%	109%	70%	130%
Beryllium	5474728		<0.5	<0.5	NA	< 0.5	105%	70%	130%	102%	80%	120%	107%	70%	130%
Boron	5474728		<5	<5	NA	< 5	79%	70%	130%	95%	80%	120%	91%	70%	130%
Boron (Hot Water Soluble)	5479563		<0.10	<0.10	NA	< 0.10	94%	60%	140%	97%	70%	130%	102%	60%	140%
Cadmium	5474728		<0.5	<0.5	NA	< 0.5	108%	70%	130%	106%	80%	120%	109%	70%	130%
Chromium	5474728		14	15	NA	< 5	106%	70%	130%	93%	80%	120%	100%	70%	130%
Cobalt	5474728		5.0	5.1	2.0%	< 0.8	97%	70%	130%	95%	80%	120%	103%	70%	130%
Copper	5474728		10.3	10.1	2.0%	< 1.0	99%	70%	130%	95%	80%	120%	94%	70%	130%
Lead	5474728		10	10	0.0%	< 1	97%	70%	130%	90%	80%	120%	88%	70%	130%
Molybdenum	5474728		<0.5	<0.5	NA	< 0.5	108%	70%	130%	110%	80%	120%	113%	70%	130%
Nickel	5474728		11	12	8.7%	< 1	104%	70%	130%	105%	80%	120%	106%	70%	130%
Selenium	5474728		<0.8	<0.8	NA	< 0.8	70%	70%	130%	104%	80%	120%	110%	70%	130%
Silver	5474728		<0.5	<0.5	NA	< 0.5	90%	70%	130%	95%	80%	120%	93%	70%	130%
Thallium	5474728		<0.5	<0.5	NA	< 0.5	89%	70%	130%	101%	80%	120%	101%	70%	130%
Uranium	5474728		<0.50	<0.50	NA	< 0.50	94%	70%	130%	91%	80%	120%	94%	70%	130%
Vanadium	5474728		22.3	22.7	1.8%	< 2.0	105%	70%	130%	88%	80%	120%	112%	70%	130%
Zinc	5474728		43	44	2.3%	< 5	122%	70%	130%	107%	80%	120%	113%	70%	130%
Chromium, Hexavalent	5469552		<0.2	<0.2	NA	< 0.2	99%	70%	130%	92%	80%	120%	98%	70%	130%
Cyanide, WAD	5477741		<0.040	<0.040	NA	< 0.040	99%	70%	130%	95%	80%	120%	96%	70%	130%
Mercury	5474728		<0.10	<0.10	NA	< 0.10	103%	70%	130%	105%	80%	120%	107%	70%	130%
Electrical Conductivity (2:1)	5476277		0.560	0.591	5.4%	< 0.005	105%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	5469752		7.36	7.26	1.4%	NA									
pH, 2:1 CaCl2 Extraction	5469358		11.7	11.8	0.9%	NA	102%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Ignitability in Soil															
Ignitability	5471058	5471058	N	N	NA	NA									

Comments: N = Non-Flammable Solid
NA = Not Applicable

O. Reg. 558 - Metals & Inorganics															
Arsenic Leachate	5471058	5471058	0.022	<0.010	NA	< 0.010	100%	70%	130%	106%	80%	120%	112%	70%	130%
Barium Leachate	5471058	5471058	0.356	0.341	4.3%	< 0.020	100%	70%	130%	100%	80%	120%	83%	70%	130%
Boron Leachate	5471058	5471058	<0.050	<0.050	NA	< 0.050	101%	70%	130%	98%	80%	120%	108%	70%	130%
Cadmium Leachate	5471058	5471058	<0.010	<0.010	NA	< 0.010	101%	70%	130%	103%	80%	120%	100%	70%	130%
Chromium Leachate	5471058	5471058	<0.050	<0.050	NA	< 0.050	101%	70%	130%	94%	80%	120%	92%	70%	130%

DRAFT

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Quality Assurance

CLIENT NAME: WSP CANADA INC.
PROJECT: 21494078 Fengate Ph Two
SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

AGAT WORK ORDER: 23Z094471
ATTENTION TO: Daniel Stabile
SAMPLED BY:Ben Waechter

Soil Analysis (Continued)

RPT Date: Nov 28, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Lead Leachate	5471058	5471058	0.016	<0.010	NA	< 0.010	87%	70%	130%	85%	80%	120%	79%	70%	130%
Mercury Leachate	5471058	5471058	<0.01	<0.01	NA	< 0.01	106%	70%	130%	106%	80%	120%	68%	70%	130%
Selenium Leachate	5471058	5471058	0.041	<0.020	NA	< 0.020	101%	70%	130%	119%	80%	120%	121%	70%	130%
Silver Leachate	5471058	5471058	<0.010	<0.010	NA	< 0.010	101%	70%	130%	99%	80%	120%	94%	70%	130%
Uranium Leachate	5471058	5471058	<0.050	<0.050	NA	< 0.050	98%	70%	130%	85%	80%	120%	81%	70%	130%
Fluoride Leachate	5471058	5471058	<0.10	<0.10	NA	< 0.10	102%	90%	110%	101%	90%	110%	101%	70%	130%
Cyanide Leachate	5471058	5471058	<0.05	<0.05	NA	< 0.05	90%	70%	130%	108%	80%	120%	109%	70%	130%
(Nitrate + Nitrite) as N Leachate	5471058	5471058	<0.70	<0.70	NA	< 0.70	101%	80%	120%	98%	80%	120%	99%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

DRAFT

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QC Exceedance

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

ATTENTION TO: Daniel Stabile

RPT Date: Nov 28, 2023

PARAMETER	Sample Id	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 558 - Metals & Inorganics										
Mercury Leachate	5471058	106%	70%	130%	106%	80%	120%	68%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

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Method Summary

CLIENT NAME: WSP CANADA INC.

AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Ignitability	INOR-93-6063	EPA SW-846 1030	BURN MOLD
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE
Arsenic Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Barium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Boron Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Cadmium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS

DRAFT

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AGAT WORK ORDER: 23Z094471

PROJECT: 21494078 Fengate Ph Two

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd, Ottawa, ON

SAMPLED BY:Ben Waechter

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chromium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Lead Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Mercury Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Selenium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Silver Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Uranium Leachate	MET-93-6103	EPA 1311 & modified from EPA 6020B	ICP-MS
Fluoride Leachate	INOR-93-6000	EPA SW 846-1311; SM 4500F-C	ION SELECTIVE ELECTRODE
Cyanide Leachate	INOR-93-6052	EPA 1311 modified from MOE 3015 SM 4500 CN-I,G387	SEGMENTED FLOW ANALYSIS
(Nitrate + Nitrite) as N Leachate	INOR-93-6053	EPA SW 846-1311 & modified from SM 4500 - NO3- I	LACHAT FIA

DRAFT

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 23709447 1

Cooler Quantity: one - loose ice.

Arrival Temperatures: 6.0 | 5.9 | 5.9.
1.1 | 2.3 | 1.8

Custody Seal Intact: ☐ Yes ☐ No ☑ N/A

Notes: Bagged ice

Report Information:

Company: WSP Canada Inc.
Contact: Daniel Stabile
Address: 701 Rossland Rd E #201, Whitby, ON L1N 8Y9
Phone: +1 905-213-4732 Fax:

Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email: Ben.Waechter@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☑ Res/Park
☐ Agriculture
Soil Texture (Check One)
☑ Coarse
☐ Fine

☐ Excess Soils R406
Table ____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
____ (Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): ____

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

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

Project Information:

Project: 21494078 Fengate Ph Two
Site Location: 1047 Richmond Rd, Ottawa, ON
Sampled By: Ben Waechter
AGAT Quote #: ____ PO: ____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company: WSP Canada Inc
Contact: Daniel Stabile
Address: 701 Rossland Rd E #201 Whitby, ON.
Email: daniel.stabile@wsp.com

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ ABNs ☐ B(a)P ☐ PCBs ☐ VOCs ☐ TCLP: F1-F4 & BTEX	O. Reg 406: Excess Soils SPLP Rainwater Leach	O. Reg 406: Excess Soils SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
SA1A	17 Nov 2023	10:30 AM/PM	3	S		N	✓												
SA1A Dup		10:30 AM/PM	3				✓												
SA2A		10:35 AM/PM	5				✓												
SA3A		10:40 AM/PM	5				✓												
SA4A		10:45 AM/PM	5				✓												
TCLP1		10:50 AM/PM	2		Ignitability & metals	✓								✓					
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Ben Waechter	17 Nov 2023			11/17/23	13h26
	11/17/23	15h30		11/18/23	10:25AM

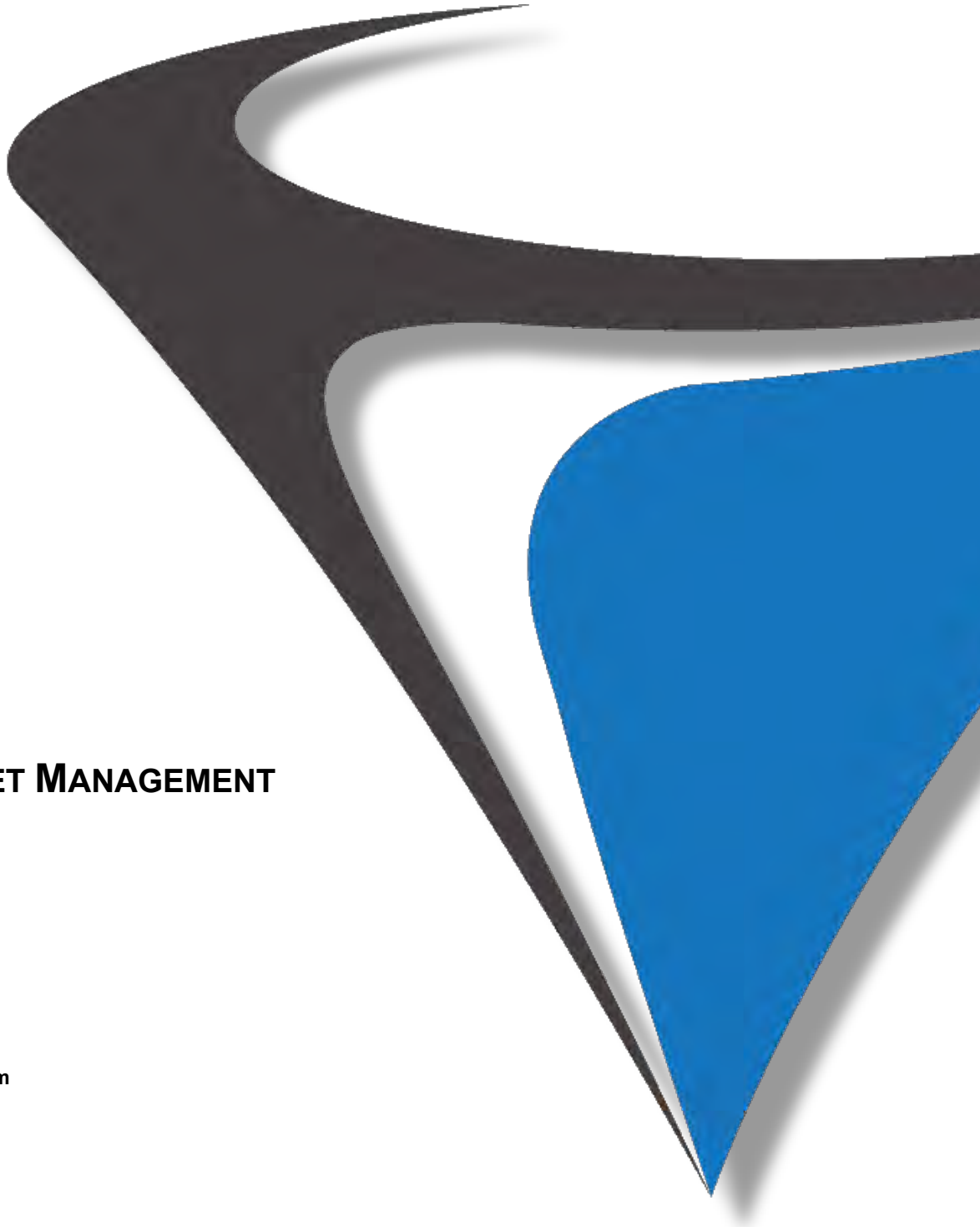
Page ____ of ____

N°: T 129389

DRAFT

REMEDIATION REPORT

1047 Richmond Road,
Ottawa, Ontario



CO972.00

FINAL REPORT

August 14, 2025

Prepared for:

FENGATE ASSET MANAGEMENT

TERRAPEX
90 Scarsdale Road
Toronto, Ontario M3B 2R7
Telephone: (416) 245-0011
environment@terrapex.com
www.terrapex.com

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1.0 EXECUTIVE SUMMARY

Terrapex Environmental Ltd. (Terrapex) was retained by Fengate Asset Management (Fengate or the Client) to conduct remedial excavation activities at the property located at 1047 Richmond Road in Ottawa, Ontario (hereinafter referred to as the "Site"). The objective of the investigation was to remediate groundwater with concentrations greater than the Table 7 Site Condition Standards (SCS) identified during a previous Phase Two Environmental Site Assessment conducted by others at the Site.

The SCS applicable for the Site were determined by Terrapex to be the Table 7 SCS for use in a shallow soil property in a non-potable groundwater situation at residential / parkland / institutional properties with coarse-grained soil.

The excavation work was conducted by Taggart Construction Ltd., supervised by Terrapex, between August 19 and September 20, 2024. The excavation was conducted in the vicinity of monitoring well MW22-04 and extended into the bedrock to address petroleum hydrocarbon (PHC) impacts in the groundwater at that location.

The completed excavation measured approximately 250 m^2 in area. All overburden soil was removed over the area and the excavation was extended into the bedrock to a depth of 9.0 m below ground surface (bgs). Approximately 2,962.99 metric tonnes of soil was sent off-site. The contractor estimated that 1,719.7 m^3 of rock was removed from the Site. A total of 35,000 L was water was pumped from the excavation, treated and discharged to the municipal sewer system.

No additional soil sampling was conducted as part of the remediation as no soil with concentrations greater than the Table 7 SCS was identified in the vicinity of MW22-04 during the Phase Two ESA. The excavation was extended to the northwestern property boundary and the next closest sampling location with soil and groundwater concentrations less than the Table 7 SCS (i.e., MW21-22, MW21-14, MW22-03, MW21-02 and MW21-03). Terrapex has relied on the results of soil samples collected as part of the Phase Two ESA to represent soil conditions at the extent of the excavation. Soil and bedrock conditions were observed by Terrapex during the excavation activities and no obvious indications of impact in the soil or rock were noted during the remedial excavation.

Following completing the remedial excavation activities, the excavation was backfilled using imported gravel fill. The gravel fill was new material imported from Lafarge, located 998 Moodie Drive in Ottawa, Ontario. Based on information provided by Taggart, a total of 3,462.95 MT of select subgrade material (SSM) gravel chips, and 1,795.24 MT of 0-5 mm limestone screening material were imported between October 1 and 7, 2024.

On December 2, 2024, two groundwater wells (MW201 and MW202) were installed as part of the confirmation sampling activities. Both of the monitoring wells were installed within the excavated area. Monitoring well MW201 was installed at the approximate location of MW22-04 as a replacement; monitoring well MW202 was installed to provide additional coverage of the former remedial excavation. Post-remediation groundwater samples were collected from MW201 and MW202 on December 19, 2024, and March 18, 2025, for analysis of BTEX, PHC F1-F4 and VOCs.

Concentrations of BTEX, PHC F1-F4 and VOCs in all groundwater samples from both post-remediation sampling events (conducted 90- and 180-days post-remediation, as required by O. Reg. 153/04) were less than the Table 7 SCS during both sampling events. Further, all parameters were not detected at the laboratory reportable detection limit (RDL).

Based on field observations, soil vapour measurements, groundwater monitoring results and results of the laboratory analyses of confirmatory soil and groundwater samples, Terrapex concludes that PHC groundwater impacts previously present at monitoring well MW22-04 has been successfully remediated as per the objective of the project.

2.0 INTRODUCTION

Terrapex Environmental Ltd. (Terrapex) was retained by Fengate Asset Management (Fengate or the Client) to conduct remedial excavation activities required for a groundwater remediation at the property located at 1047 Richmond Road in Ottawa, Ontario (hereinafter referred to as the "Site"). The Site location is provided in Figure 1.

These activities were undertaken to support the filing of a Record of Site Condition (RSC) per O. Reg. 153/04, *Records of Site Condition Part XV.1 of the A*ct for the Site on the basis of future mixed residential and commercial land use.

2.1 PROJECT OBJECTIVE

The objective of the limited remediation is to reduce petroleum hydrocarbon (PHC) concentrations (specifically PHC F1 to F3 fraction) in the groundwater in the vicinity of monitoring well MW22-04 identified during a previous Phase Two Environmental Site Assessment (ESA). The findings of the Phase Two ESA are documented in Terrapex's report entitled *Phase Two Environmental Site Assessment, 1047 Richmond Road, Ottawa, Ontario*, dated August 14, 2025, of which this report comprises part of Appendix X.

2.2 SITE DESCRIPTION

The Site is located to the north of the intersection of Richmond Road and New Orchard Avenue North in Ottawa, Ontario. The property is irregular in shape and occupies a footprint of approximately 1 ha. The Site is currently vacant. Previously there was a building located centrally on the property that was used as a car dealership and automotive service garage. Further details on the property are provided in the table below.

SUMMARY OF PROJECT AREA INFORMATION

Address:	1047 Richmond Road, Ottawa, Ontario
Property Identification Number:	03970-0109 (LT)
Legal Description:	Part Lots 24 & 25, Concession 1 (OF) Nepean as in N545545, Except Part 1 5R-3653
UTM Coordinates (centre of project area, WGS 84):	18T East: 439031 m North: 5024874 m
Name and Address of Owner:	1047 Richmond Nominee Inc. c/o Fengate Asset Management 2275 Upper Middle Road East, Suite 700 Oakville, Ontario, L6H 0C3
Name and Address of Authorizing Party:	Ms. Corina Sajewski 1047 Richmond Nominee Inc. 2275 Upper Middle Road East, Suite 700 Oakville, Ontario, L6H 0C3
Size of the Site:	0.97 ha
Structures:	None

Occupants (current):	N/A
Other facilities of note:	None

The general Site layout is provided in Figure 2.

2.3 SITE BACKGROUND

Based on the findings of a previously completed Phase One ESA, the general site history has consisted of the following:

- The Site was transferred between individuals since 1804 for assumed agricultural purposes, was occupied by 12 tourist cabins in 1956, and was developed as a car dealership and automotive service garage in approximately 1959. As such, the first developed use was determined to be the tourist cabins (i.e., first buildings) circa 1956.
- The Site was used as a car dealership, with garage, paint booth, and body shop. The car dealership and automotive service garage/body shop operated at the Site until early 2023.
- The demolition of the former building was conducted in November 2023. It is understood that all infrastructure related to the former building including footings and foundations were removed at the time.
- The Client purchased the property in August 2021 with the intention of redeveloping the Site with two residential towers with underground parking garages with commercial at ground level with a portion to be conveyed to the City of Ottawa as dedicated parkland.

Various environmental site assessments (ESAs) have been conducted to date by Golder Associates Ltd. (Golder, now WSP Canada Inc.). The groundwater results at monitoring well MW22-04 had concentrations of PHC F2 to F4 fractions greater than the Table 7 Site Condition Standards (SCS). It was therefore decided to conduct a limited excavation in the vicinity of MW22-04 to remediate the groundwater.

2.4 SCOPE OF WORK

Terrapex' scope of work included:

- directing a remedial excavation to remove the well and surrounding rock;
- logging of the subsurface conditions in the resulting excavation;
- drilling two new monitoring wells in the excavated area (MW201 and MW202) for post-remediation confirmation sampling;
- developing the new wells to remove entrained particulate in the well standpipe, well screen and filter pack, and surrounding formation materials;

- monitoring vapour and groundwater conditions in MW201 and MW202 on two occasions, the first 90 days after the last remedial action and the second 90 days after the first occasion; and,
- sampling of MW201 and MW202 for VOCs, BTEX and PHC F1-F4 on the two occasions listed above.

For this project, Taggart Construction Ltd. (Taggart) of Ottawa, Ontario was retained by the Client to provide excavation, water management and site restoration services.

Laboratory analytical services for this work program were provided by Bureau Veritas Laboratories (BV Labs) at their Mississauga laboratory. At the time of the Terrapex assessment, BV Labs's Mississauga laboratory was accredited by the Standards Council of Canada (SCC) for each of the analyses it was required to undertake as part of this work program.

The project was conducted in accordance with industry accepted protocols and applicable sections of O. Reg. 153/04 (as amended).

Selected photographs of the excavation activities are provided in Appendix I.

2.5 SITE CONDITION STANDARDS

The applicable SCS for the property as determined during the Phase Two ESA are the generic SCS for residential, parkland, and institutional property use for shallow soils in a non-potable groundwater condition that are listed in Table 7 of the April 15, 2011 MECP *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* document (hereafter referenced as the Table 7 SCS).

3.0 PRE-REMEDIATION ACTIVITIES

3.1 PRE-REMEDIATION GROUNDWATER SAMPLING

Prior to the remediation, a limited groundwater sampling event was conducted on June 27, 2024, including monitoring wells MW22-04, MW21-14, and MW22-03. Concentrations of petroleum hydrocarbon-related compounds (PHC F2 to F4 fraction) in groundwater exceeded the Table 7 SCS at monitoring well MW22-04.

3.2 EXCESS SOIL CHARACTERIZATION

In order to characterize the excess soils to be encountered during the remediation, Terrapex relied to the extent possible on soil results from the Phase Two ESA. To meet the minimum sampling requirements per O. Reg. 406/19, Terrapex conducted additional soil sampling on July 12, 2024. This included the drilling of three boreholes (BH101 to BH103) within the remediation area and the sampling of soil at each borehole at regular intervals to bedrock refusal. Selected soil samples were submitted for laboratory analysis of contaminants of potential environmental concern (COPCs).

The results of the excess soil characterization were provided in the reported entitled *Excess Soil Characterization Report, 1047 Richmond Road, Ottawa, Ontario*, dated July 18, 2024.

3.3 MONITORING WELL ABANDONMENT

On July 12, 2024, Terrapex was on-Site to observe and document the well abandonment of selected wells within the proposed excavation area. Terrapex retained Strata Drilling Group (Strata) of Carleton Place, Ontario to abandon the monitoring wells at the Site. Strata is licensed by the MECP to install and abandon monitoring wells in accordance with Regulation 903. Strata abandoned monitoring wells MW21-03, MW21-02, MW22-04, MW22-03, MW22-06, MW21-14 MW22-08 and MW21-22 in accordance with the requirements of R.R.O. 1990, Regulation 903. This included removing the well pipe and sealing the annulus to surface with a bentonite grout.

4.0 REMEDIAL ACTIONS

4.1 SOIL EXCAVATION

The excavation work occurred between August 19 and September 20, 2024. Removal of soil and rock was completed by Taggart under direction of Terrapex staff. The excavation centered around monitoring well MW22-04 and was extended to the northwestern property boundary and the next closest sampling locations with soil and/or groundwater concentrations less than the Table 7 SCS (i.e., MW21-22, MW21-14, MW22-03, MW21-02 and MW21-03). The location of the excavation is shown on Figure 2.

The completed excavation measured approximately 250 m^2 in area to a depth of 9.0 m bgs. The depth of the excavation extended past the bottom of MW22-04 in order to completely remove the screened interval of the well.

4.2 SOIL SEGREGATION AND REMOVAL

Between August 19 and 28, 2024, soil from the remediation area was excavated and loaded directly onto trucks for transfer off-site. On the basis of the excess soil characterization, a total of 2,939.97 metric tonnes (MT) of soil with concentrations of COPCs that met the Table 1 Excess Soil Quality Standards (ESQS) was sent for beneficial re-use for an aggregate site rehabilitation at the Lafarge Canada Inc. (Lafarge) quarry located at 5121 Hawthorne Road, Ottawa, Ontario (RPRA No. N00000071/RS) under notice N00001652.

Soil in the vicinity of MW21-22 that had a concentration of PHC F3 fraction greater than the Table 1 ESQS was segregated. A total of 23.02 MT of soil with concentrations greater than the Table 1 ESQS was sent off-site for disposal to the Waste Connections of Canada (WCC) landfill located at 3354 Navan Road, Ontario, Ontario. The soil disposal was approved by WCC for disposal as non-hazardous waste based on the TCLP and other analytical data.

The basting and bedrock excavation work was conducted between September 3 and Bedrock was encountered in the remedial area at depths ranging from approximately 1.5 to 2.7 m bgs. To progress the excavation, the bedrock was broken into smaller pieces by blasting in two different lifts to reach the target depth of 9.0 m bgs. Based on surveys conducted by Taggart, it was estimated that 1,719.7 m^3 of rock was removed from the Site.

Copies of bills of lading for the disposal are provided in Appendix II.

4.3 GROUNDWATER TREATMENT AND REMOVAL

During the remediation, Taggart had a groundwater treatment system on-Site to treat any water from the excavation to remediate the PHC impacted groundwater. Water from the excavation was pumped into a storage tank for temporary storage prior to treatment and discharge to the City of Ottawa sanitary sewer with a sewer discharge permit.

Based on information provided by Taggart, water treatment and discharge is summarized in the table below.

Date	Volume of Liquid Removed	Comments
September 16, 2024	35,000 L	Water pumped from the excavation, treated and discharged to the sanitary sewer

The self-monitoring report prepared in accordance with the requirements of to the sewer discharge permit is provided in Appendix III.

4.4 SEDIMENT TREATMENT AND REMOVAL

Sediment was not present at the Site, and therefore no sediment treatment or removal was necessary.

4.5 FEDERAL AND PROVINCIAL PERMITS

All soil excavated from the Site was managed in accordance with the requirements of O. Reg. 406/19. Soil with concentrations greater than the Table 1 ESQS was disposed of at a licensed facility (WCC, ECA # A460702). Terrapex obtained an Environmental Activity and Sector Registration (EASR) (Registration No. R-009-8301272276) for water taking for dewatering of work areas for a construction project. No federal permits were required.

4.6 CONTAMINANTS CREATED OR INTRODUCED TO THE PROPERTY

The method of remediation at the Site did not involve the creation or introduction of contaminants to the subsurface of the property.

4.7 BASELINE AND BACKGROUND CONDITIONS

Prior to the remedial excavation, the Site was thoroughly characterized by the Phase Two ESA conducted by others.

Terrapex conducted groundwater monitoring and sampling of selected monitoring wells on June 27, 2024, in order to confirm baseline concentrations of PHC and VOC parameters in groundwater at selected monitoring wells prior to commencing the remedial excavation activities. Monitoring data is shown on Table 1 and pre-remediation groundwater analytical results from selected monitoring wells are shown on Table 5A (PHCs) and Table 5B (VOCs).

4.8 SUBSURFACE CONDITIONS

Stratigraphy encountered at the Site during the remediation activities comprised consisted of asphalt overlying a sand or a silty sand fill. This is consistent with observations during the Phase Two ESA drilling program.

5.0 FREE FLOWING PRODUCT

No free flowing product was observed during or upon completion of the remediation activities.

6.0 CONFIRMATION SAMPLING AND ANALYSIS

6.1 CONFIRMATION SAMPLING ACTIVITIES

6.1.1 Excavation Sampling

No additional soil sampling was conducted as part of the remediation as no soil with concentrations greater than the Table 7 SCS was identified in the vicinity of MW22-04 during the Phase Two ESA. The excavation was extended to the northwestern property boundary and the next closest sampling location with soil and groundwater concentrations less than the Table 7 SCS (i.e., MW21-22, MW21-14, MW22-03, MW21-02 and MW21-03). Terrapex has relied on the results of soil samples collected as part of the Phase Two ESA to represent soil conditions at the extent of the excavation. Soil and bedrock conditions were observed by Terrapex during the excavation activities and no obvious indications of impact in the soil or rock were noted during the remedial excavation.

As shown in Table 2A through 2C, concentrations of metals and inorganics, BTEX and PHC F1-F4, and VOCs in the soil samples collected from the limits of the excavation were less than the Table 7 SCS. The confirmatory soil analytical results are illustrated in plan and cross-section on Figures 4A (metals and inorganics), 4B (BTEX and PHCs) and 4C (VOCs). Laboratory certificates of analysis are provided in Appendix IV.

6.1.2 Stockpile Sampling

No stockpile samples were collected as part of the work program.

6.1.3 Post-Remediation Sampling

On December 2, 2024, two groundwater wells (MW201 and MW202) were installed as part of the confirmation sampling activities. Both of the monitoring wells were installed within the excavated area. The wells were installed by Strata, using a Massenza MI3 drill rig equipped with standard direct push rod with soil sampler and hollow stem augers. Monitoring well MW201 was installed at the approximate location of MW22-04 as a replacement; monitoring well MW202 was installed to provide additional coverage of the former remedial excavation.

Both of the boreholes were augered with hollow stem augers to bedrock refusal within the former excavation to approximately 9.0 m bgs. The monitoring wells were constructed of 50 mm inside diameter schedule 40, PVC well pipe and #10 slot screen measuring 3.0 m in length. The annulus of each well was backfilled with washed silica sand to a depth of approximately 0.3 m above the screened interval. A bentonite seal was placed above the sand pack to prevent infiltration of surface water into the monitoring well. Flush-mount protective casings with bolt-down lids were cemented in place over the newly installed monitoring wells. Well installation details are provided on the borehole logs in Appendix V, and on Table 1.

On December 9, 2024, the new monitoring wells were developed using dedicated low-density polyethylene tubing. A total of 90 L of water was removed from each well. Terrapex also completed a survey of the geodetic elevations of the top of the pipe and ground surface for the new monitoring wells. The survey was completed using a Trimble Catalyst DA2 Global Navigation Satellite System (GNSS) Receiver Navigation Satellite System (GNSS) Receiver was used to establish geodetic elevations with reference to NAD 1983.

Soil Sampling

No soil samples were collected during the borehole drilling as both were drilled through the gravel backfill in the former excavation.

Groundwater Sampling

Groundwater sampling was conducted on December 19, 2024, and March 18, 2025 (representing 90- and 180-days post-remediation as required by O. Reg. 153/04). Prior to sampling, groundwater monitoring activities included the measurement of combustible vapours within the headspace of the well immediately upon removal of the well standpipe cap, using an RKI Eagle™ Hydrocarbon Surveyor calibrated to nBhexane and operated in “methane elimination” mode. The depth to water in the well was measured using an electronic interface probe. The presence, and apparent thickness (if applicable), of any LNAPL in the well was also assessed using the interface probe.

Samples were collected using “low-flow” methodology using a peristaltic pump and dedicated down-hole sample tubing, as per Terrapex's SOP. Low flow sampling was conducted in order to minimize drawdown of the water table. Flow rates during purging and sampling were generally less than 0.20 L/min.

Samples for analyses were placed in a cooler with ice packs and delivered under signed chain of custody to the project laboratory for analysis. QA/QC samples included one blind duplicate during each sampling event, and trip blank and/or trip spike sample per submission.

Detailed well installation procedures and measures to minimize potential cross contamination or other potential bias are described in Terrapex's SOPs. There were no deviations from the Standard Operating Procedures in installation of the monitoring wells. The objective of the remediation was to remediate PHC impacts in the groundwater at MW22-04. This was done by removing the surrounding bedrock across the screen interval of the monitoring well and pumping and treating water from the excavation to remediate the groundwater.

6.1.4 Groundwater Samples

Post-remediation groundwater samples were collected from MW201 and MW202 on December 19, 2024, and March 18, 2025 for analysis of BTEX, PHC F1-F4 and VOCs.

As shown on Table 4A and 4B, concentrations of BTEX, PHC F1-F4 and VOCs in all groundwater samples from both sampling events were less than the Table 7 SCS during both sampling events. Further, all parameters were not detected at the laboratory reportable detection limit (RDL).

The confirmatory groundwater analytical results from the wells installed in the former excavation illustrating the absence of impacts, are shown on Figure 6A (BTEX and PHC F1-F4) and 6B (VOCs). Laboratory certificates of analysis are provided in Appendix IV.

6.1.5 QA/QC Samples

As shown on the various tables, the field duplicate samples generally showed good correlation. QA/QC results. The QA/QC results for the field programs were considered acceptable.

7.0 SOIL BROUGHT TO THE PHASE TWO PROPERTY

7.1 SITE RESTORATION AND BACKFILLING

Following completing the remedial excavation activities, the excavation was backfilled using imported gravel fill. The gravel fill was new material imported from Lafarge, located 998 Moodie Drive in Ottawa, Ontario. Based on information provided by Taggart, a total of 3,462.95 MT of select subgrade material (SSM) gravel chips, and 1,795.24 MT of 0-5 mm limestone screening material were imported between October 1 and 7, 2024.

7.2 IMPORTED FILL SAMPLING

No sampling of the imported fill was conducted as all material was considered to be gravel.

8.0 CONCLUSIONS

Based on field observations, soil vapour measurements, groundwater monitoring results and results of the laboratory analyses of confirmatory soil and groundwater samples, Terrapex concludes that PHC groundwater impacts previously present at monitoring well MW22-04 has been successfully remediated as per the objective of the project.

9.0 CLOSURE

The reported information described herein was conducted in accordance with the terms of reference for this project, agreed upon by Fengate Asset Management and Terrapex Environmental Ltd.

The remedial excavation work program completed at the property located at 1047 Richmond Road, Ottawa, Ontario was conducted in accordance with O. Reg. 153/04 by, or under the supervision of a qualified person as required by the regulation.

Terrapex Environmental Ltd. has exercised due care, diligence, and judgement in the performance of this remedial work program; however, studies of this nature have inherent limitations. The reported information is believed to provide a reasonable representation of the general environmental conditions at the site, at the time the work was conducted. However, the data was collected at discrete locations and conditions may vary at other locations or with the passage of time. The remedial program was also limited to a study of those chemical parameters specifically addressed in this report.

This report has been prepared for the sole use of Fengate Asset Management. Terrapex Environmental Ltd. accepts no liability for claims arising from the use of this report, or from actions taken or decisions made as a result of this report, by parties other than Fengate Asset Management.

Sincerely,
TERRAPEX ENVIRONMENTAL LTD.

Eric Boonstra, BSc.
Project Scientist

Keith Brown, PEng.
Senior Project Manager

FIGURES

LEGEND

SITE BOUNDARY

DATA SOURCE: ESRI
MAP PROJECTION: NAD 1983 UTM Zone 18N

CLIENT: FENGATE

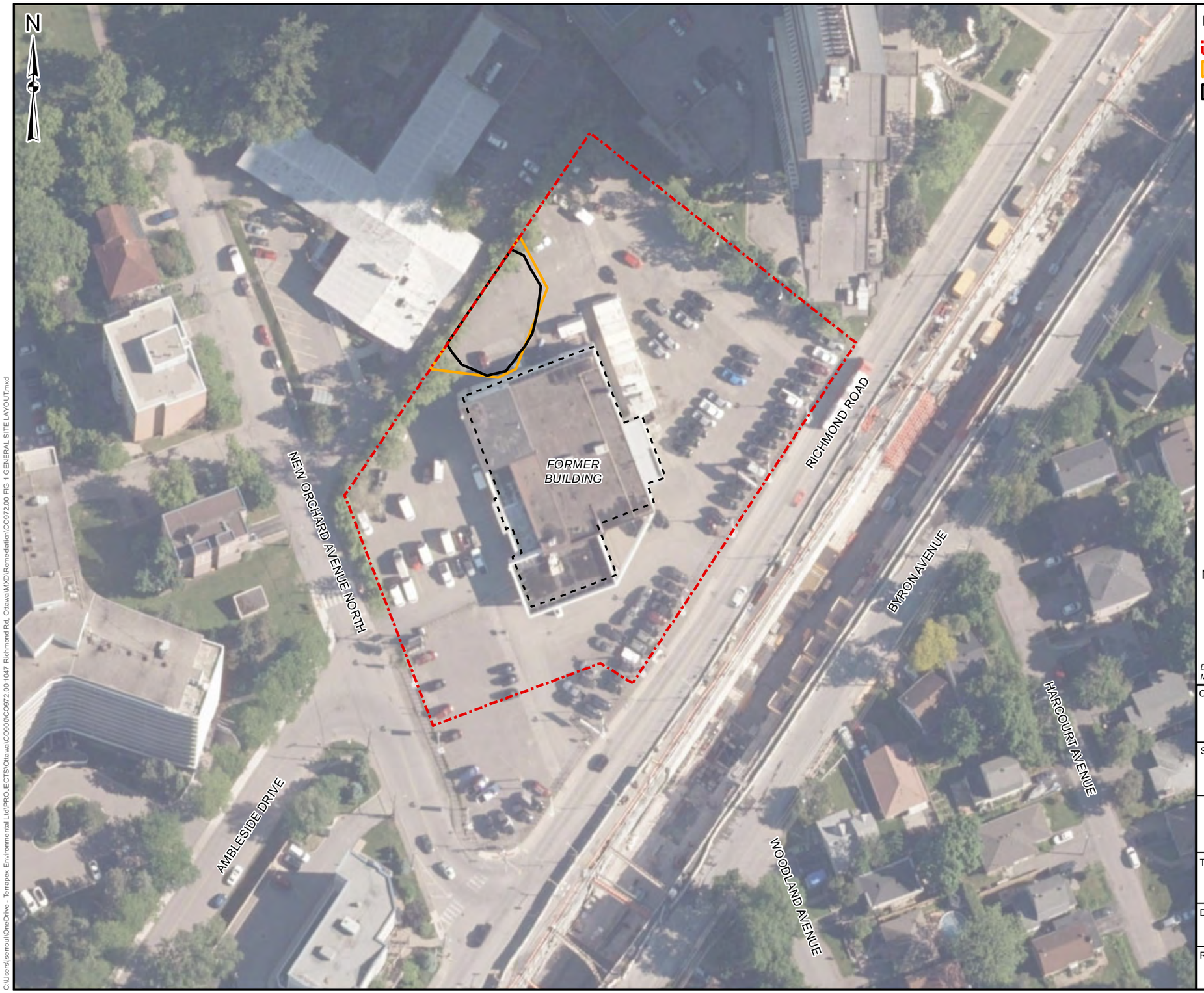
SITE LOCATION: 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE: **SITE LOCATION**

DRAWN BY: JS	PROJECT NO.: CO972.00	CHECKED BY: KWB
REVISION: 00	DATE: JUNE 2024	**FIGURE: 1**

jserroul C:\Users\jserroul\OneDrive - Terrapex Environmental Ltd\PROJECTS\Ottawa\CO900\CO972.00 1047 Richmond Rd, Ottawa\MXD\Phase ONE Update\CO972.00 FIG 1 SITE LOCATION.mxd



LEGEND

- SITE BOUNDARY
- EXTENT OF SOIL EXCAVATION
- EXTENT OF BEDROCK EXCAVATION

NOTE: BUILDING DEMOLISHED IN NOVEMBER 2023

0 10 20 30 40
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION: 1047 RICHMOND ROAD, OTTAWA, ONTARIO

TERRAPEX

TITLE: **GENERAL SITE LAYOUT**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CO972.00	KWB
REVISION: 00	DATE: FEBRUARY 2025	FIGURE: **2**

C:\Users\jsenroul\OneDrive - Terrapex Environmental Ltd\PROJECTS\Ottawa\CO900\CO972.00 1047 Richmond Rd, Ottawa\MXD\Remediation\CO972.00 FIG 1 GENERAL SITE LAYOUT.mxd

N

A
B
C
D
E

MW21-21
MW21-08
BH101
MW21-22
MW22-02
MW21-15
MW21-14
BH102
MW22-06
MW22-08
MW22-03
BH103
MW201
MW22-07
MW22-04
MW21-04
MW21-04A
MW202
MW21-02
MW21-05
MW21-03
FORMER BUILDING
BH21-19

LEGEND

- SITE BOUNDARY
- EXTENT OF REMEDIAL EXCAVATION
- CROSS SECTION
- BOREHOLE (TERRAPEX)
- MONITORING WELL (TERRAPEX)
- MONITORING WELL (OTHERS)
- DECOMMISSIONED MONITORING WELL (OTHERS)

NOTE: BUILDING DEMOLISHED IN NOVEMBER 2023

0 2 4 6 8 10
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
REMEDIATION EXTENTS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/SW	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **3**

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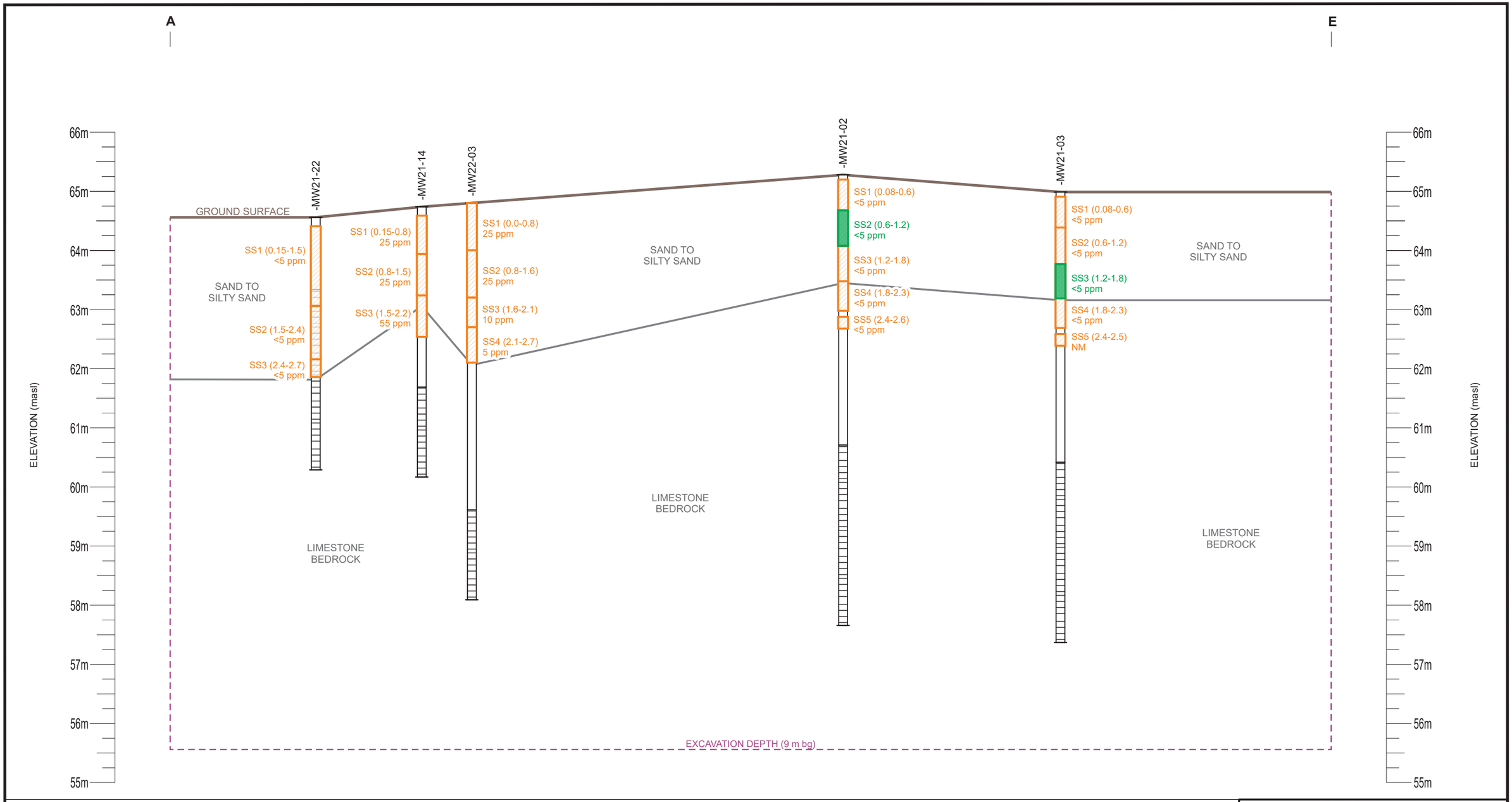


LEGEND

STRATIGRAPHIC UNIT

-MW101
- MONITORING WELL
- Sample Name (depth (m))
vapour reading
- SCREENED ZONE

ANALYSIS INFORMATION

Less than or equal to Table 7 SCS

HORIZONTAL SCALE:

0 2.5 5
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. DRAWING IS FOR CONCEPTUAL PURPOSES AND IS NOT TO BE USED FOR DESIGN

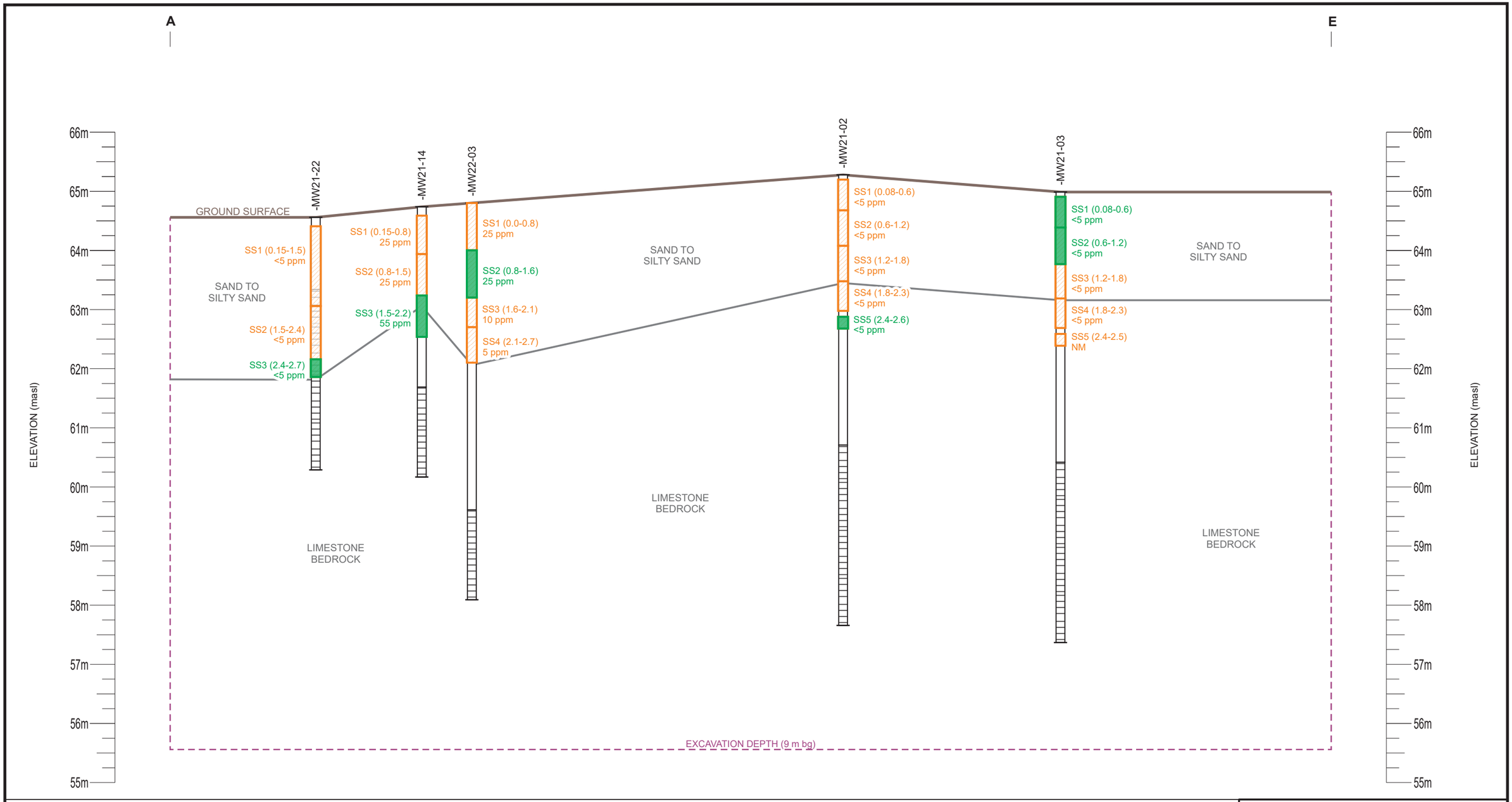
CLIENT: FENGATE

SITE LOCATION: 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE: **SOIL RESULTS - METALS AND INORGANICS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO972.00	KWB
REVISION:	DATE:	FIGURE:
00	JULY 2024	**4A**



LEGEND

STRATIGRAPHIC UNIT

-MW101
- MONITORING WELL
- Sample Name (depth (m))
vapour reading
- SCREENED ZONE

ANALYSIS INFORMATION

Less than or equal to Table 7 SCS

HORIZONTAL SCALE:

0 2.5 5
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. DRAWING IS FOR CONCEPTUAL PURPOSES AND IS NOT TO BE USED FOR DESIGN

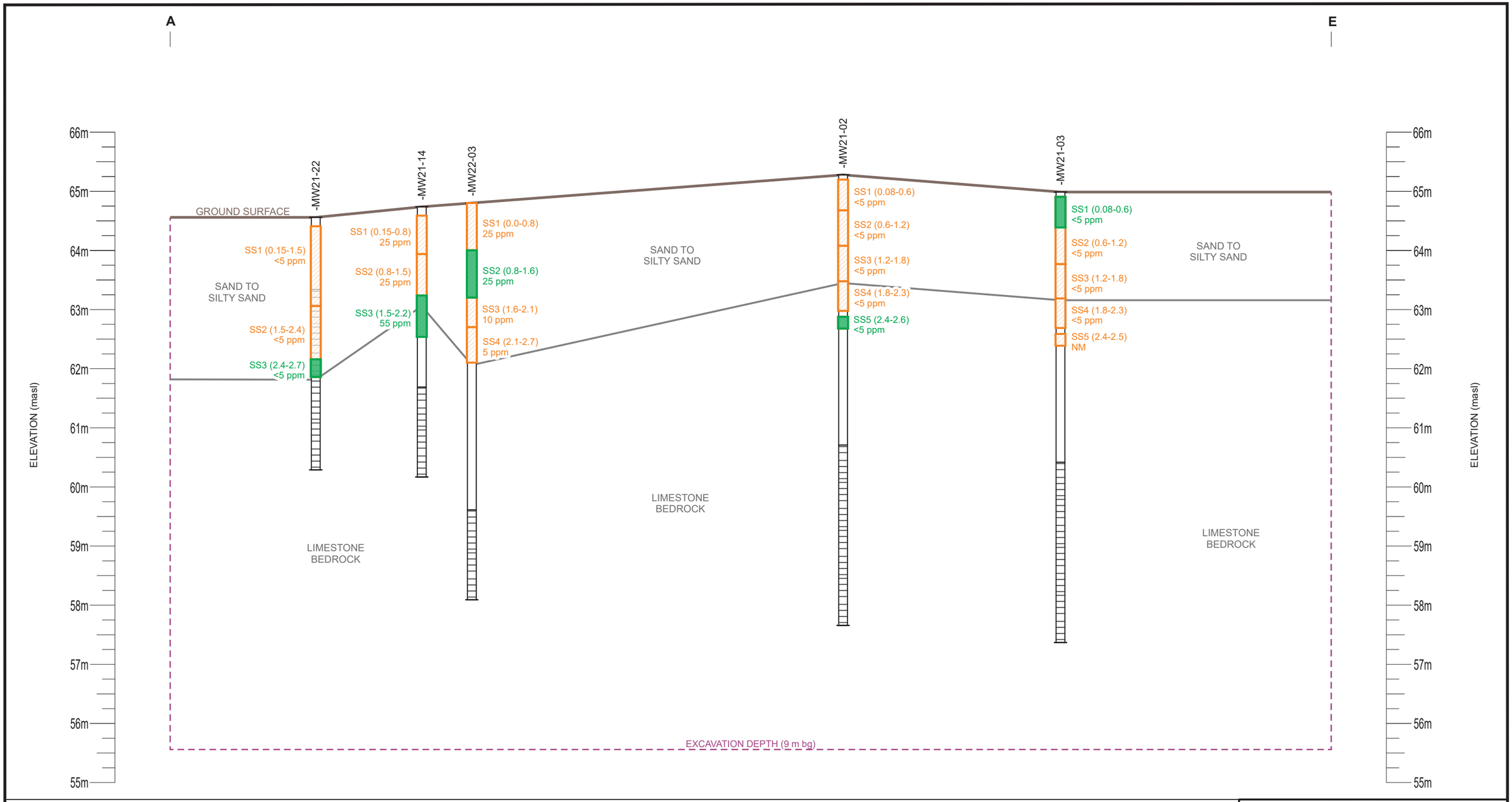
CLIENT: FENGATE

SITE LOCATION: 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE: **SOIL RESULTS - BTEX AND PHCs**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO972.00	KWB
REVISION:	DATE:	FIGURE:
00	JULY 2024	**4B**



LEGEND

STRATIGRAPHIC UNIT

-MW101
- MONITORING WELL
- Sample Name (depth (m))
vapour reading
- SCREENED ZONE

ANALYSIS INFORMATION

Less than or equal to Table 7 SCS

HORIZONTAL SCALE:

0 2.5 5
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. DRAWING IS FOR CONCEPTUAL PURPOSES AND IS NOT TO BE USED FOR DESIGN

CLIENT: FENGATE

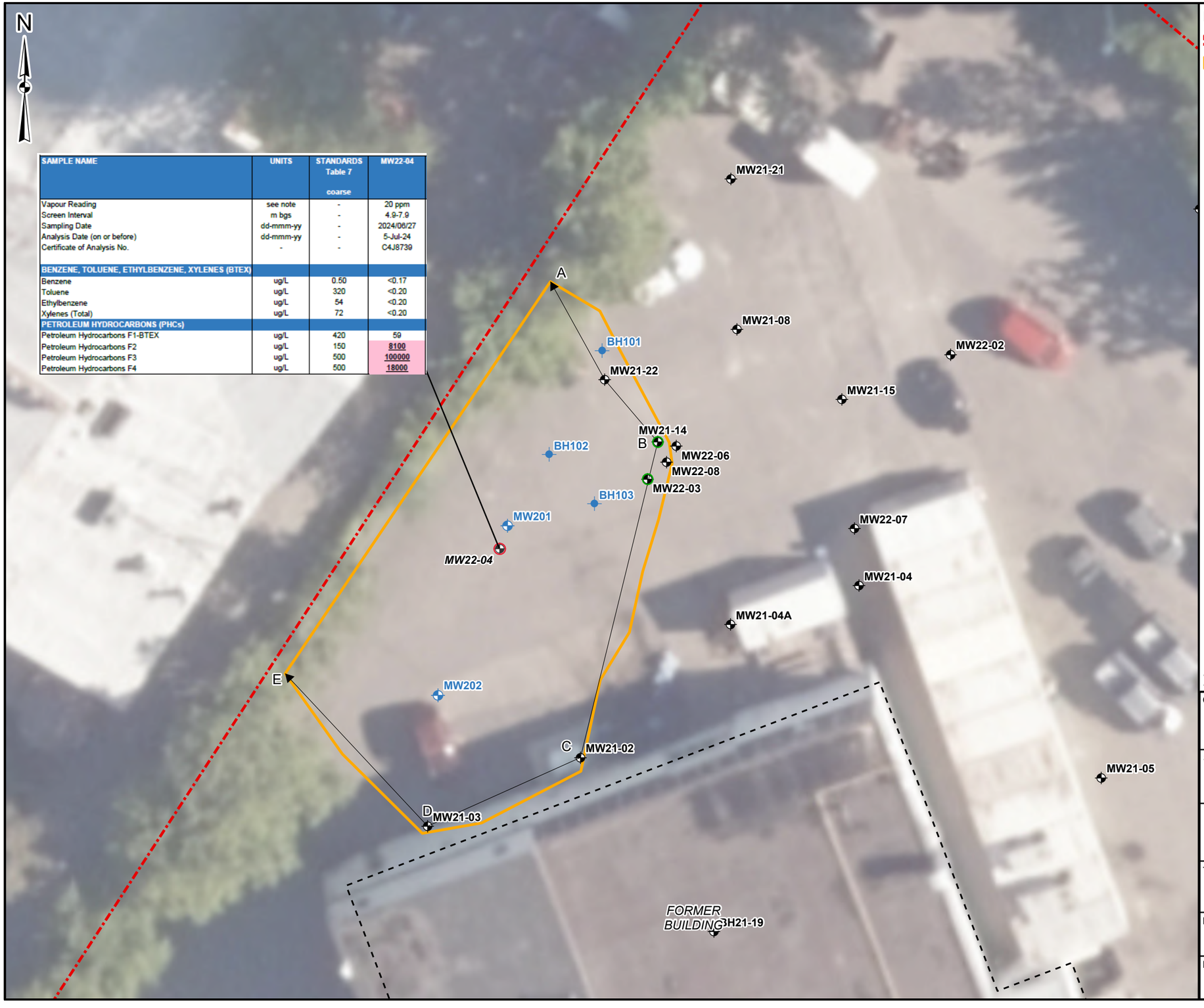
SITE LOCATION: 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE: **SOIL RESULTS - VOCs**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO972.00	KWB
REVISION:	DATE:	FIGURE:
00	JULY 2024	**4C**

SAMPLE NAME	UNITS	STANDARDS Table 7 coarse	MW22-04
Vapour Reading	see note	-	20 ppm
Screen Interval	m bgs	-	4.9-7.9
Sampling Date	dd-mmm-yy	-	2024/06/27
Analysis Date (on or before)	dd-mmm-yy	-	5-Jul-24
Certificate of Analysis No.	-	-	C4J8739
BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (BTEX)			
Benzene	ug/L	0.50	<0.17
Toluene	ug/L	320	<0.20
Ethylbenzene	ug/L	54	<0.20
Xylenes (Total)	ug/L	72	<0.20
PETROLEUM HYDROCARBONS (PHCs)			
Petroleum Hydrocarbons F1-BTEX	ug/L	420	59
Petroleum Hydrocarbons F2	ug/L	150	8100
Petroleum Hydrocarbons F3	ug/L	500	100000
Petroleum Hydrocarbons F4	ug/L	500	18000



LEGEND

- SITE BOUNDARY
- EXTENT OF REMEDIAL EXCAVATION
- CROSS SECTION
- BOREHOLE (TERRAPEX)
- MONITORING WELL (TERRAPEX)
- MONITORING WELL (OTHERS)
- DECOMMISSIONED MONITORING WELL (OTHERS)

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS
- GREATER THAN TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTE: BUILDING DEMOLISHED IN NOVEMBER 2023

0 2 4 6 8 10
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION: 1047 RICHMOND ROAD OTTAWA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER RESULTS - PRE-REMEDIATION - PHCs**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/SW	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **5A**

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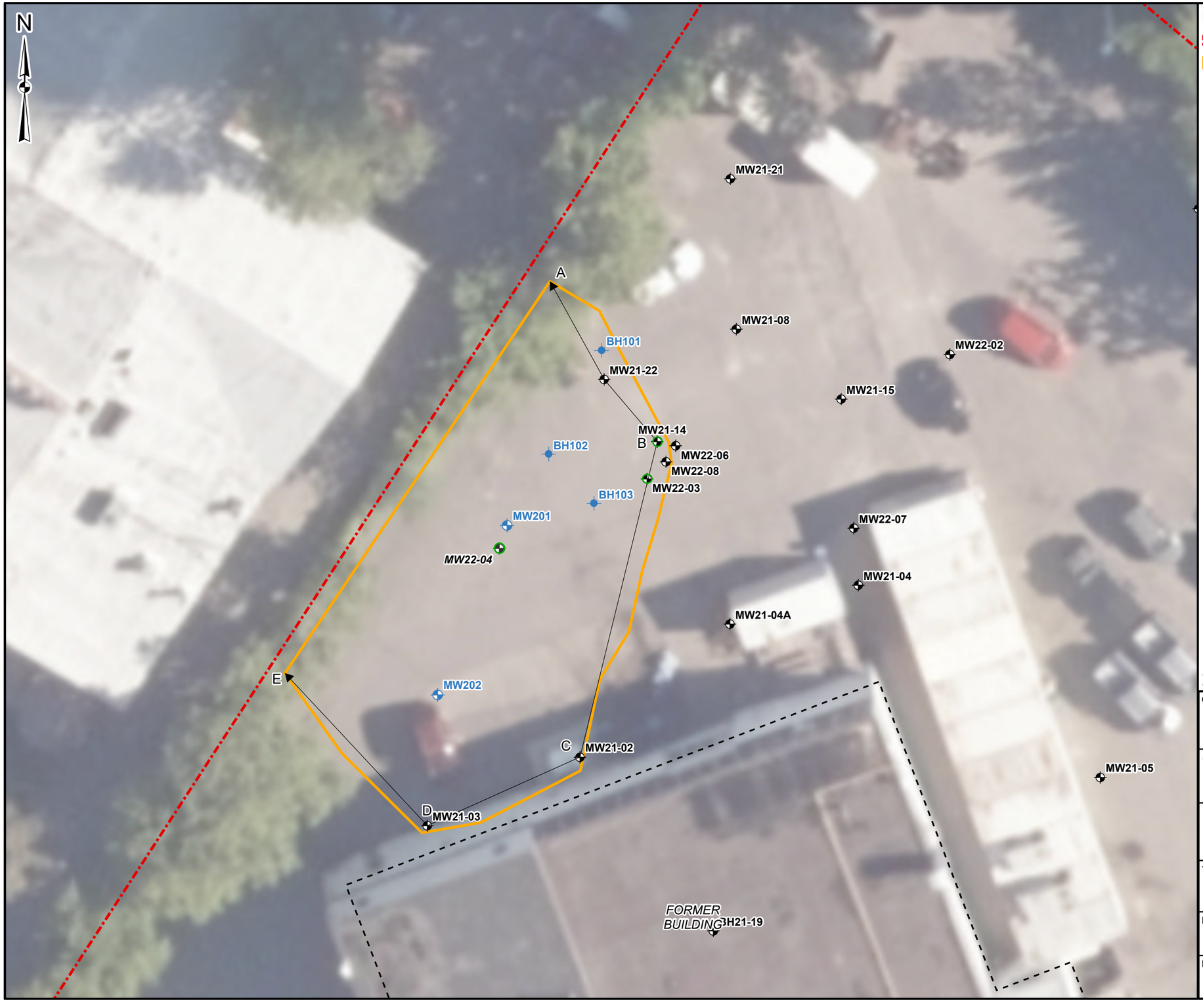

LEGEND

- SITE BOUNDARY
- EXTENT OF REMEDIAL EXCAVATION
- CROSS SECTION
- BOREHOLE (TERRAPEX)
- MONITORING WELL (TERRAPEX)
- MONITORING WELL (OTHERS)
- DECOMMISSIONED MONITORING WELL (OTHERS)

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS
- GREATER THAN TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH COARSE TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTE: BUILDING DEMOLISHED IN NOVEMBER 2023

0 2 4 6 8 10
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER RESULTS - PRE-REMEDIATION - VOCs**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/SW	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **5B**

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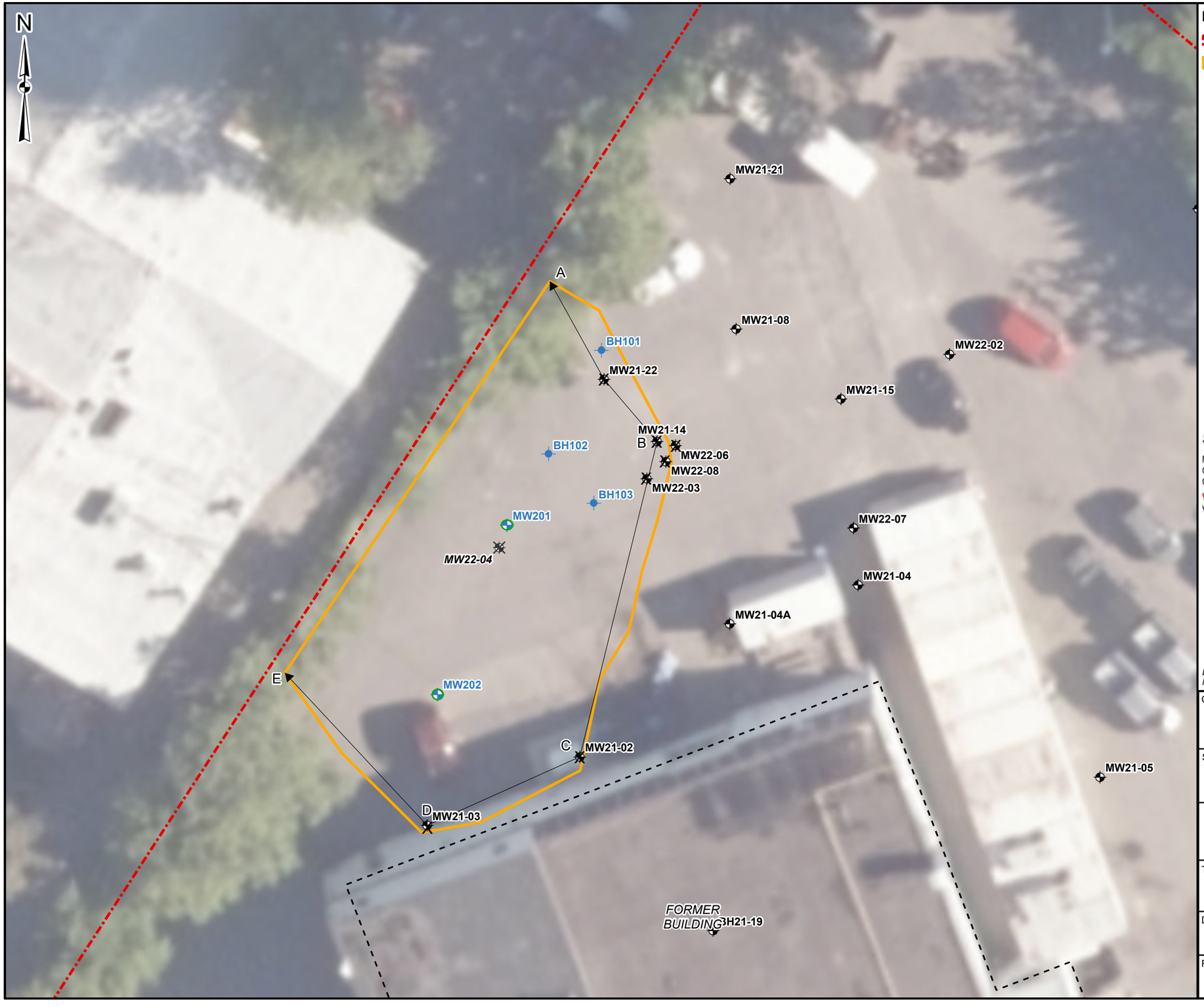

LEGEND

- SITE BOUNDARY
- EXTENT OF REMEDIAL EXCAVATION
- CROSS SECTION
- BOREHOLE (TERRAPEX)
- MONITORING WELL (TERRAPEX)
- MONITORING WELL (OTHERS)
- DECOMMISSIONED MONITORING WELL

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH COARSE TEXTURED SOIL

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTE: BUILDING DEMOLISHED IN NOVEMBER 2023

0 2 4 6 8 10
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER RESULTS - POST-REMEDIATION - PHCs**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/SW	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **6A**

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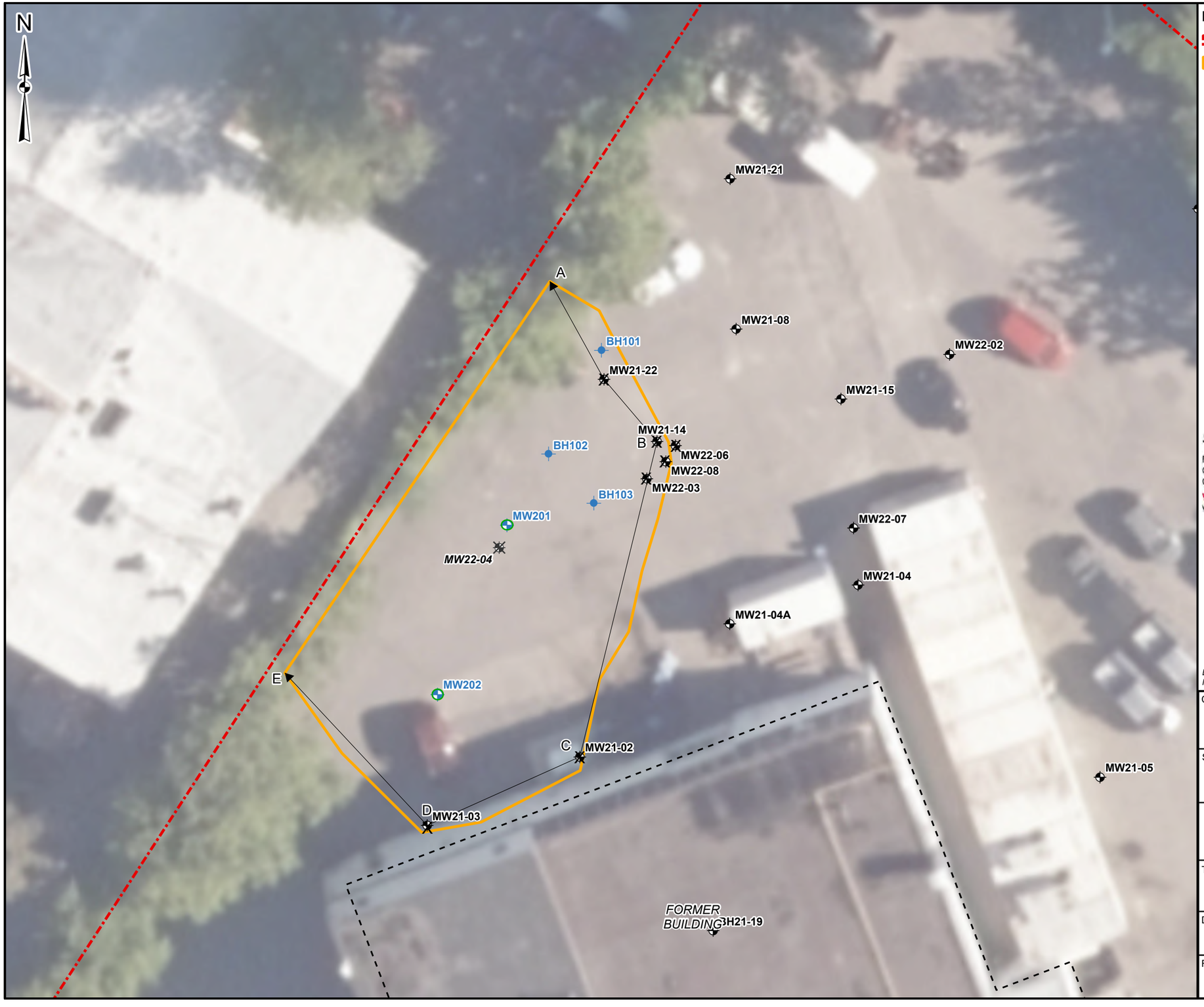

LEGEND

- SITE BOUNDARY
- EXTENT OF REMEDIAL EXCAVATION
- CROSS SECTION
- BOREHOLE (TERRAPEX)
- MONITORING WELL (TERRAPEX)
- MONITORING WELL (OTHERS)
- DECOMMISSIONED MONITORING WELL

ANALYSIS INFORMATION

- LESS THAN OR EQUAL TO TABLE 7 SCS

STANDARD INFORMATION

MECP TABLE 7: GENERIC SCS FOR SHALLOW SOILS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH COARSE TEXTURED SOIL

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTE: BUILDING DEMOLISHED IN NOVEMBER 2023

0 2 4 6 8 10
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER RESULTS - POST-REMEDIATION - VOCs**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/SW	CO972.00	KWB
REVISION: 00	DATE: JULY 2025	FIGURE: **6B**

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TABLES

TABLE 1: GROUNDWATER MONITORING DATA
1047 RICHMOND ROAD, OTTAWA, ON

WELL ID / CONSULTANT		WELL CONSTRUCTION				WELL MONITORING					
		GROUND ELEVATION[1] (m)	T.O.P. ELEVATION[2] (m)	SCREEN LENGTH (m)	BOTTOM OF SCREEN[3] (m)	DATE	CV[4]	DEPTH TO WATER FROM T.O.P. (m)	DEPTH TO WATER FROM GROUND (m)	GROUNDWATER ELEVATION[5] (m)	LNAPL THICKNESS[6] (m)
BH21-1	Terrapex	65.64	65.59	3.05	7.62	27-Jun-24	<5 ppm	4.18	4.23	61.41	None
BH21-2	Terrapex	65.28	65.31	3.05	7.01	27-Jun-24	<5 ppm	2.89	2.86	62.42	None
BH21-3	Terrapex	64.99	65.04	3.05	7.62	27-Jun-24	<5 ppm	0.85	0.80	64.19	None
BH21-4	Terrapex	65.08	64.96	3.05	7.62	27-Jun-24	<5 ppm	2.06	2.18	62.90	None
BH21-11	Terrapex	65.11	65.02	3.05	5.54	27-Jun-24	<5 ppm	2.10	2.19	62.92	None
BH21-14	Terrapex	64.74	64.72	1.52	4.57	27-Jun-24	55 ppm	1.80	1.82	62.92	None
BH21-15S	Terrapex	64.74	64.73	1.52	3.05	27-Jun-24	<5 ppm	1.83	1.84	62.90	None
BH21-15D	Terrapex	64.74	64.72	3.05	7.01	27-Jun-24	<5 ppm	2.81	2.83	61.91	None
BH21-20	Terrapex	65.93	65.85	1.88	5.18	27-Jun-24	<5 ppm	2.14	2.22	63.71	None
BH21-21	Terrapex	64.61	64.52	3.28	4.92	27-Jun-24	<5 ppm	1.67	1.76	62.85	None
BH21-22	Terrapex	64.56	64.41	3.28	4.59	27-Jun-24	80 ppm	1.74	1.89	62.67	None
BH22-02	Terrapex	64.71	64.69	3.05	7.46	27-Jun-24	<5 ppm	2.11	2.13	62.58	None
BH22-03	Terrapex	64.80	64.74	1.52	6.70	27-Jun-24	<5 ppm	6.71	6.77	58.03	None
BH22-04	Terrapex	64.66	64.52	3.05	7.92	27-Jun-24	20 ppm	6.49	6.63	58.03	Sheen
BH22-05	Terrapex	65.84	65.81	3.05	10.66	27-Jun-24	<5 ppm	7.49	7.52	58.32	None
BH22-06	Terrapex	64.76	64.67	1.00	7.00	27-Jun-24	<5 ppm	6.19	6.28	58.48	None
BH22-07	Terrapex	65.04	64.99	1.00	7.01	27-Jun-24	<5 ppm	6.64	6.69	58.35	None
BH22-08	Terrapex	64.79	64.70	1.00	10.00	27-Jun-24	20 ppm	7.52	7.62	57.18	None
BH22-10S	Terrapex	64.78	64.68	3.05	7.62	27-Jun-24	<5 ppm	6.55	6.64	58.13	None
BH22-10D	Terrapex	64.81	64.66	1.00	10.66	27-Jun-24	<5 ppm	7.49	7.64	57.17	None

TABLE 2A: SUMMARY OF SOIL ANALYTICAL RESULTS - METALS, HFMs AND OTHER REGULATED PARAMETERS
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME	UNITS	STANDARDS Table 7 R/P/I coarse	21-2 SA2	21-2 SA5	21-3 SA1	21-3 SA2	21-3 SA3	21-3 DUP-1 Duplicate of 21-3 SA3
Vapour Reading	see note	-	0 ppm	0 ppm	0 ppm	0 ppm	0 ppm	0 ppm
Sample Depth	m bgs	-	0.6-1.2	2.4-2.7	0.08-0.6	0.6-1.2	1.2-1.8	1.2-1.8
Sampling Date	dd-mmm-yy	-	21-Sep-21	21-Sep-21	22-Sep-21	22-Sep-21	22-Sep-21	22-Sep-21
Analysis Date (on or before)	dd-mmm-yy	-	1-Oct-21	12-Oct-21	12-Oct-21	12-Oct-21	1-Oct-21	1-Oct-21
Certificate of Analysis No.	-	-	C1S1463	C1S1463	C1S1463	C1S1463	C1S1463	C1S1463
METALS								
Barium	ug/g	390	21	-	-	-	99	110
Beryllium	ug/g	4.0	< 0.20	-	-	-	0.52	0.72
Boron (Total)	ug/g	120	< 5.0	-	-	-	7.8	12
Cadmium	ug/g	1.2	< 0.10	-	-	-	0.45	0.37
Chromium Total	ug/g	160	8.3	-	-	-	27	33
Cobalt	ug/g	22	3.1	-	-	-	13	14
Copper	ug/g	140	4.6	-	-	-	18	60
Lead	ug/g	120	2.0	-	-	-	23	48
Molybdenum	ug/g	6.9	< 0.50	-	-	-	< 0.50	0.52
Nickel	ug/g	100	5.5	-	-	-	25	34
Silver	ug/g	20	< 0.20	-	-	-	< 0.20	< 0.20
Thallium	ug/g	1.0	< 0.050	-	-	-	0.14	0.21
Uranium	ug/g	23	0.45	-	-	-	0.49	0.64
Vanadium	ug/g	86	20	-	-	-	26	29
Zinc	ug/g	340	16	-	-	-	54	89
HYDRIDE-FORMING METALS								
Antimony	ug/g	7.5	< 0.20	-	-	-	0.33	0.46
Arsenic	ug/g	18	< 1.0	-	-	-	1.7	2.8
Selenium	ug/g	2.4	< 0.50	-	-	-	< 0.50	< 0.50
OTHER REGULATED PARAMETERS (ORPs)								
Boron (Hot Water Soluble)[1]	ug/g	1.5	0.15	-	-	-	0.87	0.67
Cyanide (CN-)	ug/g	0.051	< 0.01	-	-	-	< 0.01	< 0.01
Chromium VI	ug/g	8.0	< 0.18	-	-	-	< 0.18	< 0.18
Mercury	ug/g	0.27	< 0.050	-	-	-	0.063	0.077
Methyl Mercury[2]	ug/g	0.0084	-	-	-	-	-	-
pH	pH Units	5-9* or 5-11**	6.97	-	-	-	7.54	7.43
Electrical Conductivity	mS/cm	0.70	0.26	-	-	-	0.34	0.41
Sodium Adsorption Ratio	-	5.0	0.88	4.1	0.29	**5.3**	**6.1**	**9.6**

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition Residential/Parkland/Institutional Property-Use, Coarse-Textured Soil

-	Parameter not analyzed
m bgs	meters below ground surface
ppm	parts per million by volume
% LEL	percent of the lower explosive limit
NV	No Value; no standard established
NA	Not Applicable; no standard established because a standard is not required
*	Surface soil (<1.5m bgs) acceptable pH range
**	Subsurface soil (>1.5m bgs) acceptable pH range
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard
[1]	Hot water soluble boron applies to surface soils (<1.5 m bg).
[2]	Analysis for methyl mercury only applies when mercury standard is exceeded

TERRAPEX

TABLE 2B: SUMMARY OF SOIL ANALYTICAL RESULTS - BTEX AND PHCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME	UNITS	STANDARDS Table 7 R/P/I coarse	21-2 SA5	21-3 SA1	21-3 SA2	21-14 SA3	BH21-22 SA3	BH22-03 SA2
Vapour Reading	see note	-	0 ppm	0 ppm	0 ppm	55 ppm	0 ppm	25 ppm
Sample Depth	m bgs	-	2.4-2.7	0.08-0.6	0.6-1.2	1.5-2.1	2.4-2.7	0.8-1.5
Sampling Date	dd-mmm-yy	-	21-Sep-21	22-Sep-21	22-Sep-21	12-Nov-21	21-Dec-21	10-May-22
Analysis Date (on or before)	dd-mmm-yy	-	1-Oct-21	1-Oct-21	1-Oct-21	17-Nov-21	28-Dec-21	23-May-22
Certificate of Analysis No.	-	-	C1S1463	C1S1463	C1S1463	C1X6358	21T848962	22Z895974
BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (BTEX)								
Benzene	ug/g	0.21	< 0.0060	< 0.0060	< 0.020	< 0.0060	< 0.02	< 0.02
Toluene	ug/g	2.3	< 0.020	0.039	< 0.020	< 0.020	< 0.05	< 0.05
Ethylbenzene	ug/g	2.0	< 0.010	< 0.010	< 0.020	< 0.010	< 0.05	< 0.05
m-Xylene & p-Xylene	ug/g	NA	< 0.020	0.045	< 0.040	< 0.020	< 0.05	< 0.05
o-Xylene	ug/g	NA	< 0.020	< 0.020	< 0.020	< 0.020	< 0.05	< 0.05
Xylenes (Total)	ug/g	3.1	< 0.020	0.045	< 0.040	< 0.020	< 0.05	< 0.05
PETROLEUM HYDROCARBONS (PHCs)								
Petroleum Hydrocarbons F1-BTEX	ug/g	55	< 10	-	< 10	< 10	6	< 5
Petroleum Hydrocarbons F2	ug/g	98	< 10	-	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons F3	ug/g	300	< 50	-	< 50	< 50	260	< 50
Petroleum Hydrocarbons F4	ug/g	2,800	< 50	-	< 50	< 50	< 50	< 50

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
ppm	parts per million by volume
% LEL	percent of the lower explosive limit
NV	No Value; no standard established
NA	Not Applicable; no standard established because a standard is not required
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 2C: SUMMARY OF SOIL ANALYTICAL RESULTS - VOCs
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME	UNITS	STANDARDS Table 7 R/P/I coarse	21-2 SA5	21-3 SA1	21-14 SA3	BH21-22 SA3	BH22-03 SA2
Vapour Reading	see note	-	0 ppm	0 ppm	55 ppm	0 ppm	25 ppm
Sample Depth	m bgs	-	2.4-2.7	0.08-0.6	1.5-2.1	2.4-2.7	0.8-1.5
Sampling Date	dd-mmm-yy	-	21-Sep-21	22-Sep-21	12-Nov-21	21-Dec-21	10-May-22
Analysis Date (on or before)	dd-mmm-yy	-	1-Oct-21	1-Oct-21	17-Nov-21	28-Dec-21	23-May-22
Certificate of Analysis No.	-	-	C1S1463	C1S1463	C1X6358	21T848962	22Z895974
VOLATILE ORGANIC COMPOUNDS (VOCs)							
Acetone	ug/g	16	< 0.49	< 0.49	< 0.49	< 0.50	< 0.50
Bromodichloromethane	ug/g	13	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Bromoform	ug/g	0.27	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Bromomethane	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Carbon Tetrachloride	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Chlorobenzene	ug/g	2.4	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Chloroform	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.04	< 0.04
Dibromochloromethane	ug/g	9.4	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Dichlorobenzene, 1,2-	ug/g	3.4	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Dichlorobenzene, 1,3-	ug/g	4.8	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Dichlorobenzene, 1,4-	ug/g	0.083	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Dichlorodifluoromethane	ug/g	16	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Dichloroethane, 1,1-	ug/g	3.5	< 0.040	< 0.040	< 0.040	< 0.02	< 0.02
Dichloroethane, 1,2-	ug/g	0.050	< 0.049	< 0.049	< 0.049	< 0.03	< 0.03
Dichloroethylene, 1,1-	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Dichloroethylene, 1,2-cis-	ug/g	3.4	< 0.040	< 0.040	< 0.040	< 0.02	< 0.02
Dichloroethylene, 1,2-trans-	ug/g	0.084	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Dichloropropane, 1,2-	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.03	< 0.03
Dichloropropene,1,3-cis	ug/g	0.050	< 0.030	< 0.030	< 0.030	-	-
Dichloropropene,1,3-trans	ug/g	0.050	< 0.040	< 0.040	< 0.040	-	-
Dichloropropene,1,3-	ug/g	0.050	< 0.050	< 0.050	< 0.050	< 0.04	< 0.05
Ethylene dibromide	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.04	< 0.04
Hexane (n)	ug/g	2.8	< 0.040	0.19	< 0.040	< 0.05	< 0.05
Methyl Ethyl Ketone	ug/g	16	< 0.40	< 0.40	< 0.40	< 0.50	< 0.50
Methyl Isobutyl Ketone	ug/g	1.7	< 0.40	< 0.40	< 0.40	< 0.50	< 0.50
Methyl tert-Butyl Ether (MTBE)	ug/g	0.75	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Methylene Chloride	ug/g	0.10	< 0.049	< 0.049	< 0.049	< 0.05	< 0.05
Styrene	ug/g	0.70	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Tetrachloroethane, 1,1,1,2-	ug/g	0.058	< 0.040	< 0.040	< 0.040	< 0.04	< 0.04
Tetrachloroethane, 1,1,2,2-	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Tetrachloroethylene	ug/g	0.28	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Trichloroethane, 1,1,1-	ug/g	0.38	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Trichloroethane, 1,1,2-	ug/g	0.050	< 0.040	< 0.040	< 0.040	< 0.04	< 0.04
Trichloroethylene	ug/g	0.061	< 0.010	< 0.010	< 0.010	< 0.03	< 0.03
Trichlorofluoromethane	ug/g	4.0	< 0.040	< 0.040	< 0.040	< 0.05	< 0.05
Vinyl Chloride	ug/g	0.020	< 0.019	< 0.019	< 0.019	< 0.02	< 0.02

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).
Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
ppm	parts per million by volume
% LEL	percent of the lower explosive limit
NV	No Value; no standard established
NA	Not Applicable; no standard established because a standard is not required
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 3A: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - BTEX AND PHCs - PRE-REMEDIATION
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME	UNITS	STANDARDS Table 7 coarse	BH21-14	BH22-03	BH22-04	BH22-114 DUPLICATE OF BH22-04
Vapour Reading	see note	-	55 ppm	<5ppm	20 ppm	-
Screen Interval	m bgs	-	3.1-4.6	5.2-6.7	4.9-7.9	4.9-7.9
Sampling Date	dd-mmm-yy	-	2024/06/27	2024/06/27	2024/06/27	2024/06/27
Analysis Date (on or before)	dd-mmm-yy	-	5-Jul-24	5-Jul-24	5-Jul-24	5-Jul-24
Certificate of Analysis No.	-	-	C4J8739	C4J8739	C4J8739	C4J8739
BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (BTEX)						
Benzene	ug/L	0.50	<0.17	<0.17	<0.17	<0.17
Toluene	ug/L	320	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	ug/L	54	<0.20	<0.20	<0.20	<0.20
Xylenes (Total)	ug/L	72	<0.20	<0.20	<0.20	<0.20
PETROLEUM HYDROCARBONS (PHCs)						
Petroleum Hydrocarbons F1-BTEX	ug/L	420	<25	<25	59	110
Petroleum Hydrocarbons F2	ug/L	150	-	-	**8100**	-
Petroleum Hydrocarbons F3	ug/L	500	-	-	**100000**	-
Petroleum Hydrocarbons F4	ug/L	500	-	-	**18000**	-

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
ppm	parts per million by volume
% LEL	percent of the lower explosive limit
NV	No Value; no standard established
NA	Not Applicable; no standard established because a standard is not required
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 3B: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - VOCs - PRE-REMEDIATION
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME	UNITS	STANDARDS Table 7 coarse	BH21-14	BH22-03	BH22-04	BH22-114 DUPLICATE OF BH22-04
Vapour Reading	see note	-	55 ppm	<5ppm	20 ppm	-
Screen Interval	m bgs	-	3.1-4.6	5.2-6.7	4.9-7.9	4.9-7.9
Sampling Date	dd-mmm-yy	-	2024/06/27	2024/06/27	2024/06/27	2024/06/27
Analysis Date (on or before)	dd-mmm-yy	-	5-Jul-24	5-Jul-24	5-Jul-24	5-Jul-24
Certificate of Analysis No.	-	-	C4J8739	C4J8739	C4J8739	C4J8739
VOLATILE ORGANIC COMPOUNDS (VOCs)						
Acetone	ug/L	100,000	<10	<10	13	11
Bromodichloromethane	ug/L	67,000	<0.50	<0.50	<0.50	<0.50
Bromoform	ug/L	5.0	<1.0	<1.0	<1.0	<1.0
Bromomethane	ug/L	0.89	<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride	ug/L	0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	ug/L	140	<0.20	<0.20	0.22	0.22
Chloroform	ug/L	2.0	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	ug/L	65,000	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,2-	ug/L	150	<0.50	<0.50	0.61	0.64
Dichlorobenzene, 1,3-	ug/L	7,600	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,4-	ug/L	0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	ug/L	3,500	<1.0	<1.0	<1.0	<1.0
Dichloroethane, 1,1-	ug/L	11	<0.20	<0.20	<0.20	<0.20
Dichloroethane, 1,2-	ug/L	0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,1-	ug/L	0.50	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, 1,2-cis-	ug/L	1.6	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,2-trans-	ug/L	1.6	<0.50	<0.50	<0.50	<0.50
Dichloropropane, 1,2-	ug/L	0.58	<0.20	<0.20	<0.20	<0.20
Dichloropropene,1,3-	ug/L	0.50	<0.50	<0.50	<0.50	<0.50
Ethylene dibromide	ug/L	0.20	<0.20	<0.20	<0.20	<0.20
Hexane (n)	ug/L	5.0	<1.0	<1.0	<1.0	<1.0
Methyl Ethyl Ketone	ug/L	21,000	<10	<10	<10	<10
Methyl Isobutyl Ketone	ug/L	5,200	<5.0	<5.0	<5.0	<5.0
Methyl tert-Butyl Ether (MTBE)	ug/L	15	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	ug/L	26	<2.0	<2.0	<2.0	<2.0
Styrene	ug/L	43	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,1,2-	ug/L	1.1	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,2,2-	ug/L	0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	ug/L	0.50	<0.20	<0.20	0.22	0.23
Trichloroethane, 1,1,1-	ug/L	23	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,2-	ug/L	0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	ug/L	0.50	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	ug/L	2,000	<0.50	<0.50	<0.50	<0.50
Vinyl Chloride	ug/L	0.50	<0.20	<0.20	<0.20	<0.20

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Conditior
All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
ppm	parts per million by volume
% LEL	percent of the lower explosive limit
NV	No Value; no standard established
NA	Not Applicable; no standard established because a standard is not required
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 4A: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - BTEX AND PHCs - POST-REMEDIATION
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME	UNITS	STANDARDS Table 7 coarse	MW201	MW2000 DUPLICATE OF MW201	MW201	MW2000 DUPLICATE OF MW201	MW202	MW202
Vapour Reading	see note	-	<5 ppm	-	-	-	<5 ppm	-
Screen Interval	m bgs	-	16.0-19.0	16.0-19.0	16.0-19.0	16.0-19.0	16.0-19.0	16.0-19.0
Sampling Date	dd-mmm-yy	-	19-Dec-24	19-Dec-24	18-Mar-25	18-Mar-25	19-Dec-24	18-Mar-25
Analysis Date (on or before)	dd-mmm-yy	-	30-Dec-24	30-Dec-24	24-Mar-25	24-Mar-25	30-Dec-24	24-Mar-25
Certificate of Analysis No.	-	-	C4BO251	C4BO251	C529307	C529307	C4BO251	C529307
BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (BTEX)								
Benzene	ug/L	0.50	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Toluene	ug/L	320	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	ug/L	54	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
m-Xylene & p-Xylene	ug/L	NA	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
o-Xylene	ug/L	NA	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Xylenes (Total)	ug/L	72	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
PETROLEUM HYDROCARBONS (PHCs)								
Petroleum Hydrocarbons F1-BTEX	ug/L	420	<25	<25	<25	<25	<25	<25
Petroleum Hydrocarbons F2	ug/L	150	<90	<90	<90	<90	<90	<90
Petroleum Hydrocarbons F3	ug/L	500	<200	<200	<200	<200	<200	<200
Petroleum Hydrocarbons F4	ug/L	500	<200	<200	<200	<200	<200	<200

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition
All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
ppm	parts per million by volume
% LEL	percent of the lower explosive limit
NV	No Value; no standard established
NA	Not Applicable; no standard established because a standard is not required
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 4B: SUMMARY OF GROUNDWATER ANALYTICAL RESULTS - VOCs - POST-REMEDIATION
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME	UNITS	STANDARDS Table 7 coarse	MW201	MW2000 DUPLICATE OF MW201	MW201	MW2000 DUPLICATE OF MW201	MW202	MW202
Vapour Reading	see note	-	<5 ppm	-	-	-	<5 ppm	-
Screen Interval	m bgs	-	16.0-19.0	16.0-19.0	16.0-19.0	16.0-19.0	16.0-19.0	16.0-19.0
Sampling Date	dd-mmm-yy	-	19-Dec-24	19-Dec-24	18-Mar-25	18-Mar-25	19-Dec-24	18-Mar-25
Analysis Date (on or before)	dd-mmm-yy	-	30-Dec-24	30-Dec-24	24-Mar-25	24-Mar-25	30-Dec-24	24-Mar-25
Certificate of Analysis No.	-	-	C4BO251	C4BO251	C529307	C529307	C4BO251	C529307
VOLATILE ORGANIC COMPOUNDS (VOCs)								
Acetone	ug/L	100,000	<10	<10	<10	<10	<10	<10
Bromodichloromethane	ug/L	67,000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	ug/L	5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane	ug/L	0.89	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride	ug/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	ug/L	140	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	ug/L	2.0	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	ug/L	65,000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,2-	ug/L	150	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,3-	ug/L	7,600	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,4-	ug/L	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	ug/L	3,500	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethane, 1,1-	ug/L	11	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethane, 1,2-	ug/L	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,1-	ug/L	0.50	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, 1,2-cis-	ug/L	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,2-trans-	ug/L	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloropropane, 1,2-	ug/L	0.58	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropene,1,3-cis	ug/L	0.50	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Dichloropropene,1,3-trans	ug/L	0.50	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Dichloropropene,1,3-	ug/L	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylene dibromide	ug/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Hexane (n)	ug/L	5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Ethyl Ketone	ug/L	21,000	<10	<10	<10	<10	<10	<10
Methyl Isobutyl Ketone	ug/L	5,200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl tert-Butyl Ether (MTBE)	ug/L	15	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	ug/L	26	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	ug/L	43	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,1,2-	ug/L	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,2,2-	ug/L	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	ug/L	0.50	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	ug/L	23	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,2-	ug/L	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	ug/L	0.50	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	ug/L	2,000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Vinyl Chloride	ug/L	0.50	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 7: Generic SCS for Shallow Soils in a Non-Potable Ground Water Condition

All Types of Property-Use, Coarse-Textured Soil

-	Not analyzed
m bgs	meters below ground surface
ppm	parts per million by volume
% LEL	percent of the lower explosive limit
NV	No Value; no standard established
NA	Not Applicable; no standard established because a standard is not required
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TERRAPEX

APPENDIX I
SITE PHOTOGRAPHS

TERRAPEX	PHOTOGRAPHIC LOG 		
Client: 1047 Richmond Nominee Inc.	**Site Location**:	1047 Richmond Road, Ottawa, ON	**Project No**: CO972.00

Photo No: 1 **Date:** August 19, 2024 **Viewing Direction:** Southwest **Description:** View showing the remediation prior to the start of the excavation work.	

Photo No: 2 **Date:** August 20, 2024 **Viewing Direction:** Northeast **Description:** View showing the excavation of the overburden along the northeastern property limit following the installation of the shoring.	

Client: 1047 Richmond Nominee Inc.	**Site Location**:	1047 Richmond Road, Ottawa, ON	**Project No**: CO972.00

Photo No: 3 **Date:** August 29, 2024 **Viewing Direction:** Northeast **Description:** View showing the completion of the soil excavation.	

Photo No: 4 **Date:** September 9, 2024 **Viewing Direction:** Northwest **Description:** View showing the progression of the excavation into the bedrock in preparation of additional blasting.	

Client: 1047 Richmond Nominee Inc.	**Site Location**:	1047 Richmond Road, Ottawa, ON	**Project No**: CO972.00

Photo No: 5
Date: September 10, 2024
Viewing Direction: Northwest
Description: View showing the progression of the northeastern portion of the excavation into the bedrock.

Photo No: 6
Date: September 17, 2024
Viewing Direction: Northwest
Description: View showing the progression of the excavation in the bedrock to the southwest

Client: 1047 Richmond Nominee Inc.	**Site Location**:	1047 Richmond Road, Ottawa, ON	**Project No**: CO972.00

Photo No: 7 **Date:** September 19, 2024 **Viewing Direction:** West **Description:** View showing the bedrock excavation.	

Photo No: 8 **Date:** September 20, 2024 **Viewing Direction:** West **Description:** View showing the progression of the bedrock excavation.	

Client: 1047 Richmond Nominee Inc.	**Site Location**:	1047 Richmond Road, Ottawa, ON	**Project No**: CO972.00

Photo No: 9 **Date:** September 20, 2024 **Viewing Direction:** Northwest **Description:** View showing the final limits of the excavation.	

Photo No: 10 **Date:** September 27, 2024 **Viewing Direction:** Northeast **Description:** View showing the final limits of the excavation.	

Client: 1047 Richmond Nominee Inc.	**Site Location**:	1047 Richmond Road, Ottawa, ON	**Project No**: CO972.00

Photo No: 11
Date: October 2, 2024
Viewing Direction: Northeast
Description: View showing the backfilling of the excavation.

Photo No: 12
Date: October 4, 2024
Viewing Direction: West
Description: View showing the progression of the backfilling.

Client: 1047 Richmond Nominee Inc.	**Site Location**:	1047 Richmond Road, Ottawa, ON	**Project No**: CO972.00

Photo No: 13
Date: October 8, 2024
Viewing Direction: Northeast
Description: View showing the completed backfilling of the excavation.

Photo No: 14
Date: December 2, 2024
Viewing Direction: Northeast
Description: View showing the drilling of MW201.

APPENDIX II
DISPOSAL AND IMPORTED MATERIAL RECEIPTS

REPRINT

WASTE CONNECTIONS OF CANADA
OTTAWA LANDFILL
3354 NAVAN ROAD
OTTAWA, ON K4B 1H9
(613) 824-7289

SITE	TICKET #	OPERATOR
05	**1293574**	SGIBSON

IN	OUT	TRUCK	CONT.	LICENCE
8/19/24 10:44 am	8/19/24 10:59 am	**2452**		

REFERENCE	ORIGIN
3 CHRIS	WEST END

001402 - TAGGART CONSTRUCTION LTD
3187 ALBION ROAD
OTTAWA, ON K1V 8Y3

INVOICE
INBOUND

Contract: NV2452-1047 RICHMOND RD-CONTAMINATED S

GROSS	36200 kg	Scale In
TARE	13180 kg	Scale Out
NET	23020 kg	

COMMENTS: J17

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
23.02	MT	Contaminated Soil				
1.00		Carbon Emissions Recovery				
		HST# 866808298RT0004				

SIGNATURE:_____

Date	Site	Ticket	Time	Product Name	Qty	Description
2024-08-19	Boyce	174950784	12:51:48 PM	EXCESS SOIL - TABLE 1 RPIC	19.40	1047 Richmond Rd / 5289
2024-08-19	Boyce	174950794	3:15:00 PM	EXCESS SOIL - TABLE 1 RPIC	19.89	1047 Richmond Rd / 5289
2024-08-20	Boyce	174950806	8:17:21 AM	EXCESS SOIL - TABLE 1 RPIC	21.31	1047 Richmond Rd / 5289
2024-08-20	Boyce	174950819	9:47:11 AM	EXCESS SOIL - TABLE 1 RPIC	18.32	1047 Richmond Rd / 5289
2024-08-20	Boyce	174950820	9:59:59 AM	EXCESS SOIL - TABLE 1 RPIC	17.81	1047 Richmond Rd / 5289
2024-08-20	Boyce	174950823	10:25:47 AM	EXCESS SOIL - TABLE 1 RPIC	19.38	1047 Richmond Rd / 5289
2024-08-20	Boyce	174950830	11:26:17 AM	EXCESS SOIL - TABLE 1 RPIC	17.35	1047 Richmond Rd / 5289
2024-08-20	Boyce	174950831	11:35:23 AM	EXCESS SOIL - TABLE 1 RPIC	14.20	1047 Richmond Rd / 5289
2024-08-20	Boyce	174950841	12:41:46 PM	EXCESS SOIL - TABLE 1 RPIC	18.72	1047 Richmond Rd / 5289
2024-08-20	Boyce	174950844	1:03:14 PM	EXCESS SOIL - TABLE 1 RPIC	20.56	1047 Richmond Rd / 5289
2024-08-20	Boyce	174950845	1:08:16 PM	EXCESS SOIL - TABLE 1 RPIC	18.25	1047 Richmond Rd / 5289
2024-08-20	Boyce	174950855	2:32:42 PM	EXCESS SOIL - TABLE 1 RPIC	22.58	1047 Richmond Rd / 5289
2024-08-20	Boyce	174950857	2:39:36 PM	EXCESS SOIL - TABLE 1 RPIC	17.49	1047 Richmond Rd / 5289
2024-08-20	Boyce	174950860	3:00:04 PM	EXCESS SOIL - TABLE 1 RPIC	13.72	1047 Richmond Rd / 5289
2024-08-20	Boyce	174950866	4:26:06 PM	EXCESS SOIL - TABLE 1 RPIC	20.95	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950870	7:45:51 AM	EXCESS SOIL - TABLE 1 RPIC	14.93	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950871	7:51:49 AM	EXCESS SOIL - TABLE 1 RPIC	16.55	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950872	7:52:59 AM	EXCESS SOIL - TABLE 1 RPIC	21.56	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950873	8:12:01 AM	EXCESS SOIL - TABLE 1 RPIC	19.37	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950879	9:15:37 AM	EXCESS SOIL - TABLE 1 RPIC	19.05	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950881	9:28:03 AM	EXCESS SOIL - TABLE 1 RPIC	18.08	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950883	9:50:37 AM	EXCESS SOIL - TABLE 1 RPIC	19.19	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950887	10:08:35 AM	EXCESS SOIL - TABLE 1 RPIC	18.24	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950890	10:39:01 AM	EXCESS SOIL - TABLE 1 RPIC	18.91	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950892	10:54:26 AM	EXCESS SOIL - TABLE 1 RPIC	20.43	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950896	11:24:47 AM	EXCESS SOIL - TABLE 1 RPIC	17.66	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950903	12:16:35 PM	EXCESS SOIL - TABLE 1 RPIC	22.56	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950905	12:19:01 PM	EXCESS SOIL - TABLE 1 RPIC	22.99	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950906	12:20:09 PM	EXCESS SOIL - TABLE 1 RPIC	20.02	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950910	1:04:22 PM	EXCESS SOIL - TABLE 1 RPIC	18.22	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950915	1:43:38 PM	EXCESS SOIL - TABLE 1 RPIC	19.88	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950917	2:01:17 PM	EXCESS SOIL - TABLE 1 RPIC	17.94	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950920	2:22:35 PM	EXCESS SOIL - TABLE 1 RPIC	21.06	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950921	2:47:34 PM	EXCESS SOIL - TABLE 1 RPIC	21.23	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950924	3:13:23 PM	EXCESS SOIL - TABLE 1 RPIC	19.43	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950927	3:39:10 PM	EXCESS SOIL - TABLE 1 RPIC	20.88	1047 Richmond Rd / 5289
2024-08-21	Boyce	174950929	4:54:34 PM	EXCESS SOIL - TABLE 1 RPIC	23.35	1047 Richmond Rd / 5289
2024-08-22	Boyce	174950933	7:30:15 AM	EXCESS SOIL - TABLE 1 RPIC	23.18	1047 Richmond Rd / 5289
2024-08-22	Boyce	174950941	9:11:09 AM	EXCESS SOIL - TABLE 1 RPIC	20.25	1047 Richmond Rd / 5289
2024-08-22	Boyce	174950943	9:16:45 AM	EXCESS SOIL - TABLE 1 RPIC	22.76	1047 Richmond Rd / 5289
2024-08-22	Boyce	174950944	9:28:45 AM	EXCESS SOIL - TABLE 1 RPIC	23.22	1047 Richmond Rd / 5289
2024-08-22	Boyce	174950951	10:49:30 AM	EXCESS SOIL - TABLE 1 RPIC	22.53	1047 Richmond Rd / 5289
2024-08-22	Boyce	174950953	11:33:33 AM	EXCESS SOIL - TABLE 1 RPIC	22.86	1047 Richmond Rd / 5289
2024-08-22	Boyce	174950959	12:14:02 PM	EXCESS SOIL - TABLE 1 RPIC	22.22	1047 Richmond Rd / 5289
2024-08-22	Boyce	174950961	12:27:23 PM	EXCESS SOIL - TABLE 1 RPIC	21.51	1047 Richmond Rd / 5289
2024-08-22	Boyce	174950966	1:36:35 PM	EXCESS SOIL - TABLE 1 RPIC	20.72	1047 Richmond Rd / 5289
2024-08-22	Boyce	174950968	1:57:21 PM	EXCESS SOIL - TABLE 1 RPIC	21.85	1047 Richmond Rd / 5289
2024-08-22	Boyce	174950970	2:01:40 PM	EXCESS SOIL - TABLE 1 RPIC	19.32	1047 Richmond Rd / 5289
2024-08-22	Boyce	174950977	3:29:08 PM	EXCESS SOIL - TABLE 1 RPIC	23.11	1047 Richmond Rd / 5289
2024-08-22	Boyce	174950981	3:54:18 PM	EXCESS SOIL - TABLE 1 RPIC	21.34	1047 Richmond Rd / 5289
2024-08-22	Boyce	174950982	3:55:16 PM	EXCESS SOIL - TABLE 1 RPIC	23.48	1047 Richmond Rd / 5289
2024-08-23	Boyce	174950986	7:39:20 AM	EXCESS SOIL - TABLE 1 RPIC	22.65	1047 Richmond Rd / 5289
2024-08-23	Boyce	174950991	8:02:53 AM	EXCESS SOIL - TABLE 1 RPIC	21.71	1047 Richmond Rd / 5289
2024-08-23	Boyce	174950992	8:29:24 AM	EXCESS SOIL - TABLE 1 RPIC	19.97	1047 Richmond Rd / 5289

2024-08-23	Boyce	174950996	9:07:55 AM	EXCESS SOIL - TABLE 1 RPIC	23.12	1047 Richmond Rd / 5289
2024-08-23	Boyce	174951001	9:57:07 AM	EXCESS SOIL - TABLE 1 RPIC	21.33	1047 Richmond Rd / 5289
2024-08-23	Boyce	174951002	10:16:49 AM	EXCESS SOIL - TABLE 1 RPIC	21.42	1047 Richmond Rd / 5289
2024-08-23	Boyce	174951004	10:46:06 AM	EXCESS SOIL - TABLE 1 RPIC	23.02	1047 Richmond Rd / 5289
2024-08-23	Boyce	174951011	11:40:35 AM	EXCESS SOIL - TABLE 1 RPIC	21.43	1047 Richmond Rd / 5289
2024-08-23	Boyce	174951014	12:03:26 PM	EXCESS SOIL - TABLE 1 RPIC	22.78	1047 Richmond Rd / 5289
2024-08-23	Boyce	174951016	12:12:41 PM	EXCESS SOIL - TABLE 1 RPIC	20.11	1047 Richmond Rd / 5289
2024-08-23	Boyce	174951025	1:41:31 PM	EXCESS SOIL - TABLE 1 RPIC	14.89	1047 Richmond Rd / 5289
2024-08-23	Boyce	174951028	1:55:53 PM	EXCESS SOIL - TABLE 1 RPIC	23.31	1047 Richmond Rd / 5289
2024-08-23	Boyce	174951029	1:57:25 PM	EXCESS SOIL - TABLE 1 RPIC	20.18	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951042	7:45:58 AM	EXCESS SOIL - TABLE 1 RPIC	21.25	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951043	7:49:32 AM	EXCESS SOIL - TABLE 1 RPIC	23.11	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951046	7:56:54 AM	EXCESS SOIL - TABLE 1 RPIC	19.21	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951048	8:26:07 AM	EXCESS SOIL - TABLE 1 RPIC	18.97	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951058	9:10:52 AM	EXCESS SOIL - TABLE 1 RPIC	21.29	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951062	9:25:53 AM	EXCESS SOIL - TABLE 1 RPIC	20.56	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951063	9:34:39 AM	EXCESS SOIL - TABLE 1 RPIC	17.73	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951070	10:06:57 AM	EXCESS SOIL - TABLE 1 RPIC	17.36	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951077	10:34:21 AM	EXCESS SOIL - TABLE 1 RPIC	22.03	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951084	11:05:28 AM	EXCESS SOIL - TABLE 1 RPIC	17.16	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951086	11:08:11 AM	EXCESS SOIL - TABLE 1 RPIC	17.71	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951094	12:00:08 PM	EXCESS SOIL - TABLE 1 RPIC	19.35	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951096	12:05:05 PM	EXCESS SOIL - TABLE 1 RPIC	18.59	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951102	12:28:21 PM	EXCESS SOIL - TABLE 1 RPIC	21.06	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951106	12:48:15 PM	EXCESS SOIL - TABLE 1 RPIC	21.78	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951114	1:22:55 PM	EXCESS SOIL - TABLE 1 RPIC	20.39	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951118	1:47:09 PM	EXCESS SOIL - TABLE 1 RPIC	17.01	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951122	1:54:14 PM	EXCESS SOIL - TABLE 1 RPIC	20.69	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951128	2:25:10 PM	EXCESS SOIL - TABLE 1 RPIC	19.30	1047 Richmond Rd / 5289
2024-08-26	Boyce	174951132	2:52:03 PM	EXCESS SOIL - TABLE 1 RPIC	22.68	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951152	7:30:46 AM	EXCESS SOIL - TABLE 1 RPIC	20.29	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951155	7:41:58 AM	EXCESS SOIL - TABLE 1 RPIC	21.84	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951156	7:42:43 AM	EXCESS SOIL - TABLE 1 RPIC	18.65	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951161	7:48:59 AM	EXCESS SOIL - TABLE 1 RPIC	21.93	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951162	7:52:35 AM	EXCESS SOIL - TABLE 1 RPIC	20.50	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951163	7:54:34 AM	EXCESS SOIL - TABLE 1 RPIC	18.63	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951177	9:04:12 AM	EXCESS SOIL - TABLE 1 RPIC	22.98	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951180	9:20:02 AM	EXCESS SOIL - TABLE 1 RPIC	21.37	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951182	9:26:00 AM	EXCESS SOIL - TABLE 1 RPIC	23.38	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951184	9:35:16 AM	EXCESS SOIL - TABLE 1 RPIC	21.04	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951185	9:36:13 AM	EXCESS SOIL - TABLE 1 RPIC	21.46	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951196	10:15:35 AM	EXCESS SOIL - TABLE 1 RPIC	16.53	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951200	10:28:57 AM	EXCESS SOIL - TABLE 1 RPIC	19.41	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951202	10:51:07 AM	EXCESS SOIL - TABLE 1 RPIC	20.94	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951206	11:03:43 AM	EXCESS SOIL - TABLE 1 RPIC	23.58	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951207	11:04:44 AM	EXCESS SOIL - TABLE 1 RPIC	18.40	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951210	11:10:33 AM	EXCESS SOIL - TABLE 1 RPIC	20.08	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951220	11:50:23 AM	EXCESS SOIL - TABLE 1 RPIC	21.99	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951223	12:06:52 PM	EXCESS SOIL - TABLE 1 RPIC	21.38	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951231	12:38:03 PM	EXCESS SOIL - TABLE 1 RPIC	19.54	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951233	12:42:04 PM	EXCESS SOIL - TABLE 1 RPIC	17.58	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951234	12:44:32 PM	EXCESS SOIL - TABLE 1 RPIC	19.46	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951236	12:49:55 PM	EXCESS SOIL - TABLE 1 RPIC	19.48	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951245	1:32:38 PM	EXCESS SOIL - TABLE 1 RPIC	19.89	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951249	1:41:58 PM	EXCESS SOIL - TABLE 1 RPIC	19.64	1047 Richmond Rd / 5289

2024-08-27	Boyce	174951255	2:03:47 PM	EXCESS SOIL - TABLE 1 RPIC	19.80	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951257	2:13:38 PM	EXCESS SOIL - TABLE 1 RPIC	19.85	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951258	2:17:12 PM	EXCESS SOIL - TABLE 1 RPIC	18.16	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951261	2:25:42 PM	EXCESS SOIL - TABLE 1 RPIC	19.44	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951273	3:17:05 PM	EXCESS SOIL - TABLE 1 RPIC	18.98	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951275	3:23:34 PM	EXCESS SOIL - TABLE 1 RPIC	19.92	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951279	3:35:39 PM	EXCESS SOIL - TABLE 1 RPIC	21.98	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951284	4:10:49 PM	EXCESS SOIL - TABLE 1 RPIC	19.06	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951285	4:12:19 PM	EXCESS SOIL - TABLE 1 RPIC	19.20	1047 Richmond Rd / 5289
2024-08-27	Boyce	174951287	4:17:02 PM	EXCESS SOIL - TABLE 1 RPIC	20.75	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951299	7:34:35 AM	EXCESS SOIL - TABLE 1 RPIC	16.04	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951302	7:37:52 AM	EXCESS SOIL - TABLE 1 RPIC	18.31	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951306	7:47:12 AM	EXCESS SOIL - TABLE 1 RPIC	15.30	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951310	7:52:45 AM	EXCESS SOIL - TABLE 1 RPIC	19.38	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951311	7:53:37 AM	EXCESS SOIL - TABLE 1 RPIC	18.82	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951313	7:57:05 AM	EXCESS SOIL - TABLE 1 RPIC	20.99	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951333	9:11:17 AM	EXCESS SOIL - TABLE 1 RPIC	16.73	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951334	9:12:08 AM	EXCESS SOIL - TABLE 1 RPIC	17.50	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951342	9:30:53 AM	EXCESS SOIL - TABLE 1 RPIC	19.25	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951345	9:34:07 AM	EXCESS SOIL - TABLE 1 RPIC	18.95	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951346	9:35:02 AM	EXCESS SOIL - TABLE 1 RPIC	19.01	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951347	9:36:10 AM	EXCESS SOIL - TABLE 1 RPIC	18.61	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951364	10:31:41 AM	EXCESS SOIL - TABLE 1 RPIC	16.02	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951365	10:35:32 AM	EXCESS SOIL - TABLE 1 RPIC	17.81	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951374	11:05:34 AM	EXCESS SOIL - TABLE 1 RPIC	19.40	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951376	11:12:17 AM	EXCESS SOIL - TABLE 1 RPIC	20.36	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951378	11:16:00 AM	EXCESS SOIL - TABLE 1 RPIC	19.46	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951379	11:16:57 AM	EXCESS SOIL - TABLE 1 RPIC	20.43	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951389	11:59:31 AM	EXCESS SOIL - TABLE 1 RPIC	16.07	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951391	12:03:43 PM	EXCESS SOIL - TABLE 1 RPIC	19.16	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951405	12:44:48 PM	EXCESS SOIL - TABLE 1 RPIC	20.96	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951407	12:48:38 PM	EXCESS SOIL - TABLE 1 RPIC	20.86	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951410	12:52:14 PM	EXCESS SOIL - TABLE 1 RPIC	19.35	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951411	12:56:02 PM	EXCESS SOIL - TABLE 1 RPIC	21.22	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951421	1:27:08 PM	EXCESS SOIL - TABLE 1 RPIC	16.74	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951423	1:30:43 PM	EXCESS SOIL - TABLE 1 RPIC	16.26	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951439	2:21:59 PM	EXCESS SOIL - TABLE 1 RPIC	19.77	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951443	2:33:13 PM	EXCESS SOIL - TABLE 1 RPIC	17.01	1047 Richmond Rd / 5289
2024-08-28	Boyce	174951445	2:36:49 PM	EXCESS SOIL - TABLE 1 RPIC	20.13	1047 Richmond Rd / 5289
					2939.97	

Date	Site	Ticket	Time	Product Name	Qty	Description
2024-09-24	Moodie	329462323	7:27:18 AM	SSM CHIPS	19.72	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463615	12:06:20 PM	SSM CHIPS	20.65	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463616	12:08:28 PM	SSM CHIPS	21.09	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463618	12:10:01 PM	SSM CHIPS	21.04	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463619	12:10:44 PM	SSM CHIPS	19.38	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463621	12:12:55 PM	SSM CHIPS	20.64	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463623	12:14:06 PM	SSM CHIPS	20.26	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463626	12:19:04 PM	SSM CHIPS	19.59	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463637	12:38:01 PM	SSM CHIPS	21.41	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463638	12:39:01 PM	SSM CHIPS	20.73	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463654	1:01:16 PM	SSM CHIPS	20.84	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463655	1:04:58 PM	SSM CHIPS	20.76	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463657	1:10:17 PM	SSM CHIPS	20.97	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463658	1:12:34 PM	SSM CHIPS	22.56	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463662	1:18:35 PM	SSM CHIPS	20.81	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463663	1:20:01 PM	SSM CHIPS	20.34	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463664	1:23:53 PM	SSM CHIPS	19.86	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463681	1:48:50 PM	SSM CHIPS	22.19	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463683	1:50:14 PM	SSM CHIPS	21.11	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463696	2:12:42 PM	SSM CHIPS	21.34	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463698	2:16:36 PM	SSM CHIPS	20.86	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463700	2:18:43 PM	SSM CHIPS	20.52	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463701	2:20:22 PM	SSM CHIPS	20.08	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463703	2:23:14 PM	SSM CHIPS	20.60	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463704	2:25:45 PM	SSM CHIPS	20.20	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463714	2:45:31 PM	SSM CHIPS	17.47	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463717	2:47:22 PM	SSM CHIPS	20.59	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463734	3:20:48 PM	SSM CHIPS	21.63	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463735	3:22:15 PM	SSM CHIPS	22.83	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463736	3:23:40 PM	SSM CHIPS	21.61	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463737	3:26:18 PM	SSM CHIPS	22.07	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463738	3:27:12 PM	SSM CHIPS	21.75	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463740	3:29:26 PM	SSM CHIPS	20.68	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463754	3:51:05 PM	SSM CHIPS	20.92	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463755	3:53:45 PM	SSM CHIPS	21.78	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463778	6:52:52 AM	SSM CHIPS	20.74	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463779	6:56:21 AM	SSM CHIPS	22.90	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463780	6:57:34 AM	SSM CHIPS	21.22	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463781	6:58:25 AM	SSM CHIPS	20.82	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463786	7:08:34 AM	SSM CHIPS	20.72	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463787	7:11:24 AM	SSM CHIPS	20.84	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463788	7:12:10 AM	SSM CHIPS	21.37	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463789	7:14:06 AM	SSM CHIPS	20.87	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463799	7:34:50 AM	SSM CHIPS	20.99	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463802	7:39:02 AM	SSM CHIPS	21.18	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463809	7:52:25 AM	SSM CHIPS	21.08	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463810	7:55:57 AM	SSM CHIPS	20.91	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463812	8:00:24 AM	SSM CHIPS	20.70	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463814	8:09:52 AM	SSM CHIPS	21.53	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463819	8:32:19 AM	SSM CHIPS	21.27	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463820	8:33:15 AM	SSM CHIPS	21.58	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463821	8:35:38 AM	SSM CHIPS	20.84	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463822	8:36:23 AM	SSM CHIPS	21.33	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463823	8:37:06 AM	SSM CHIPS	21.26	1047 Richmond Rd / 5289

2024-10-03	Moodie	329463833	8:58:33 AM	SSM CHIPS	19.88	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463836	9:01:51 AM	SSM CHIPS	20.43	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463840	9:08:48 AM	SSM CHIPS	21.91	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463849	9:36:07 AM	SSM CHIPS	21.66	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463850	9:37:50 AM	SSM CHIPS	21.34	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463851	9:39:43 AM	SSM CHIPS	21.19	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463853	9:41:34 AM	SSM CHIPS	21.88	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463854	9:42:40 AM	SSM CHIPS	21.03	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463860	9:56:38 AM	SSM CHIPS	21.43	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463861	9:57:21 AM	SSM CHIPS	21.10	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463868	10:22:14 AM	SSM CHIPS	22.49	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463870	10:24:49 AM	SSM CHIPS	21.48	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463871	10:25:33 AM	SSM CHIPS	21.44	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463877	10:40:23 AM	SSM CHIPS	21.56	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463879	10:44:15 AM	SSM CHIPS	20.69	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463880	10:46:34 AM	SSM CHIPS	20.40	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463888	11:02:03 AM	SSM CHIPS	21.38	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463889	11:04:23 AM	SSM CHIPS	21.78	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463890	11:06:19 AM	SSM CHIPS	21.62	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463900	11:29:53 AM	SSM CHIPS	20.78	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463901	11:30:28 AM	SSM CHIPS	21.07	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463902	11:31:12 AM	SSM CHIPS	22.41	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463903	11:33:11 AM	SSM CHIPS	21.33	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463910	12:03:26 PM	SSM CHIPS	20.95	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463911	12:04:11 PM	SSM CHIPS	21.51	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463912	12:05:08 PM	SSM CHIPS	21.16	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463913	12:05:50 PM	SSM CHIPS	20.28	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463917	12:18:26 PM	SSM CHIPS	19.97	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463926	12:33:19 PM	SSM CHIPS	20.80	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463927	12:34:51 PM	SSM CHIPS	22.97	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463929	12:37:16 PM	SSM CHIPS	21.37	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463930	12:38:02 PM	SSM CHIPS	21.72	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463946	1:05:36 PM	SSM CHIPS	20.26	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463950	1:09:57 PM	SSM CHIPS	20.24	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463951	1:10:37 PM	SSM CHIPS	19.91	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463959	1:24:43 PM	SSM CHIPS	20.06	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463960	1:25:43 PM	SSM CHIPS	20.21	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463964	1:34:13 PM	SSM CHIPS	20.56	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463966	1:37:44 PM	SSM CHIPS	19.79	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463968	1:39:39 PM	SSM CHIPS	20.13	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463973	1:46:53 PM	SSM CHIPS	19.56	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463981	2:04:44 PM	SSM CHIPS	19.75	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463982	2:06:43 PM	SSM CHIPS	20.75	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463983	2:07:21 PM	SSM CHIPS	20.41	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463991	2:22:53 PM	SSM CHIPS	20.60	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463994	2:26:36 PM	SSM CHIPS	21.23	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463997	2:30:46 PM	SSM CHIPS	22.39	1047 Richmond Rd / 5289
2024-10-03	Moodie	329463999	2:35:03 PM	SSM CHIPS	20.64	1047 Richmond Rd / 5289
2024-10-03	Moodie	329464004	2:47:45 PM	SSM CHIPS	21.06	1047 Richmond Rd / 5289
2024-10-03	Moodie	329464006	2:50:10 PM	SSM CHIPS	20.99	1047 Richmond Rd / 5289
2024-10-03	Moodie	329464007	2:57:54 PM	SSM CHIPS	20.53	1047 Richmond Rd / 5289
2024-10-03	Moodie	329464008	3:01:35 PM	SSM CHIPS	20.31	1047 Richmond Rd / 5289
2024-10-03	Moodie	329464009	3:02:32 PM	SSM CHIPS	20.89	1047 Richmond Rd / 5289
2024-10-04	Moodie	329464044	6:54:16 AM	SSM CHIPS	21.78	1047 Richmond Rd / 5289
2024-10-04	Moodie	329464145	11:15:57 AM	SSM CHIPS	22.16	1047 Richmond Rd / 5289

2024-10-04	Moodie	329464170	12:13:33 PM	SSM CHIPS	21.32	1047 Richmond Rd / 5289
2024-10-04	Moodie	329464195	1:14:17 PM	SSM CHIPS	20.93	1047 Richmond Rd / 5289
2024-10-04	Moodie	329464214	2:14:32 PM	SSM CHIPS	21.50	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464305	7:16:33 AM	SSM CHIPS	21.78	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464306	7:18:14 AM	SSM CHIPS	20.96	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464307	7:19:22 AM	SSM CHIPS	20.39	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464308	7:19:55 AM	SSM CHIPS	20.33	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464309	7:22:12 AM	SSM CHIPS	21.17	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464327	7:45:51 AM	SSM CHIPS	17.62	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464328	7:48:01 AM	SSM CHIPS	20.31	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464351	8:21:22 AM	SSM CHIPS	21.49	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464352	8:23:18 AM	SSM CHIPS	21.42	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464353	8:26:47 AM	SSM CHIPS	20.36	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464361	8:43:59 AM	SSM CHIPS	20.26	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464362	8:46:31 AM	SSM CHIPS	20.40	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464372	9:00:59 AM	SSM CHIPS	20.42	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464373	9:01:25 AM	SSM CHIPS	19.24	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464395	9:35:02 AM	SSM CHIPS	20.91	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464396	9:37:22 AM	SSM CHIPS	22.12	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464403	9:46:23 AM	SSM CHIPS	20.96	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464404	9:47:29 AM	SSM CHIPS	21.18	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464410	9:55:44 AM	SSM CHIPS	19.32	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464411	9:58:15 AM	SSM CHIPS	19.88	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464441	10:42:55 AM	SSM CHIPS	20.91	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464443	10:44:33 AM	SSM CHIPS	21.41	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464444	10:45:23 AM	SSM CHIPS	20.44	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464446	10:48:24 AM	SSM CHIPS	20.51	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464451	10:58:30 AM	SSM CHIPS	19.67	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464452	11:01:57 AM	SSM CHIPS	21.07	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464453	11:02:27 AM	SSM CHIPS	19.15	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464465	11:36:51 AM	SSM CHIPS	21.38	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464468	11:38:41 AM	SSM CHIPS	20.23	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464479	11:53:08 AM	SSM CHIPS	20.93	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464480	11:54:19 AM	SSM CHIPS	21.09	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464481	11:55:17 AM	SSM CHIPS	18.45	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464482	11:58:20 AM	SSM CHIPS	21.07	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464490	12:17:19 PM	SSM CHIPS	19.93	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464500	12:34:08 PM	SSM CHIPS	22.23	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464501	12:35:15 PM	SSM CHIPS	21.26	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464502	12:36:17 PM	SSM CHIPS	20.30	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464517	12:59:24 PM	SSM CHIPS	20.96	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464518	1:01:28 PM	SSM CHIPS	21.39	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464519	1:03:51 PM	SSM CHIPS	21.23	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464520	1:04:18 PM	SSM CHIPS	18.41	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464533	1:26:32 PM	SSM CHIPS	20.11	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464537	1:38:03 PM	SSM CHIPS	21.55	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464553	2:12:42 PM	SSM CHIPS	20.28	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464554	2:13:14 PM	SSM CHIPS	18.35	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464555	2:14:53 PM	SSM CHIPS	20.56	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464556	2:16:46 PM	SSM CHIPS	20.55	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464573	2:41:32 PM	SSM CHIPS	22.38	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464574	2:44:03 PM	SSM CHIPS	20.62	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464578	3:09:51 PM	SSM CHIPS	20.50	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464579	3:12:35 PM	SSM CHIPS	22.03	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464598	3:39:25 PM	SSM CHIPS	21.94	1047 Richmond Rd / 5289

2024-10-07	Moodie	329464599	3:40:54 PM	SSM CHIPS	20.83	1047 Richmond Rd / 5289
2024-10-07	Moodie	329464600	3:43:06 PM	SSM CHIPS	20.71	1047 Richmond Rd / 5289
					3462.95	

Date	Site	Ticket	Time	Product Name	Qty	Description
2024-10-01	Moodie	329463269	7:09:35 AM	LI,5-0MM,SCREENINGS	21.71	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463270	7:12:51 AM	LI,5-0MM,SCREENINGS	21.28	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463271	7:13:44 AM	LI,5-0MM,SCREENINGS	21.24	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463272	7:16:03 AM	LI,5-0MM,SCREENINGS	20.23	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463278	7:28:42 AM	LI,5-0MM,SCREENINGS	21.65	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463280	7:31:58 AM	LI,5-0MM,SCREENINGS	20.60	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463291	8:17:43 AM	LI,5-0MM,SCREENINGS	21.04	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463292	8:18:23 AM	LI,5-0MM,SCREENINGS	20.23	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463293	8:19:54 AM	LI,5-0MM,SCREENINGS	19.82	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463294	8:22:20 AM	LI,5-0MM,SCREENINGS	20.50	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463301	8:50:45 AM	LI,5-0MM,SCREENINGS	21.64	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463309	9:09:40 AM	LI,5-0MM,SCREENINGS	20.74	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463311	9:16:06 AM	LI,5-0MM,SCREENINGS	21.10	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463312	9:17:48 AM	LI,5-0MM,SCREENINGS	20.62	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463313	9:20:55 AM	LI,5-0MM,SCREENINGS	19.62	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463314	9:25:00 AM	LI,5-0MM,SCREENINGS	21.12	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463321	9:48:28 AM	LI,5-0MM,SCREENINGS	22.39	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463331	10:18:20 AM	LI,5-0MM,SCREENINGS	20.64	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463332	10:19:52 AM	LI,5-0MM,SCREENINGS	20.97	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463333	10:20:37 AM	LI,5-0MM,SCREENINGS	20.28	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463334	10:22:44 AM	LI,5-0MM,SCREENINGS	20.30	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463336	10:26:20 AM	LI,5-0MM,SCREENINGS	21.12	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463343	10:51:07 AM	LI,5-0MM,SCREENINGS	22.30	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463350	11:16:24 AM	LI,5-0MM,SCREENINGS	20.53	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463351	11:18:06 AM	LI,5-0MM,SCREENINGS	21.33	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463352	11:18:44 AM	LI,5-0MM,SCREENINGS	20.38	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463357	11:37:55 AM	LI,5-0MM,SCREENINGS	21.15	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463358	11:40:32 AM	LI,5-0MM,SCREENINGS	20.90	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463362	11:50:22 AM	LI,5-0MM,SCREENINGS	22.09	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463370	12:14:11 PM	LI,5-0MM,SCREENINGS	21.02	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463371	12:15:39 PM	LI,5-0MM,SCREENINGS	21.02	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463372	12:16:49 PM	LI,5-0MM,SCREENINGS	19.83	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463376	12:43:08 PM	LI,5-0MM,SCREENINGS	21.32	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463377	12:45:43 PM	LI,5-0MM,SCREENINGS	22.33	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463378	12:48:58 PM	LI,5-0MM,SCREENINGS	20.95	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463388	1:22:14 PM	LI,5-0MM,SCREENINGS	20.83	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463390	1:24:28 PM	LI,5-0MM,SCREENINGS	20.77	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463391	1:26:24 PM	LI,5-0MM,SCREENINGS	20.03	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463394	1:41:07 PM	LI,5-0MM,SCREENINGS	20.94	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463395	1:42:30 PM	LI,5-0MM,SCREENINGS	21.96	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463396	1:43:47 PM	LI,5-0MM,SCREENINGS	20.84	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463406	2:27:44 PM	LI,5-0MM,SCREENINGS	20.81	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463407	2:28:43 PM	LI,5-0MM,SCREENINGS	20.89	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463412	2:45:39 PM	LI,5-0MM,SCREENINGS	21.32	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463413	2:46:27 PM	LI,5-0MM,SCREENINGS	19.83	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463414	2:48:29 PM	LI,5-0MM,SCREENINGS	21.89	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463415	2:50:47 PM	LI,5-0MM,SCREENINGS	21.37	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463427	3:26:55 PM	LI,5-0MM,SCREENINGS	20.80	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463428	3:29:53 PM	LI,5-0MM,SCREENINGS	20.30	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463434	3:45:49 PM	LI,5-0MM,SCREENINGS	20.79	1047 Richmond Rd / 5289
2024-10-01	Moodie	329463435	3:48:57 PM	LI,5-0MM,SCREENINGS	20.20	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463465	7:13:35 AM	LI,5-0MM,SCREENINGS	21.94	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463466	7:14:50 AM	LI,5-0MM,SCREENINGS	20.16	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463467	7:17:00 AM	LI,5-0MM,SCREENINGS	21.12	1047 Richmond Rd / 5289

2024-10-02	Moodie	329463468	7:17:40 AM	LI,5-0MM,SCREENINGS	20.93	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463469	7:18:15 AM	LI,5-0MM,SCREENINGS	21.11	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463470	7:20:27 AM	LI,5-0MM,SCREENINGS	21.01	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463471	7:21:31 AM	LI,5-0MM,SCREENINGS	19.87	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463472	7:22:30 AM	LI,5-0MM,SCREENINGS	20.96	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463501	8:35:01 AM	LI,5-0MM,SCREENINGS	21.26	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463502	8:35:50 AM	LI,5-0MM,SCREENINGS	20.32	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463503	8:38:09 AM	LI,5-0MM,SCREENINGS	21.20	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463504	8:39:49 AM	LI,5-0MM,SCREENINGS	20.89	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463505	8:40:37 AM	LI,5-0MM,SCREENINGS	20.96	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463506	8:41:14 AM	LI,5-0MM,SCREENINGS	21.30	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463507	8:42:39 AM	LI,5-0MM,SCREENINGS	20.00	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463508	8:44:50 AM	LI,5-0MM,SCREENINGS	20.72	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463529	9:40:11 AM	LI,5-0MM,SCREENINGS	21.77	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463530	9:41:57 AM	LI,5-0MM,SCREENINGS	21.36	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463540	9:58:19 AM	LI,5-0MM,SCREENINGS	20.21	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463541	9:59:26 AM	LI,5-0MM,SCREENINGS	20.76	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463542	10:00:38 AM	LI,5-0MM,SCREENINGS	20.82	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463543	10:01:07 AM	LI,5-0MM,SCREENINGS	20.42	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463544	10:03:46 AM	LI,5-0MM,SCREENINGS	21.17	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463545	10:05:07 AM	LI,5-0MM,SCREENINGS	20.53	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463546	10:05:40 AM	LI,5-0MM,SCREENINGS	19.53	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463574	11:01:33 AM	LI,5-0MM,SCREENINGS	20.89	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463575	11:02:07 AM	LI,5-0MM,SCREENINGS	22.46	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463576	11:04:00 AM	LI,5-0MM,SCREENINGS	20.95	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463577	11:05:14 AM	LI,5-0MM,SCREENINGS	20.42	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463578	11:06:18 AM	LI,5-0MM,SCREENINGS	20.45	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463579	11:06:45 AM	LI,5-0MM,SCREENINGS	20.32	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463581	11:09:30 AM	LI,5-0MM,SCREENINGS	21.10	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463588	11:17:51 AM	LI,5-0MM,SCREENINGS	19.66	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463590	11:21:06 AM	LI,5-0MM,SCREENINGS	20.42	1047 Richmond Rd / 5289
2024-10-02	Moodie	329463608	12:11:27 PM	LI,5-0MM,SCREENINGS	20.69	1047 Richmond Rd / 5289

1795.24

APPENDIX III
WATER DISCHARGE DOCUMENTATION

SELF MONITORING SUBMISSION FORM

The City of Ottawa Sewer Use By-law (2003-514) Section 8 requires that this Self Monitoring Submission Form be completed. All Self Monitoring Reports are due before the 15th day of the month following the reporting period or as otherwise required.
The completed and signed form is to be addressed to: Compliance Officer, Sewer Use Program and mailed to 800 Green Creek Drive Ottawa ON K1J 1A6; faxed to 613-745-9197; or scanned and emailed to SUP-PUE@ottawa.ca. Should you have questions regarding completion of this form, please call the Sewer Use Program Duty Officer at 613-580-2424 extension 23326.

Company Name	*Taggart Construction LTD.*	File Number	*n/a*
Discharge Location Address	*1047 Richmond Road, Ottawa, ON,K2B 6R1*		
Project Name	*1047 Richmond road remediation*		
Reporting Period	Reporting Period: *01/09/2024* to: *30/09/2024* *DD/MM/YYYY* *DD/MM/YYYY*		
Reporting Frequency	☐ daily ☐ bi-weekly ☐ weekly ☒ monthly ☐ quarterly ☐ annual ☐ other		
Volume of wastewater discharged for reporting period	*35 m³* ☐ estimated ☒ actual	Daily Discharge Log Attached (includes start and end time per day and daily volume)	☒ Attached ☐ Not Required
Identify Sampling Location(s)	*Sampling port of treatment system*	Type of Sample(s) Collected	☒ grab ☐ composite
Sample Date(s)	*September 5, 2024*	Sample Time(s)	*n/a*

Attach a copy of the analytical results and chain of custody

Additional Required Document (s)	Temperature/pH readings	☐ Attached	☒ Not Required
	Movement Documents (Reg. 347)	☐ Attached	☒ Not Required
	Maintenance logs	☐ Attached	☒ Not Required
	Other:	☐ Attached	☒ Not Required

Certification (*to be completed by an official authorized to sign for the company*)

I certify, under penalty of law, that all samples collected and reported herein are representative of the volume and nature of the normal discharge, and that all handling, preservation, and laboratory analysis have been performed in accordance with Sewer Use by-law requirements.

Certification of **NO DISCHARGE**: if the facility / site had **NO DISCHARGE** during the reporting period; return the self monitoring form, intial here_____ and sign below.

Jason Archambault	Environmental Manager
Name (print)	Oct 30, 2024
JA	
Signature	Date

Leave no blanks when completing this form: use "N/A" where requested information was considered but determined not to be applicable to the facility.

DEWATERING DATA

Blackstone Village

Permit #:	
Permit Holder's Name:	
Address:	
Telephone Number	

Source Information			
Source Name	Excavation	*Max. Allowable Number of Days*	
Source Type	Construction	*Zone*	
Specific Purpose	Construction	*Easting*	
Major Category	Dewatering Construction	*Northing*	
Max. Allowable Taken Per Day(litres)	400,000		

Dewatering Data					
Method of Determination	Metered ☑		Calculated ☐		
Units of Measure	Litres ☑	US Gallons ☐	Imperial Gallons ☐	Acre-inch ☐	Cubic Meter ☐

Date	**Volumes**				
	Pumping Source	*Pumping Outlet*	*Hours Pumped*	*Pump Size*	*Calc Volume(L)*
01-Sep-24					-
02-Sep-24					-
03-Sep-24					-
04-Sep-24					-
05-Sep-24					-
06-Sep-24					-
07-Sep-24					-
08-Sep-24					-
09-Sep-24					-
10-Sep-24					-
11-Sep-24					-
12-Sep-24					-
13-Sep-24					-
14-Sep-24					-
15-Sep-24					-
16-Sep-24	Excavation	Sewer	2	2"	35,000.00
17-Sep-24					-
18-Sep-24					-
19-Sep-24					-
20-Sep-24					-
21-Sep-24					-
22-Sep-24					
23-Sep-24					-
24-Sep-24					-
25-Sep-24					-
26-Sep-24					-
27-Sep-24					-
28-Sep-24					-
29-Sep-24					-
30-Sep-24					-

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www.paracellabs.com

Certificate of Analysis

Taggart Construction Ltd.
3187 Albion Rd South
Ottawa, ON K1V 8Y3
Attn: Jason Archambault

Client PO: 5289
Project: Richmond
Custody: 75331

Report Date: 6-Sep-2024
Order Date: 5-Sep-2024

Order #: 2436272

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2436272-01	Richmond

Approved By:

Mark Foto, M.Sc.
Lab Supervisor

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Mercury by CVAA	EPA 245.2 - Cold Vapour AA	6-Sep-24	6-Sep-24
Metals, ICP-MS	EPA 200.8 - ICP-MS	6-Sep-24	6-Sep-24
Ottawa - San/Comb: SVOCs with PAHs	EPA 625 - GC-MS, extraction	6-Sep-24	6-Sep-24
pH	EPA 150.1 - pH probe @25 °C	6-Sep-24	6-Sep-24
Total Suspended Solids	SM 2540D - Gravimetric	6-Sep-24	6-Sep-24
VOCs, Sewer Use	EPA 624 - P&T GC-MS	6-Sep-24	6-Sep-24

Summary of Criteria Exceedances

(If this page is blank then there are no exceedances)

Only those criteria that a sample exceeds will be highlighted in red

Regulatory Comparison:

Paracel Laboratories has provided regulatory guidelines on this report for informational purposes only and makes no representations or warranties that the data is accurate or reflects the current regulatory values. The user is advised to consult with the appropriate official regulations to evaluate compliance. Sample results that are highlighted have exceeded the selected regulatory limit. Calculated uncertainty estimations have not been applied for determining regulatory exceedances.

Sample	Analyte	MDL / Units	Result	Sewer Use - Ottawa: San/Comb	-

Certificate of Analysis

Report Date: 06-Sep-2024

Client: **Taggart Construction Ltd.**

Order Date: 5-Sep-2024

Client PO: **5289**

Project Description: Richmond

	Client ID:	Richmond	-	-	-	Criteria:	
	Sample Date:	05-Sep-24 12:00	-	-	-	Sewer Use - Ottawa: San/Comb	-
	Sample ID:	2436272-01	-	-	-		
	Matrix:	Ground Water	-	-	-		
	MDL/Units						
General Inorganics							
pH	0.1 pH Units	8.9	-	-	-	5.50 - 11.00 pH Units	-
Total Suspended Solids	2 mg/L	<2	-	-	-	350 mg/L	-
Metals - Total							
Aluminum	0.01 mg/L	0.25	-	-	-	50 mg/L	-
Antimony	0.001 mg/L	0.013	-	-	-	5 mg/L	-
Arsenic	0.01 mg/L	0.13	-	-	-	1 mg/L	-
Bismuth	0.005 mg/L	<0.005	-	-	-	5 mg/L	-
Boron	0.05 mg/L	0.07	-	-	-	25 mg/L	-
Cadmium	0.001 mg/L	<0.001	-	-	-	0.02 mg/L	-
Chromium	0.05 mg/L	<0.05	-	-	-	5 mg/L	-
Cobalt	0.001 mg/L	<0.001	-	-	-	5 mg/L	-
Copper	0.005 mg/L	<0.005	-	-	-	3 mg/L	-
Lead	0.001 mg/L	<0.001	-	-	-	5 mg/L	-
Mercury	0.0001 mg/L	<0.0001	-	-	-	0.001 mg/L	-
Manganese	0.05 mg/L	<0.05	-	-	-	5 mg/L	-
Molybdenum	0.005 mg/L	0.048	-	-	-	5 mg/L	-
Nickel	0.005 mg/L	0.005	-	-	-	3 mg/L	-
Selenium	0.005 mg/L	<0.005	-	-	-	5 mg/L	-
Silver	0.001 mg/L	<0.001	-	-	-	5 mg/L	-
Tin	0.01 mg/L	<0.01	-	-	-	5 mg/L	-
Titanium	0.01 mg/L	<0.01	-	-	-	5 mg/L	-
Vanadium	0.001 mg/L	0.047	-	-	-	5 mg/L	-
Zinc	0.02 mg/L	<0.02	-	-	-	3 mg/L	-
Volatiles							
Benzene	0.0005 mg/L	<0.0005	-	-	-	0.01 mg/L	-

Certificate of Analysis

Report Date: 06-Sep-2024

Client: **Taggart Construction Ltd.**

Order Date: 5-Sep-2024

Client PO: **5289**

Project Description: Richmond

	Client ID:	Richmond	-	-	-	**Criteria:**	
	Sample Date:	05-Sep-24 12:00	-	-	-	**Sewer Use - Ottawa:**	-
	Sample ID:	2436272-01	-	-	-	**San/Comb**	
	Matrix:	Ground Water	-	-	-		
	MDL/Units						
Volatiles							
Bromodichloromethane	0.0005 mg/L	<0.0005	-	-	-	0.35 mg/L	-
Bromoform	0.0005 mg/L	<0.0005	-	-	-	0.63 mg/L	-
Bromomethane	0.0005 mg/L	<0.0005	-	-	-	0.11 mg/L	-
Carbon Tetrachloride	0.0002 mg/L	<0.0002	-	-	-	0.057 mg/L	-
Chlorobenzene	0.0005 mg/L	<0.0005	-	-	-	0.057 mg/L	-
Chloroethane	0.0010 mg/L	<0.0010	-	-	-	0.27 mg/L	-
Chloroform	0.0005 mg/L	<0.0005	-	-	-	0.08 mg/L	-
Chloromethane	0.0030 mg/L	<0.0030	-	-	-	0.19 mg/L	-
Dibromochloromethane	0.0005 mg/L	<0.0005	-	-	-	0.057 mg/L	-
1,2-Dibromoethane	0.0002 mg/L	<0.0002	-	-	-	0.028 mg/L	-
1,2-Dichlorobenzene	0.0005 mg/L	<0.0005	-	-	-	0.088 mg/L	-
1,3-Dichlorobenzene	0.0005 mg/L	<0.0005	-	-	-	0.036 mg/L	-
1,4-Dichlorobenzene	0.0005 mg/L	<0.0005	-	-	-	0.017 mg/L	-
1,1-Dichloroethane	0.0005 mg/L	<0.0005	-	-	-	0.2 mg/L	-
1,2-Dichloroethane	0.0005 mg/L	<0.0005	-	-	-	0.21 mg/L	-
1,1-Dichloroethylene	0.0005 mg/L	<0.0005	-	-	-	0.04 mg/L	-
cis-1,2-Dichloroethylene	0.0005 mg/L	<0.0005	-	-	-	0.2 mg/L	-
trans-1,2-Dichloroethylene	0.0005 mg/L	<0.0005	-	-	-	0.2 mg/L	-
1,2-Dichloropropane	0.0005 mg/L	<0.0005	-	-	-	0.85 mg/L	-
cis-1,3-Dichloropropylene	0.0005 mg/L	<0.0005	-	-	-	0.07 mg/L	-
trans-1,3-Dichloropropylene	0.0005 mg/L	<0.0005	-	-	-	0.07 mg/L	-
Ethylbenzene	0.0005 mg/L	<0.0005	-	-	-	0.057 mg/L	-
Methylene Chloride	0.0050 mg/L	<0.0050	-	-	-	0.211 mg/L	-
Styrene	0.0005 mg/L	<0.0005	-	-	-	0.04 mg/L	-
1,1,2,2-Tetrachloroethane	0.0005 mg/L	<0.0005	-	-	-	0.04 mg/L	-

	Client ID:	Richmond	-	-	-	**Criteria:**	
	Sample Date:	05-Sep-24 12:00	-	-	-	**Sewer Use - Ottawa:**	-
	Sample ID:	2436272-01	-	-	-	**San/Comb**	
	Matrix:	Ground Water	-	-	-		
	MDL/Units						
Volatiles							
Tetrachloroethylene	0.0005 mg/L	<0.0005	-	-	-	0.05 mg/L	-
Toluene	0.0005 mg/L	<0.0005	-	-	-	0.08 mg/L	-
1,1,1-Trichloroethane	0.0005 mg/L	<0.0005	-	-	-	0.054 mg/L	-
1,1,2-Trichloroethane	0.0005 mg/L	<0.0005	-	-	-	0.8 mg/L	-
Trichloroethylene	0.0005 mg/L	<0.0005	-	-	-	0.054 mg/L	-
Trichlorofluoromethane	0.0010 mg/L	<0.0010	-	-	-	0.02 mg/L	-
1,3,5-Trimethylbenzene	0.0005 mg/L	<0.0005	-	-	-	0.003 mg/L	-
Vinyl chloride	0.0005 mg/L	<0.0005	-	-	-	0.4 mg/L	-
Xylenes, total	0.0005 mg/L	<0.0005	-	-	-	0.32 mg/L	-
Toluene-d8	Surrogate	104%	-	-	-	-	-
Dibromofluoromethane	Surrogate	114%	-	-	-	-	-
4-Bromofluorobenzene	Surrogate	123%	-	-	-	-	-
Semi-Volatiles							
1-Methylnaphthalene	0.00005 mg/L	<0.00005	-	-	-	0.032 mg/L	-
2-Methylnaphthalene	0.00005 mg/L	<0.00005	-	-	-	0.022 mg/L	-
7H-Dibenzo[c,g]carbazole	0.00050 mg/L	<0.00050	-	-	-	-	-
Anthracene	0.00001 mg/L	<0.00001	-	-	-	-	-
Benzo [a] anthracene	0.00001 mg/L	<0.00001	-	-	-	-	-
Benzo [a] pyrene	0.00001 mg/L	<0.00001	-	-	-	-	-
Benzo [e] pyrene	0.00005 mg/L	<0.00005	-	-	-	-	-
Benzo [b&j] fluoranthene	0.00005 mg/L	<0.00005	-	-	-	-	-
Benzo [g,h,i] perylene	0.00005 mg/L	<0.00005	-	-	-	-	-
Benzo [k] fluoranthene	0.00005 mg/L	<0.00005	-	-	-	-	-
Benzylbutylphthalate	0.00050 mg/L	<0.00050	-	-	-	0.017 mg/L	-
Biphenyl	0.00005 mg/L	<0.00005	-	-	-	-	-

	Client ID:	Richmond	-	-	-	Criteria:	
	Sample Date:	05-Sep-24 12:00	-	-	-	Sewer Use - Ottawa: San/Comb	-
	Sample ID:	2436272-01	-	-	-		
	Matrix:	Ground Water	-	-	-		
	MDL/Units						
Semi-Volatiles							
Bis(2-chloroethoxy)methane	0.00100 mg/L	<0.00100	-	-	-	0.036 mg/L	-
Bis(2-ethylhexyl)phthalate	0.00100 mg/L	<0.00100	-	-	-	0.28 mg/L	-
Chrysene	0.00005 mg/L	<0.00005	-	-	-	-	-
Dibenzo [a,h] anthracene	0.00005 mg/L	<0.00005	-	-	-	-	-
Dibenzo [a,i] pyrene	0.00050 mg/L	<0.00050	-	-	-	-	-
Dibenzo [a,j] acridine	0.00050 mg/L	<0.00050	-	-	-	-	-
Diethylphthalate	0.00100 mg/L	<0.00100	-	-	-	0.2 mg/L	-
Di-n-butylphthalate	0.00100 mg/L	<0.00100	-	-	-	0.057 mg/L	-
Di-n-octylphthalate	0.00100 mg/L	<0.00100	-	-	-	0.03 mg/L	-
Fluoranthene	0.00001 mg/L	<0.00001	-	-	-	-	-
Fluorene	0.00005 mg/L	<0.00005	-	-	-	0.059 mg/L	-
Indeno [1,2,3-cd] pyrene	0.00005 mg/L	<0.00005	-	-	-	-	-
Indole	0.00100 mg/L	<0.00100	-	-	-	0.05 mg/L	-
Naphthalene	0.00005 mg/L	<0.00005	-	-	-	0.059 mg/L	-
Phenanthrene	0.00005 mg/L	<0.00005	-	-	-	-	-
Perylene	0.00050 mg/L	<0.00050	-	-	-	-	-
Pyrene	0.00001 mg/L	<0.00001	-	-	-	-	-
2,4-Dichlorophenol	0.00100 mg/L	<0.00100	-	-	-	0.044 mg/L	-
PAHs, Total	0.0025 mg/L	<0.0025	-	-	-	0.015 mg/L	-
2-Fluorobiphenyl	Surrogate	90.4%	-	-	-	-	-
Nitrobenzene-d5	Surrogate	87.1%	-	-	-	-	-
Terphenyl-d14	Surrogate	109%	-	-	-	-	-
2,4,6-Tribromophenol	Surrogate	105%	-	-	-	-	-
2-Fluorophenol	Surrogate	9.65% [3]	-	-	-	-	-
Phenol-d6	Surrogate	14.9% [3]	-	-	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics								
Total Suspended Solids	ND	2	mg/L					
Metals - Total								
Aluminum	ND	0.01	mg/L					
Antimony	ND	0.001	mg/L					
Arsenic	ND	0.01	mg/L					
Bismuth	ND	0.005	mg/L					
Boron	ND	0.05	mg/L					
Cadmium	ND	0.001	mg/L					
Chromium	ND	0.05	mg/L					
Cobalt	ND	0.001	mg/L					
Copper	ND	0.005	mg/L					
Lead	ND	0.001	mg/L					
Mercury	ND	0.0001	mg/L					
Manganese	ND	0.05	mg/L					
Molybdenum	ND	0.005	mg/L					
Nickel	ND	0.005	mg/L					
Selenium	ND	0.005	mg/L					
Silver	ND	0.001	mg/L					
Tin	ND	0.01	mg/L					
Titanium	ND	0.01	mg/L					
Vanadium	ND	0.001	mg/L					
Zinc	ND	0.02	mg/L					
Semi-Volatiles								
1-Methylnaphthalene	ND	0.00005	mg/L					
2-Methylnaphthalene	ND	0.00005	mg/L					
7H-Dibenzo[c,g]carbazole	ND	0.00050	mg/L					
Anthracene	ND	0.00001	mg/L					
Benzo [a] anthracene	ND	0.00001	mg/L					
Benzo [a] pyrene	ND	0.00001	mg/L					
Benzo [b&j] fluoranthene	ND	0.00005	mg/L					
Benzo [e] pyrene	ND	0.00005	mg/L					
Benzo [g,h,i] perylene	ND	0.00005	mg/L					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [k] fluoranthene	ND	0.00005	mg/L					
Benzylbutylphthalate	ND	0.00050	mg/L					
Biphenyl	ND	0.00005	mg/L					
Bis(2-chloroethoxy)methane	ND	0.00100	mg/L					
Bis(2-ethylhexyl)phthalate	ND	0.00100	mg/L					
Chrysene	ND	0.00005	mg/L					
Dibenzo [a,h] anthracene	ND	0.00005	mg/L					
Dibenzo [a,i] pyrene	ND	0.00050	mg/L					
Dibenzo [a,j] acridine	ND	0.00050	mg/L					
Diethylphthalate	ND	0.00100	mg/L					
Di-n-butylphthalate	ND	0.00100	mg/L					
Di-n-octylphthalate	ND	0.00100	mg/L					
Fluoranthene	ND	0.00001	mg/L					
Fluorene	ND	0.00005	mg/L					
Indeno [1,2,3-cd] pyrene	ND	0.00005	mg/L					
Indole	ND	0.00100	mg/L					
Naphthalene	ND	0.00005	mg/L					
Phenanthrene	ND	0.00005	mg/L					
Perylene	ND	0.00050	mg/L					
Pyrene	ND	0.00001	mg/L					
2,4-Dichlorophenol	ND	0.00100	mg/L					
Surrogate: 2-Fluorobiphenyl	*0.0176*		%	*87.8*	*50-140*			
Surrogate: Nitrobenzene-d5	*0.0170*		%	*85.1*	*50-140*			
Surrogate: Terphenyl-d14	*0.0211*		%	*106*	*50-140*			
Surrogate: 2,4,6-Tribromophenol	*0.0402*		%	*101*	*50-140*			
Surrogate: 2-Fluorophenol	*0.00686*		%	*17.2*	*50-140*			S-GC
Surrogate: Phenol-d6	*0.0113*		%	*28.2*	*50-140*			S-GC
Volatiles								
Benzene	ND	0.0005	mg/L					
Bromodichloromethane	ND	0.0005	mg/L					
Bromoform	ND	0.0005	mg/L					
Bromomethane	ND	0.0005	mg/L					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Carbon Tetrachloride	ND	0.0002	mg/L					
Chlorobenzene	ND	0.0005	mg/L					
Chloroethane	ND	0.0010	mg/L					
Chloroform	ND	0.0005	mg/L					
Chloromethane	ND	0.0030	mg/L					
Dibromochloromethane	ND	0.0005	mg/L					
1,2-Dibromoethane	ND	0.0002	mg/L					
1,2-Dichlorobenzene	ND	0.0005	mg/L					
1,3-Dichlorobenzene	ND	0.0005	mg/L					
1,4-Dichlorobenzene	ND	0.0005	mg/L					
1,1-Dichloroethane	ND	0.0005	mg/L					
1,2-Dichloroethane	ND	0.0005	mg/L					
1,1-Dichloroethylene	ND	0.0005	mg/L					
cis-1,2-Dichloroethylene	ND	0.0005	mg/L					
trans-1,2-Dichloroethylene	ND	0.0005	mg/L					
1,2-Dichloropropane	ND	0.0005	mg/L					
cis-1,3-Dichloropropylene	ND	0.0005	mg/L					
trans-1,3-Dichloropropylene	ND	0.0005	mg/L					
Ethylbenzene	ND	0.0005	mg/L					
Methylene Chloride	ND	0.0050	mg/L					
Styrene	ND	0.0005	mg/L					
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L					
Tetrachloroethylene	ND	0.0005	mg/L					
Toluene	ND	0.0005	mg/L					
1,1,1-Trichloroethane	ND	0.0005	mg/L					
1,1,2-Trichloroethane	ND	0.0005	mg/L					
Trichloroethylene	ND	0.0005	mg/L					
Trichlorofluoromethane	ND	0.0010	mg/L					
1,3,5-Trimethylbenzene	ND	0.0005	mg/L					
Vinyl chloride	ND	0.0005	mg/L					
Xylenes, total	ND	0.0005	mg/L					
Surrogate: 4-Bromofluorobenzene	*0.101*		*%*	*126*	*50-140*			

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*0.0884*		*%*	*110*	*50-140*			
Surrogate: Toluene-d8	*0.0815*		*%*	*102*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Total Suspended Solids	ND	2	mg/L	ND			NC	10	
Metals - Total									
Aluminum	0.09	0.01	mg/L	0.09			8.3	20	
Antimony	ND	0.001	mg/L	ND			NC	20	
Arsenic	0.255	0.01	mg/L	0.275			7.5	20	
Bismuth	ND	0.005	mg/L	ND			NC	20	
Boron	0.09	0.05	mg/L	0.15			NC	20	
Cadmium	ND	0.001	mg/L	ND			NC	20	
Chromium	ND	0.05	mg/L	ND			NC	20	
Cobalt	ND	0.001	mg/L	ND			NC	20	
Copper	0.077	0.005	mg/L	0.084			9.0	20	
Lead	0.006	0.001	mg/L	0.006			0.3	20	
Mercury	ND	0.0001	mg/L	ND			NC	20	
Manganese	ND	0.05	mg/L	ND			NC	20	
Molybdenum	ND	0.005	mg/L	ND			NC	20	
Nickel	ND	0.005	mg/L	ND			NC	20	
Selenium	ND	0.005	mg/L	ND			NC	20	
Silver	ND	0.001	mg/L	ND			NC	20	
Tin	ND	0.01	mg/L	ND			NC	20	
Titanium	ND	0.01	mg/L	ND			NC	20	
Vanadium	ND	0.001	mg/L	ND			NC	20	
Zinc	0.042	0.02	mg/L	0.044			4.9	20	
Volatiles									
Benzene	ND	0.0005	mg/L	ND			NC	30	
Bromodichloromethane	ND	0.0005	mg/L	ND			NC	30	
Bromoform	ND	0.0005	mg/L	ND			NC	30	
Bromomethane	ND	0.0005	mg/L	ND			NC	30	
Carbon Tetrachloride	ND	0.0002	mg/L	ND			NC	30	
Chlorobenzene	ND	0.0005	mg/L	ND			NC	30	
Chloroethane	ND	0.0010	mg/L	ND			NC	30	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Chloroform	0.0006	0.0005	mg/L	0.0006			1.8	30	
Chloromethane	ND	0.0030	mg/L	ND			NC	30	
Dibromochloromethane	ND	0.0005	mg/L	ND			NC	30	
1,2-Dibromoethane	ND	0.0002	mg/L	ND			NC	30	
1,2-Dichlorobenzene	ND	0.0005	mg/L	ND			NC	30	
1,3-Dichlorobenzene	ND	0.0005	mg/L	ND			NC	30	
1,4-Dichlorobenzene	ND	0.0005	mg/L	ND			NC	30	
1,1-Dichloroethane	ND	0.0005	mg/L	ND			NC	30	
1,2-Dichloroethane	ND	0.0005	mg/L	ND			NC	30	
1,1-Dichloroethylene	ND	0.0005	mg/L	ND			NC	30	
cis-1,2-Dichloroethylene	ND	0.0005	mg/L	ND			NC	30	
trans-1,2-Dichloroethylene	ND	0.0005	mg/L	ND			NC	30	
1,2-Dichloropropane	ND	0.0005	mg/L	ND			NC	30	
cis-1,3-Dichloropropylene	ND	0.0005	mg/L	ND			NC	30	
trans-1,3-Dichloropropylene	ND	0.0005	mg/L	ND			NC	30	
Ethylbenzene	ND	0.0005	mg/L	ND			NC	30	
Methylene Chloride	ND	0.0050	mg/L	ND			NC	30	
Styrene	ND	0.0005	mg/L	ND			NC	30	
1,1,2,2-Tetrachloroethane	ND	0.0005	mg/L	ND			NC	30	
Tetrachloroethylene	ND	0.0005	mg/L	ND			NC	30	
Toluene	ND	0.0005	mg/L	ND			NC	30	
1,1,1-Trichloroethane	ND	0.0005	mg/L	ND			NC	30	
1,1,2-Trichloroethane	ND	0.0005	mg/L	ND			NC	30	
Trichloroethylene	ND	0.0005	mg/L	ND			NC	30	
Trichlorofluoromethane	ND	0.0010	mg/L	ND			NC	30	
1,3,5-Trimethylbenzene	ND	0.0005	mg/L	ND			NC	30	
Vinyl chloride	ND	0.0005	mg/L	ND			NC	30	
m,p-Xylenes	ND	0.0005	mg/L	ND			NC	30	
o-Xylene	ND	0.0005	mg/L	ND			NC	30	
Surrogate: 4-Bromofluorobenzene	*0.0980*		*%*		*122*	*50-140*			
Surrogate: Dibromofluoromethane	*0.0934*		*%*		*117*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Toluene-d8	*0.0826*		*%*		*103*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Total Suspended Solids	24.0	2	mg/L	ND	112	75-125			
Metals - Total									
Aluminum	63.7	0.01	mg/L	9.25	109	80-120			
Arsenic	78.1	0.01	mg/L	27.5	101	80-120			
Bismuth	40.7	0.005	mg/L	0.218	81.0	80-120			
Boron	69.2	0.05	mg/L	15.3	108	80-120			
Cadmium	51.6	0.001	mg/L	0.004	103	80-120			
Chromium	54.7	0.05	mg/L	0.155	109	80-120			
Cobalt	52.5	0.001	mg/L	0.016	105	80-120			
Copper	58.5	0.005	mg/L	8.39	100	80-120			
Lead	43.4	0.001	mg/L	0.576	85.7	80-120			
Mercury	0.0029	0.0001	mg/L	ND	97.4	70-130			
Manganese	56.5	0.05	mg/L	1.59	110	80-120			
Molybdenum	54.3	0.005	mg/L	0.219	108	80-120			
Nickel	51.9	0.005	mg/L	0.170	104	80-120			
Selenium	49.0	0.005	mg/L	0.024	97.9	80-120			
Silver	52.0	0.001	mg/L	0.054	104	80-120			
Tin	52.4	0.01	mg/L	0.118	105	80-120			
Titanium	59.3	0.01	mg/L	0.361	118	80-120			
Vanadium	54.6	0.001	mg/L	0.044	109	80-120			
Zinc	53.0	0.02	mg/L	4.40	97.2	80-120			
Semi-Volatiles									
1-Methylnaphthalene	0.0110	0.00005	mg/L	ND	110	50-140			
2-Methylnaphthalene	0.0109	0.00005	mg/L	ND	109	50-140			
7H-Dibenzo[c,g]carbazole	0.00955	0.00050	mg/L	ND		50-140			
Anthracene	0.00998	0.00001	mg/L	ND	99.8	50-140			
Benzo [a] anthracene	0.00901	0.00001	mg/L	ND	90.1	50-140			
Benzo [a] pyrene	0.0102	0.00001	mg/L	ND	102	50-140			
Benzo [b&j] fluoranthene	0.0115	0.00005	mg/L	ND	115	50-140			
Benzo [e] pyrene	0.00913	0.00005	mg/L	ND		50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [g,h,i] perylene	0.0113	0.00005	mg/L	ND	113	50-140			
Benzo [k] fluoranthene	0.0130	0.00005	mg/L	ND	130	50-140			
Benzylbutylphthalate	0.00711	0.00050	mg/L	ND	71.1	50-140			
Biphenyl	0.00830	0.00005	mg/L	ND		50-140			
Bis(2-chloroethoxy)methane	0.0128	0.00100	mg/L	ND	128	50-140			
Bis(2-ethylhexyl)phthalate	0.00650	0.00100	mg/L	ND	65.0	50-140			
Chrysene	0.00924	0.00005	mg/L	ND	92.4	50-140			
Dibenzo [a,h] anthracene	0.0120	0.00005	mg/L	ND	120	50-140			
Dibenzo [a,i] pyrene	0.0105	0.00050	mg/L	ND		50-140			
Dibenzo [a,j] acridine	0.00870	0.00050	mg/L	ND		50-140			
Diethylphthalate	0.00999	0.00100	mg/L	ND	99.9	50-140			
Di-n-butylphthalate	0.00929	0.00100	mg/L	ND	92.9	50-140			
Di-n-octylphthalate	0.00633	0.00100	mg/L	ND	63.3	50-140			
Fluoranthene	0.0115	0.00001	mg/L	ND	115	50-140			
Fluorene	0.0111	0.00005	mg/L	ND	111	50-140			
Indeno [1,2,3-cd] pyrene	0.0108	0.00005	mg/L	ND	108	50-140			
Indole	0.00864	0.00100	mg/L	ND		50-140			
Naphthalene	0.0112	0.00005	mg/L	ND	112	50-140			
Phenanthrene	0.0113	0.00005	mg/L	ND	113	50-140			
Perylene	0.00879	0.00050	mg/L	ND		50-140			
Pyrene	0.00901	0.00001	mg/L	ND	90.1	50-140			
2,4-Dichlorophenol	0.0108	0.00100	mg/L	ND	108	50-140			
Surrogate: 2-Fluorobiphenyl	*0.0174*		*%*		*86.8*	*50-140*			
Surrogate: Nitrobenzene-d5	*0.0191*		*%*		*95.3*	*50-140*			
Surrogate: Terphenyl-d14	*0.0187*		*%*		*93.6*	*50-140*			
Surrogate: 2,4,6-Tribromophenol	*0.0407*		*%*		*102*	*50-140*			
Surrogate: 2-Fluorophenol	*0.00486*		*%*		*12.1*	*50-140*			*S-GC*
Surrogate: Phenol-d6	*0.00810*		*%*		*20.3*	*50-140*			*S-GC*
Volatiles									
Benzene	0.0413	0.0005	mg/L	ND	103	60-130			
Bromodichloromethane	0.0414	0.0005	mg/L	ND	103	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Bromoform	0.0332	0.0005	mg/L	ND	82.9	60-130			
Bromomethane	0.0378	0.0005	mg/L	ND	94.4	50-140			
Carbon Tetrachloride	0.0379	0.0002	mg/L	ND	94.7	60-130			
Chlorobenzene	0.0389	0.0005	mg/L	ND	97.2	60-130			
Chloroethane	0.0392	0.0010	mg/L	ND	97.9	50-140			
Chloroform	0.0423	0.0005	mg/L	ND	106	60-130			
Chloromethane	0.0479	0.0030	mg/L	ND	120	50-140			
Dibromochloromethane	0.0377	0.0005	mg/L	ND	94.2	60-130			
1,2-Dibromoethane	0.0402	0.0002	mg/L	ND	101	60-130			
1,2-Dichlorobenzene	0.0361	0.0005	mg/L	ND	90.2	60-130			
1,3-Dichlorobenzene	0.0386	0.0005	mg/L	ND	96.4	60-130			
1,4-Dichlorobenzene	0.0375	0.0005	mg/L	ND	93.7	60-130			
1,1-Dichloroethane	0.0450	0.0005	mg/L	ND	112	60-130			
1,2-Dichloroethane	0.0434	0.0005	mg/L	ND	109	60-130			
1,1-Dichloroethylene	0.0462	0.0005	mg/L	ND	116	60-130			
cis-1,2-Dichloroethylene	0.0417	0.0005	mg/L	ND	104	60-130			
trans-1,2-Dichloroethylene	0.0442	0.0005	mg/L	ND	110	60-130			
1,2-Dichloropropane	0.0401	0.0005	mg/L	ND	100	60-130			
cis-1,3-Dichloropropylene	0.0415	0.0005	mg/L	ND	104	60-130			
trans-1,3-Dichloropropylene	0.0414	0.0005	mg/L	ND	104	60-130			
Ethylbenzene	0.0343	0.0005	mg/L	ND	85.8	60-130			
Methylene Chloride	0.0463	0.0050	mg/L	ND	116	60-130			
Styrene	0.0343	0.0005	mg/L	ND	85.8	60-130			
1,1,2,2-Tetrachloroethane	0.0392	0.0005	mg/L	ND	97.9	60-130			
Tetrachloroethylene	0.0323	0.0005	mg/L	ND	80.8	60-130			
Toluene	0.0386	0.0005	mg/L	ND	96.5	60-130			
1,1,1-Trichloroethane	0.0388	0.0005	mg/L	ND	96.9	60-130			
1,1,2-Trichloroethane	0.0448	0.0005	mg/L	ND	112	60-130			
Trichloroethylene	0.0374	0.0005	mg/L	ND	93.5	60-130			
Trichlorofluoromethane	0.0488	0.0010	mg/L	ND	122	60-130			
1,3,5-Trimethylbenzene	0.0341	0.0005	mg/L	ND	85.2	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Vinyl chloride	0.0318	0.0005	mg/L	ND	79.4	50-140			
m,p-Xylenes	0.0725	0.0005	mg/L	ND	90.7	60-130			
o-Xylene	0.0353	0.0005	mg/L	ND	88.2	60-130			
Surrogate: 4-Bromofluorobenzene	*0.0849*		*%*		*106*	*50-140*			
Surrogate: Dibromofluoromethane	*0.0915*		*%*		*114*	*50-140*			
Surrogate: Toluene-d8	*0.0789*		*%*		*98.6*	*50-140*			

Qualifier Notes:

Sample Qualifiers :

3: Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

QC Qualifiers:

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

Sample Data Revisions:

None

Work Order Revisions / Comments:

Received at temperature > 25C

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

PARACE LABORATORIES L

Paracel ID: 2436272

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Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2436272	№ 75331

Client Name: TAGGART
Contact Name:
Address:
Telephone: 613 223 4766

Project Ref: Richmond
Quote #:
PO #: 5289
E-mail: jarchambault@taggartconstruction.com

Page __ of __

Turnaround Time
- ☑ 1 day
- ☐ 3 day
- ☐ 2 day
- ☐ Regular

Date Required:

☐ REG 153/04 ☐ REG 406/19

Table 1 ☐ Res/Park ☐ Med/Fine
Table 2 ☐ Ind/Comm ☐ Coarse
Table 3 ☐ Agri/Other
Table ___
For RSC: ☐ Yes ☐ No

Other Regulation
☐ REG 558 ☐ PWQO
☐ CCME ☐ MISA
☑ SU - Sani ☒ SU - Storm
Mun: Ottawa
☐ Other:

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	Required Analysis: PH+TSS	Total Metals	Mercury	VOCs	ACID BASE NEUTRALS
1	Richmond	GW		5 6	Sept 5	12:00	✓	✓	✓	✓	✓
2											
3											
4											
5											
6											
7											
8											
9											
10											

Comments:

Method of Delivery: Walk In

Relinquished By (Sign): JL	Received at Depot:	Received at Lab: 1415	Verified By: SO
Relinquished By (Print): JASON L	Date/Time:	Date/Time: Sept 5th	Date/Time: Sept 5, 2024 2:39 pm
Date/Time: Sept 5 1:00	Temperature: °C	Temperature: 25.8 °C	pH Verified: ☑ By: SS

APPENDIX IV
LABORATORY CERTIFICATES OF ANALYSIS

Your Project #: 21494078
Site Location: 1047 RICHMOND
Your C.O.C. #: na

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/10/13
Report #: R6851793
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C1S1463
Received: 2021/09/28, 15:20

Sample Matrix: Soil
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Hot Water Extractable Boron (1)	5	2021/10/01	2021/10/01	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum (1)	6	N/A	2021/10/01		EPA 8260C m
Free (WAD) Cyanide (1)	5	2021/10/01	2021/10/01	CAM SOP-00457	OMOE E3015 m
Conductivity (1)	5	2021/10/01	2021/10/01	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1, 2)	5	2021/10/01	2021/10/01	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (1, 3)	1	N/A	2021/10/13	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (1, 3)	2	N/A	2021/09/30	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (1, 4)	1	2021/10/08	2021/10/11	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (1, 4)	1	2021/09/30	2021/10/01	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (1, 4)	5	2021/09/30	2021/09/30	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS (1)	5	2021/10/01	2021/10/01	CAM SOP-00447	EPA 6020B m
Moisture (1)	8	N/A	2021/09/29	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture (1)	5	N/A	2021/09/30	CAM SOP-00445	Carter 2nd ed 51.2 m
pH CaCl2 EXTRACT (1)	5	2021/10/01	2021/10/01	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR) (1)	5	N/A	2021/10/01	CAM SOP-00102	EPA 6010C
Sodium Adsorption Ratio (SAR) (1)	8	N/A	2021/10/12	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs (1)	4	N/A	2021/10/01	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds in Soil (1)	1	N/A	2021/10/01	CAM SOP-00228	EPA 8260C m
Volatile Organic Compounds in Soil (1)	1	N/A	2021/09/30	CAM SOP-00228	EPA 8260C m

Remarks:

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

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

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

Your Project #: 21494078
Site Location: 1047 RICHMOND
Your C.O.C. #: na

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2021/10/13
Report #: R6851793
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C1S1463
Received: 2021/09/28, 15:20

otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) Soils are reported on a dry weight basis unless otherwise specified.
(3) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
(4) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: emese.gitej@bureauveritas.com
Phone# (905)817-5829
==========
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BV Labs Job #: C1S1463
Report Date: 2021/10/13

Golder Associates Ltd
Client Project #: 21494078
Site Location: 1047 RICHMOND
Sampler Initials: DG

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		QUD247	QUD251			QUD251			QUD254		
Sampling Date		2021/09/24 11:00	2021/09/21 11:30			2021/09/21 11:30			2021/09/24 08:05		
COC Number		na	na			na			na		
	UNITS	21-1 SA1	21-2 SA2	RDL	QC Batch	21-2 SA2 Lab-Dup	RDL	QC Batch	21-5 SA3	RDL	QC Batch
Calculated Parameters											
Sodium Adsorption Ratio	N/A	3.6	0.88		7607144				0.36		7607144
Inorganics											
Conductivity	mS/cm	0.54	0.26	0.002	7612428				0.27	0.002	7612428
Moisture	%	22	4.7	1.0	7610577	5.7	1.0	7610577	14	1.0	7610577
Available (CaCl2) pH	pH	7.51	6.97		7612293				7.42		7612293
WAD Cyanide (Free)	ug/g	<0.01	<0.01	0.01	7612164				<0.01	0.01	7612164
Chromium (VI)	ug/g	<0.18	<0.18	0.18	7611943				<0.18	0.18	7611943
Metals											
Hot Water Ext. Boron (B)	ug/g	0.38	0.15	0.050	7612002				0.40	0.050	7612002
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	0.20	7611998				0.23	0.20	7611998
Acid Extractable Arsenic (As)	ug/g	<1.0	<1.0	1.0	7611998				1.3	1.0	7611998
Acid Extractable Barium (Ba)	ug/g	72	21	0.50	7611998				89	0.50	7611998
Acid Extractable Beryllium (Be)	ug/g	0.49	<0.20	0.20	7611998				0.40	0.20	7611998
Acid Extractable Boron (B)	ug/g	9.8	<5.0	5.0	7611998				6.9	5.0	7611998
Acid Extractable Cadmium (Cd)	ug/g	<0.10	<0.10	0.10	7611998				0.54	0.10	7611998
Acid Extractable Chromium (Cr)	ug/g	25	8.3	1.0	7611998				22	1.0	7611998
Acid Extractable Cobalt (Co)	ug/g	7.6	3.1	0.10	7611998				7.9	0.10	7611998
Acid Extractable Copper (Cu)	ug/g	12	4.6	0.50	7611998				14	0.50	7611998
Acid Extractable Lead (Pb)	ug/g	5.6	2.0	1.0	7611998				85	1.0	7611998
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	<0.50	0.50	7611998				1.2	0.50	7611998
Acid Extractable Nickel (Ni)	ug/g	22	5.5	0.50	7611998				16	0.50	7611998
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	0.50	7611998				<0.50	0.50	7611998
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	0.20	7611998				<0.20	0.20	7611998
Acid Extractable Thallium (Tl)	ug/g	0.10	<0.050	0.050	7611998				0.12	0.050	7611998
Acid Extractable Uranium (U)	ug/g	0.50	0.45	0.050	7611998				0.53	0.050	7611998
Acid Extractable Vanadium (V)	ug/g	30	20	5.0	7611998				30	5.0	7611998
Acid Extractable Zinc (Zn)	ug/g	33	16	5.0	7611998				43	5.0	7611998
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	0.050	7611998				<0.050	0.050	7611998

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

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		QUD258		QUD259		
Sampling Date		2021/09/22 08:30		2021/09/22		
COC Number		na		na		
	UNITS	21-3 SA3	QC Batch	21-3 DUP-1	RDL	QC Batch
Calculated Parameters						
Sodium Adsorption Ratio	N/A	6.1	7607144	9.6		7610400
Inorganics						
Conductivity	mS/cm	0.34	7612428	0.41	0.002	7612465
Moisture	%	16	7610577	15	1.0	7611396
Available (CaCl2) pH	pH	7.54	7612293	7.43		7612293
WAD Cyanide (Free)	ug/g	<0.01	7612164	<0.01	0.01	7612164
Chromium (VI)	ug/g	<0.18	7611943	<0.18	0.18	7611943
Metals						
Hot Water Ext. Boron (B)	ug/g	0.87	7612002	0.67	0.050	7612310
Acid Extractable Antimony (Sb)	ug/g	0.33	7611998	0.46	0.20	7612314
Acid Extractable Arsenic (As)	ug/g	1.7	7611998	2.8	1.0	7612314
Acid Extractable Barium (Ba)	ug/g	99	7611998	110	0.50	7612314
Acid Extractable Beryllium (Be)	ug/g	0.52	7611998	0.72	0.20	7612314
Acid Extractable Boron (B)	ug/g	7.8	7611998	12	5.0	7612314
Acid Extractable Cadmium (Cd)	ug/g	0.45	7611998	0.37	0.10	7612314
Acid Extractable Chromium (Cr)	ug/g	27	7611998	33	1.0	7612314
Acid Extractable Cobalt (Co)	ug/g	13	7611998	14	0.10	7612314
Acid Extractable Copper (Cu)	ug/g	18	7611998	60	0.50	7612314
Acid Extractable Lead (Pb)	ug/g	23	7611998	48	1.0	7612314
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	7611998	0.52	0.50	7612314
Acid Extractable Nickel (Ni)	ug/g	25	7611998	34	0.50	7612314
Acid Extractable Selenium (Se)	ug/g	<0.50	7611998	<0.50	0.50	7612314
Acid Extractable Silver (Ag)	ug/g	<0.20	7611998	<0.20	0.20	7612314
Acid Extractable Thallium (Tl)	ug/g	0.14	7611998	0.21	0.050	7612314
Acid Extractable Uranium (U)	ug/g	0.49	7611998	0.64	0.050	7612314
Acid Extractable Vanadium (V)	ug/g	26	7611998	29	5.0	7612314
Acid Extractable Zinc (Zn)	ug/g	54	7611998	89	5.0	7612314
Acid Extractable Mercury (Hg)	ug/g	0.063	7611998	0.077	0.050	7612314

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

BV Labs Job #: C1S1463
Report Date: 2021/10/13

Golder Associates Ltd
Client Project #: 21494078
Site Location: 1047 RICHMOND
Sampler Initials: DG

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

BV Labs ID		QUD250			QUD254			QUD257		
Sampling Date		2021/09/21 10:40			2021/09/24 08:05			2021/09/22 08:15		
COC Number		na			na			na		
	UNITS	21-4 SA6	RDL	QC Batch	21-5 SA3	RDL	QC Batch	21-3 SA2	RDL	QC Batch
Inorganics										
Moisture	%	9.6	1.0	7609199				5.6	1.0	7608490
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	0.020	7610488	<0.020	0.020	7632544	<0.020	0.020	7610488
Toluene	ug/g	<0.020	0.020	7610488	<0.020	0.020	7632544	<0.020	0.020	7610488
Ethylbenzene	ug/g	<0.020	0.020	7610488	<0.020	0.020	7632544	<0.020	0.020	7610488
o-Xylene	ug/g	<0.020	0.020	7610488	<0.020	0.020	7632544	<0.020	0.020	7610488
p+m-Xylene	ug/g	<0.040	0.040	7610488	<0.040	0.040	7632544	<0.040	0.040	7610488
Total Xylenes	ug/g	<0.040	0.040	7610488	<0.040	0.040	7632544	<0.040	0.040	7610488
F1 (C6-C10)	ug/g	<10	10	7610488	<10	10	7632544	<10	10	7610488
F1 (C6-C10) - BTEX	ug/g	<10	10	7610488	<10	10	7632544	<10	10	7610488
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7609831	<10	10	7628860	<10	10	7609831
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7609831	200	50	7628860	<50	50	7609831
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7609831	76	50	7628860	<50	50	7609831
Reached Baseline at C50	ug/g	Yes		7609831	Yes		7628860	Yes		7609831
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	100		7610488	106		7632544	103		7610488
4-Bromofluorobenzene	%	102		7610488	90		7632544	94		7610488
D10-o-Xylene	%	93		7610488	78		7632544	103		7610488
D4-1,2-Dichloroethane	%	95		7610488	106		7632544	96		7610488
o-Terphenyl	%	106		7609831	90		7628860	100		7609831

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

BV Labs ID		QUD257		
Sampling Date		2021/09/22 08:15		
COC Number		na		
	UNITS	21-3 SA2 Lab-Dup	RDL	QC Batch
Inorganics				
Moisture	%	5.1	1.0	7608490

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

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

BV Labs ID		QUD248	QUD252	QUD253	QUD255		
Sampling Date		2021/09/24 11:30	2021/09/21 12:00	2021/09/22 10:50	2021/09/22 10:50		
COC Number		na	na	na	na		
	UNITS	21-1 SA3	21-2 SA5	21-5 SA2	21-5 DUP-1	RDL	QC Batch
Inorganics							
Moisture	%	17	7.6	10	9.3	1.0	7609199
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	<0.050	<0.050	0.050	7607143
Volatile Organics							
Acetone (2-Propanone)	ug/g	<0.49	<0.49	<0.49	<0.49	0.49	7612202
Benzene	ug/g	<0.0060	<0.0060	<0.0060	<0.0060	0.0060	7612202
Bromodichloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Bromoform	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Bromomethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Carbon Tetrachloride	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Chlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Chloroform	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Dibromochloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	0.12	0.15	0.040	7612202
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	0.073	0.093	0.040	7612202
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,1-Dichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,2-Dichloroethane	ug/g	<0.049	<0.049	<0.049	<0.049	0.049	7612202
1,1-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,2-Dichloropropane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	<0.030	<0.030	0.030	7612202
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Ethylbenzene	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	7612202
Ethylene Dibromide	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Hexane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	<0.049	<0.049	0.049	7612202
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	<0.40	<0.40	0.40	7612202
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	<0.40	<0.40	0.40	7612202
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Styrene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

BV Labs ID		QUD248	QUD252	QUD253	QUD255		
Sampling Date		2021/09/24 11:30	2021/09/21 12:00	2021/09/22 10:50	2021/09/22 10:50		
COC Number		na	na	na	na		
	UNITS	21-1 SA3	21-2 SA5	21-5 SA2	21-5 DUP-1	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Tetrachloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Toluene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	7612202
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Trichloroethylene	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	7612202
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	7612202
Vinyl Chloride	ug/g	<0.019	<0.019	<0.019	<0.019	0.019	7612202
p+m-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	7612202
o-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	7612202
Total Xylenes	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	7612202
F1 (C6-C10)	ug/g	<10	<10	<10	<10	10	7612202
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	<10	10	7612202
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	260	10	7609831
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	1500	25000	50	7609831
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	520	8100	50	7609831
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		7609831
Surrogate Recovery (%)							
o-Terphenyl	%	101	101	92	99		7609831
4-Bromofluorobenzene	%	91	91	90	90		7612202
D10-o-Xylene	%	86	81	88	74		7612202
D4-1,2-Dichloroethane	%	116	115	118	117		7612202
D8-Toluene	%	90	89	89	90		7612202

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 VOCS BY HS (SOIL)

BV Labs ID		QUD249			QUD249			QUD256		
Sampling Date		2021/09/21 09:40			2021/09/21 09:40			2021/09/22 08:00		
COC Number		na			na			na		
	UNITS	21-4 SA1	RDL	QC Batch	21-4 SA1 Lab-Dup	RDL	QC Batch	21-3 SA1	RDL	QC Batch
Inorganics										
Moisture	%	6.6	1.0	7608769	6.7	1.0	7608769	3.4	1.0	7608769
Calculated Parameters										
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	7607143				<0.050	0.050	7607143
Volatile Organics										
Acetone (2-Propanone)	ug/g	<0.49	0.49	7609853	<0.49	0.49	7609853	<0.49	0.49	7612260
Benzene	ug/g	<0.0060	0.0060	7609853	<0.0060	0.0060	7609853	<0.0060	0.0060	7612260
Bromodichloromethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Bromoform	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Bromomethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Carbon Tetrachloride	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Chlorobenzene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Chloroform	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Dibromochloromethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,2-Dichlorobenzene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,3-Dichlorobenzene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,4-Dichlorobenzene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,1-Dichloroethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,2-Dichloroethane	ug/g	<0.049	0.049	7609853	<0.049	0.049	7609853	<0.049	0.049	7612260
1,1-Dichloroethylene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,2-Dichloropropane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	7609853	<0.030	0.030	7609853	<0.030	0.030	7612260
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Ethylbenzene	ug/g	<0.010	0.010	7609853	<0.010	0.010	7609853	<0.010	0.010	7612260
Ethylene Dibromide	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Hexane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	0.19	0.040	7612260
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	7609853	<0.049	0.049	7609853	<0.049	0.049	7612260
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	7609853	<0.40	0.40	7609853	<0.40	0.40	7612260
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	7609853	<0.40	0.40	7609853	<0.40	0.40	7612260
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260

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

O.REG 153 VOCS BY HS (SOIL)

BV Labs ID		QUD249			QUD249			QUD256		
Sampling Date		2021/09/21 09:40			2021/09/21 09:40			2021/09/22 08:00		
COC Number		na			na			na		
	UNITS	21-4 SA1	RDL	QC Batch	21-4 SA1 Lab-Dup	RDL	QC Batch	21-3 SA1	RDL	QC Batch
Styrene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Tetrachloroethylene	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Toluene	ug/g	<0.020	0.020	7609853	<0.020	0.020	7609853	0.039	0.020	7612260
1,1,1-Trichloroethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
1,1,2-Trichloroethane	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Trichloroethylene	ug/g	<0.010	0.010	7609853	<0.010	0.010	7609853	<0.010	0.010	7612260
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	7609853	<0.040	0.040	7609853	<0.040	0.040	7612260
Vinyl Chloride	ug/g	<0.019	0.019	7609853	<0.019	0.019	7609853	<0.019	0.019	7612260
p+m-Xylene	ug/g	<0.020	0.020	7609853	<0.020	0.020	7609853	0.045	0.020	7612260
o-Xylene	ug/g	<0.020	0.020	7609853	<0.020	0.020	7609853	<0.020	0.020	7612260
Total Xylenes	ug/g	<0.020	0.020	7609853	<0.020	0.020	7609853	0.045	0.020	7612260
Surrogate Recovery (%)										
4-Bromofluorobenzene	%	106		7609853	105		7609853	87		7612260
D10-o-Xylene	%	99		7609853	95		7609853	97		7612260
D4-1,2-Dichloroethane	%	101		7609853	102		7609853	104		7612260
D8-Toluene	%	96		7609853	95		7609853	94		7612260

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

O.REG 153 VOCS BY HS (SOIL)

BV Labs ID		QUD256		
Sampling Date		2021/09/22 08:00		
COC Number		na		
	UNITS	21-3 SA1 Lab-Dup	RDL	QC Batch
Volatile Organics				
Acetone (2-Propanone)	ug/g	<0.49	0.49	7612260
Benzene	ug/g	<0.0060	0.0060	7612260
Bromodichloromethane	ug/g	<0.040	0.040	7612260
Bromoform	ug/g	<0.040	0.040	7612260
Bromomethane	ug/g	<0.040	0.040	7612260
Carbon Tetrachloride	ug/g	<0.040	0.040	7612260
Chlorobenzene	ug/g	<0.040	0.040	7612260
Chloroform	ug/g	<0.040	0.040	7612260
Dibromochloromethane	ug/g	<0.040	0.040	7612260
1,2-Dichlorobenzene	ug/g	<0.040	0.040	7612260
1,3-Dichlorobenzene	ug/g	<0.040	0.040	7612260
1,4-Dichlorobenzene	ug/g	<0.040	0.040	7612260
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	7612260
1,1-Dichloroethane	ug/g	<0.040	0.040	7612260
1,2-Dichloroethane	ug/g	<0.049	0.049	7612260
1,1-Dichloroethylene	ug/g	<0.040	0.040	7612260
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	7612260
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	7612260
1,2-Dichloropropane	ug/g	<0.040	0.040	7612260
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	7612260
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	7612260
Ethylbenzene	ug/g	<0.010	0.010	7612260
Ethylene Dibromide	ug/g	<0.040	0.040	7612260
Hexane	ug/g	0.18	0.040	7612260
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	7612260
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	7612260
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	7612260
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	7612260
Styrene	ug/g	<0.040	0.040	7612260
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	7612260

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

O.REG 153 VOCS BY HS (SOIL)

BV Labs ID		QUD256		
Sampling Date		2021/09/22 08:00		
COC Number		na		
	UNITS	21-3 SA1 Lab-Dup	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	7612260
Tetrachloroethylene	ug/g	<0.040	0.040	7612260
Toluene	ug/g	0.036	0.020	7612260
1,1,1-Trichloroethane	ug/g	<0.040	0.040	7612260
1,1,2-Trichloroethane	ug/g	<0.040	0.040	7612260
Trichloroethylene	ug/g	<0.010	0.010	7612260
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	7612260
Vinyl Chloride	ug/g	<0.019	0.019	7612260
p+m-Xylene	ug/g	0.046	0.020	7612260
o-Xylene	ug/g	<0.020	0.020	7612260
Total Xylenes	ug/g	0.046	0.020	7612260
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	86		7612260
D10-o-Xylene	%	95		7612260
D4-1,2-Dichloroethane	%	103		7612260
D8-Toluene	%	94		7612260

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

BV Labs Job #: C1S1463
Report Date: 2021/10/13

Golder Associates Ltd
Client Project #: 21494078
Site Location: 1047 RICHMOND
Sampler Initials: DG

RESULTS OF ANALYSES OF SOIL

BV Labs ID		QUD248	QUD249	QUD250	QUD252	QUD253	QUD255	QUD256	
Sampling Date		2021/09/24 11:30	2021/09/21 09:40	2021/09/21 10:40	2021/09/21 12:00	2021/09/22 10:50	2021/09/22 10:50	2021/09/22 08:00	
COC Number		na	na	na	na	na	na	na	
	UNITS	21-1 SA3	21-4 SA1	21-4 SA6	21-2 SA5	21-5 SA2	21-5 DUP-1	21-3 SA1	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	2.3	0.46 (1)	0.34 (1)	4.1	0.24 (1)	0.21 (1)	0.29	7626412

QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

BV Labs ID		QUD257	
Sampling Date		2021/09/22 08:15	
COC Number		na	
	UNITS	21-3 SA2	QC Batch
Calculated Parameters			
Sodium Adsorption Ratio	N/A	5.3	7626412

QC Batch = Quality Control Batch

BV Labs Job #: C1S1463
Report Date: 2021/10/13

Golder Associates Ltd
Client Project #: 21494078
Site Location: 1047 RICHMOND
Sampler Initials: DG

TEST SUMMARY

BV Labs ID: QUD247
Sample ID: 21-1 SA1
Matrix: Soil

Collected: 2021/09/24
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7612002	2021/10/01	2021/10/01	Archana Patel
Free (WAD) Cyanide	TECH	7612164	2021/10/01	2021/10/01	Aditiben Patel
Conductivity	AT	7612428	2021/10/01	2021/10/01	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7611943	2021/10/01	2021/10/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7611998	2021/10/01	2021/10/01	Daniel Teclu
Moisture	BAL	7610577	N/A	2021/09/30	Abhijot Kaur
pH CaCl2 EXTRACT	AT	7612293	2021/10/01	2021/10/01	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7607144	N/A	2021/10/01	Automated Statchk

BV Labs ID: QUD248
Sample ID: 21-1 SA3
Matrix: Soil

Collected: 2021/09/24
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/09/30	Agnieszka Brzuzy-Snopko
Moisture	BAL	7609199	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7612202	N/A	2021/10/01	Denis Reid

BV Labs ID: QUD249
Sample ID: 21-4 SA1
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Moisture	BAL	7608769	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds in Soil	GC/MS	7609853	N/A	2021/09/30	Juan Pangilinan

BV Labs ID: QUD249 Dup
Sample ID: 21-4 SA1
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7608769	N/A	2021/09/29	Kruti Jitesh Patel
Volatile Organic Compounds in Soil	GC/MS	7609853	N/A	2021/09/30	Juan Pangilinan

BV Labs ID: QUD250
Sample ID: 21-4 SA6
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7610488	N/A	2021/09/30	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/09/30	Agnieszka Brzuzy-Snopko
Moisture	BAL	7609199	N/A	2021/09/29	Kruti Jitesh Patel

TEST SUMMARY

BV Labs ID: QUD250
Sample ID: 21-4 SA6
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk

BV Labs ID: QUD251
Sample ID: 21-2 SA2
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7612002	2021/10/01	2021/10/01	Archana Patel
Free (WAD) Cyanide	TECH	7612164	2021/10/01	2021/10/01	Aditiben Patel
Conductivity	AT	7612428	2021/10/01	2021/10/01	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7611943	2021/10/01	2021/10/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7611998	2021/10/01	2021/10/01	Daniel Teclu
Moisture	BAL	7610577	N/A	2021/09/30	Abhijot Kaur
pH CaCl2 EXTRACT	AT	7612293	2021/10/01	2021/10/01	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7607144	N/A	2021/10/01	Automated Statchk

BV Labs ID: QUD251 Dup
Sample ID: 21-2 SA2
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7610577	N/A	2021/09/30	Abhijot Kaur

BV Labs ID: QUD252
Sample ID: 21-2 SA5
Matrix: Soil

Collected: 2021/09/21
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/09/30	Agnieszka Brzuzy-Snopko
Moisture	BAL	7609199	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7612202	N/A	2021/10/01	Denis Reid

BV Labs ID: QUD253
Sample ID: 21-5 SA2
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/09/30	Agnieszka Brzuzy-Snopko
Moisture	BAL	7609199	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7612202	N/A	2021/10/01	Denis Reid

BV Labs Job #: C1S1463
Report Date: 2021/10/13

Golder Associates Ltd
Client Project #: 21494078
Site Location: 1047 RICHMOND
Sampler Initials: DG

TEST SUMMARY

BV Labs ID: QUD254
Sample ID: 21-5 SA3
Matrix: Soil

Collected: 2021/09/24
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7612002	2021/10/01	2021/10/01	Archana Patel
Free (WAD) Cyanide	TECH	7612164	2021/10/01	2021/10/01	Aditiben Patel
Conductivity	AT	7612428	2021/10/01	2021/10/01	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7611943	2021/10/01	2021/10/01	Violeta Porcila
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7632544	N/A	2021/10/13	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7628860	2021/10/08	2021/10/11	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7611998	2021/10/01	2021/10/01	Daniel Teclu
Moisture	BAL	7610577	N/A	2021/09/30	Abhijot Kaur
pH CaCl2 EXTRACT	AT	7612293	2021/10/01	2021/10/01	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7607144	N/A	2021/10/01	Automated Statchk

BV Labs ID: QUD255
Sample ID: 21-5 DUP-1
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/09/30	Agnieszka Brzuzy-Snopko
Moisture	BAL	7609199	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7612202	N/A	2021/10/01	Denis Reid

BV Labs ID: QUD256
Sample ID: 21-3 SA1
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7607143	N/A	2021/10/01	Automated Statchk
Moisture	BAL	7608769	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk
Volatile Organic Compounds in Soil	GC/MS	7612260	N/A	2021/10/01	Karen Hughes

BV Labs ID: QUD256 Dup
Sample ID: 21-3 SA1
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds in Soil	GC/MS	7612260	N/A	2021/10/01	Karen Hughes

BV Labs ID: QUD257
Sample ID: 21-3 SA2
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	7610488	N/A	2021/09/30	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7609831	2021/09/30	2021/10/01	Agnieszka Brzuzy-Snopko

TEST SUMMARY

BV Labs ID: QUD257
Sample ID: 21-3 SA2
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7608490	N/A	2021/09/29	Kruti Jitesh Patel
Sodium Adsorption Ratio (SAR)	CALC/MET	7626412	N/A	2021/10/12	Automated Statchk

BV Labs ID: QUD257 Dup
Sample ID: 21-3 SA2
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7608490	N/A	2021/09/29	Kruti Jitesh Patel

BV Labs ID: QUD258
Sample ID: 21-3 SA3
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7612002	2021/10/01	2021/10/01	Archana Patel
Free (WAD) Cyanide	TECH	7612164	2021/10/01	2021/10/01	Aditiben Patel
Conductivity	AT	7612428	2021/10/01	2021/10/01	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7611943	2021/10/01	2021/10/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7611998	2021/10/01	2021/10/01	Daniel Teclu
Moisture	BAL	7610577	N/A	2021/09/30	Abhijot Kaur
pH CaCl2 EXTRACT	AT	7612293	2021/10/01	2021/10/01	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7607144	N/A	2021/10/01	Automated Statchk

BV Labs ID: QUD259
Sample ID: 21-3 DUP-1
Matrix: Soil

Collected: 2021/09/22
Shipped:
Received: 2021/09/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7612310	2021/10/01	2021/10/01	Archana Patel
Free (WAD) Cyanide	TECH	7612164	2021/10/01	2021/10/01	Aditiben Patel
Conductivity	AT	7612465	2021/10/01	2021/10/01	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7611943	2021/10/01	2021/10/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7612314	2021/10/01	2021/10/01	Viviana Canzonieri
Moisture	BAL	7611396	N/A	2021/09/30	Abhijot Kaur
pH CaCl2 EXTRACT	AT	7612293	2021/10/01	2021/10/01	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7610400	N/A	2021/10/01	Automated Statchk

GENERAL COMMENTS

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

Package 1	9.0°C

Revised Report [2021/10/13]: Samples 21-1 SA3, 21-4 SA1, SA-4 SA6, SA-2 SA5, 21-5 SA2, 21-5 DUP-1, 21-3 SA1 and 21-3 SA2 have been analyzed for SAR; sample 21-5 SA3 has been analyzed for Reg.153 PHCs as per client request.

Sample QUD250 [21-4 SA6] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample QUD254 [21-5 SA3] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Sample QUD259 [21-3 DUP-1] : Sample analyzed for Reg. 153 Metals & Inorganics as per client request.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7608490	MUC	RPD [QUD257-02]	Moisture	2021/09/29	9.3		%	20
7608769	MYG	RPD [QUD249-01]	Moisture	2021/09/29	1.5		%	20
7609199	MUC	RPD	Moisture	2021/09/29	9.2		%	20
7609831	ABS	Matrix Spike	o-Terphenyl	2021/09/30		91	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/09/30		96	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/09/30		97	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/09/30		98	%	50 - 130
7609831	ABS	Spiked Blank	o-Terphenyl	2021/09/30		93	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/09/30		97	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/09/30		98	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/09/30		99	%	80 - 120
7609831	ABS	Method Blank	o-Terphenyl	2021/09/30		93	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/09/30	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/09/30	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/09/30	<50		ug/g	
7609831	ABS	RPD	F2 (C10-C16 Hydrocarbons)	2021/09/30	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2021/09/30	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2021/09/30	NC		%	30
7609853	JPN	Matrix Spike [QUD249-02]	4-Bromofluorobenzene	2021/09/30		112	%	60 - 140
			D10-o-Xylene	2021/09/30		106	%	60 - 130
			D4-1,2-Dichloroethane	2021/09/30		98	%	60 - 140
			D8-Toluene	2021/09/30		106	%	60 - 140
			Acetone (2-Propanone)	2021/09/30		94	%	60 - 140
			Benzene	2021/09/30		92	%	60 - 140
			Bromodichloromethane	2021/09/30		100	%	60 - 140
			Bromoform	2021/09/30		95	%	60 - 140
			Bromomethane	2021/09/30		99	%	60 - 140
			Carbon Tetrachloride	2021/09/30		103	%	60 - 140
			Chlorobenzene	2021/09/30		99	%	60 - 140
			Chloroform	2021/09/30		99	%	60 - 140
			Dibromochloromethane	2021/09/30		90	%	60 - 140
			1,2-Dichlorobenzene	2021/09/30		96	%	60 - 140
			1,3-Dichlorobenzene	2021/09/30		98	%	60 - 140
			1,4-Dichlorobenzene	2021/09/30		114	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2021/09/30		106	%	60 - 140
			1,1-Dichloroethane	2021/09/30		96	%	60 - 140
			1,2-Dichloroethane	2021/09/30		93	%	60 - 140
			1,1-Dichloroethylene	2021/09/30		101	%	60 - 140
			cis-1,2-Dichloroethylene	2021/09/30		100	%	60 - 140
			trans-1,2-Dichloroethylene	2021/09/30		103	%	60 - 140
			1,2-Dichloropropane	2021/09/30		96	%	60 - 140
			cis-1,3-Dichloropropene	2021/09/30		80	%	60 - 140
			trans-1,3-Dichloropropene	2021/09/30		84	%	60 - 140
			Ethylbenzene	2021/09/30		92	%	60 - 140
			Ethylene Dibromide	2021/09/30		92	%	60 - 140
			Hexane	2021/09/30		104	%	60 - 140
			Methylene Chloride(Dichloromethane)	2021/09/30		110	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2021/09/30		96	%	60 - 140
			Methyl Isobutyl Ketone	2021/09/30		93	%	60 - 140
			Methyl t-butyl ether (MTBE)	2021/09/30		89	%	60 - 140
			Styrene	2021/09/30		108	%	60 - 140
			1,1,1,2-Tetrachloroethane	2021/09/30		102	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,1,2,2-Tetrachloroethane	2021/09/30		92	%	60 - 140
			Tetrachloroethylene	2021/09/30		99	%	60 - 140
			Toluene	2021/09/30		95	%	60 - 140
			1,1,1-Trichloroethane	2021/09/30		104	%	60 - 140
			1,1,2-Trichloroethane	2021/09/30		99	%	60 - 140
			Trichloroethylene	2021/09/30		107	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2021/09/30		106	%	60 - 140
			Vinyl Chloride	2021/09/30		106	%	60 - 140
			p+m-Xylene	2021/09/30		98	%	60 - 140
			o-Xylene	2021/09/30		92	%	60 - 140
7609853	JPN	Spiked Blank	4-Bromofluorobenzene	2021/09/30		113	%	60 - 140
			D10-o-Xylene	2021/09/30		112	%	60 - 130
			D4-1,2-Dichloroethane	2021/09/30		103	%	60 - 140
			D8-Toluene	2021/09/30		104	%	60 - 140
			Acetone (2-Propanone)	2021/09/30		98	%	60 - 140
			Benzene	2021/09/30		94	%	60 - 130
			Bromodichloromethane	2021/09/30		105	%	60 - 130
			Bromoform	2021/09/30		104	%	60 - 130
			Bromomethane	2021/09/30		106	%	60 - 140
			Carbon Tetrachloride	2021/09/30		102	%	60 - 130
			Chlorobenzene	2021/09/30		101	%	60 - 130
			Chloroform	2021/09/30		103	%	60 - 130
			Dibromochloromethane	2021/09/30		114	%	60 - 130
			1,2-Dichlorobenzene	2021/09/30		98	%	60 - 130
			1,3-Dichlorobenzene	2021/09/30		98	%	60 - 130
			1,4-Dichlorobenzene	2021/09/30		114	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2021/09/30		106	%	60 - 140
			1,1-Dichloroethane	2021/09/30		98	%	60 - 130
			1,2-Dichloroethane	2021/09/30		99	%	60 - 130
			1,1-Dichloroethylene	2021/09/30		99	%	60 - 130
			cis-1,2-Dichloroethylene	2021/09/30		104	%	60 - 130
			trans-1,2-Dichloroethylene	2021/09/30		103	%	60 - 130
			1,2-Dichloropropane	2021/09/30		100	%	60 - 130
			cis-1,3-Dichloropropene	2021/09/30		91	%	60 - 130
			trans-1,3-Dichloropropene	2021/09/30		98	%	60 - 130
			Ethylbenzene	2021/09/30		91	%	60 - 130
			Ethylene Dibromide	2021/09/30		100	%	60 - 130
			Hexane	2021/09/30		102	%	60 - 130
			Methylene Chloride(Dichloromethane)	2021/09/30		115	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/09/30		105	%	60 - 140
			Methyl Isobutyl Ketone	2021/09/30		106	%	60 - 130
			Methyl t-butyl ether (MTBE)	2021/09/30		92	%	60 - 130
			Styrene	2021/09/30		111	%	60 - 130
			1,1,1,2-Tetrachloroethane	2021/09/30		105	%	60 - 130
			1,1,2,2-Tetrachloroethane	2021/09/30		101	%	60 - 130
			Tetrachloroethylene	2021/09/30		98	%	60 - 130
			Toluene	2021/09/30		96	%	60 - 130
			1,1,1-Trichloroethane	2021/09/30		105	%	60 - 130
			1,1,2-Trichloroethane	2021/09/30		106	%	60 - 130
			Trichloroethylene	2021/09/30		108	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2021/09/30		105	%	60 - 130
			Vinyl Chloride	2021/09/30		106	%	60 - 130
			p+m-Xylene	2021/09/30		97	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			o-Xylene	2021/09/30		92	%	60 - 130
7609853	JPN	Method Blank	4-Bromofluorobenzene	2021/09/30		106	%	60 - 140
			D10-o-Xylene	2021/09/30		103	%	60 - 130
			D4-1,2-Dichloroethane	2021/09/30		108	%	60 - 140
			D8-Toluene	2021/09/30		93	%	60 - 140
			Acetone (2-Propanone)	2021/09/30	<0.49		ug/g	
			Benzene	2021/09/30	<0.0060		ug/g	
			Bromodichloromethane	2021/09/30	<0.040		ug/g	
			Bromoform	2021/09/30	<0.040		ug/g	
			Bromomethane	2021/09/30	<0.040		ug/g	
			Carbon Tetrachloride	2021/09/30	<0.040		ug/g	
			Chlorobenzene	2021/09/30	<0.040		ug/g	
			Chloroform	2021/09/30	<0.040		ug/g	
			Dibromochloromethane	2021/09/30	<0.040		ug/g	
			1,2-Dichlorobenzene	2021/09/30	<0.040		ug/g	
			1,3-Dichlorobenzene	2021/09/30	<0.040		ug/g	
			1,4-Dichlorobenzene	2021/09/30	<0.040		ug/g	
			Dichlorodifluoromethane (FREON 12)	2021/09/30	<0.040		ug/g	
			1,1-Dichloroethane	2021/09/30	<0.040		ug/g	
			1,2-Dichloroethane	2021/09/30	<0.049		ug/g	
			1,1-Dichloroethylene	2021/09/30	<0.040		ug/g	
			cis-1,2-Dichloroethylene	2021/09/30	<0.040		ug/g	
			trans-1,2-Dichloroethylene	2021/09/30	<0.040		ug/g	
			1,2-Dichloropropane	2021/09/30	<0.040		ug/g	
			cis-1,3-Dichloropropene	2021/09/30	<0.030		ug/g	
			trans-1,3-Dichloropropene	2021/09/30	<0.040		ug/g	
			Ethylbenzene	2021/09/30	<0.010		ug/g	
			Ethylene Dibromide	2021/09/30	<0.040		ug/g	
			Hexane	2021/09/30	<0.040		ug/g	
			Methylene Chloride(Dichloromethane)	2021/09/30	<0.049		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2021/09/30	<0.40		ug/g	
			Methyl Isobutyl Ketone	2021/09/30	<0.40		ug/g	
			Methyl t-butyl ether (MTBE)	2021/09/30	<0.040		ug/g	
			Styrene	2021/09/30	<0.040		ug/g	
			1,1,1,2-Tetrachloroethane	2021/09/30	<0.040		ug/g	
			1,1,2,2-Tetrachloroethane	2021/09/30	<0.040		ug/g	
			Tetrachloroethylene	2021/09/30	<0.040		ug/g	
			Toluene	2021/09/30	<0.020		ug/g	
			1,1,1-Trichloroethane	2021/09/30	<0.040		ug/g	
			1,1,2-Trichloroethane	2021/09/30	<0.040		ug/g	
			Trichloroethylene	2021/09/30	<0.010		ug/g	
			Trichlorofluoromethane (FREON 11)	2021/09/30	<0.040		ug/g	
			Vinyl Chloride	2021/09/30	<0.019		ug/g	
			p+m-Xylene	2021/09/30	<0.020		ug/g	
			o-Xylene	2021/09/30	<0.020		ug/g	
			Total Xylenes	2021/09/30	<0.020		ug/g	
7609853	JPN	RPD [QUD249-02]	Acetone (2-Propanone)	2021/09/30	NC		%	50
			Benzene	2021/09/30	NC		%	50
			Bromodichloromethane	2021/09/30	NC		%	50
			Bromoform	2021/09/30	NC		%	50
			Bromomethane	2021/09/30	NC		%	50
			Carbon Tetrachloride	2021/09/30	NC		%	50
			Chlorobenzene	2021/09/30	NC		%	50

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Chloroform	2021/09/30	NC		%	50
			Dibromochloromethane	2021/09/30	NC		%	50
			1,2-Dichlorobenzene	2021/09/30	NC		%	50
			1,3-Dichlorobenzene	2021/09/30	NC		%	50
			1,4-Dichlorobenzene	2021/09/30	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2021/09/30	NC		%	50
			1,1-Dichloroethane	2021/09/30	NC		%	50
			1,2-Dichloroethane	2021/09/30	NC		%	50
			1,1-Dichloroethylene	2021/09/30	NC		%	50
			cis-1,2-Dichloroethylene	2021/09/30	NC		%	50
			trans-1,2-Dichloroethylene	2021/09/30	NC		%	50
			1,2-Dichloropropane	2021/09/30	NC		%	50
			cis-1,3-Dichloropropene	2021/09/30	NC		%	50
			trans-1,3-Dichloropropene	2021/09/30	NC		%	50
			Ethylbenzene	2021/09/30	NC		%	50
			Ethylene Dibromide	2021/09/30	NC		%	50
			Hexane	2021/09/30	NC		%	50
			Methylene Chloride(Dichloromethane)	2021/09/30	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2021/09/30	NC		%	50
			Methyl Isobutyl Ketone	2021/09/30	NC		%	50
			Methyl t-butyl ether (MTBE)	2021/09/30	NC		%	50
			Styrene	2021/09/30	NC		%	50
			1,1,1,2-Tetrachloroethane	2021/09/30	NC		%	50
			1,1,2,2-Tetrachloroethane	2021/09/30	NC		%	50
			Tetrachloroethylene	2021/09/30	NC		%	50
			Toluene	2021/09/30	NC		%	50
			1,1,1-Trichloroethane	2021/09/30	NC		%	50
			1,1,2-Trichloroethane	2021/09/30	NC		%	50
			Trichloroethylene	2021/09/30	NC		%	50
			Trichlorofluoromethane (FREON 11)	2021/09/30	NC		%	50
			Vinyl Chloride	2021/09/30	NC		%	50
			p+m-Xylene	2021/09/30	NC		%	50
			o-Xylene	2021/09/30	NC		%	50
			Total Xylenes	2021/09/30	NC		%	50
7610488	H_W	Matrix Spike	1,4-Difluorobenzene	2021/09/30		97	%	60 - 140
			4-Bromofluorobenzene	2021/09/30		103	%	60 - 140
			D10-o-Xylene	2021/09/30		111	%	60 - 140
			D4-1,2-Dichloroethane	2021/09/30		91	%	60 - 140
			Benzene	2021/09/30		107	%	50 - 140
			Toluene	2021/09/30		111	%	50 - 140
			Ethylbenzene	2021/09/30		124	%	50 - 140
			o-Xylene	2021/09/30		119	%	50 - 140
			p+m-Xylene	2021/09/30		119	%	50 - 140
			F1 (C6-C10)	2021/09/30		105	%	60 - 140
7610488	H_W	Spiked Blank	1,4-Difluorobenzene	2021/09/30		96	%	60 - 140
			4-Bromofluorobenzene	2021/09/30		104	%	60 - 140
			D10-o-Xylene	2021/09/30		106	%	60 - 140
			D4-1,2-Dichloroethane	2021/09/30		86	%	60 - 140
			Benzene	2021/09/30		102	%	50 - 140
			Toluene	2021/09/30		107	%	50 - 140
			Ethylbenzene	2021/09/30		120	%	50 - 140
			o-Xylene	2021/09/30		115	%	50 - 140
			p+m-Xylene	2021/09/30		115	%	50 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F1 (C6-C10)	2021/09/30		96	%	80 - 120
7610488	H_W	Method Blank	1,4-Difluorobenzene	2021/09/30		104	%	60 - 140
			4-Bromofluorobenzene	2021/09/30		96	%	60 - 140
			D10-o-Xylene	2021/09/30		102	%	60 - 140
			D4-1,2-Dichloroethane	2021/09/30		95	%	60 - 140
			Benzene	2021/09/30	<0.020		ug/g	
			Toluene	2021/09/30	<0.020		ug/g	
			Ethylbenzene	2021/09/30	<0.020		ug/g	
			o-Xylene	2021/09/30	<0.020		ug/g	
			p+m-Xylene	2021/09/30	<0.040		ug/g	
			Total Xylenes	2021/09/30	<0.040		ug/g	
			F1 (C6-C10)	2021/09/30	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/09/30	<10		ug/g	
7610488	H_W	RPD	Benzene	2021/09/30	NC		%	50
			Toluene	2021/09/30	NC		%	50
			Ethylbenzene	2021/09/30	NC		%	50
			o-Xylene	2021/09/30	NC		%	50
			p+m-Xylene	2021/09/30	NC		%	50
			Total Xylenes	2021/09/30	NC		%	50
			F1 (C6-C10)	2021/09/30	NC		%	30
			F1 (C6-C10) - BTEX	2021/09/30	NC		%	30
7610577	MUC	RPD [QUD251-02]	Moisture	2021/09/30	19		%	20
7611396	MUC	RPD	Moisture	2021/09/30	2.2		%	20
7611943	VP2	Matrix Spike	Chromium (VI)	2021/10/01		28 (1)	%	70 - 130
7611943	VP2	Spiked Blank	Chromium (VI)	2021/10/01		92	%	80 - 120
7611943	VP2	Method Blank	Chromium (VI)	2021/10/01	<0.18		ug/g	
7611943	VP2	RPD	Chromium (VI)	2021/10/01	NC		%	35
7611998	DT1	Matrix Spike	Acid Extractable Antimony (Sb)	2021/10/01		85	%	75 - 125
			Acid Extractable Arsenic (As)	2021/10/01		100	%	75 - 125
			Acid Extractable Barium (Ba)	2021/10/01		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/10/01		101	%	75 - 125
			Acid Extractable Boron (B)	2021/10/01		86	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/10/01		95	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/10/01		93	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/10/01		92	%	75 - 125
			Acid Extractable Copper (Cu)	2021/10/01		NC	%	75 - 125
			Acid Extractable Lead (Pb)	2021/10/01		NC	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/10/01		94	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/10/01		91	%	75 - 125
			Acid Extractable Selenium (Se)	2021/10/01		98	%	75 - 125
			Acid Extractable Silver (Ag)	2021/10/01		98	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/10/01		98	%	75 - 125
			Acid Extractable Uranium (U)	2021/10/01		98	%	75 - 125
			Acid Extractable Vanadium (V)	2021/10/01		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/10/01		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/10/01		88	%	75 - 125
7611998	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2021/10/01		101	%	80 - 120
			Acid Extractable Arsenic (As)	2021/10/01		104	%	80 - 120
			Acid Extractable Barium (Ba)	2021/10/01		104	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/10/01		99	%	80 - 120
			Acid Extractable Boron (B)	2021/10/01		95	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/10/01		98	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/10/01		100	%	80 - 120

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Cobalt (Co)	2021/10/01		100	%	80 - 120
			Acid Extractable Copper (Cu)	2021/10/01		99	%	80 - 120
			Acid Extractable Lead (Pb)	2021/10/01		100	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/10/01		96	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/10/01		99	%	80 - 120
			Acid Extractable Selenium (Se)	2021/10/01		103	%	80 - 120
			Acid Extractable Silver (Ag)	2021/10/01		101	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/10/01		104	%	80 - 120
			Acid Extractable Uranium (U)	2021/10/01		101	%	80 - 120
			Acid Extractable Vanadium (V)	2021/10/01		106	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/10/01		102	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/10/01		95	%	80 - 120
7611998	DT1	Method Blank	Acid Extractable Antimony (Sb)	2021/10/01	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/10/01	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/10/01	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/10/01	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/10/01	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/10/01	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/10/01	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/10/01	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/10/01	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/10/01	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/10/01	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/10/01	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/10/01	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/10/01	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/10/01	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/10/01	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/10/01	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/10/01	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/10/01	<0.050		ug/g	
7611998	DT1	RPD	Acid Extractable Antimony (Sb)	2021/10/01	1.1		%	30
			Acid Extractable Arsenic (As)	2021/10/01	0.021		%	30
			Acid Extractable Barium (Ba)	2021/10/01	0.25		%	30
			Acid Extractable Beryllium (Be)	2021/10/01	1.3		%	30
			Acid Extractable Boron (B)	2021/10/01	7.7		%	30
			Acid Extractable Cadmium (Cd)	2021/10/01	19		%	30
			Acid Extractable Chromium (Cr)	2021/10/01	2.1		%	30
			Acid Extractable Cobalt (Co)	2021/10/01	0.43		%	30
			Acid Extractable Copper (Cu)	2021/10/01	1.5		%	30
			Acid Extractable Lead (Pb)	2021/10/01	2.1		%	30
			Acid Extractable Molybdenum (Mo)	2021/10/01	12		%	30
			Acid Extractable Nickel (Ni)	2021/10/01	0.088		%	30
			Acid Extractable Selenium (Se)	2021/10/01	NC		%	30
			Acid Extractable Silver (Ag)	2021/10/01	NC		%	30
			Acid Extractable Thallium (Tl)	2021/10/01	4.6		%	30
			Acid Extractable Uranium (U)	2021/10/01	3.8		%	30
			Acid Extractable Vanadium (V)	2021/10/01	1.5		%	30
			Acid Extractable Zinc (Zn)	2021/10/01	13		%	30
			Acid Extractable Mercury (Hg)	2021/10/01	9.4		%	30
7612002	APT	Matrix Spike	Hot Water Ext. Boron (B)	2021/10/01		98	%	75 - 125
7612002	APT	Spiked Blank	Hot Water Ext. Boron (B)	2021/10/01		94	%	75 - 125
7612002	APT	Method Blank	Hot Water Ext. Boron (B)	2021/10/01	<0.050		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7612002	APT	RPD	Hot Water Ext. Boron (B)	2021/10/01	3.9		%	40
7612164	ABP	Matrix Spike	WAD Cyanide (Free)	2021/10/01		104	%	75 - 125
7612164	ABP	Spiked Blank	WAD Cyanide (Free)	2021/10/01		100	%	80 - 120
7612164	ABP	Method Blank	WAD Cyanide (Free)	2021/10/01	<0.01		ug/g	
7612164	ABP	RPD	WAD Cyanide (Free)	2021/10/01	NC		%	35
7612202	DR1	Matrix Spike	4-Bromofluorobenzene	2021/10/01		102	%	60 - 140
			D10-o-Xylene	2021/10/01		100	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		111	%	60 - 140
			D8-Toluene	2021/10/01		105	%	60 - 140
			Acetone (2-Propanone)	2021/10/01		114	%	60 - 140
			Benzene	2021/10/01		95	%	60 - 140
			Bromodichloromethane	2021/10/01		104	%	60 - 140
			Bromoform	2021/10/01		98	%	60 - 140
			Bromomethane	2021/10/01		111	%	60 - 140
			Carbon Tetrachloride	2021/10/01		100	%	60 - 140
			Chlorobenzene	2021/10/01		94	%	60 - 140
			Chloroform	2021/10/01		104	%	60 - 140
			Dibromochloromethane	2021/10/01		95	%	60 - 140
			1,2-Dichlorobenzene	2021/10/01		95	%	60 - 140
			1,3-Dichlorobenzene	2021/10/01		90	%	60 - 140
			1,4-Dichlorobenzene	2021/10/01		103	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2021/10/01		105	%	60 - 140
			1,1-Dichloroethane	2021/10/01		101	%	60 - 140
			1,2-Dichloroethane	2021/10/01		103	%	60 - 140
			1,1-Dichloroethylene	2021/10/01		103	%	60 - 140
			cis-1,2-Dichloroethylene	2021/10/01		105	%	60 - 140
			trans-1,2-Dichloroethylene	2021/10/01		103	%	60 - 140
			1,2-Dichloropropane	2021/10/01		103	%	60 - 140
			cis-1,3-Dichloropropene	2021/10/01		100	%	60 - 140
			trans-1,3-Dichloropropene	2021/10/01		107	%	60 - 140
			Ethylbenzene	2021/10/01		88	%	60 - 140
			Ethylene Dibromide	2021/10/01		98	%	60 - 140
			Hexane	2021/10/01		104	%	60 - 140
			Methylene Chloride(Dichloromethane)	2021/10/01		118	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01		114	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/01		101	%	60 - 140
			Methyl t-butyl ether (MTBE)	2021/10/01		93	%	60 - 140
			Styrene	2021/10/01		102	%	60 - 140
			1,1,1,2-Tetrachloroethane	2021/10/01		95	%	60 - 140
			1,1,2,2-Tetrachloroethane	2021/10/01		106	%	60 - 140
			Tetrachloroethylene	2021/10/01		95	%	60 - 140
			Toluene	2021/10/01		101	%	60 - 140
			1,1,1-Trichloroethane	2021/10/01		104	%	60 - 140
			1,1,2-Trichloroethane	2021/10/01		102	%	60 - 140
			Trichloroethylene	2021/10/01		104	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2021/10/01		105	%	60 - 140
			Vinyl Chloride	2021/10/01		110	%	60 - 140
			p+m-Xylene	2021/10/01		92	%	60 - 140
			o-Xylene	2021/10/01		89	%	60 - 140
			F1 (C6-C10)	2021/10/01		86	%	60 - 140
7612202	DR1	Spiked Blank	4-Bromofluorobenzene	2021/10/01		103	%	60 - 140
			D10-o-Xylene	2021/10/01		100	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		113	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			D8-Toluene	2021/10/01		104	%	60 - 140
			Acetone (2-Propanone)	2021/10/01		125	%	60 - 140
			Benzene	2021/10/01		94	%	60 - 130
			Bromodichloromethane	2021/10/01		105	%	60 - 130
			Bromoform	2021/10/01		102	%	60 - 130
			Bromomethane	2021/10/01		107	%	60 - 140
			Carbon Tetrachloride	2021/10/01		98	%	60 - 130
			Chlorobenzene	2021/10/01		93	%	60 - 130
			Chloroform	2021/10/01		104	%	60 - 130
			Dibromochloromethane	2021/10/01		97	%	60 - 130
			1,2-Dichlorobenzene	2021/10/01		94	%	60 - 130
			1,3-Dichlorobenzene	2021/10/01		87	%	60 - 130
			1,4-Dichlorobenzene	2021/10/01		101	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2021/10/01		98	%	60 - 140
			1,1-Dichloroethane	2021/10/01		101	%	60 - 130
			1,2-Dichloroethane	2021/10/01		106	%	60 - 130
			1,1-Dichloroethylene	2021/10/01		99	%	60 - 130
			cis-1,2-Dichloroethylene	2021/10/01		106	%	60 - 130
			trans-1,2-Dichloroethylene	2021/10/01		101	%	60 - 130
			1,2-Dichloropropane	2021/10/01		104	%	60 - 130
			cis-1,3-Dichloropropene	2021/10/01		97	%	60 - 130
			trans-1,3-Dichloropropene	2021/10/01		102	%	60 - 130
			Ethylbenzene	2021/10/01		85	%	60 - 130
			Ethylene Dibromide	2021/10/01		101	%	60 - 130
			Hexane	2021/10/01		100	%	60 - 130
			Methylene Chloride(Dichloromethane)	2021/10/01		118	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01		128	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/01		112	%	60 - 130
			Methyl t-butyl ether (MTBE)	2021/10/01		92	%	60 - 130
			Styrene	2021/10/01		103	%	60 - 130
			1,1,1,2-Tetrachloroethane	2021/10/01		94	%	60 - 130
			1,1,2,2-Tetrachloroethane	2021/10/01		111	%	60 - 130
			Tetrachloroethylene	2021/10/01		91	%	60 - 130
			Toluene	2021/10/01		98	%	60 - 130
			1,1,1-Trichloroethane	2021/10/01		102	%	60 - 130
			1,1,2-Trichloroethane	2021/10/01		105	%	60 - 130
			Trichloroethylene	2021/10/01		102	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2021/10/01		101	%	60 - 130
			Vinyl Chloride	2021/10/01		105	%	60 - 130
			p+m-Xylene	2021/10/01		90	%	60 - 130
			o-Xylene	2021/10/01		88	%	60 - 130
			F1 (C6-C10)	2021/10/01		92	%	80 - 120
7612202	DR1	Method Blank	4-Bromofluorobenzene	2021/10/01		91	%	60 - 140
			D10-o-Xylene	2021/10/01		83	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		115	%	60 - 140
			D8-Toluene	2021/10/01		90	%	60 - 140
			Acetone (2-Propanone)	2021/10/01	<0.49		ug/g	
			Benzene	2021/10/01	<0.0060		ug/g	
			Bromodichloromethane	2021/10/01	<0.040		ug/g	
			Bromoform	2021/10/01	<0.040		ug/g	
			Bromomethane	2021/10/01	<0.040		ug/g	
			Carbon Tetrachloride	2021/10/01	<0.040		ug/g	
			Chlorobenzene	2021/10/01	<0.040		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Chloroform	2021/10/01	<0.040		ug/g	
			Dibromochloromethane	2021/10/01	<0.040		ug/g	
			1,2-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			1,3-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			1,4-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			Dichlorodifluoromethane (FREON 12)	2021/10/01	<0.040		ug/g	
			1,1-Dichloroethane	2021/10/01	<0.040		ug/g	
			1,2-Dichloroethane	2021/10/01	<0.049		ug/g	
			1,1-Dichloroethylene	2021/10/01	<0.040		ug/g	
			cis-1,2-Dichloroethylene	2021/10/01	<0.040		ug/g	
			trans-1,2-Dichloroethylene	2021/10/01	<0.040		ug/g	
			1,2-Dichloropropane	2021/10/01	<0.040		ug/g	
			cis-1,3-Dichloropropene	2021/10/01	<0.030		ug/g	
			trans-1,3-Dichloropropene	2021/10/01	<0.040		ug/g	
			Ethylbenzene	2021/10/01	<0.010		ug/g	
			Ethylene Dibromide	2021/10/01	<0.040		ug/g	
			Hexane	2021/10/01	<0.040		ug/g	
			Methylene Chloride(Dichloromethane)	2021/10/01	<0.049		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01	<0.40		ug/g	
			Methyl Isobutyl Ketone	2021/10/01	<0.40		ug/g	
			Methyl t-butyl ether (MTBE)	2021/10/01	<0.040		ug/g	
			Styrene	2021/10/01	<0.040		ug/g	
			1,1,1,2-Tetrachloroethane	2021/10/01	<0.040		ug/g	
			1,1,2,2-Tetrachloroethane	2021/10/01	<0.040		ug/g	
			Tetrachloroethylene	2021/10/01	<0.040		ug/g	
			Toluene	2021/10/01	<0.020		ug/g	
			1,1,1-Trichloroethane	2021/10/01	<0.040		ug/g	
			1,1,2-Trichloroethane	2021/10/01	<0.040		ug/g	
			Trichloroethylene	2021/10/01	<0.010		ug/g	
			Trichlorofluoromethane (FREON 11)	2021/10/01	<0.040		ug/g	
			Vinyl Chloride	2021/10/01	<0.019		ug/g	
			p+m-Xylene	2021/10/01	<0.020		ug/g	
			o-Xylene	2021/10/01	<0.020		ug/g	
			Total Xylenes	2021/10/01	<0.020		ug/g	
			F1 (C6-C10)	2021/10/01	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/10/01	<10		ug/g	
7612202	DR1	RPD	Acetone (2-Propanone)	2021/10/01	NC		%	50
			Benzene	2021/10/01	NC		%	50
			Bromodichloromethane	2021/10/01	NC		%	50
			Bromoform	2021/10/01	NC		%	50
			Bromomethane	2021/10/01	NC		%	50
			Carbon Tetrachloride	2021/10/01	NC		%	50
			Chlorobenzene	2021/10/01	NC		%	50
			Chloroform	2021/10/01	NC		%	50
			Dibromochloromethane	2021/10/01	NC		%	50
			1,2-Dichlorobenzene	2021/10/01	NC		%	50
			1,3-Dichlorobenzene	2021/10/01	NC		%	50
			1,4-Dichlorobenzene	2021/10/01	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2021/10/01	NC		%	50
			1,1-Dichloroethane	2021/10/01	NC		%	50
			1,2-Dichloroethane	2021/10/01	NC		%	50
			1,1-Dichloroethylene	2021/10/01	NC		%	50
			cis-1,2-Dichloroethylene	2021/10/01	NC		%	50

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			trans-1,2-Dichloroethylene	2021/10/01	NC		%	50
			1,2-Dichloropropane	2021/10/01	NC		%	50
			cis-1,3-Dichloropropene	2021/10/01	NC		%	50
			trans-1,3-Dichloropropene	2021/10/01	NC		%	50
			Ethylbenzene	2021/10/01	NC		%	50
			Ethylene Dibromide	2021/10/01	NC		%	50
			Hexane	2021/10/01	NC		%	50
			Methylene Chloride(Dichloromethane)	2021/10/01	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01	NC		%	50
			Methyl Isobutyl Ketone	2021/10/01	NC		%	50
			Methyl t-butyl ether (MTBE)	2021/10/01	1.8		%	50
			Styrene	2021/10/01	NC		%	50
			1,1,1,2-Tetrachloroethane	2021/10/01	NC		%	50
			1,1,2,2-Tetrachloroethane	2021/10/01	NC		%	50
			Tetrachloroethylene	2021/10/01	NC		%	50
			Toluene	2021/10/01	NC		%	50
			1,1,1-Trichloroethane	2021/10/01	NC		%	50
			1,1,2-Trichloroethane	2021/10/01	NC		%	50
			Trichloroethylene	2021/10/01	NC		%	50
			Trichlorofluoromethane (FREON 11)	2021/10/01	NC		%	50
			Vinyl Chloride	2021/10/01	NC		%	50
			p+m-Xylene	2021/10/01	NC		%	50
			o-Xylene	2021/10/01	NC		%	50
			Total Xylenes	2021/10/01	NC		%	50
			F1 (C6-C10)	2021/10/01	NC		%	30
			F1 (C6-C10) - BTEX	2021/10/01	NC		%	30
7612260	KH2	Matrix Spike [QUD256-03]	4-Bromofluorobenzene	2021/10/01		113	%	60 - 140
			D10-o-Xylene	2021/10/01		101	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		100	%	60 - 140
			D8-Toluene	2021/10/01		104	%	60 - 140
			Acetone (2-Propanone)	2021/10/01		91	%	60 - 140
			Benzene	2021/10/01		91	%	60 - 140
			Bromodichloromethane	2021/10/01		99	%	60 - 140
			Bromoform	2021/10/01		95	%	60 - 140
			Bromomethane	2021/10/01		104	%	60 - 140
			Carbon Tetrachloride	2021/10/01		101	%	60 - 140
			Chlorobenzene	2021/10/01		96	%	60 - 140
			Chloroform	2021/10/01		98	%	60 - 140
			Dibromochloromethane	2021/10/01		106	%	60 - 140
			1,2-Dichlorobenzene	2021/10/01		93	%	60 - 140
			1,3-Dichlorobenzene	2021/10/01		95	%	60 - 140
			1,4-Dichlorobenzene	2021/10/01		111	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2021/10/01		95	%	60 - 140
			1,1-Dichloroethane	2021/10/01		94	%	60 - 140
			1,2-Dichloroethane	2021/10/01		93	%	60 - 140
			1,1-Dichloroethylene	2021/10/01		97	%	60 - 140
			cis-1,2-Dichloroethylene	2021/10/01		99	%	60 - 140
			trans-1,2-Dichloroethylene	2021/10/01		101	%	60 - 140
			1,2-Dichloropropane	2021/10/01		94	%	60 - 140
			cis-1,3-Dichloropropene	2021/10/01		93	%	60 - 140
			trans-1,3-Dichloropropene	2021/10/01		99	%	60 - 140
			Ethylbenzene	2021/10/01		88	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Ethylene Dibromide	2021/10/01		92	%	60 - 140
			Hexane	2021/10/01		99	%	60 - 140
			Methylene Chloride(Dichloromethane)	2021/10/01		109	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01		95	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/01		93	%	60 - 140
			Methyl t-butyl ether (MTBE)	2021/10/01		87	%	60 - 140
			Styrene	2021/10/01		105	%	60 - 140
			1,1,1,2-Tetrachloroethane	2021/10/01		100	%	60 - 140
			1,1,2,2-Tetrachloroethane	2021/10/01		91	%	60 - 140
			Tetrachloroethylene	2021/10/01		97	%	60 - 140
			Toluene	2021/10/01		92	%	60 - 140
			1,1,1-Trichloroethane	2021/10/01		103	%	60 - 140
			1,1,2-Trichloroethane	2021/10/01		98	%	60 - 140
			Trichloroethylene	2021/10/01		105	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2021/10/01		103	%	60 - 140
			Vinyl Chloride	2021/10/01		101	%	60 - 140
			p+m-Xylene	2021/10/01		94	%	60 - 140
			o-Xylene	2021/10/01		89	%	60 - 140
7612260	KH2	Spiked Blank	4-Bromofluorobenzene	2021/10/01		114	%	60 - 140
			D10-o-Xylene	2021/10/01		107	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		104	%	60 - 140
			D8-Toluene	2021/10/01		103	%	60 - 140
			Acetone (2-Propanone)	2021/10/01		101	%	60 - 140
			Benzene	2021/10/01		95	%	60 - 130
			Bromodichloromethane	2021/10/01		107	%	60 - 130
			Bromoform	2021/10/01		106	%	60 - 130
			Bromomethane	2021/10/01		108	%	60 - 140
			Carbon Tetrachloride	2021/10/01		103	%	60 - 130
			Chlorobenzene	2021/10/01		99	%	60 - 130
			Chloroform	2021/10/01		104	%	60 - 130
			Dibromochloromethane	2021/10/01		113	%	60 - 130
			1,2-Dichlorobenzene	2021/10/01		97	%	60 - 130
			1,3-Dichlorobenzene	2021/10/01		96	%	60 - 130
			1,4-Dichlorobenzene	2021/10/01		113	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2021/10/01		102	%	60 - 140
			1,1-Dichloroethane	2021/10/01		99	%	60 - 130
			1,2-Dichloroethane	2021/10/01		102	%	60 - 130
			1,1-Dichloroethylene	2021/10/01		99	%	60 - 130
			cis-1,2-Dichloroethylene	2021/10/01		106	%	60 - 130
			trans-1,2-Dichloroethylene	2021/10/01		104	%	60 - 130
			1,2-Dichloropropane	2021/10/01		101	%	60 - 130
			cis-1,3-Dichloropropene	2021/10/01		98	%	60 - 130
			trans-1,3-Dichloropropene	2021/10/01		102	%	60 - 130
			Ethylbenzene	2021/10/01		88	%	60 - 130
			Ethylene Dibromide	2021/10/01		99	%	60 - 130
			Hexane	2021/10/01		101	%	60 - 130
			Methylene Chloride(Dichloromethane)	2021/10/01		116	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01		110	%	60 - 140
			Methyl Isobutyl Ketone	2021/10/01		111	%	60 - 130
			Methyl t-butyl ether (MTBE)	2021/10/01		92	%	60 - 130
			Styrene	2021/10/01		110	%	60 - 130
			1,1,1,2-Tetrachloroethane	2021/10/01		104	%	60 - 130
			1,1,2,2-Tetrachloroethane	2021/10/01		102	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Tetrachloroethylene	2021/10/01		96	%	60 - 130
			Toluene	2021/10/01		94	%	60 - 130
			1,1,1-Trichloroethane	2021/10/01		105	%	60 - 130
			1,1,2-Trichloroethane	2021/10/01		105	%	60 - 130
			Trichloroethylene	2021/10/01		109	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2021/10/01		105	%	60 - 130
			Vinyl Chloride	2021/10/01		105	%	60 - 130
			p+m-Xylene	2021/10/01		95	%	60 - 130
			o-Xylene	2021/10/01		90	%	60 - 130
7612260	KH2	Method Blank	4-Bromofluorobenzene	2021/10/01		107	%	60 - 140
			D10-o-Xylene	2021/10/01		99	%	60 - 130
			D4-1,2-Dichloroethane	2021/10/01		110	%	60 - 140
			D8-Toluene	2021/10/01		91	%	60 - 140
			Acetone (2-Propanone)	2021/10/01	<0.49		ug/g	
			Benzene	2021/10/01	<0.0060		ug/g	
			Bromodichloromethane	2021/10/01	<0.040		ug/g	
			Bromoform	2021/10/01	<0.040		ug/g	
			Bromomethane	2021/10/01	<0.040		ug/g	
			Carbon Tetrachloride	2021/10/01	<0.040		ug/g	
			Chlorobenzene	2021/10/01	<0.040		ug/g	
			Chloroform	2021/10/01	<0.040		ug/g	
			Dibromochloromethane	2021/10/01	<0.040		ug/g	
			1,2-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			1,3-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			1,4-Dichlorobenzene	2021/10/01	<0.040		ug/g	
			Dichlorodifluoromethane (FREON 12)	2021/10/01	<0.040		ug/g	
			1,1-Dichloroethane	2021/10/01	<0.040		ug/g	
			1,2-Dichloroethane	2021/10/01	<0.049		ug/g	
			1,1-Dichloroethylene	2021/10/01	<0.040		ug/g	
			cis-1,2-Dichloroethylene	2021/10/01	<0.040		ug/g	
			trans-1,2-Dichloroethylene	2021/10/01	<0.040		ug/g	
			1,2-Dichloropropane	2021/10/01	<0.040		ug/g	
			cis-1,3-Dichloropropene	2021/10/01	<0.030		ug/g	
			trans-1,3-Dichloropropene	2021/10/01	<0.040		ug/g	
			Ethylbenzene	2021/10/01	<0.010		ug/g	
			Ethylene Dibromide	2021/10/01	<0.040		ug/g	
			Hexane	2021/10/01	<0.040		ug/g	
			Methylene Chloride(Dichloromethane)	2021/10/01	<0.049		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01	<0.40		ug/g	
			Methyl Isobutyl Ketone	2021/10/01	<0.40		ug/g	
			Methyl t-butyl ether (MTBE)	2021/10/01	<0.040		ug/g	
			Styrene	2021/10/01	<0.040		ug/g	
			1,1,1,2-Tetrachloroethane	2021/10/01	<0.040		ug/g	
			1,1,2,2-Tetrachloroethane	2021/10/01	<0.040		ug/g	
			Tetrachloroethylene	2021/10/01	<0.040		ug/g	
			Toluene	2021/10/01	<0.020		ug/g	
			1,1,1-Trichloroethane	2021/10/01	<0.040		ug/g	
			1,1,2-Trichloroethane	2021/10/01	<0.040		ug/g	
			Trichloroethylene	2021/10/01	<0.010		ug/g	
			Trichlorofluoromethane (FREON 11)	2021/10/01	<0.040		ug/g	
			Vinyl Chloride	2021/10/01	<0.019		ug/g	
			p+m-Xylene	2021/10/01	<0.020		ug/g	
			o-Xylene	2021/10/01	<0.020		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Total Xylenes	2021/10/01	<0.020		ug/g	
7612260	KH2	RPD [QUD256-03]	Acetone (2-Propanone)	2021/10/01	NC		%	50
			Benzene	2021/10/01	NC		%	50
			Bromodichloromethane	2021/10/01	NC		%	50
			Bromoform	2021/10/01	NC		%	50
			Bromomethane	2021/10/01	NC		%	50
			Carbon Tetrachloride	2021/10/01	NC		%	50
			Chlorobenzene	2021/10/01	NC		%	50
			Chloroform	2021/10/01	NC		%	50
			Dibromochloromethane	2021/10/01	NC		%	50
			1,2-Dichlorobenzene	2021/10/01	NC		%	50
			1,3-Dichlorobenzene	2021/10/01	NC		%	50
			1,4-Dichlorobenzene	2021/10/01	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2021/10/01	NC		%	50
			1,1-Dichloroethane	2021/10/01	NC		%	50
			1,2-Dichloroethane	2021/10/01	NC		%	50
			1,1-Dichloroethylene	2021/10/01	NC		%	50
			cis-1,2-Dichloroethylene	2021/10/01	NC		%	50
			trans-1,2-Dichloroethylene	2021/10/01	NC		%	50
			1,2-Dichloropropane	2021/10/01	NC		%	50
			cis-1,3-Dichloropropene	2021/10/01	NC		%	50
			trans-1,3-Dichloropropene	2021/10/01	NC		%	50
			Ethylbenzene	2021/10/01	NC		%	50
			Ethylene Dibromide	2021/10/01	NC		%	50
			Hexane	2021/10/01	1.8		%	50
			Methylene Chloride(Dichloromethane)	2021/10/01	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2021/10/01	NC		%	50
			Methyl Isobutyl Ketone	2021/10/01	NC		%	50
			Methyl t-butyl ether (MTBE)	2021/10/01	NC		%	50
			Styrene	2021/10/01	NC		%	50
			1,1,1,2-Tetrachloroethane	2021/10/01	NC		%	50
			1,1,2,2-Tetrachloroethane	2021/10/01	NC		%	50
			Tetrachloroethylene	2021/10/01	NC		%	50
			Toluene	2021/10/01	7.4		%	50
			1,1,1-Trichloroethane	2021/10/01	NC		%	50
			1,1,2-Trichloroethane	2021/10/01	NC		%	50
			Trichloroethylene	2021/10/01	NC		%	50
			Trichlorofluoromethane (FREON 11)	2021/10/01	NC		%	50
			Vinyl Chloride	2021/10/01	NC		%	50
			p+m-Xylene	2021/10/01	1.1		%	50
			o-Xylene	2021/10/01	NC		%	50
			Total Xylenes	2021/10/01	1.1		%	50
7612293	TAK	Spiked Blank	Available (CaCl2) pH	2021/10/01		100	%	97 - 103
7612293	TAK	RPD	Available (CaCl2) pH	2021/10/01	0.084		%	N/A
7612310	APT	Matrix Spike	Hot Water Ext. Boron (B)	2021/10/01		96	%	75 - 125
7612310	APT	Spiked Blank	Hot Water Ext. Boron (B)	2021/10/01		93	%	75 - 125
7612310	APT	Method Blank	Hot Water Ext. Boron (B)	2021/10/01	<0.050		ug/g	
7612310	APT	RPD	Hot Water Ext. Boron (B)	2021/10/01	0.19		%	40
7612314	VIV	Matrix Spike	Acid Extractable Antimony (Sb)	2021/10/01		84	%	75 - 125
			Acid Extractable Arsenic (As)	2021/10/01		100	%	75 - 125
			Acid Extractable Barium (Ba)	2021/10/01		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/10/01		111	%	75 - 125
			Acid Extractable Boron (B)	2021/10/01		105	%	75 - 125

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Cadmium (Cd)	2021/10/01		96	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/10/01		NC	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/10/01		94	%	75 - 125
			Acid Extractable Copper (Cu)	2021/10/01		89	%	75 - 125
			Acid Extractable Lead (Pb)	2021/10/01		100	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/10/01		95	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/10/01		95	%	75 - 125
			Acid Extractable Selenium (Se)	2021/10/01		102	%	75 - 125
			Acid Extractable Silver (Ag)	2021/10/01		99	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/10/01		99	%	75 - 125
			Acid Extractable Uranium (U)	2021/10/01		101	%	75 - 125
			Acid Extractable Vanadium (V)	2021/10/01		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/10/01		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/10/01		98	%	75 - 125
7612314	VIV	Spiked Blank	Acid Extractable Antimony (Sb)	2021/10/01		93	%	80 - 120
			Acid Extractable Arsenic (As)	2021/10/01		102	%	80 - 120
			Acid Extractable Barium (Ba)	2021/10/01		100	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/10/01		100	%	80 - 120
			Acid Extractable Boron (B)	2021/10/01		94	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/10/01		92	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/10/01		93	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/10/01		94	%	80 - 120
			Acid Extractable Copper (Cu)	2021/10/01		91	%	80 - 120
			Acid Extractable Lead (Pb)	2021/10/01		98	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/10/01		94	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/10/01		94	%	80 - 120
			Acid Extractable Selenium (Se)	2021/10/01		103	%	80 - 120
			Acid Extractable Silver (Ag)	2021/10/01		96	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/10/01		98	%	80 - 120
			Acid Extractable Uranium (U)	2021/10/01		98	%	80 - 120
			Acid Extractable Vanadium (V)	2021/10/01		101	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/10/01		95	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/10/01		96	%	80 - 120
7612314	VIV	Method Blank	Acid Extractable Antimony (Sb)	2021/10/01	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/10/01	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/10/01	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/10/01	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/10/01	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/10/01	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/10/01	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/10/01	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/10/01	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/10/01	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/10/01	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/10/01	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/10/01	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/10/01	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/10/01	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/10/01	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/10/01	<5.0		ug/g	
			Acid Extractable Zinc (Zn)	2021/10/01	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/10/01	<0.050		ug/g	
7612314	VIV	RPD	Acid Extractable Antimony (Sb)	2021/10/01	NC		%	30

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Arsenic (As)	2021/10/01	6.0		%	30
			Acid Extractable Barium (Ba)	2021/10/01	0.62		%	30
			Acid Extractable Beryllium (Be)	2021/10/01	2.6		%	30
			Acid Extractable Boron (B)	2021/10/01	1.4		%	30
			Acid Extractable Cadmium (Cd)	2021/10/01	23		%	30
			Acid Extractable Chromium (Cr)	2021/10/01	7.5		%	30
			Acid Extractable Cobalt (Co)	2021/10/01	3.7		%	30
			Acid Extractable Copper (Cu)	2021/10/01	1.5		%	30
			Acid Extractable Lead (Pb)	2021/10/01	0.12		%	30
			Acid Extractable Molybdenum (Mo)	2021/10/01	NC		%	30
			Acid Extractable Nickel (Ni)	2021/10/01	5.5		%	30
			Acid Extractable Selenium (Se)	2021/10/01	NC		%	30
			Acid Extractable Silver (Ag)	2021/10/01	NC		%	30
			Acid Extractable Thallium (Tl)	2021/10/01	9.2		%	30
			Acid Extractable Uranium (U)	2021/10/01	5.4		%	30
			Acid Extractable Vanadium (V)	2021/10/01	3.3		%	30
			Acid Extractable Zinc (Zn)	2021/10/01	2.9		%	30
			Acid Extractable Mercury (Hg)	2021/10/01	NC		%	30
7612428	NYS	Spiked Blank	Conductivity	2021/10/01		100	%	90 - 110
7612428	NYS	Method Blank	Conductivity	2021/10/01	<0.002		mS/cm	
7612428	NYS	RPD	Conductivity	2021/10/01	2.4		%	10
7612465	NYS	Spiked Blank	Conductivity	2021/10/01		100	%	90 - 110
7612465	NYS	Method Blank	Conductivity	2021/10/01	<0.002		mS/cm	
7612465	NYS	RPD	Conductivity	2021/10/01	0		%	10
7628860	DN0	Spiked Blank	o-Terphenyl	2021/10/11		94	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/10/11		104	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/10/11		101	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/10/11		105	%	80 - 120
7628860	DN0	RPD	F2 (C10-C16 Hydrocarbons)	2021/10/11	2.7		%	30
			F3 (C16-C34 Hydrocarbons)	2021/10/11	3.1		%	30
			F4 (C34-C50 Hydrocarbons)	2021/10/11	3.4		%	30
7628860	DN0	Method Blank	o-Terphenyl	2021/10/11		91	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/10/11	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/10/11	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/10/11	<50		ug/g	
7632544	H_W	Spiked Blank	1,4-Difluorobenzene	2021/10/13		99	%	60 - 140
			4-Bromofluorobenzene	2021/10/13		100	%	60 - 140
			D10-o-Xylene	2021/10/13		91	%	60 - 140
			D4-1,2-Dichloroethane	2021/10/13		107	%	60 - 140
			Benzene	2021/10/13		103	%	50 - 140
			Toluene	2021/10/13		102	%	50 - 140
			Ethylbenzene	2021/10/13		115	%	50 - 140
			o-Xylene	2021/10/13		109	%	50 - 140
			p+m-Xylene	2021/10/13		111	%	50 - 140
			F1 (C6-C10)	2021/10/13		89	%	80 - 120
7632544	H_W	RPD	Benzene	2021/10/13	2.2		%	50
			Toluene	2021/10/13	1.7		%	50
			Ethylbenzene	2021/10/13	2.9		%	50
			o-Xylene	2021/10/13	0.60		%	50
			p+m-Xylene	2021/10/13	2.2		%	50
			F1 (C6-C10)	2021/10/13	1.3		%	30
			Benzene	2021/10/13	NC		%	50
			Toluene	2021/10/13	NC		%	50

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Ethylbenzene	2021/10/13	NC		%	50
			o-Xylene	2021/10/13	NC		%	50
			p+m-Xylene	2021/10/13	NC		%	50
			Total Xylenes	2021/10/13	NC		%	50
			F1 (C6-C10)	2021/10/13	NC		%	30
			F1 (C6-C10) - BTEX	2021/10/13	NC		%	30
7632544	H_W	Method Blank	1,4-Difluorobenzene	2021/10/13		107	%	60 - 140
			4-Bromofluorobenzene	2021/10/13		94	%	60 - 140
			D10-o-Xylene	2021/10/13		78	%	60 - 140
			D4-1,2-Dichloroethane	2021/10/13		107	%	60 - 140
			Benzene	2021/10/13	<0.020		ug/g	
			Toluene	2021/10/13	<0.020		ug/g	
			Ethylbenzene	2021/10/13	<0.020		ug/g	
			o-Xylene	2021/10/13	<0.020		ug/g	
			p+m-Xylene	2021/10/13	<0.040		ug/g	
			Total Xylenes	2021/10/13	<0.040		ug/g	
			F1 (C6-C10)	2021/10/13	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/10/13	<10		ug/g	

N/A = Not Applicable

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

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

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

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

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

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

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

(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was reanalyzed with the same results

VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

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

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

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CHAIN OF CUSTODY RECORD
ENV COC - 00014v2

Page 1 of 2

Invoice Information	Invoice to (requires report)	Report Information (if differs from invoice)		Project Information	
Company :	Golder	Company:		Quotation #:	
Contact Name:	Daniel Stabile	Contact Name:		P.O. #/ AFE#:	
Street Address:		Street Address:		Project #:	21494078
City:	Prov: Postal Code:	City:	Prov: Postal Code:	Site #:	
Phone:	905-213-4732	Phone:		Site Location:	1047 Richmond
Email:	dstabile@golder.com	Email:		Site Location Province:	Ontario
Copies:		Copies:		Sampled By:	DG

28-Sep-21 15:20
Ema Gitej
C1S1463
ENV-1188

Regulatory Criteria

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

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

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

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

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

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

Date Required: YY MM DD

Comments

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX/ F1	5 F2 - F4	6 VOCs	7 Reg 153 metals and inorganics	8 Reg 153 ICPMS metals	9 Reg 153 metals (Hg, Cr VI, ICPMS metals, HWS - B)	10 metals and ORP (see email)	11	12	13	14	15	16	17	18	19	20	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE
1	21-1 SA1	21	9	24	11	0	Soil	NA	Y	N							X										4	
2	21-1 SA3	21	9	24	11	30	Soil	NA	Y	N	X	X	X														4	
3	21-4 SA1	21	9	21	9	40	Soil	NA	Y	N			X														3	
4	21-4 SA6	21	9	21	10	40	Soil	NA	Y	N	X	X															3	
5	21-2 SA2	21	9	21	11	30	Soil	NA	Y	N							X										4	
6	21-2 SA5	21	9	21	12	0	Soil	NA	Y	N	X	X	X														3	
7	21-5 SA2	21	9	22	10	50	Soil	NA	Y	N	X	X	X														4	
8	21-5 SA3	21	9	24	8	5	Soil	NA	Y	N							X										4	
9	21-5 Dup-1	21	9	22	10	50	Soil	NA	Y	N	X	X	X														4	
10	21-3 SA1	21	9	22	8	0	Soil	NA	Y	N			X														4	
11	21-3 SA2	21	9	22	8	15	Soil	NA	Y	N	X	X															4	
12	21-3 SA3	21	9	22	8	30	Soil	NA	Y	N							X										4	

RECEIVED IN OTTAWA

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

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

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

LAB USE ONLY	Yes	No	°C	1	2	3	Temperature reading by:
Seal present		✓					
Seal intact		✓					
Cooling media present ICE	✓			9	9	9	QWW

	Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Special Instructions
1	Tonyla	2021	09	28			AISLINN MULLAHY QWW	2021	09	28	15	20	
2								2021	09	29	08	00	

3/3/4°C

www.BVNA.com

6740 Campobello Road, Mississauga, Ontario L5N 2L8
Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266

CHAIN OF CUSTODY RECORD

ENV COC - 00014v2

CONTINUED

[PAGE 1 REFERENCE]

Company:	Golder
Contact Name:	Daniel Stabile
Project #:	21494078

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

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX/F1	5 F2 - F4	6 VOCs	7 Reg 153 metals and inorganics	8 Reg 153 ICPMS metals	9 Reg 153 metals (Hg, CrVI, ICPMS metals, HWS- B)	10	11	12	13	14	15	16	17	18	19	20	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE	Same as above / Comments
13	21-3 SA3	21	9	22	8	30	Soil	NA	N	N							X											1		
14																														
15																														
16																														
17																														
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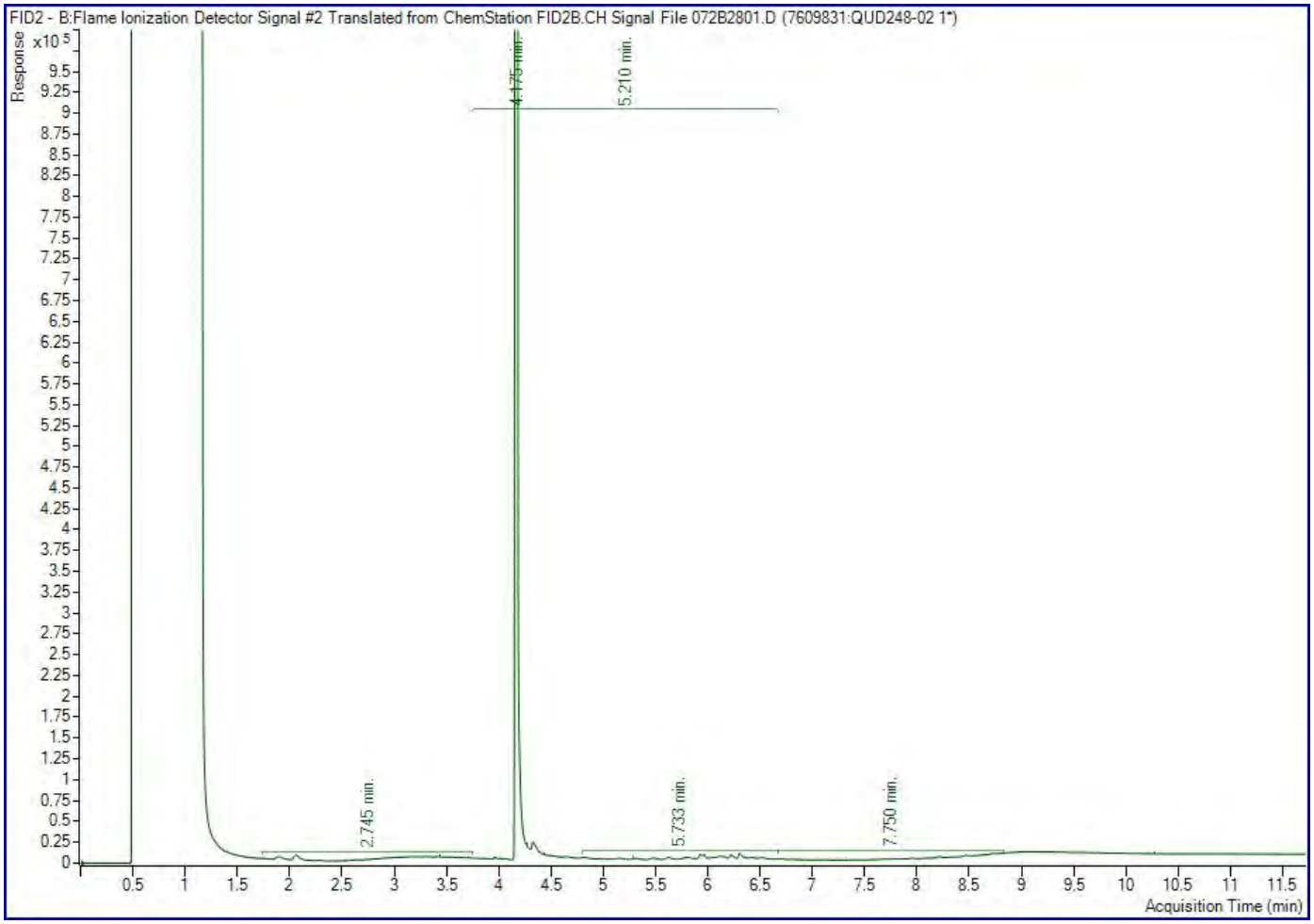
40																														

see page 1.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD248

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-1 SA3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

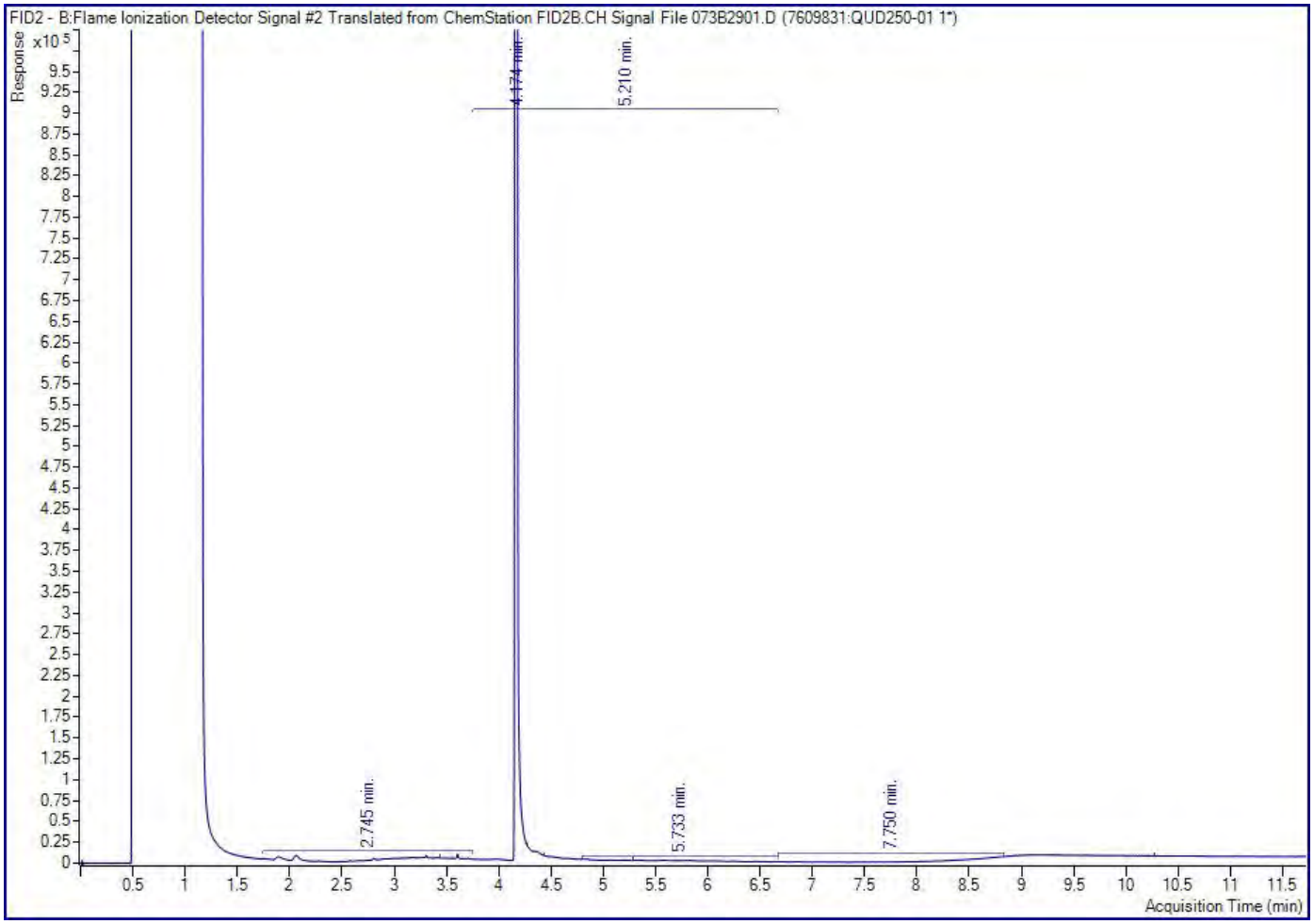


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD250

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-4 SA6

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

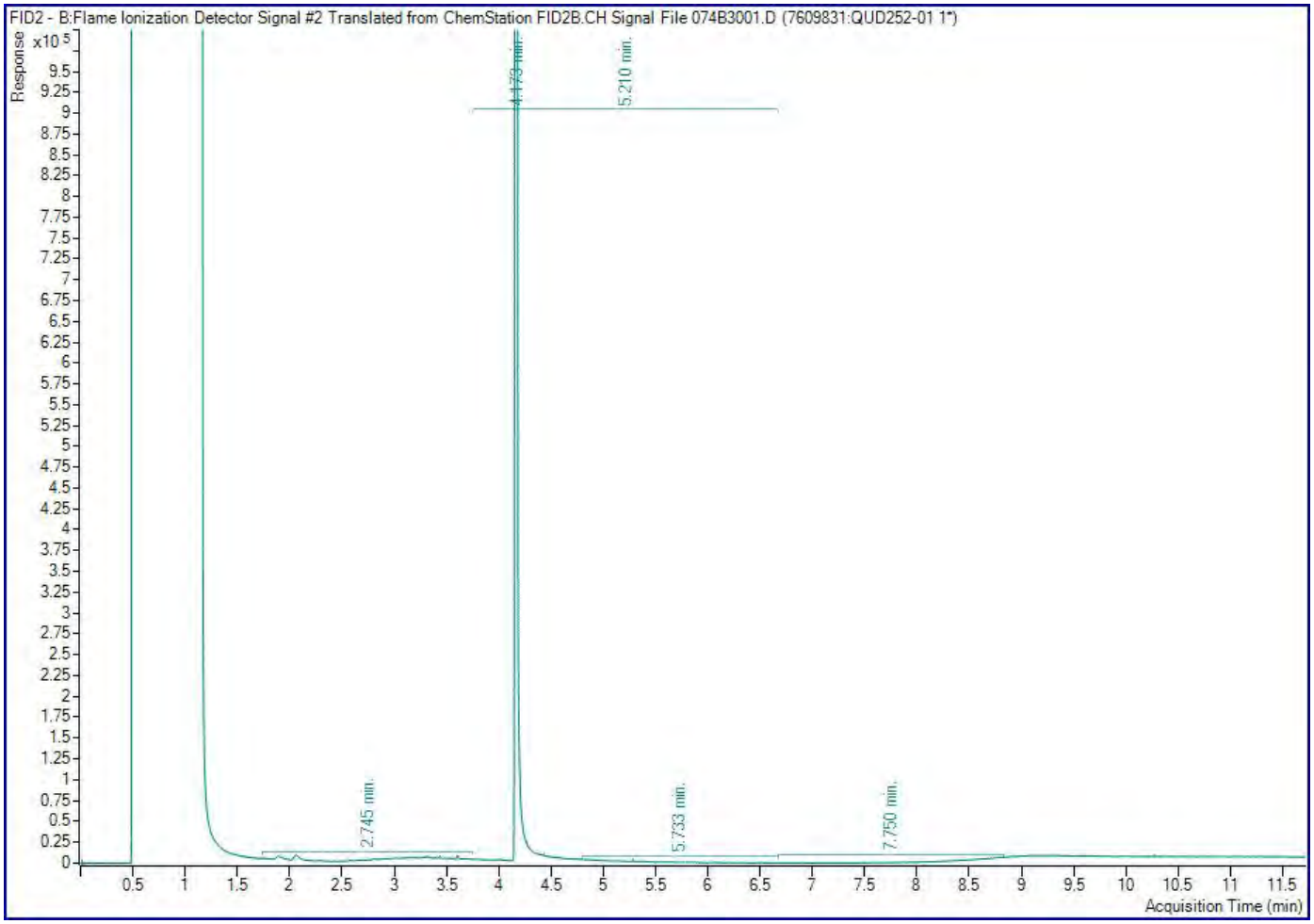


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD252

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-2 SA5

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

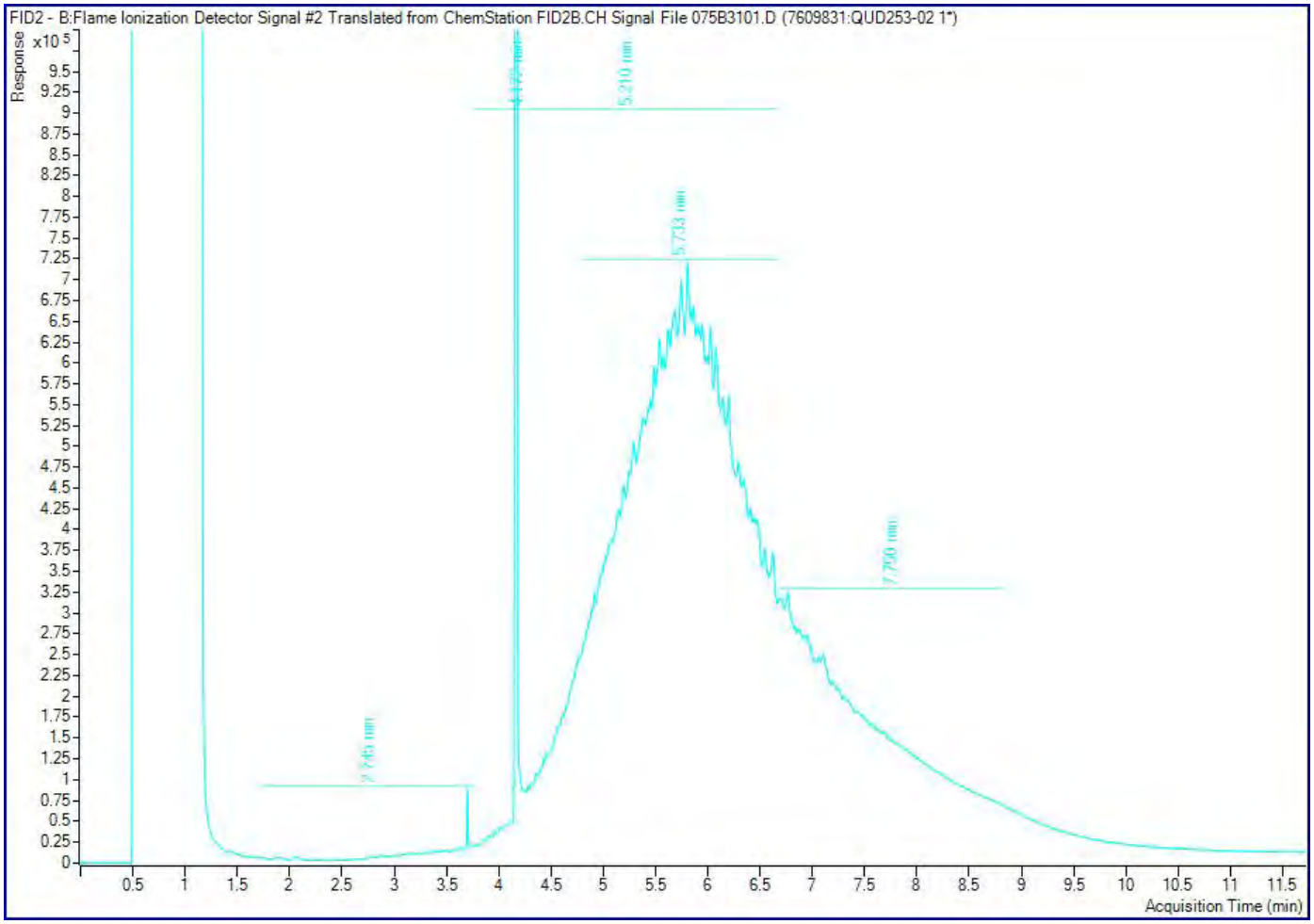


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD253

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-5 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

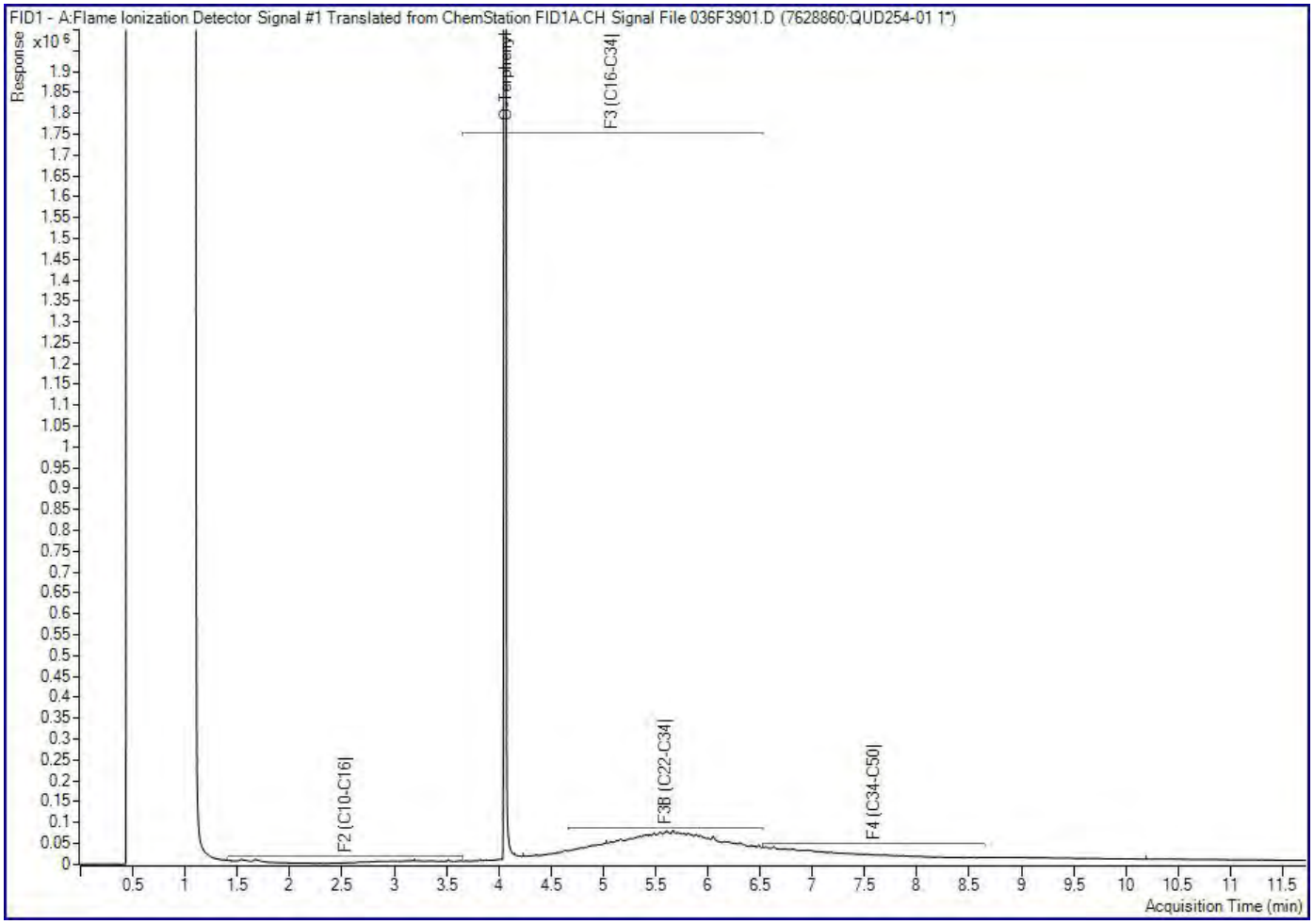


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD254

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-5 SA3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

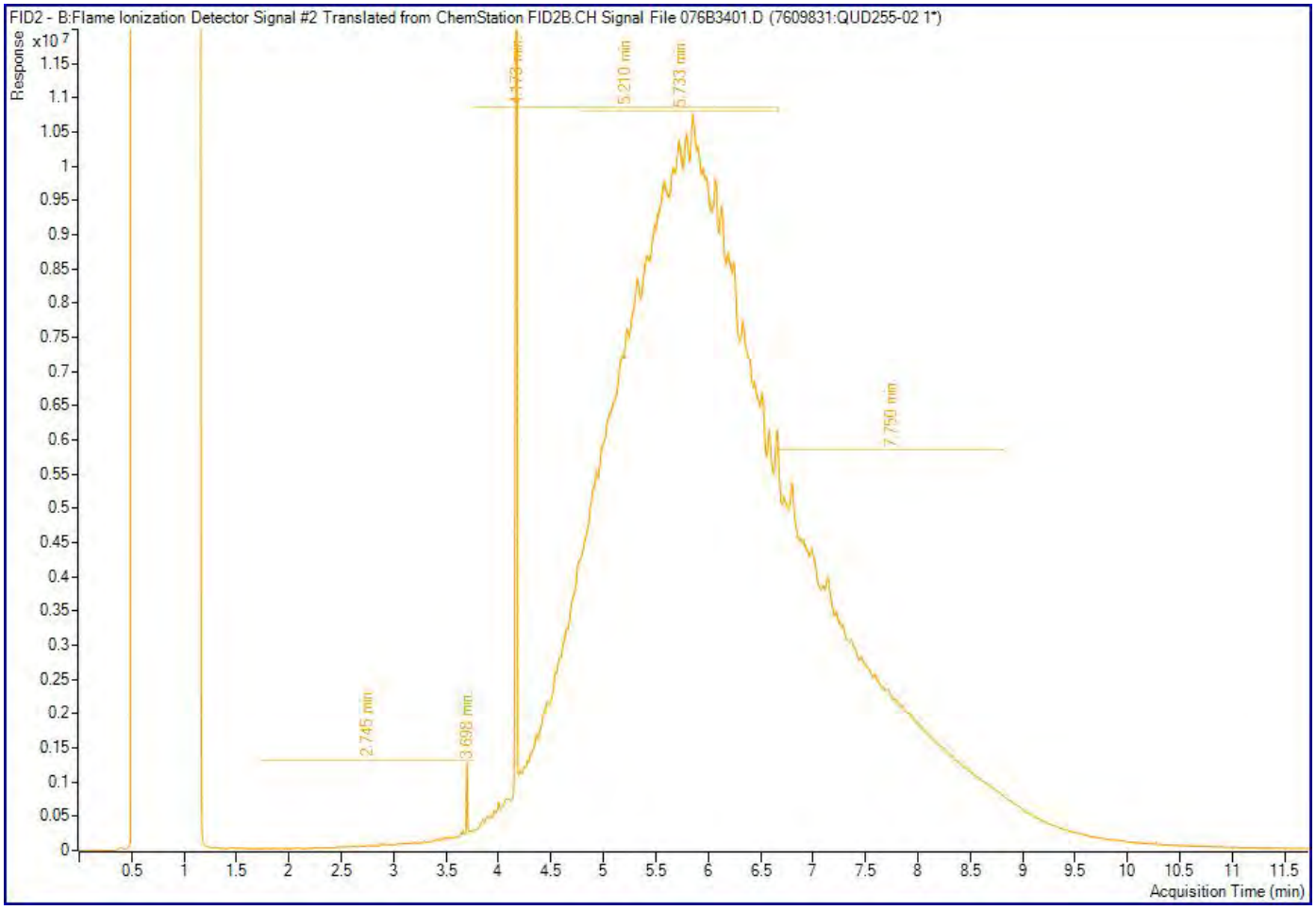


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD255

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-5 DUP-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

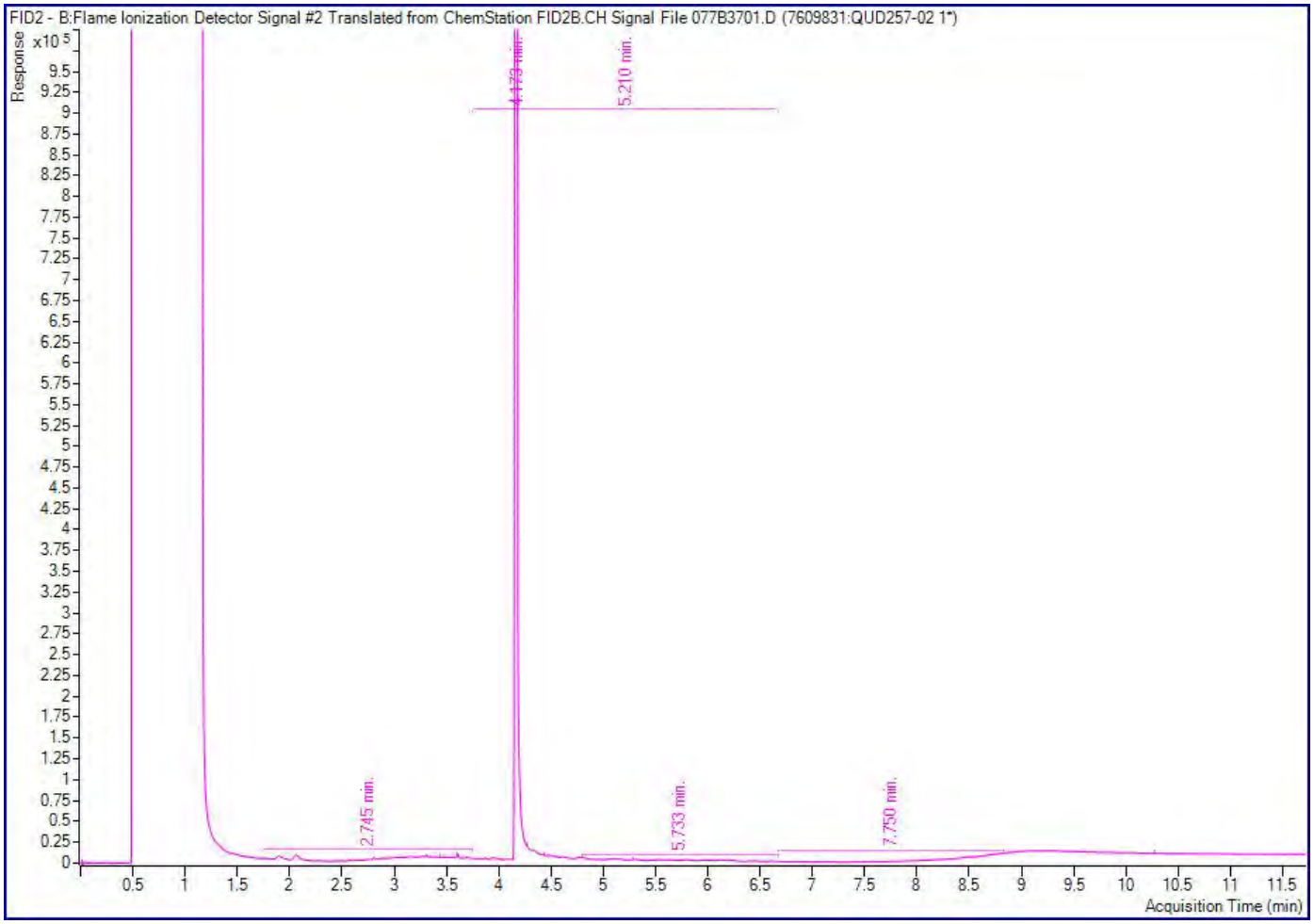


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1S1463
Report Date: 2021/10/13
BV Labs Sample: QUD257

Golder Associates Ltd
Client Project #: 21494078
Project name: 1047 RICHMOND
Client ID: 21-3 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: 21494078
Your C.O.C. #: 855386-01-01, 855386-02-01

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2022/01/11
Report #: R6957298
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1X6358
Received: 2021/11/15, 13:20

Sample Matrix: Soil
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Hot Water Extractable Boron (1)	6	2021/11/17	2021/11/17	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum (1)	7	N/A	2021/11/17		EPA 8260C m
Free (WAD) Cyanide (1)	6	2021/11/17	2021/11/17	CAM SOP-00457	OMOE E3015 m
Conductivity (1)	6	2021/11/17	2021/11/17	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1, 2)	6	2021/11/17	2021/11/17	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydrocarbons F2-F4 in Soil (1, 3)	7	2021/11/16	2021/11/17	CAM SOP-00316	CCME CWS m
F4G (CCME Hydrocarbons Gravimetric) (1)	2	2021/11/18	2021/11/18	CAM SOP-00316	CCME PHC-CWS m
Acid Extractable Metals by ICPMS (1)	6	2021/11/17	2021/11/17	CAM SOP-00447	EPA 6020B m
Moisture (1)	11	N/A	2021/11/16	CAM SOP-00445	Carter 2nd ed 51.2 m
pH CaCl2 EXTRACT (1)	6	2021/11/17	2021/11/17	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR) (1)	6	N/A	2021/11/17	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs (1)	7	N/A	2021/11/17	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

Your Project #: 21494078
Your C.O.C. #: 855386-01-01, 855386-02-01

Attention: Daniel Stabile

Golder Associates Ltd
100 Scotia Crt
Whitby, ON
CANADA L1N 8Y6

Report Date: 2022/01/11
Report #: R6957298
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1X6358
Received: 2021/11/15, 13:20

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) Soils are reported on a dry weight basis unless otherwise specified.
(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Ema Gitej, Senior Project Manager
Email: emese.gitej@bureauveritas.com
Phone# (905)817-5829
==========
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		RFW712			RFW713	RFW714		
Sampling Date		2021/11/12 12:30			2021/11/12 13:00	2021/11/11 14:00		
COC Number		855386-01-01			855386-01-01	855386-01-01		
	UNITS	21-11 SA2	RDL	QC Batch	21-11 SA3	21-12 SA2	RDL	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A	6.6		7704789	5.9	0.71		7704789
Inorganics								
Conductivity	mS/cm	0.33	0.002	7705253	0.37	0.13	0.002	7705253
Moisture	%				16	8.7	1.0	7704833
Available (CaCl2) pH	pH	7.41		7705354	7.61	6.99		7705354
WAD Cyanide (Free)	ug/g	<0.01	0.01	7705073	<0.01	<0.01	0.01	7705073
Chromium (VI)	ug/g	<0.18	0.18	7705099	<0.18	<0.18	0.18	7705099
Metals								
Hot Water Ext. Boron (B)	ug/g	0.60	0.050	7705250	0.61	0.13	0.050	7705250
Acid Extractable Antimony (Sb)	ug/g	0.53	0.20	7705373	<0.20	<0.20	0.20	7705373
Acid Extractable Arsenic (As)	ug/g	1.1	1.0	7705373	<1.0	<1.0	1.0	7705373
Acid Extractable Barium (Ba)	ug/g	110	0.50	7705373	76	49	0.50	7705373
Acid Extractable Beryllium (Be)	ug/g	0.61	0.20	7705373	0.46	0.31	0.20	7705373
Acid Extractable Boron (B)	ug/g	8.1	5.0	7705373	6.9	<5.0	5.0	7705373
Acid Extractable Cadmium (Cd)	ug/g	0.29	0.10	7705373	0.20	<0.10	0.10	7705373
Acid Extractable Chromium (Cr)	ug/g	26	1.0	7705373	24	15	1.0	7705373
Acid Extractable Cobalt (Co)	ug/g	11	0.10	7705373	7.2	4.3	0.10	7705373
Acid Extractable Copper (Cu)	ug/g	22	0.50	7705373	15	8.6	0.50	7705373
Acid Extractable Lead (Pb)	ug/g	54	1.0	7705373	20	2.7	1.0	7705373
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7705373	0.73	<0.50	0.50	7705373
Acid Extractable Nickel (Ni)	ug/g	26	0.50	7705373	22	8.6	0.50	7705373
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7705373	<0.50	<0.50	0.50	7705373
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7705373	<0.20	<0.20	0.20	7705373
Acid Extractable Thallium (Tl)	ug/g	0.15	0.050	7705373	0.11	0.060	0.050	7705373
Acid Extractable Uranium (U)	ug/g	0.42	0.050	7705373	0.39	0.55	0.050	7705373
Acid Extractable Vanadium (V)	ug/g	27	5.0	7705373	28	27	5.0	7705373
Acid Extractable Zinc (Zn)	ug/g	80	5.0	7705373	60	21	5.0	7705373
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7705373	<0.050	<0.050	0.050	7705373

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		RFW715			RFW715			RFW716		
Sampling Date		2021/11/11 14:10			2021/11/11 14:10			2021/11/11 15:00		
COC Number		855386-01-01			855386-01-01			855386-01-01		
	UNITS	21-12 SA3	RDL	QC Batch	21-12 SA3 Lab-Dup	RDL	QC Batch	21-13 SA2	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.70		7704789				0.54		7704789
Inorganics										
Conductivity	mS/cm	0.59	0.002	7705253	0.61	0.002	7705253	0.060	0.002	7705253
Moisture	%							6.2	1.0	7704833
Available (CaCl2) pH	pH	7.58		7705354				6.88		7705354
WAD Cyanide (Free)	ug/g	<0.01	0.01	7705073				<0.01	0.01	7705073
Chromium (VI)	ug/g	<0.18	0.18	7705099				<0.18	0.18	7705099
Metals										
Hot Water Ext. Boron (B)	ug/g	0.51	0.050	7705250	0.56	0.050	7705250	0.14	0.050	7705250
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7705373	<0.20	0.20	7705373	<0.20	0.20	7705373
Acid Extractable Arsenic (As)	ug/g	<1.0	1.0	7705373	1.1	1.0	7705373	<1.0	1.0	7705373
Acid Extractable Barium (Ba)	ug/g	77	0.50	7705373	74	0.50	7705373	24	0.50	7705373
Acid Extractable Beryllium (Be)	ug/g	0.54	0.20	7705373	0.56	0.20	7705373	<0.20	0.20	7705373
Acid Extractable Boron (B)	ug/g	9.2	5.0	7705373	9.8	5.0	7705373	<5.0	5.0	7705373
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7705373	<0.10	0.10	7705373	<0.10	0.10	7705373
Acid Extractable Chromium (Cr)	ug/g	39	1.0	7705373	40	1.0	7705373	7.0	1.0	7705373
Acid Extractable Cobalt (Co)	ug/g	8.5	0.10	7705373	8.5	0.10	7705373	2.8	0.10	7705373
Acid Extractable Copper (Cu)	ug/g	17	0.50	7705373	17	0.50	7705373	5.3	0.50	7705373
Acid Extractable Lead (Pb)	ug/g	6.7	1.0	7705373	6.6	1.0	7705373	1.9	1.0	7705373
Acid Extractable Molybdenum (Mo)	ug/g	4.6	0.50	7705373	4.6	0.50	7705373	<0.50	0.50	7705373
Acid Extractable Nickel (Ni)	ug/g	18	0.50	7705373	18	0.50	7705373	4.9	0.50	7705373
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7705373	<0.50	0.50	7705373	<0.50	0.50	7705373
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7705373	<0.20	0.20	7705373	<0.20	0.20	7705373
Acid Extractable Thallium (Tl)	ug/g	0.11	0.050	7705373	0.11	0.050	7705373	<0.050	0.050	7705373
Acid Extractable Uranium (U)	ug/g	0.54	0.050	7705373	0.51	0.050	7705373	0.40	0.050	7705373
Acid Extractable Vanadium (V)	ug/g	27	5.0	7705373	26	5.0	7705373	15	5.0	7705373
Acid Extractable Zinc (Zn)	ug/g	32	5.0	7705373	31	5.0	7705373	12	5.0	7705373
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7705373	<0.050	0.050	7705373	<0.050	0.050	7705373

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

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		RFW717		
Sampling Date		2021/11/11 15:10		
COC Number		855386-01-01		
	UNITS	21-13 SA3	RDL	QC Batch
Calculated Parameters				
Sodium Adsorption Ratio	N/A	7.3		7704789
Inorganics				
Conductivity	mS/cm	0.38	0.002	7705253
Moisture	%	10	1.0	7704833
Available (CaCl2) pH	pH	7.68		7705354
WAD Cyanide (Free)	ug/g	<0.01	0.01	7705073
Chromium (VI)	ug/g	<0.18	0.18	7705099
Metals				
Hot Water Ext. Boron (B)	ug/g	0.41	0.050	7705250
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7705373
Acid Extractable Arsenic (As)	ug/g	2.0	1.0	7705373
Acid Extractable Barium (Ba)	ug/g	81	0.50	7705373
Acid Extractable Beryllium (Be)	ug/g	1.1	0.20	7705373
Acid Extractable Boron (B)	ug/g	16	5.0	7705373
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7705373
Acid Extractable Chromium (Cr)	ug/g	41	1.0	7705373
Acid Extractable Cobalt (Co)	ug/g	20	0.10	7705373
Acid Extractable Copper (Cu)	ug/g	7.8	0.50	7705373
Acid Extractable Lead (Pb)	ug/g	5.2	1.0	7705373
Acid Extractable Molybdenum (Mo)	ug/g	0.76	0.50	7705373
Acid Extractable Nickel (Ni)	ug/g	47	0.50	7705373
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7705373
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7705373
Acid Extractable Thallium (Tl)	ug/g	0.21	0.050	7705373
Acid Extractable Uranium (U)	ug/g	0.31	0.050	7705373
Acid Extractable Vanadium (V)	ug/g	27	5.0	7705373
Acid Extractable Zinc (Zn)	ug/g	35	5.0	7705373
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7705373

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		RFW712	RFW715	RFW718	RFW719	RFW721		
Sampling Date		2021/11/12 12:30	2021/11/11 14:10	2021/11/12 16:00	2021/11/12 15:00	2021/11/11 16:00		
COC Number		855386-01-01	855386-01-01	855386-01-01	855386-01-01	855386-01-01		
	UNITS	21-11 SA2	21-12 SA3	21-14 SA3	21-15 SA3	21-16 SA2	RDL	QC Batch
Inorganics								
Moisture	%	18	15	17	11	8.5	1.0	7704833
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7704186
Volatile Organics								
Acetone (2-Propanone)	ug/g	<0.49	<0.49	<0.49	<0.49	<0.49	0.49	7705309
Benzene	ug/g	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.0060	7705309
Bromodichloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Bromoform	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Bromomethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Carbon Tetrachloride	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Chlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Chloroform	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Dibromochloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,1-Dichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,2-Dichloroethane	ug/g	<0.049	<0.049	<0.049	<0.049	<0.049	0.049	7705309
1,1-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,2-Dichloropropane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	7705309
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Ethylbenzene	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7705309
Ethylene Dibromide	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Hexane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	<0.049	<0.049	<0.049	0.049	7705309
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	7705309
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	7705309
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Styrene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		RFW712	RFW715	RFW718	RFW719	RFW721		
Sampling Date		2021/11/12 12:30	2021/11/11 14:10	2021/11/12 16:00	2021/11/12 15:00	2021/11/11 16:00		
COC Number		855386-01-01	855386-01-01	855386-01-01	855386-01-01	855386-01-01		
	UNITS	21-11 SA2	21-12 SA3	21-14 SA3	21-15 SA3	21-16 SA2	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Tetrachloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Toluene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7705309
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Trichloroethylene	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7705309
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	7705309
Vinyl Chloride	ug/g	<0.019	<0.019	<0.019	<0.019	<0.019	0.019	7705309
p+m-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7705309
o-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7705309
Total Xylenes	ug/g	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	7705309
F1 (C6-C10)	ug/g	<10	<10	<10	<10	<10	10	7705309
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	<10	<10	10	7705309
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	<10	<10	10	7704766
F3 (C16-C34 Hydrocarbons)	ug/g	<50	140	<50	300	100	50	7704766
F4 (C34-C50 Hydrocarbons)	ug/g	<50	310	<50	780	<50	50	7704766
Reached Baseline at C50	ug/g	Yes	No	Yes	No	Yes		7704766
Surrogate Recovery (%)								
o-Terphenyl	%	101	92	101	101	102		7704766
4-Bromofluorobenzene	%	92	91	91	91	91		7705309
D10-o-Xylene	%	80	81	83	81	82		7705309
D4-1,2-Dichloroethane	%	107	108	108	107	107		7705309
D8-Toluene	%	89	90	90	90	90		7705309

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		RFW734	RFW735			RFW735		
Sampling Date		2021/11/11 17:00	2021/11/11 18:00			2021/11/11 18:00		
COC Number		855386-02-01	855386-02-01			855386-02-01		
	UNITS	21-17 SA2	21-18 SA2	RDL	QC Batch	21-18 SA2 Lab-Dup	RDL	QC Batch
Inorganics								
Moisture	%	15	9.9	1.0	7704833	9.6	1.0	7704833
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	7704186			
Volatile Organics								
Acetone (2-Propanone)	ug/g	<0.49	<0.49	0.49	7705309			
Benzene	ug/g	<0.0060	<0.0060	0.0060	7705309			
Bromodichloromethane	ug/g	<0.040	<0.040	0.040	7705309			
Bromoform	ug/g	<0.040	<0.040	0.040	7705309			
Bromomethane	ug/g	<0.040	<0.040	0.040	7705309			
Carbon Tetrachloride	ug/g	<0.040	<0.040	0.040	7705309			
Chlorobenzene	ug/g	<0.040	<0.040	0.040	7705309			
Chloroform	ug/g	<0.040	<0.040	0.040	7705309			
Dibromochloromethane	ug/g	<0.040	<0.040	0.040	7705309			
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	7705309			
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	7705309			
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	7705309			
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	0.040	7705309			
1,1-Dichloroethane	ug/g	<0.040	<0.040	0.040	7705309			
1,2-Dichloroethane	ug/g	<0.049	<0.049	0.049	7705309			
1,1-Dichloroethylene	ug/g	<0.040	<0.040	0.040	7705309			
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	7705309			
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	7705309			
1,2-Dichloropropane	ug/g	<0.040	<0.040	0.040	7705309			
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	7705309			
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	7705309			
Ethylbenzene	ug/g	<0.010	<0.010	0.010	7705309			
Ethylene Dibromide	ug/g	<0.040	<0.040	0.040	7705309			
Hexane	ug/g	<0.040	<0.040	0.040	7705309			
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	0.049	7705309			
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	0.40	7705309			
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	0.40	7705309			
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	0.040	7705309			
Styrene	ug/g	<0.040	<0.040	0.040	7705309			

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

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

Bureau Veritas ID		RFW734	RFW735			RFW735		
Sampling Date		2021/11/11 17:00	2021/11/11 18:00			2021/11/11 18:00		
COC Number		855386-02-01	855386-02-01			855386-02-01		
	UNITS	21-17 SA2	21-18 SA2	RDL	QC Batch	21-18 SA2 Lab-Dup	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	7705309			
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	7705309			
Tetrachloroethylene	ug/g	<0.040	<0.040	0.040	7705309			
Toluene	ug/g	<0.020	<0.020	0.020	7705309			
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	0.040	7705309			
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	0.040	7705309			
Trichloroethylene	ug/g	<0.010	<0.010	0.010	7705309			
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	0.040	7705309			
Vinyl Chloride	ug/g	<0.019	<0.019	0.019	7705309			
p+m-Xylene	ug/g	<0.020	<0.020	0.020	7705309			
o-Xylene	ug/g	<0.020	<0.020	0.020	7705309			
Total Xylenes	ug/g	<0.020	<0.020	0.020	7705309			
F1 (C6-C10)	ug/g	<10	<10	10	7705309			
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	7705309			
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	7704766			
F3 (C16-C34 Hydrocarbons)	ug/g	260	<50	50	7704766			
F4 (C34-C50 Hydrocarbons)	ug/g	87	<50	50	7704766			
Reached Baseline at C50	ug/g	Yes	Yes		7704766			
Surrogate Recovery (%)								
o-Terphenyl	%	99	103		7704766			
4-Bromofluorobenzene	%	90	92		7705309			
D10-o-Xylene	%	77	83		7705309			
D4-1,2-Dichloroethane	%	109	107		7705309			
D8-Toluene	%	89	90		7705309			

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

PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		RFW715	RFW719		
Sampling Date		2021/11/11 14:10	2021/11/12 15:00		
COC Number		855386-01-01	855386-01-01		
	UNITS	**21-12 SA3**	**21-15 SA3**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons					
F4G-sg (Grav. Heavy Hydrocarbons)	ug/g	1400	2200	100	7707684

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

TEST SUMMARY

Bureau Veritas ID: RFW712 **Collected:** 2021/11/12
Sample ID: 21-11 SA2 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW713 **Collected:** 2021/11/12
Sample ID: 21-11 SA3 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk

Bureau Veritas ID: RFW714 **Collected:** 2021/11/11
Sample ID: 21-12 SA2 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk

Bureau Veritas ID: RFW715 **Collected:** 2021/11/11
Sample ID: 21-12 SA3 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John

TEST SUMMARY

Bureau Veritas ID: RFW715
Sample ID: 21-12 SA3
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
F4G (CCME Hydrocarbons Gravimetric)	BAL	7707684	2021/11/18	2021/11/18	Rashmi Dubey
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW715 Dup
Sample ID: 21-12 SA3
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu

Bureau Veritas ID: RFW716
Sample ID: 21-13 SA2
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk

Bureau Veritas ID: RFW717
Sample ID: 21-13 SA3
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7705250	2021/11/17	2021/11/17	Jolly John
Free (WAD) Cyanide	TECH	7705073	2021/11/17	2021/11/17	Louise Harding
Conductivity	AT	7705253	2021/11/17	2021/11/17	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	7705099	2021/11/17	2021/11/17	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7705373	2021/11/17	2021/11/17	Daniel Teclu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal

TEST SUMMARY

Bureau Veritas ID: RFW717 **Collected:** 2021/11/11
Sample ID: 21-13 SA3 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	7705354	2021/11/17	2021/11/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	7704789	N/A	2021/11/17	Automated Statchk

Bureau Veritas ID: RFW718 **Collected:** 2021/11/12
Sample ID: 21-14 SA3 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW719 **Collected:** 2021/11/12
Sample ID: 21-15 SA3 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
F4G (CCME Hydrocarbons Gravimetric)	BAL	7707684	2021/11/18	2021/11/18	Rashmi Dubey
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW721 **Collected:** 2021/11/11
Sample ID: 21-16 SA2 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW734 **Collected:** 2021/11/11
Sample ID: 21-17 SA2 **Shipped:**
Matrix: Soil **Received:** 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

TEST SUMMARY

Bureau Veritas ID: RFW735
Sample ID: 21-18 SA2
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7704186	N/A	2021/11/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7704766	2021/11/16	2021/11/17	Dennis Ngondu
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7705309	N/A	2021/11/17	Juan Pangilinan

Bureau Veritas ID: RFW735 Dup
Sample ID: 21-18 SA2
Matrix: Soil

Collected: 2021/11/11
Shipped:
Received: 2021/11/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7704833	N/A	2021/11/16	Simrat Bhathal

GENERAL COMMENTS

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

Package 1	7.0°C

Sample RFW712 [21-11 SA2] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Sample RFW718 [21-14 SA3] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Sample RFW719 [21-15 SA3] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Sample RFW721 [21-16 SA2] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Sample RFW734 [21-17 SA2] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Sample RFW735 [21-18 SA2] : One or more of the pre-weighed sample vials in the order had an extra label attached. To determine the original vial weight used in calculating the sample weight, the weight of any extra labels was approximated using the weight of a label similar to the extra label attached.

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7704766	DN0	Matrix Spike	o-Terphenyl	2021/11/17		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/11/17		108	%	50 - 130
			F3 (C16-C34 Hydrocarbons)	2021/11/17		114	%	50 - 130
			F4 (C34-C50 Hydrocarbons)	2021/11/17		119	%	50 - 130
7704766	DN0	Spiked Blank	o-Terphenyl	2021/11/17		101	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/11/17		109	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2021/11/17		114	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2021/11/17		117	%	80 - 120
7704766	DN0	Method Blank	o-Terphenyl	2021/11/17		96	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2021/11/17	<10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2021/11/17	<50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2021/11/17	<50		ug/g	
7704766	DN0	RPD	F2 (C10-C16 Hydrocarbons)	2021/11/17	17		%	30
			F3 (C16-C34 Hydrocarbons)	2021/11/17	10		%	30
			F4 (C34-C50 Hydrocarbons)	2021/11/17	NC		%	30
7704833	MYG	RPD [RFW735-01]	Moisture	2021/11/16	3.1		%	20
7705073	LHA	Matrix Spike	WAD Cyanide (Free)	2021/11/17		96	%	75 - 125
7705073	LHA	Spiked Blank	WAD Cyanide (Free)	2021/11/17		97	%	80 - 120
7705073	LHA	Method Blank	WAD Cyanide (Free)	2021/11/17	<0.01		ug/g	
7705073	LHA	RPD	WAD Cyanide (Free)	2021/11/17	NC		%	35
7705099	VP2	Matrix Spike	Chromium (VI)	2021/11/17		17 (1)	%	70 - 130
7705099	VP2	Spiked Blank	Chromium (VI)	2021/11/17		92	%	80 - 120
7705099	VP2	Method Blank	Chromium (VI)	2021/11/17	<0.18		ug/g	
7705099	VP2	RPD	Chromium (VI)	2021/11/17	NC		%	35
7705250	JOH	Matrix Spike [RFW715-03]	Hot Water Ext. Boron (B)	2021/11/17		109	%	75 - 125
7705250	JOH	Spiked Blank	Hot Water Ext. Boron (B)	2021/11/17		100	%	75 - 125
7705250	JOH	Method Blank	Hot Water Ext. Boron (B)	2021/11/17	<0.050		ug/g	
7705250	JOH	RPD [RFW715-03]	Hot Water Ext. Boron (B)	2021/11/17	8.2		%	40
7705253	KIT	Spiked Blank	Conductivity	2021/11/17		98	%	90 - 110
7705253	KIT	Method Blank	Conductivity	2021/11/17	<0.002		mS/cm	
7705253	KIT	RPD [RFW715-03]	Conductivity	2021/11/17	3.5		%	10
7705309	JPN	Matrix Spike	4-Bromofluorobenzene	2021/11/17		105	%	60 - 140
			D10-o-Xylene	2021/11/17		99	%	60 - 130
			D4-1,2-Dichloroethane	2021/11/17		98	%	60 - 140
			D8-Toluene	2021/11/17		106	%	60 - 140
			Acetone (2-Propanone)	2021/11/17		103	%	60 - 140
			Benzene	2021/11/17		87	%	60 - 140
			Bromodichloromethane	2021/11/17		99	%	60 - 140
			Bromoform	2021/11/17		99	%	60 - 140
			Bromomethane	2021/11/17		93	%	60 - 140
			Carbon Tetrachloride	2021/11/17		95	%	60 - 140
			Chlorobenzene	2021/11/17		97	%	60 - 140
			Chloroform	2021/11/17		96	%	60 - 140
			Dibromochloromethane	2021/11/17		96	%	60 - 140
			1,2-Dichlorobenzene	2021/11/17		96	%	60 - 140
			1,3-Dichlorobenzene	2021/11/17		93	%	60 - 140
			1,4-Dichlorobenzene	2021/11/17		111	%	60 - 140
			Dichlorodifluoromethane (FREON 12)	2021/11/17		85	%	60 - 140
			1,1-Dichloroethane	2021/11/17		93	%	60 - 140
			1,2-Dichloroethane	2021/11/17		91	%	60 - 140
			1,1-Dichloroethylene	2021/11/17		95	%	60 - 140
			cis-1,2-Dichloroethylene	2021/11/17		101	%	60 - 140
			trans-1,2-Dichloroethylene	2021/11/17		95	%	60 - 140

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,2-Dichloropropane	2021/11/17		95	%	60 - 140
			cis-1,3-Dichloropropene	2021/11/17		94	%	60 - 140
			trans-1,3-Dichloropropene	2021/11/17		105	%	60 - 140
			Ethylbenzene	2021/11/17		89	%	60 - 140
			Ethylene Dibromide	2021/11/17		94	%	60 - 140
			Hexane	2021/11/17		98	%	60 - 140
			Methylene Chloride(Dichloromethane)	2021/11/17		112	%	60 - 140
			Methyl Ethyl Ketone (2-Butanone)	2021/11/17		110	%	60 - 140
			Methyl Isobutyl Ketone	2021/11/17		102	%	60 - 140
			Methyl t-butyl ether (MTBE)	2021/11/17		90	%	60 - 140
			Styrene	2021/11/17		106	%	60 - 140
			1,1,1,2-Tetrachloroethane	2021/11/17		98	%	60 - 140
			1,1,2,2-Tetrachloroethane	2021/11/17		95	%	60 - 140
			Tetrachloroethylene	2021/11/17		91	%	60 - 140
			Toluene	2021/11/17		89	%	60 - 140
			1,1,1-Trichloroethane	2021/11/17		97	%	60 - 140
			1,1,2-Trichloroethane	2021/11/17		100	%	60 - 140
			Trichloroethylene	2021/11/17		102	%	60 - 140
			Trichlorofluoromethane (FREON 11)	2021/11/17		94	%	60 - 140
			Vinyl Chloride	2021/11/17		94	%	60 - 140
			p+m-Xylene	2021/11/17		92	%	60 - 140
			o-Xylene	2021/11/17		91	%	60 - 140
			F1 (C6-C10)	2021/11/17		98	%	60 - 140
7705309	JPN	Spiked Blank	4-Bromofluorobenzene	2021/11/17		104	%	60 - 140
			D10-o-Xylene	2021/11/17		109	%	60 - 130
			D4-1,2-Dichloroethane	2021/11/17		99	%	60 - 140
			D8-Toluene	2021/11/17		106	%	60 - 140
			Acetone (2-Propanone)	2021/11/17		96	%	60 - 140
			Benzene	2021/11/17		89	%	60 - 130
			Bromodichloromethane	2021/11/17		100	%	60 - 130
			Bromoform	2021/11/17		99	%	60 - 130
			Bromomethane	2021/11/17		90	%	60 - 140
			Carbon Tetrachloride	2021/11/17		98	%	60 - 130
			Chlorobenzene	2021/11/17		98	%	60 - 130
			Chloroform	2021/11/17		98	%	60 - 130
			Dibromochloromethane	2021/11/17		97	%	60 - 130
			1,2-Dichlorobenzene	2021/11/17		96	%	60 - 130
			1,3-Dichlorobenzene	2021/11/17		95	%	60 - 130
			1,4-Dichlorobenzene	2021/11/17		113	%	60 - 130
			Dichlorodifluoromethane (FREON 12)	2021/11/17		87	%	60 - 140
			1,1-Dichloroethane	2021/11/17		95	%	60 - 130
			1,2-Dichloroethane	2021/11/17		92	%	60 - 130
			1,1-Dichloroethylene	2021/11/17		97	%	60 - 130
			cis-1,2-Dichloroethylene	2021/11/17		103	%	60 - 130
			trans-1,2-Dichloroethylene	2021/11/17		98	%	60 - 130
			1,2-Dichloropropane	2021/11/17		97	%	60 - 130
			cis-1,3-Dichloropropene	2021/11/17		88	%	60 - 130
			trans-1,3-Dichloropropene	2021/11/17		95	%	60 - 130
			Ethylbenzene	2021/11/17		90	%	60 - 130
			Ethylene Dibromide	2021/11/17		95	%	60 - 130
			Hexane	2021/11/17		101	%	60 - 130
			Methylene Chloride(Dichloromethane)	2021/11/17		114	%	60 - 130
			Methyl Ethyl Ketone (2-Butanone)	2021/11/17		104	%	60 - 140
			Methyl Isobutyl Ketone	2021/11/17		97	%	60 - 130

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methyl t-butyl ether (MTBE)	2021/11/17		91	%	60 - 130
			Styrene	2021/11/17		108	%	60 - 130
			1,1,1,2-Tetrachloroethane	2021/11/17		100	%	60 - 130
			1,1,2,2-Tetrachloroethane	2021/11/17		99	%	60 - 130
			Tetrachloroethylene	2021/11/17		94	%	60 - 130
			Toluene	2021/11/17		91	%	60 - 130
			1,1,1-Trichloroethane	2021/11/17		100	%	60 - 130
			1,1,2-Trichloroethane	2021/11/17		101	%	60 - 130
			Trichloroethylene	2021/11/17		105	%	60 - 130
			Trichlorofluoromethane (FREON 11)	2021/11/17		97	%	60 - 130
			Vinyl Chloride	2021/11/17		97	%	60 - 130
			p+m-Xylene	2021/11/17		93	%	60 - 130
			o-Xylene	2021/11/17		92	%	60 - 130
			F1 (C6-C10)	2021/11/17		92	%	80 - 120
7705309	JPN	Method Blank	4-Bromofluorobenzene	2021/11/17		90	%	60 - 140
			D10-o-Xylene	2021/11/17		75	%	60 - 130
			D4-1,2-Dichloroethane	2021/11/17		105	%	60 - 140
			D8-Toluene	2021/11/17		90	%	60 - 140
			Acetone (2-Propanone)	2021/11/17	<0.49		ug/g	
			Benzene	2021/11/17	<0.0060		ug/g	
			Bromodichloromethane	2021/11/17	<0.040		ug/g	
			Bromoform	2021/11/17	<0.040		ug/g	
			Bromomethane	2021/11/17	<0.040		ug/g	
			Carbon Tetrachloride	2021/11/17	<0.040		ug/g	
			Chlorobenzene	2021/11/17	<0.040		ug/g	
			Chloroform	2021/11/17	<0.040		ug/g	
			Dibromochloromethane	2021/11/17	<0.040		ug/g	
			1,2-Dichlorobenzene	2021/11/17	<0.040		ug/g	
			1,3-Dichlorobenzene	2021/11/17	<0.040		ug/g	
			1,4-Dichlorobenzene	2021/11/17	<0.040		ug/g	
			Dichlorodifluoromethane (FREON 12)	2021/11/17	<0.040		ug/g	
			1,1-Dichloroethane	2021/11/17	<0.040		ug/g	
			1,2-Dichloroethane	2021/11/17	<0.049		ug/g	
			1,1-Dichloroethylene	2021/11/17	<0.040		ug/g	
			cis-1,2-Dichloroethylene	2021/11/17	<0.040		ug/g	
			trans-1,2-Dichloroethylene	2021/11/17	<0.040		ug/g	
			1,2-Dichloropropane	2021/11/17	<0.040		ug/g	
			cis-1,3-Dichloropropene	2021/11/17	<0.030		ug/g	
			trans-1,3-Dichloropropene	2021/11/17	<0.040		ug/g	
			Ethylbenzene	2021/11/17	<0.010		ug/g	
			Ethylene Dibromide	2021/11/17	<0.040		ug/g	
			Hexane	2021/11/17	<0.040		ug/g	
			Methylene Chloride(Dichloromethane)	2021/11/17	<0.049		ug/g	
			Methyl Ethyl Ketone (2-Butanone)	2021/11/17	<0.40		ug/g	
			Methyl Isobutyl Ketone	2021/11/17	<0.40		ug/g	
			Methyl t-butyl ether (MTBE)	2021/11/17	<0.040		ug/g	
			Styrene	2021/11/17	<0.040		ug/g	
			1,1,1,2-Tetrachloroethane	2021/11/17	<0.040		ug/g	
			1,1,2,2-Tetrachloroethane	2021/11/17	<0.040		ug/g	
			Tetrachloroethylene	2021/11/17	<0.040		ug/g	
			Toluene	2021/11/17	<0.020		ug/g	
			1,1,1-Trichloroethane	2021/11/17	<0.040		ug/g	
			1,1,2-Trichloroethane	2021/11/17	<0.040		ug/g	
			Trichloroethylene	2021/11/17	<0.010		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Trichlorofluoromethane (FREON 11)	2021/11/17	<0.040		ug/g	
			Vinyl Chloride	2021/11/17	<0.019		ug/g	
			p+m-Xylene	2021/11/17	<0.020		ug/g	
			o-Xylene	2021/11/17	<0.020		ug/g	
			Total Xylenes	2021/11/17	<0.020		ug/g	
			F1 (C6-C10)	2021/11/17	<10		ug/g	
			F1 (C6-C10) - BTEX	2021/11/17	<10		ug/g	
7705309	JPN	RPD	Acetone (2-Propanone)	2021/11/17	NC		%	50
			Benzene	2021/11/17	NC		%	50
			Bromodichloromethane	2021/11/17	NC		%	50
			Bromoform	2021/11/17	NC		%	50
			Bromomethane	2021/11/17	NC		%	50
			Carbon Tetrachloride	2021/11/17	NC		%	50
			Chlorobenzene	2021/11/17	NC		%	50
			Chloroform	2021/11/17	NC		%	50
			Dibromochloromethane	2021/11/17	NC		%	50
			1,2-Dichlorobenzene	2021/11/17	NC		%	50
			1,3-Dichlorobenzene	2021/11/17	NC		%	50
			1,4-Dichlorobenzene	2021/11/17	NC		%	50
			Dichlorodifluoromethane (FREON 12)	2021/11/17	NC		%	50
			1,1-Dichloroethane	2021/11/17	NC		%	50
			1,2-Dichloroethane	2021/11/17	NC		%	50
			1,1-Dichloroethylene	2021/11/17	NC		%	50
			cis-1,2-Dichloroethylene	2021/11/17	NC		%	50
			trans-1,2-Dichloroethylene	2021/11/17	NC		%	50
			1,2-Dichloropropane	2021/11/17	NC		%	50
			cis-1,3-Dichloropropene	2021/11/17	NC		%	50
			trans-1,3-Dichloropropene	2021/11/17	NC		%	50
			Ethylbenzene	2021/11/17	NC		%	50
			Ethylene Dibromide	2021/11/17	NC		%	50
			Hexane	2021/11/17	NC		%	50
			Methylene Chloride(Dichloromethane)	2021/11/17	NC		%	50
			Methyl Ethyl Ketone (2-Butanone)	2021/11/17	NC		%	50
			Methyl Isobutyl Ketone	2021/11/17	NC		%	50
			Methyl t-butyl ether (MTBE)	2021/11/17	NC		%	50
			Styrene	2021/11/17	NC		%	50
			1,1,1,2-Tetrachloroethane	2021/11/17	NC		%	50
			1,1,2,2-Tetrachloroethane	2021/11/17	NC		%	50
			Tetrachloroethylene	2021/11/17	NC		%	50
			Toluene	2021/11/17	NC		%	50
			1,1,1-Trichloroethane	2021/11/17	NC		%	50
			1,1,2-Trichloroethane	2021/11/17	NC		%	50
			Trichloroethylene	2021/11/17	NC		%	50
			Trichlorofluoromethane (FREON 11)	2021/11/17	NC		%	50
			Vinyl Chloride	2021/11/17	NC		%	50
			p+m-Xylene	2021/11/17	NC		%	50
			o-Xylene	2021/11/17	NC		%	50
			Total Xylenes	2021/11/17	NC		%	50
			F1 (C6-C10)	2021/11/17	NC		%	30
			F1 (C6-C10) - BTEX	2021/11/17	NC		%	30
7705354	TAK	Spiked Blank	Available (CaCl2) pH	2021/11/17		100	%	97 - 103
7705354	TAK	RPD	Available (CaCl2) pH	2021/11/17	0.91		%	N/A
7705373	DT1	Matrix Spike [RFW715-03]	Acid Extractable Antimony (Sb)	2021/11/17		93	%	75 - 125

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Arsenic (As)	2021/11/17		102	%	75 - 125
			Acid Extractable Barium (Ba)	2021/11/17		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2021/11/17		102	%	75 - 125
			Acid Extractable Boron (B)	2021/11/17		97	%	75 - 125
			Acid Extractable Cadmium (Cd)	2021/11/17		101	%	75 - 125
			Acid Extractable Chromium (Cr)	2021/11/17		NC	%	75 - 125
			Acid Extractable Cobalt (Co)	2021/11/17		102	%	75 - 125
			Acid Extractable Copper (Cu)	2021/11/17		98	%	75 - 125
			Acid Extractable Lead (Pb)	2021/11/17		96	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2021/11/17		100	%	75 - 125
			Acid Extractable Nickel (Ni)	2021/11/17		104	%	75 - 125
			Acid Extractable Selenium (Se)	2021/11/17		100	%	75 - 125
			Acid Extractable Silver (Ag)	2021/11/17		100	%	75 - 125
			Acid Extractable Thallium (Tl)	2021/11/17		96	%	75 - 125
			Acid Extractable Uranium (U)	2021/11/17		98	%	75 - 125
			Acid Extractable Vanadium (V)	2021/11/17		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2021/11/17		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2021/11/17		84	%	75 - 125
7705373	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2021/11/17		104	%	80 - 120
			Acid Extractable Arsenic (As)	2021/11/17		99	%	80 - 120
			Acid Extractable Barium (Ba)	2021/11/17		99	%	80 - 120
			Acid Extractable Beryllium (Be)	2021/11/17		101	%	80 - 120
			Acid Extractable Boron (B)	2021/11/17		101	%	80 - 120
			Acid Extractable Cadmium (Cd)	2021/11/17		98	%	80 - 120
			Acid Extractable Chromium (Cr)	2021/11/17		98	%	80 - 120
			Acid Extractable Cobalt (Co)	2021/11/17		98	%	80 - 120
			Acid Extractable Copper (Cu)	2021/11/17		96	%	80 - 120
			Acid Extractable Lead (Pb)	2021/11/17		96	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2021/11/17		97	%	80 - 120
			Acid Extractable Nickel (Ni)	2021/11/17		100	%	80 - 120
			Acid Extractable Selenium (Se)	2021/11/17		99	%	80 - 120
			Acid Extractable Silver (Ag)	2021/11/17		97	%	80 - 120
			Acid Extractable Thallium (Tl)	2021/11/17		98	%	80 - 120
			Acid Extractable Uranium (U)	2021/11/17		97	%	80 - 120
			Acid Extractable Vanadium (V)	2021/11/17		99	%	80 - 120
			Acid Extractable Zinc (Zn)	2021/11/17		100	%	80 - 120
			Acid Extractable Mercury (Hg)	2021/11/17		85	%	80 - 120
7705373	DT1	Method Blank	Acid Extractable Antimony (Sb)	2021/11/17	<0.20		ug/g	
			Acid Extractable Arsenic (As)	2021/11/17	<1.0		ug/g	
			Acid Extractable Barium (Ba)	2021/11/17	<0.50		ug/g	
			Acid Extractable Beryllium (Be)	2021/11/17	<0.20		ug/g	
			Acid Extractable Boron (B)	2021/11/17	<5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2021/11/17	<0.10		ug/g	
			Acid Extractable Chromium (Cr)	2021/11/17	<1.0		ug/g	
			Acid Extractable Cobalt (Co)	2021/11/17	<0.10		ug/g	
			Acid Extractable Copper (Cu)	2021/11/17	<0.50		ug/g	
			Acid Extractable Lead (Pb)	2021/11/17	<1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2021/11/17	<0.50		ug/g	
			Acid Extractable Nickel (Ni)	2021/11/17	<0.50		ug/g	
			Acid Extractable Selenium (Se)	2021/11/17	<0.50		ug/g	
			Acid Extractable Silver (Ag)	2021/11/17	<0.20		ug/g	
			Acid Extractable Thallium (Tl)	2021/11/17	<0.050		ug/g	
			Acid Extractable Uranium (U)	2021/11/17	<0.050		ug/g	
			Acid Extractable Vanadium (V)	2021/11/17	<5.0		ug/g	

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Zinc (Zn)	2021/11/17	<5.0		ug/g	
			Acid Extractable Mercury (Hg)	2021/11/17	<0.050		ug/g	
7705373	DT1	RPD [RFW715-03]	Acid Extractable Antimony (Sb)	2021/11/17	NC		%	30
			Acid Extractable Arsenic (As)	2021/11/17	4.9		%	30
			Acid Extractable Barium (Ba)	2021/11/17	3.0		%	30
			Acid Extractable Beryllium (Be)	2021/11/17	3.3		%	30
			Acid Extractable Boron (B)	2021/11/17	5.6		%	30
			Acid Extractable Cadmium (Cd)	2021/11/17	NC		%	30
			Acid Extractable Chromium (Cr)	2021/11/17	1.6		%	30
			Acid Extractable Cobalt (Co)	2021/11/17	0.95		%	30
			Acid Extractable Copper (Cu)	2021/11/17	0.81		%	30
			Acid Extractable Lead (Pb)	2021/11/17	1.4		%	30
			Acid Extractable Molybdenum (Mo)	2021/11/17	1.0		%	30
			Acid Extractable Nickel (Ni)	2021/11/17	0.81		%	30
			Acid Extractable Selenium (Se)	2021/11/17	NC		%	30
			Acid Extractable Silver (Ag)	2021/11/17	NC		%	30
			Acid Extractable Thallium (Tl)	2021/11/17	1.7		%	30
			Acid Extractable Uranium (U)	2021/11/17	4.1		%	30
			Acid Extractable Vanadium (V)	2021/11/17	3.7		%	30
			Acid Extractable Zinc (Zn)	2021/11/17	1.9		%	30
			Acid Extractable Mercury (Hg)	2021/11/17	NC		%	30
7707684	RDU	Matrix Spike	F4G-sg (Grav. Heavy Hydrocarbons)	2021/11/18		86	%	65 - 135
7707684	RDU	Spiked Blank	F4G-sg (Grav. Heavy Hydrocarbons)	2021/11/18		100	%	65 - 135
7707684	RDU	Method Blank	F4G-sg (Grav. Heavy Hydrocarbons)	2021/11/18	<100		ug/g	
7707684	RDU	RPD	F4G-sg (Grav. Heavy Hydrocarbons)	2021/11/18	10		%	50

N/A = Not Applicable

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

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

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

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

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

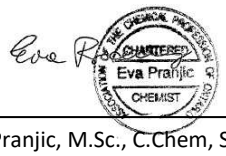
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

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

(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was reanalyzed with the same results

VALIDATION SIGNATURE PAGE

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



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

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

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

Page 1 of 2

CHAIN OF CUSTODY RECORD

RUSH!

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#2292 Golder Associates Ltd	Company Name:		Quotation #:	B80683
Attention:	Accounts Payable	Attention:	Daniel Stabile	P.O. #:	
Address:	100 Scotia Crt Whitby ON L1N 8Y6	Address:		Project:	21494078
				Project Name:	
Tel:	(905) 723-2727 Fax: (905) 723-2182	Tel:	Fax:	Site #:	
Email:	CanadaAccountsPayableInvoices@golder.com	Email:	Daniel_Stabile@golder.com	Sampled By:	AB

15-Nov-21 13:20
Ema Gitej
C1X6358

AVV ENV 1592

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

Regulation 153 (2011): ☐ Table 1 ☒ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☒ For RSC ☒ Table 7

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Reg 406 Table ☐ Other

Special Instructions

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

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

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: 48 hrs Time Required:
Rush Confirmation Number: (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	ORP	PHC	BTEX	VOC	Metals	PHC	BTEX	VOC			# of Bottles	Comments
1		~~21-11~~ SA2	Nov 12/21	1230	Soil	/	X	X	X	X	X						4	
2		21-11 SA3	Nov 12/21	1300		/	X										4	
3		21-12 SA2	Nov 11/21	1400		/	X										1	RUSH
4		21-12 SA3	Nov 11/21	1410		/	X	~~X~~				X	X	X			4	
5		21-13 SA2	Nov 11/21	1500		/	X										1	
6		21-13 SA3	Nov 11/21	1510		/	X										1	
7		21-14 SA3	Nov 12/21	10:00		/		X	X	X							3	RECEIVED IN OTTAWA
8		21-15 SA3	Nov 12/21	15:00		/		X	X	X							3	
9		21-15 SA4	Nov 12/21	15:10		/		X	X	X							3	*on Hold*
10		21-16 SA2	Nov 11/21	1600	↓	/		X	X	X							3	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
			Angelica Santiago	21/11/15	13:20	
			AALISHA VAHORA	21/11/16	08:00	

Laboratory Use Only
Time Sensitive
Temperature (°C) on Receipt: 5.9.7 ice
Custody Seal Present: Yes / No
Intact: Yes / No

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

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

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

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

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

6/7/7

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

Page 2 of 2

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#2292 Golder Associates Ltd	Company Name:		Quotation #:	B80683	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Daniel Stabile	P.O. #:			855386
Address:	100 Scotia Crt Whitby ON L1N 8Y6	Address:		Project:	21494078	COC #:	Project Manager:
Tel:	(905) 723-2727 Fax: (905) 723-2182	Tel:	Fax:	Project Name:		C#855386-02-01	Erna Gitej
Email:	CanadaAccountsPayableInvoices@golder.com	Email:	Daniel_Stabile@golder.com	Site #:			
				Sampled By:	ALB		

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

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☐ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☒ Table 7	☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Reg 406 Table ☐ Other	

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC):

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

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: ____ Time Required: ____
Rush Confirmation Number: 48 hrs (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle) Metals / Hg / Cr VI	PHC	BTEX	VOC	# of Bottles	Comments
1		21-17 SA2	Nov 11/21	1700	Soil	/	X	X	X	3	
2		21-18 SA2	Nov 11/21	1800	Soil	/	X	X	X	3	
3											
4											
5											
6											
7											
8											
9											
10											

RUSH

RECEIVED IN OTTAWA

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
			Angelica Sevilleja see page 1	21/11/15	13:20	

Laboratory Use Only
Time Sensitive
Temperature (°C) on Recei: 5, 9, 7 / ice
Custody Seal Present: Yes
Custody Seal Intact: —

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

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

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

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

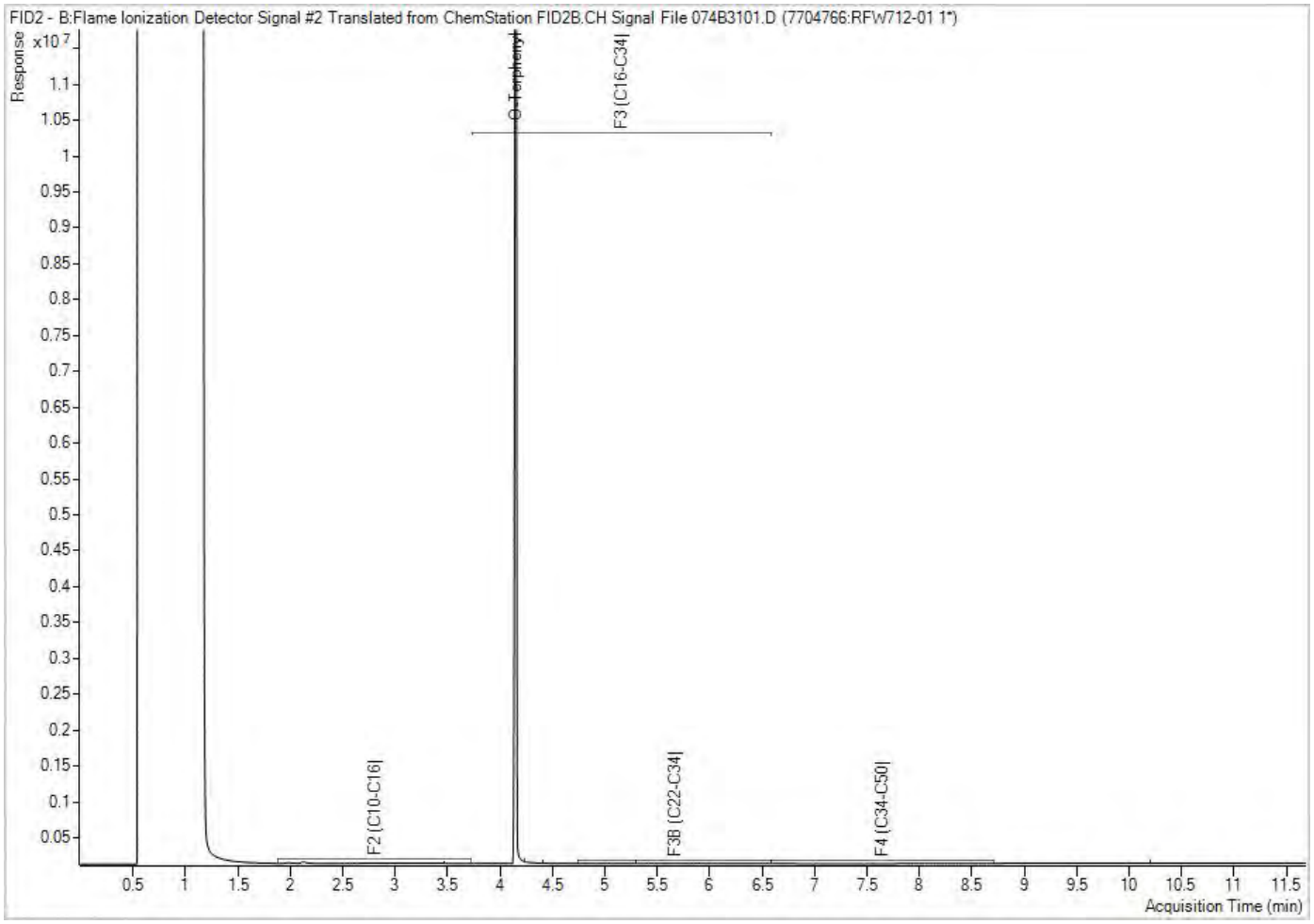
White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW712

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-11 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

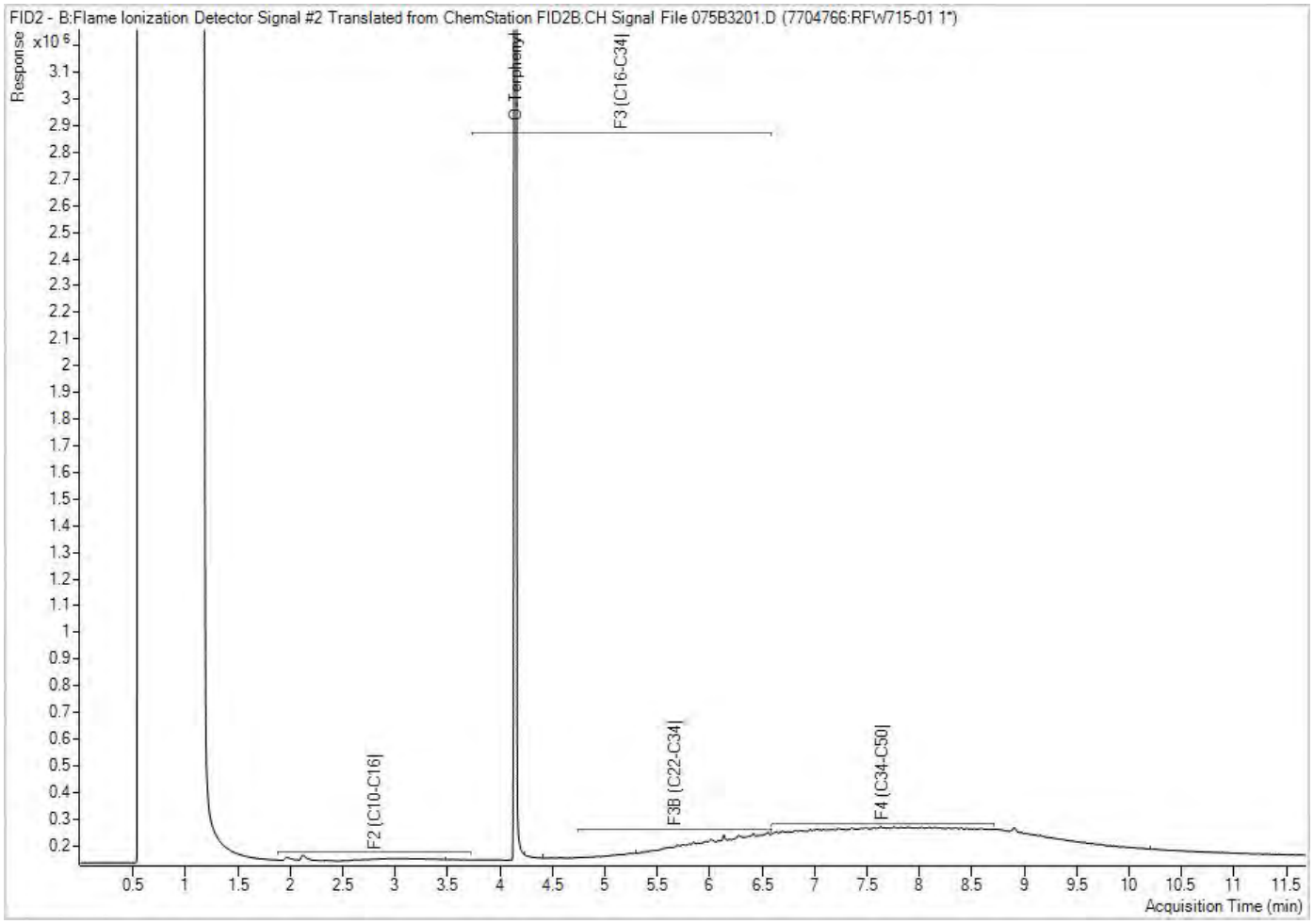


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW715

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-12 SA3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

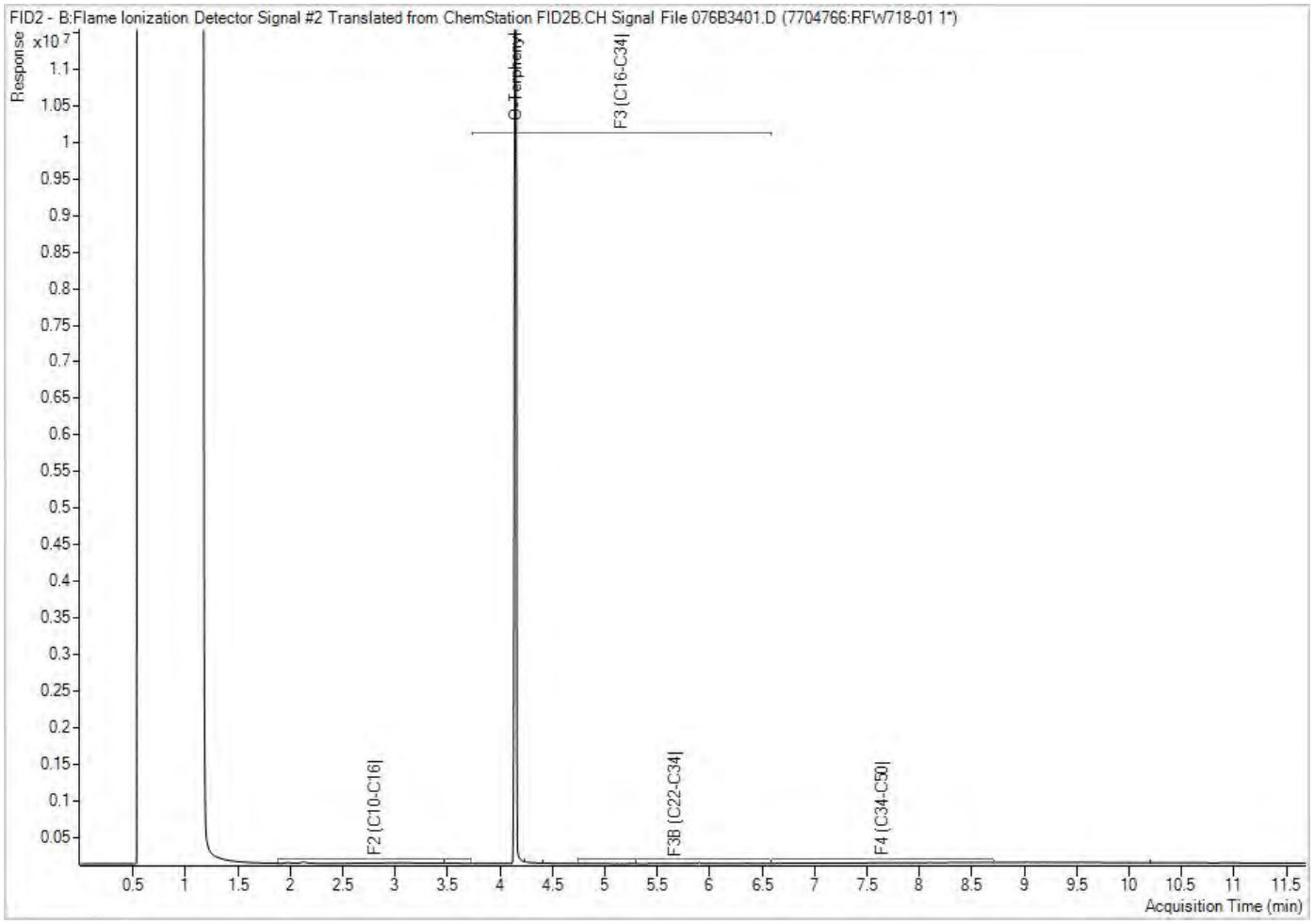


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW718

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-14 SA3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

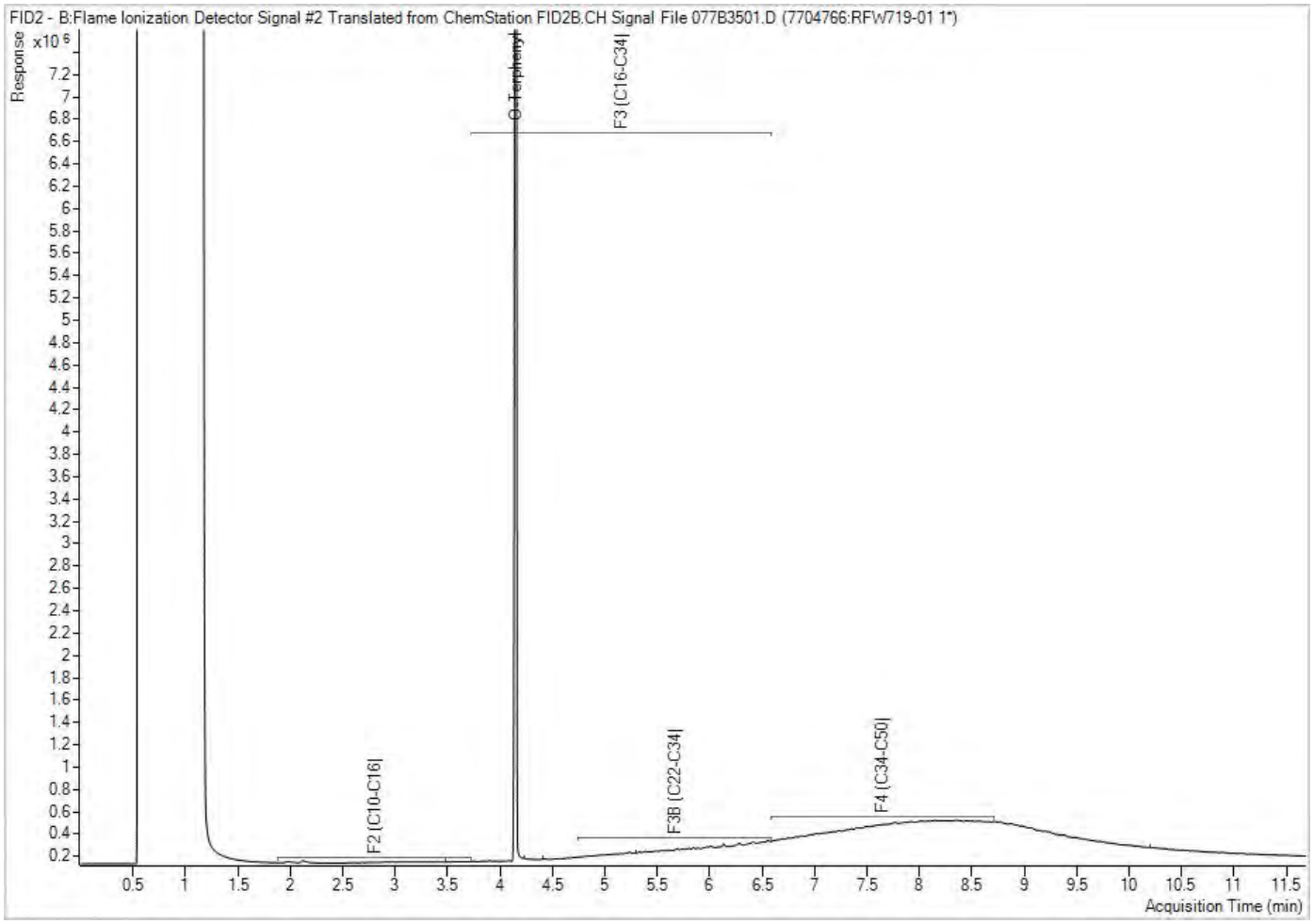


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW719

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-15 SA3

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

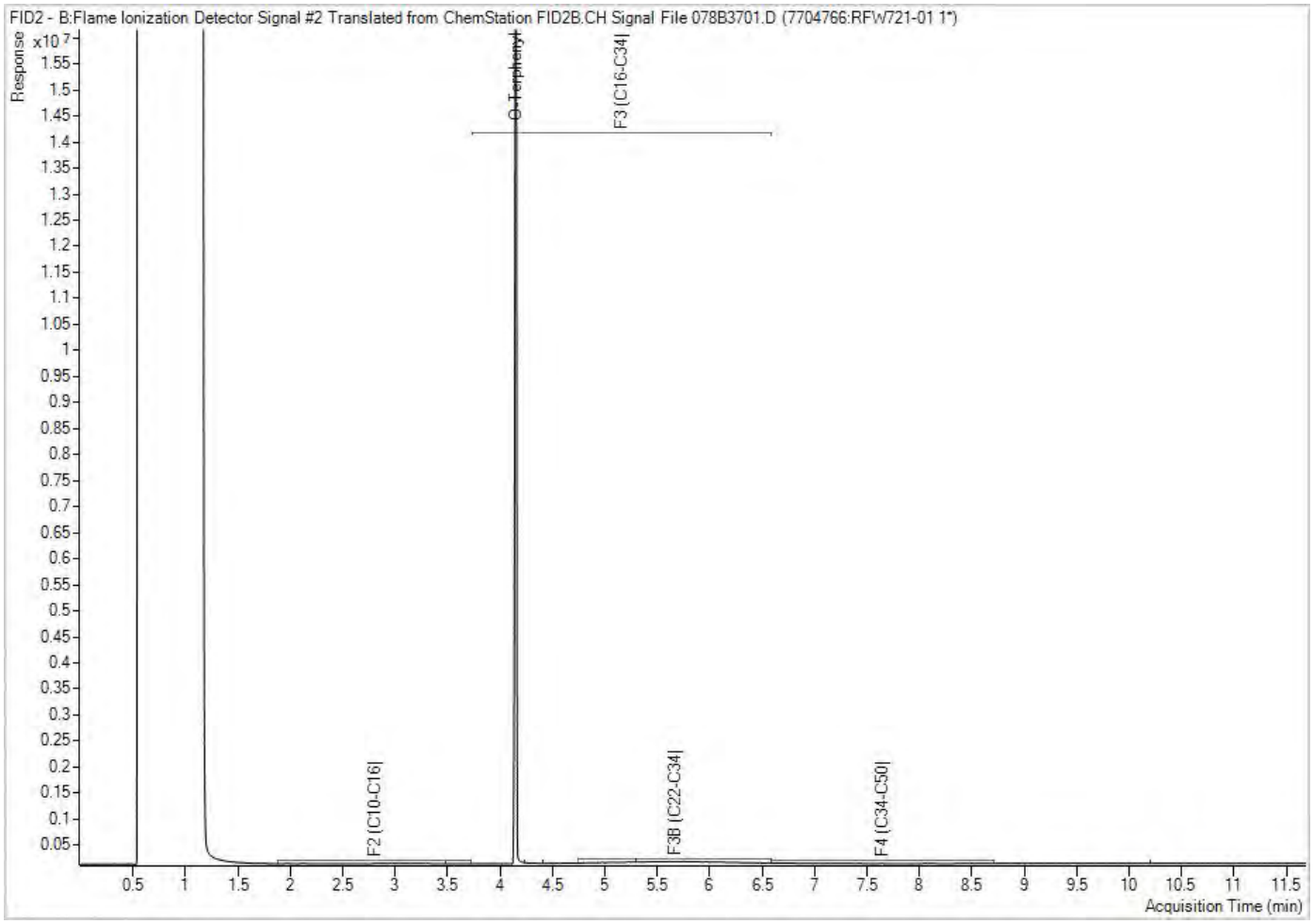


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW721

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-16 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

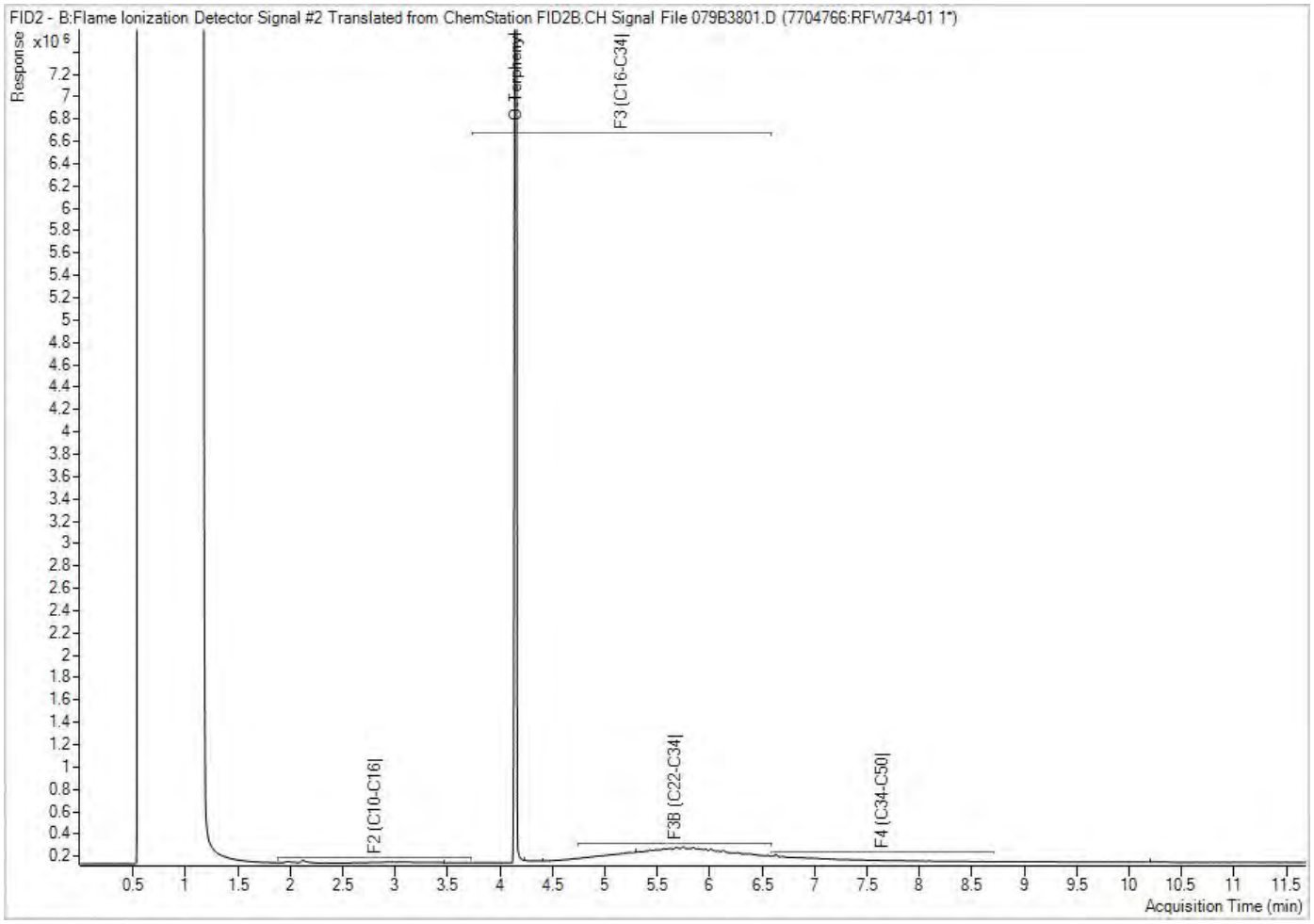


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW734

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-17 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

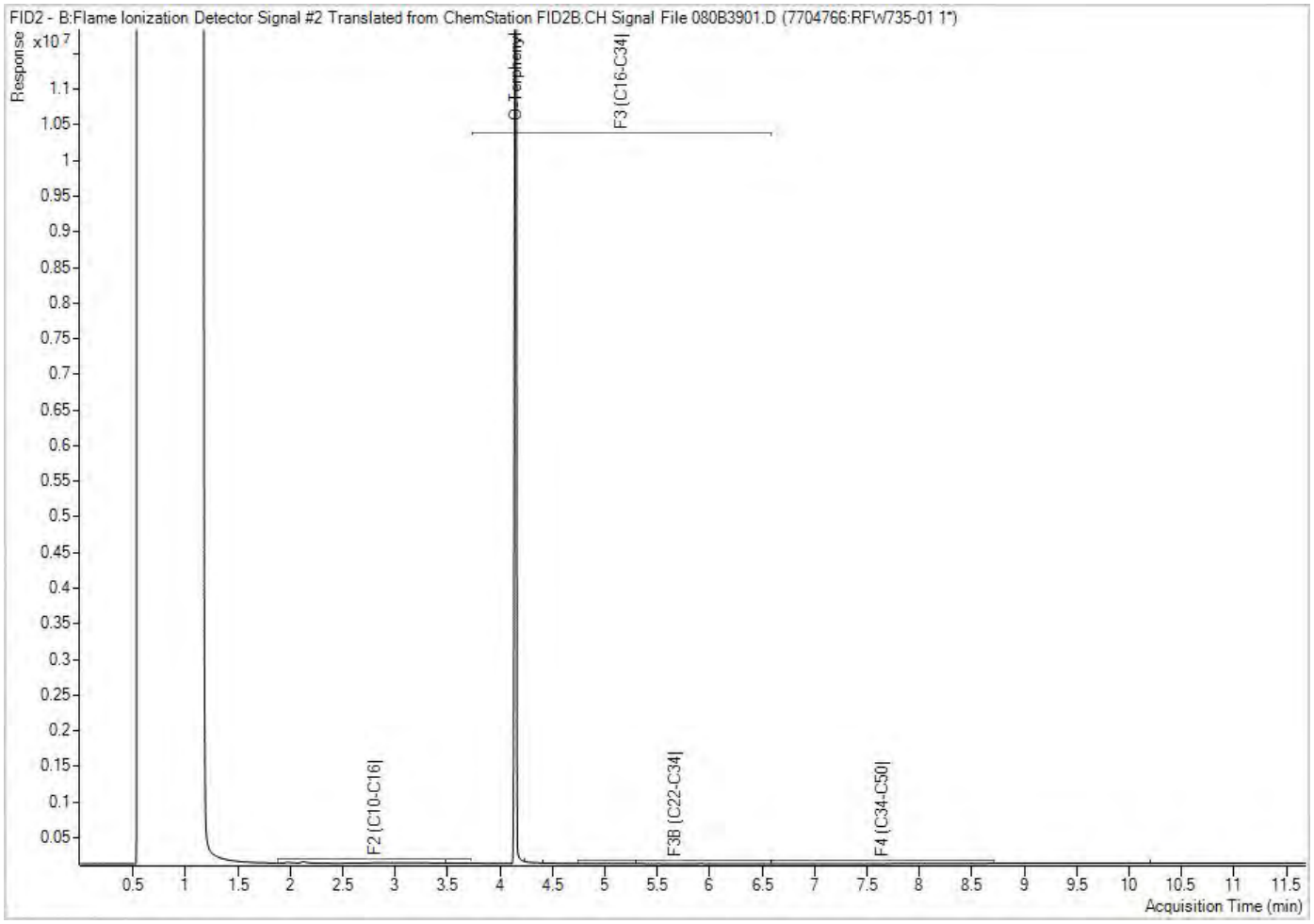


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C1X6358
Report Date: 2022/01/11
Bureau Veritas Sample: RFW735

Golder Associates Ltd
Client Project #: 21494078
Client ID: 21-18 SA2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

AGAT Laboratories

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

CLIENT NAME: GOLDER ASSOCIATES LTD.
100 SCOTIA COURT
WHITBY, ON L1N8Y6
(905) 723-2727

ATTENTION TO: Daniel Stabile

PROJECT: 21494078

AGAT WORK ORDER: 21T848962

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Jan 05, 2022

PAGES (INCLUDING COVER): 22

VERSION*: 2

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

*Notes

VERSION 2:Version 2 supersedes work order 21T848962 , Version 1, issued January, 5, 2022. Complete.

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	BH21- 21 SA3	BH21-22 SA3	DUP1
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2021-12-21 10:30	2021-12-21 12:00	2021-12-21
Parameter	Unit	G / S	RDL		3391187	3391190	3391201
F1 (C6 - C10)	µg/g		5		<5	6	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5	6	<5
F2 (C10 to C16)	µg/g	230	10		<10	<10	<10
F3 (C16 to C34)	µg/g	1700	50		<50	260	<50
F4 (C34 to C50)	µg/g	3300	50		<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	3300	50		NA	NA	NA
Moisture Content	%		0.1		9.1	13.6	10.0
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140			112	112	104
Terphenyl	%	60-140			78	100	89

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391187-3391201 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	BH21-21	BH21-4	BH21-14	BH21-22	DUP1
				SAMPLE TYPE:	Water	Water	Water	Water	Water
				DATE SAMPLED:	2021-12-22 10:45	2021-12-22 11:25	2021-12-22 12:00	2021-12-22 12:35	2021-12-22
Parameter	Unit	G / S	RDL		3391083	3391094	3391095	3391097	3391203
F1 (C6 - C10)	µg/L		25		<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100		<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100		<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100		<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA	NA	NA
Sediment					No	No	No	No	No
Surrogate	Unit	Acceptable Limits							
Toluene-d8	% Recovery	50-140			116	70.0	97.5	104	79.2
Terphenyl	%	60-140			86	98	99	104	90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391083-3391203 The C6-C10 fraction is calculated using Toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	BH21-23 SA4	BH21-24 SA4	BH21-25 SA4
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2021-12-21 13:55	2021-12-21 14:25	2021-12-21 15:00
Parameter	Unit	G / S	RDL		3391191	3391192	3391193
Benzene	µg/g	0.32	0.02		<0.02	<0.02	<0.02
Toluene	µg/g	68	0.05		<0.05	<0.05	<0.05
Ethylbenzene	µg/g	9.5	0.05		<0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05		<0.05	<0.05	<0.05
o-Xylene	µg/g		0.05		<0.05	<0.05	<0.05
Xylenes (Total)	µg/g	26	0.05		<0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g		5		<5	154	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5	154	<5
F2 (C10 to C16)	µg/g	230	10		<10	<10	<10
F3 (C16 to C34)	µg/g	1700	50		<50	1500	<50
F4 (C34 to C50)	µg/g	3300	50		<50	170	<50
Gravimetric Heavy Hydrocarbons	µg/g	3300	50		NA	NA	NA
Moisture Content	%		0.1		9.8	10.4	10.6
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	60-140			117	94	116
Terphenyl	%	60-140			89	91	89

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23 DATE REPORTED: 2022-01-05

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391191-3391193 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	TRIP BLANK	FIELD BALNK
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2021-12-22	2021-12-22 12:00
Parameter	Unit	G / S	RDL		3391202	3391204
Benzene	µg/L	0.5	0.20		<0.20	<0.20
Toluene	µg/L	320	0.20		<0.20	<0.20
Ethylbenzene	µg/L	54	0.10		<0.10	<0.10
m & p-Xylene	µg/L		0.20		<0.20	<0.20
o-Xylene	µg/L		0.10		<0.10	<0.10
Xylenes (Total)	µg/L	72	0.20		<0.20	<0.20
F1 (C6-C10)	µg/L		25		<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25		<25	<25
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	60-140			122	78.8

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391202-3391204 The C6-C10 fraction is calculated using Toluene response factor.
Total C6-C10 results are corrected for BTEX contributions.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
Extraction and holding times were met for this sample.
NA = Not Applicable

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

Results relate only to the items tested. Results apply to samples as received.

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AGAT WORK ORDER: 21T848962

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

SAMPLE DESCRIPTION:				BH21- 21 SA3	BH21-22 SA3	DUP1
SAMPLE TYPE:				Soil	Soil	Soil
DATE SAMPLED:				2021-12-21 10:30	2021-12-21 12:00	2021-12-21
Parameter	Unit	G / S	RDL	3391187	3391190	3391201
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.032	0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.064	0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	1.6	0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	1.3	0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	11	0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	17	0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	70	0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	55	0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.47	0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	6.1	0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.21	0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.32	0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.16	0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.91	0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	18	0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	31	0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Toluene	ug/g	68	0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	13	0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	4.5	0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.087	0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	9.5	0.05	<0.05	<0.05	<0.05

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 21T848962
PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.
SAMPLING SITE:1047 Richmond Rd.

ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

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

DATE RECEIVED: 2021-12-23

DATE REPORTED: 2022-01-05

				SAMPLE DESCRIPTION:	BH21- 21 SA3	BH21-22 SA3	DUP1
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2021-12-21 10:30	2021-12-21 12:00	2021-12-21
Parameter	Unit	G / S	RDL		3391187	3391190	3391201
m & p-Xylene	ug/g		0.05		<0.05	<0.05	<0.05
Bromoform	ug/g	0.61	0.05		<0.05	<0.05	<0.05
Styrene	ug/g	34	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
o-Xylene	ug/g		0.05		<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	9.6	0.05		<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.2	0.05		<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	6.8	0.05		<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	26	0.05		<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.18	0.04		<0.04	<0.04	<0.04
n-Hexane	µg/g	46	0.05		<0.05	<0.05	<0.05
Moisture Content	%		0.1		9.1	13.6	10.0
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140			108	105	109
4-Bromofluorobenzene	% Recovery	50-140			86	97	76

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3391187-3391201 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

Results relate only to the items tested. Results apply to samples as received.

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Exceedance Summary

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

CLIENT NAME: GOLDER ASSOCIATES LTD.

ATTENTION TO: Daniel Stabile

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
3391094	BH21-4	ON T7 NPGW CT	O. Reg. 153(511) - VOCs (Water)	1,2-Dichloroethane	µg/L	0.5	2.51
3391192	BH21-24 SA4	ON T7 S ICC CT	O. Reg. 153(511) - PHCs F1 - F4 (Soil)	F1 (C6 to C10) minus BTEX	µg/g	55	154

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 21T848962
ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

Trace Organics Analysis

RPT Date: Jan 05, 2022

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)															
F1 (C6 - C10)	3375873		<25	<25	NA	< 25	93%	60%	140%	104%	60%	140%	113%	60%	140%
F2 (C10 to C16)	3361993		< 100	< 100	NA	< 100	102%	60%	140%	85%	60%	140%	68%	60%	140%
F3 (C16 to C34)	3361993		< 100	< 100	NA	< 100	103%	60%	140%	74%	60%	140%	69%	60%	140%
F4 (C34 to C50)	3361993		< 100	< 100	NA	< 100	105%	60%	140%	75%	60%	140%	72%	60%	140%
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	3330735		<0.20	<0.20	NA	< 0.20	71%	50%	140%	86%	50%	140%	80%	50%	140%
Vinyl Chloride	3330735		<0.17	<0.17	NA	< 0.17	83%	50%	140%	74%	50%	140%	99%	50%	140%
Bromomethane	3330735		<0.20	<0.20	NA	< 0.20	104%	50%	140%	96%	50%	140%	91%	50%	140%
Trichlorofluoromethane	3330735		<0.40	<0.40	NA	< 0.40	74%	50%	140%	87%	50%	140%	108%	50%	140%
Acetone	3330735		<1.0	<1.0	NA	< 1.0	103%	50%	140%	99%	50%	140%	102%	50%	140%
1,1-Dichloroethylene	3330735		<0.30	<0.30	NA	< 0.30	70%	50%	140%	81%	60%	130%	97%	50%	140%
Methylene Chloride	3330735		<0.30	<0.30	NA	< 0.30	107%	50%	140%	100%	60%	130%	107%	50%	140%
trans- 1,2-Dichloroethylene	3330735		<0.20	<0.20	NA	< 0.20	86%	50%	140%	72%	60%	130%	93%	50%	140%
Methyl tert-butyl ether	3330735		<0.20	<0.20	NA	< 0.20	109%	50%	140%	90%	60%	130%	110%	50%	140%
1,1-Dichloroethane	3330735		<0.30	<0.30	NA	< 0.30	90%	50%	140%	79%	60%	130%	114%	50%	140%
Methyl Ethyl Ketone	3330735		<1.0	<1.0	NA	< 1.0	98%	50%	140%	104%	50%	140%	106%	50%	140%
cis- 1,2-Dichloroethylene	3330735		<0.20	<0.20	NA	< 0.20	109%	50%	140%	86%	60%	130%	80%	50%	140%
Chloroform	3330735		<0.20	<0.20	NA	< 0.20	114%	50%	140%	98%	60%	130%	97%	50%	140%
1,2-Dichloroethane	3330735		<0.20	<0.20	NA	< 0.20	83%	50%	140%	99%	60%	130%	98%	50%	140%
1,1,1-Trichloroethane	3330735		<0.30	<0.30	NA	< 0.30	71%	50%	140%	116%	60%	130%	85%	50%	140%
Carbon Tetrachloride	3330735		<0.20	<0.20	NA	< 0.20	75%	50%	140%	80%	60%	130%	92%	50%	140%
Benzene	3330735		<0.20	<0.20	NA	< 0.20	89%	50%	140%	81%	60%	130%	88%	50%	140%
1,2-Dichloropropane	3330735		<0.20	<0.20	NA	< 0.20	82%	50%	140%	82%	60%	130%	109%	50%	140%
Trichloroethylene	3330735		<0.20	<0.20	NA	< 0.20	80%	50%	140%	83%	60%	130%	109%	50%	140%
Bromodichloromethane	3330735		<0.20	<0.20	NA	< 0.20	108%	50%	140%	103%	60%	130%	91%	50%	140%
Methyl Isobutyl Ketone	3330735		<1.0	<1.0	NA	< 1.0	107%	50%	140%	102%	50%	140%	101%	50%	140%
1,1,2-Trichloroethane	3330735		<0.20	<0.20	NA	< 0.20	118%	50%	140%	96%	60%	130%	107%	50%	140%
Toluene	3330735		<0.20	<0.20	NA	< 0.20	109%	50%	140%	105%	60%	130%	79%	50%	140%
Dibromochloromethane	3330735		<0.10	<0.10	NA	< 0.10	81%	50%	140%	105%	60%	130%	100%	50%	140%
Ethylene Dibromide	3330735		<0.10	<0.10	NA	< 0.10	93%	50%	140%	112%	60%	130%	112%	50%	140%
Tetrachloroethylene	3330735		<0.20	<0.20	NA	< 0.20	93%	50%	140%	101%	60%	130%	82%	50%	140%
1,1,1,2-Tetrachloroethane	3330735		<0.10	<0.10	NA	< 0.10	111%	50%	140%	101%	60%	130%	80%	50%	140%
Chlorobenzene	3330735		<0.10	<0.10	NA	< 0.10	100%	50%	140%	101%	60%	130%	92%	50%	140%
Ethylbenzene	3330735		<0.10	<0.10	NA	< 0.10	85%	50%	140%	70%	60%	130%	76%	50%	140%
m & p-Xylene	3330735		<0.20	<0.20	NA	< 0.20	93%	50%	140%	93%	60%	130%	104%	50%	140%
Bromoform	3330735		<0.10	<0.10	NA	< 0.10	99%	50%	140%	110%	60%	130%	101%	50%	140%
Styrene	3330735		<0.10	<0.10	NA	< 0.10	82%	50%	140%	72%	60%	130%	82%	50%	140%
1,1,2,2-Tetrachloroethane	3330735		<0.10	<0.10	NA	< 0.10	105%	50%	140%	85%	60%	130%	116%	50%	140%
o-Xylene	3330735		<0.10	<0.10	NA	< 0.10	83%	50%	140%	94%	60%	130%	73%	50%	140%

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http://www.agatlabs.com

Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.
PROJECT: 21494078
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 21T848962
ATTENTION TO: Daniel Stabile
SAMPLED BY:D.Stabile

Trace Organics Analysis (Continued)

RPT Date: Jan 05, 2022

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	3330735		<0.10	<0.10	NA	< 0.10	99%	50%	140%	93%	60%	130%	103%	50%	140%
1,4-Dichlorobenzene	3330735		<0.10	<0.10	NA	< 0.10	82%	50%	140%	99%	60%	130%	105%	50%	140%
1,2-Dichlorobenzene	3330735		<0.10	<0.10	NA	< 0.10	97%	50%	140%	83%	60%	130%	97%	50%	140%
n-Hexane	3330735		<0.20	<0.20	NA	< 0.20	94%	50%	140%	107%	60%	130%	110%	50%	140%
O. Reg. 153(511) - PHCs F1/BTEX (Water)															
Benzene	3375873		<0.20	<0.20	NA	< 0.20	101%	60%	140%	99%	60%	140%	88%	60%	140%
Toluene	3375873		<0.20	<0.20	NA	< 0.20	113%	60%	140%	83%	60%	140%	82%	60%	140%
Ethylbenzene	3375873		<0.10	<0.10	NA	< 0.10	86%	60%	140%	91%	60%	140%	82%	60%	140%
m & p-Xylene	3375873		<0.20	<0.20	NA	< 0.20	97%	60%	140%	96%	60%	140%	98%	60%	140%
o-Xylene	3375873		<0.10	<0.10	NA	< 0.10	104%	60%	140%	111%	60%	140%	93%	60%	140%
F1 (C6-C10)	3375873		<25	<25	NA	< 25	93%	60%	140%	104%	60%	140%	113%	60%	140%
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Soil)															
F1 (C6 - C10)	3377182		<5	<5	NA	< 5	113%	60%	140%	97%	60%	140%	107%	60%	140%
F2 (C10 to C16)	3330837		< 10	< 10	NA	< 10	89%	60%	140%	79%	60%	140%	84%	60%	140%
F3 (C16 to C34)	3330837		< 50	< 50	NA	< 50	85%	60%	140%	74%	60%	140%	79%	60%	140%
F4 (C34 to C50)	3330837		< 50	< 50	NA	< 50	79%	60%	140%	76%	60%	140%	86%	60%	140%
O. Reg. 153(511) - VOCs (Soil)															
Dichlorodifluoromethane	3384810		< 0.05	< 0.05	NA	< 0.05	103%	50%	140%	103%	50%	140%	73%	50%	140%
Vinyl Chloride	3384810		< 0.02	< 0.02	NA	< 0.02	104%	50%	140%	94%	50%	140%	78%	50%	140%
Bromomethane	3384810		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	69%	50%	140%	105%	50%	140%
Trichlorofluoromethane	3384810		< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	56%	50%	140%	98%	50%	140%
Acetone	3384810		< 0.50	< 0.50	NA	< 0.50	88%	50%	140%	97%	50%	140%	104%	50%	140%
1,1-Dichloroethylene	3384810		< 0.05	< 0.05	NA	< 0.05	119%	50%	140%	83%	60%	130%	87%	50%	140%
Methylene Chloride	3384810		< 0.05	< 0.05	NA	< 0.05	79%	50%	140%	112%	60%	130%	87%	50%	140%
Trans- 1,2-Dichloroethylene	3384810		< 0.05	< 0.05	NA	< 0.05	115%	50%	140%	82%	60%	130%	90%	50%	140%
Methyl tert-butyl Ether	3384810		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	71%	60%	130%	106%	50%	140%
1,1-Dichloroethane	3384810		< 0.02	< 0.02	NA	< 0.02	72%	50%	140%	112%	60%	130%	95%	50%	140%
Methyl Ethyl Ketone	3384810		< 0.50	< 0.50	NA	< 0.50	102%	50%	140%	98%	50%	140%	101%	50%	140%
Cis- 1,2-Dichloroethylene	3384810		< 0.02	< 0.02	NA	< 0.02	75%	50%	140%	101%	60%	130%	90%	50%	140%
Chloroform	3384810		< 0.04	< 0.04	NA	< 0.04	117%	50%	140%	107%	60%	130%	89%	50%	140%
1,2-Dichloroethane	3384810		< 0.03	< 0.03	NA	< 0.03	111%	50%	140%	101%	60%	130%	90%	50%	140%
1,1,1-Trichloroethane	3384810		< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	86%	60%	130%	86%	50%	140%
Carbon Tetrachloride	3384810		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	98%	60%	130%	78%	50%	140%
Benzene	3384810		< 0.02	< 0.02	NA	< 0.02	110%	50%	140%	112%	60%	130%	120%	50%	140%
1,2-Dichloropropane	3384810		< 0.03	< 0.03	NA	< 0.03	85%	50%	140%	96%	60%	130%	104%	50%	140%
Trichloroethylene	3384810		< 0.03	< 0.03	NA	< 0.03	103%	50%	140%	118%	60%	130%	103%	50%	140%
Bromodichloromethane	3384810		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	96%	60%	130%	94%	50%	140%
Methyl Isobutyl Ketone	3384810		< 0.50	< 0.50	NA	< 0.50	104%	50%	140%	98%	50%	140%	107%	50%	140%

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD.
AGAT WORK ORDER: 21T848962
PROJECT: 21494078
ATTENTION TO: Daniel Stabile
SAMPLING SITE:1047 Richmond Rd.
SAMPLED BY:D.Stabile

Trace Organics Analysis (Continued)

RPT Date: Jan 05, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,1,2-Trichloroethane	3384810		< 0.04	< 0.04	NA	< 0.04	96%	50%	140%	112%	60%	130%	97%	50%	140%
Toluene	3384810		2.46	2.79	NA	< 0.05	110%	50%	140%	76%	60%	130%	98%	50%	140%
Dibromochloromethane	3384810		< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	119%	60%	130%	86%	50%	140%
Ethylene Dibromide	3384810		< 0.04	< 0.04	NA	< 0.04	89%	50%	140%	106%	60%	130%	99%	50%	140%
Tetrachloroethylene	3384810		< 0.05	< 0.05	NA	< 0.05	76%	50%	140%	108%	60%	130%	79%	50%	140%
1,1,1,2-Tetrachloroethane	3384810		< 0.04	< 0.04	NA	< 0.04	110%	50%	140%	84%	60%	130%	79%	50%	140%
Chlorobenzene	3384810		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	106%	60%	130%	97%	50%	140%
Ethylbenzene	3384810		< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	97%	60%	130%	97%	50%	140%
m & p-Xylene	3384810		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	94%	60%	130%	95%	50%	140%
Bromoform	3384810		< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	89%	60%	130%	83%	50%	140%
Styrene	3384810		< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	85%	60%	130%	115%	50%	140%
1,1,2,2-Tetrachloroethane	3384810		< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	96%	60%	130%	81%	50%	140%
o-Xylene	3384810		< 0.05	< 0.05	NA	< 0.05	82%	50%	140%	89%	60%	130%	97%	50%	140%
1,3-Dichlorobenzene	3384810		< 0.05	< 0.05	NA	< 0.05	83%	50%	140%	89%	60%	130%	90%	50%	140%
1,4-Dichlorobenzene	3384810		< 0.05	< 0.05	NA	< 0.05	111%	50%	140%	105%	60%	130%	109%	50%	140%
1,2-Dichlorobenzene	3384810		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	102%	60%	130%	117%	50%	140%
n-Hexane	3384810		< 0.05	< 0.05	NA	< 0.05	106%	50%	140%	103%	60%	130%	109%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	3377182		<0.02	<0.02	NA	< 0.02	110%	60%	140%	93%	60%	140%	93%	60%	140%
Toluene	3377182		<0.05	<0.05	NA	< 0.05	96%	60%	140%	101%	60%	140%	96%	60%	140%
Ethylbenzene	3377182		<0.05	<0.05	NA	< 0.05	97%	60%	140%	107%	60%	140%	105%	60%	140%
m & p-Xylene	3377182		<0.05	<0.05	NA	< 0.05	100%	60%	140%	111%	60%	140%	107%	60%	140%
o-Xylene	3377182		<0.05	<0.05	NA	< 0.05	106%	60%	140%	100%	60%	140%	100%	60%	140%
F1 (C6 - C10)	3377182		<5	<5	NA	< 5	113%	60%	140%	97%	60%	140%	107%	60%	140%

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

Certified By: N Popowkolof

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F1 (C6 - C10)	VOL-91- 5010	modified from MOE PHC E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC E3421	GC / FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC E3421	GC / FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC E3421	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC E3421	BALANCE
Terphenyl	VOL-91-5009	modified from MOE PHC E3421	GC/FID
Sediment			
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Benzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Toluene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F1 (C6-C10)	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD.

AGAT WORK ORDER: 21T848962

PROJECT: 21494078

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:D.Stabile

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

*WORK ORDER # 129

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

Chain of Custody Record

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

Report Information:

Company: GOLDER ASSOCIATES LTD.
Contact: DANIEL STABILE
Address: 100 SCOTIA CRT, WHITBY
L1N 8Y6
Phone: 905-213-4732 Fax:
Reports to be sent to:
1. Email: DSTABILE@GOLDER.COM
2. Email:

Project Information:

Project: 21494078
Site Location: 1047 NICHOLSON Rd. OTT
Sampled By: D. STABILE
AGAT Quote #: MSA GOLDER-AGAT PO: 2020
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 7 (Indicate One)
☒ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Excess Soils R406
Table (Indicate One)
☐ Regulation 558
☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
(Region)
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
(Indicate One)

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Sample Matrix Legend

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

Laboratory Use Only

Work Order #: 21T848962
Cooler Quantity:
Arrival Temperatures: 5.1 5.2 5.2 / 5.0 5.1 5.1
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes:

Turnaround Time (TAT) Required:

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - CrVI, Hg, HWSB	O. Reg 153: BTEX, F1-F4 PHCs (Analyze F4G if required ☐ Yes ☐ No)	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	VOC + PHC F1	Potentially Hazardous or High Concentration (Y/N)
BH21-21	12/22/21	1045 AM/PM	4	GW			X		X			X						
BH21-4	↓	1125 AM/PM	↓	↓			↓		↓			↓						
BH21-14		1200 AM/PM																
BH21-22		1235 AM/PM																
BH21-21 SA3	12/21/21	1030 AM/PM	3	SOIL			X		X			X						
BH21-22 SA3	↓	1200 AM/PM	↓	↓			X		X			X						Y
BH21-23 SA4		1355 AM/PM					↓		↓			↓						
BH21-24 SA4		1425 AM/PM																
BH21-25 SA3		1500 AM/PM																
DUP 1	↓	- AM/PM	↓	↓			↓		↓			X						
TRIP BLANK	12/22/21	- AM/PM	4	GW												X		

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
DANIEL STABILE	12/23/21	09:30		2021/12/23	10:10
2021/12/23		1:05			

Page 1 of 2
N°: T 129142

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AGAT Laboratories

work order #

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

Chain of Custody Record

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

Report Information:

Company: ~~GOLDER~~ GOLDER ASSOCIATES LTD.
Contact:
Address: SAME PAGE #1
Phone: Fax:
Reports to be sent to:
1. Email:
2. Email:

Project Information:

Project: 21494074
Site Location:
Sampled By: SAME PAGE #1
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 2 *Indicate One*
☑ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☑ Coarse
☐ Fine

☐ Excess Soils R406
Table _____ *Indicate One*

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
_____ *Region*

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
_____ *Indicate One*

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Sample Matrix Legend

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

Laboratory Use Only

Work Order #:
Cooler Quantity:
Arrival Temperatures: 5.1 5.2 5.2 / 5.0 5.1 5.1
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes:

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☑ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	VOC + PHC F1	Potentially Hazardous or High Concentration (Y/N)
DUP 1	12/22/21	— AM/PM	4	GW					X				X						
FIELD BLANK	12/22/21	1200 AM/PM	4	GW													X		
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	
		AM/PM																	

Samples Relinquished By (Print Name and Sign): DANIEL STABILE	Date: 12/23/21	Time: 09:30	Samples Received By (Print Name and Sign): 2021/12/23	Date:	Time: 10:10
Samples Relinquished By (Print Name and Sign): 2021/12/23	Date:	Time: 1:05	Samples Received By (Print Name and Sign):	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:

Page 2 of 2

N°: T 126605

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AGAT Laboratories

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

CLIENT NAME: GOLDER ASSOCIATES LTD
1931 ROBERTSON ROAD
OTTAWA, ON K2H5B7
(613) 592-9600

ATTENTION TO: Daniel Stabile

PROJECT: 21494078 - 1047 Richmond fengate

AGAT WORK ORDER: 22Z895974

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: May 24, 2022

PAGES (INCLUDING COVER): 11

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

CLIENT NAME: GOLDER ASSOCIATES LTD

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

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

DATE RECEIVED: 2022-05-16

DATE REPORTED: 2022-05-24

		SAMPLE DESCRIPTION:		BH22-05 SA4
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2022-05-11
Parameter	Unit	G / S	RDL	3866975
Benzene	µg/g	0.21	0.02	<0.02
Toluene	µg/g	2.3	0.05	<0.05
Ethylbenzene	µg/g	2	0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05
o-Xylene	µg/g		0.05	<0.05
Xylenes (Total)	µg/g	3.1	0.05	<0.05
F1 (C6 - C10)	µg/g		5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5
F2 (C10 to C16)	µg/g	98	10	<10
F3 (C16 to C34)	µg/g	300	50	<50
F4 (C34 to C50)	µg/g	2800	50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50	NA
Moisture Content	%		0.1	8.7
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	60-140		104
Terphenyl	%	60-140		88

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

CLIENT NAME: GOLDER ASSOCIATES LTD

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

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

DATE RECEIVED: 2022-05-16

DATE REPORTED: 2022-05-24

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3866975 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

CLIENT NAME: GOLDER ASSOCIATES LTD

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

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

DATE RECEIVED: 2022-05-16

DATE REPORTED: 2022-05-24

				SAMPLE DESCRIPTION:	BH22-01 SA2	BH22-02 SA4	BH22-03 SA2	BH22-04 SA1
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2022-05-11	2022-05-09 10:45	2022-05-10	2022-05-09 13:55
Parameter	Unit	G / S	RDL		3866968	3866971	3866973	3866974
F1 (C6 - C10)	µg/g		5		<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5		<5	<5	<5	<5
F2 (C10 to C16)	µg/g	98	10		<10	<10	<10	<10
F3 (C16 to C34)	µg/g	300	50		<50	<50	<50	<50
F4 (C34 to C50)	µg/g	2800	50		<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50		NA	NA	NA	NA
Moisture Content	%		0.1		13.5	8.8	9.6	6.3
Surrogate	Unit	Acceptable Limits						
Toluene-d8	%	50-140			115	112	114	112
Terphenyl	%	60-140			117	100	93	100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3866968-3866974 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

CLIENT NAME: GOLDER ASSOCIATES LTD

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

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

DATE RECEIVED: 2022-05-16

DATE REPORTED: 2022-05-24

		SAMPLE DESCRIPTION:		BH22-01 SA2	BH22-02 SA4	BH22-03 SA2	BH22-04 SA1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2022-05-11	2022-05-09 10:45	2022-05-10	2022-05-09 13:55
Parameter	Unit	G / S	RDL	3866968	3866971	3866973	3866974
Dichlorodifluoromethane	µg/g	16	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
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	3.5	0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	3.4	0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.38	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
Benzene	ug/g	0.21	0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.061	0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	13	0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	1.7	0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	2.3	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
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.28	0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	2	0.05	<0.05	<0.05	<0.05	<0.05

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

CLIENT NAME: GOLDER ASSOCIATES LTD

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

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

DATE RECEIVED: 2022-05-16

DATE REPORTED: 2022-05-24

				SAMPLE DESCRIPTION:	BH22-01 SA2	BH22-02 SA4	BH22-03 SA2	BH22-04 SA1
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2022-05-11	2022-05-09 10:45	2022-05-10	2022-05-09 13:55
Parameter	Unit	G / S	RDL		3866968	3866971	3866973	3866974
m & p-Xylene	ug/g		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
Styrene	ug/g	0.7	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
o-Xylene	ug/g		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
1,4-Dichlorobenzene	ug/g	0.083	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
Xylenes (Total)	ug/g	3.1	0.05		<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05		<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	2.8	0.05		<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1		13.5	8.8	9.6	6.3
Surrogate	Unit	Acceptable Limits						
Toluene-d8	% Recovery	50-140			115	112	114	112
4-Bromofluorobenzene	% Recovery	50-140			84	80	86	81

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

3866968-3866974 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkof

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD
PROJECT: 21494078 - 1047 Richmond fengate
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 22Z895974
ATTENTION TO: Daniel Stabile
SAMPLED BY:DG/KG

Trace Organics Analysis

RPT Date: May 24, 2022

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)															
F1 (C6 - C10)	3866974	3866974	<5	<5	NA	< 5	124%	60%	140%	99%	60%	140%	92%	60%	140%
F2 (C10 to C16)	3866688		< 10	< 10	NA	< 10	111%	60%	140%	95%	60%	140%	67%	60%	140%
F3 (C16 to C34)	3866688		< 50	< 50	NA	< 50	108%	60%	140%	100%	60%	140%	67%	60%	140%
F4 (C34 to C50)	3866688		< 50	< 50	NA	< 50	94%	60%	140%	64%	60%	140%	75%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	114%	50%	140%	109%	50%	140%	83%	50%	140%
Vinyl Chloride	3866974	3866974	<0.02	<0.02	NA	< 0.02	106%	50%	140%	105%	50%	140%	98%	50%	140%
Bromomethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	112%	50%	140%	115%	50%	140%	103%	50%	140%
Trichlorofluoromethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	120%	50%	140%	103%	50%	140%	112%	50%	140%
Acetone	3866974	3866974	<0.50	<0.50	NA	< 0.50	113%	50%	140%	111%	50%	140%	87%	50%	140%
1,1-Dichloroethylene	3866974	3866974	<0.05	<0.05	NA	< 0.05	71%	50%	140%	77%	60%	130%	70%	50%	140%
Methylene Chloride	3866974	3866974	<0.05	<0.05	NA	< 0.05	87%	50%	140%	103%	60%	130%	105%	50%	140%
Trans- 1,2-Dichloroethylene	3866974	3866974	<0.05	<0.05	NA	< 0.05	80%	50%	140%	71%	60%	130%	112%	50%	140%
Methyl tert-butyl Ether	3866974	3866974	<0.05	<0.05	NA	< 0.05	74%	50%	140%	82%	60%	130%	80%	50%	140%
1,1-Dichloroethane	3866974	3866974	<0.02	<0.02	NA	< 0.02	84%	50%	140%	107%	60%	130%	94%	50%	140%
Methyl Ethyl Ketone	3866974	3866974	<0.50	<0.50	NA	< 0.50	113%	50%	140%	94%	50%	140%	86%	50%	140%
Cis- 1,2-Dichloroethylene	3866974	3866974	<0.02	<0.02	NA	< 0.02	78%	50%	140%	86%	60%	130%	88%	50%	140%
Chloroform	3866974	3866974	<0.04	<0.04	NA	< 0.04	77%	50%	140%	80%	60%	130%	80%	50%	140%
1,2-Dichloroethane	3866974	3866974	<0.03	<0.03	NA	< 0.03	80%	50%	140%	82%	60%	130%	84%	50%	140%
1,1,1-Trichloroethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	94%	50%	140%	76%	60%	130%	76%	50%	140%
Carbon Tetrachloride	3866974	3866974	<0.05	<0.05	NA	< 0.05	109%	50%	140%	113%	60%	130%	114%	50%	140%
Benzene	3866974	3866974	<0.02	<0.02	NA	< 0.02	75%	50%	140%	78%	60%	130%	79%	50%	140%
1,2-Dichloropropane	3866974	3866974	<0.03	<0.03	NA	< 0.03	92%	50%	140%	92%	60%	130%	81%	50%	140%
Trichloroethylene	3866974	3866974	<0.03	<0.03	NA	< 0.03	76%	50%	140%	82%	60%	130%	90%	50%	140%
Bromodichloromethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	76%	50%	140%	76%	60%	130%	84%	50%	140%
Methyl Isobutyl Ketone	3866974	3866974	<0.50	<0.50	NA	< 0.50	118%	50%	140%	90%	50%	140%	86%	50%	140%
1,1,2-Trichloroethane	3866974	3866974	<0.04	<0.04	NA	< 0.04	109%	50%	140%	116%	60%	130%	116%	50%	140%
Toluene	3866974	3866974	<0.05	<0.05	NA	< 0.05	100%	50%	140%	108%	60%	130%	107%	50%	140%
Dibromochloromethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	116%	50%	140%	119%	60%	130%	111%	50%	140%
Ethylene Dibromide	3866974	3866974	<0.04	<0.04	NA	< 0.04	99%	50%	140%	111%	60%	130%	106%	50%	140%
Tetrachloroethylene	3866974	3866974	<0.05	<0.05	NA	< 0.05	107%	50%	140%	102%	60%	130%	108%	50%	140%
1,1,1,2-Tetrachloroethane	3866974	3866974	<0.04	<0.04	NA	< 0.04	116%	50%	140%	91%	60%	130%	89%	50%	140%
Chlorobenzene	3866974	3866974	<0.05	<0.05	NA	< 0.05	104%	50%	140%	110%	60%	130%	109%	50%	140%
Ethylbenzene	3866974	3866974	<0.05	<0.05	NA	< 0.05	86%	50%	140%	89%	60%	130%	89%	50%	140%
m & p-Xylene	3866974	3866974	<0.05	<0.05	NA	< 0.05	97%	50%	140%	102%	60%	130%	99%	50%	140%
Bromoform	3866974	3866974	<0.05	<0.05	NA	< 0.05	109%	50%	140%	84%	60%	130%	94%	50%	140%
Styrene	3866974	3866974	<0.05	<0.05	NA	< 0.05	85%	50%	140%	90%	60%	130%	85%	50%	140%
1,1,2,2-Tetrachloroethane	3866974	3866974	<0.05	<0.05	NA	< 0.05	106%	50%	140%	99%	60%	130%	113%	50%	140%
o-Xylene	3866974	3866974	<0.05	<0.05	NA	< 0.05	94%	50%	140%	102%	60%	130%	98%	50%	140%

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: GOLDER ASSOCIATES LTD
PROJECT: 21494078 - 1047 Richmond fengate
SAMPLING SITE:1047 Richmond Rd.

AGAT WORK ORDER: 22Z895974
ATTENTION TO: Daniel Stabile
SAMPLED BY:DG/KG

Trace Organics Analysis (Continued)

RPT Date: May 24, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	3866974	3866974	<0.05	<0.05	NA	< 0.05	111%	50%	140%	113%	60%	130%	113%	50%	140%
1,4-Dichlorobenzene	3866974	3866974	<0.05	<0.05	NA	< 0.05	104%	50%	140%	113%	60%	130%	105%	50%	140%
1,2-Dichlorobenzene	3866974	3866974	<0.05	<0.05	NA	< 0.05	100%	50%	140%	107%	60%	130%	103%	50%	140%
n-Hexane	3866974	3866974	<0.05	<0.05	NA	< 0.05	95%	50%	140%	79%	60%	130%	91%	50%	140%

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

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)															
Moisture Content	3866971	3866971	8.81	10.00	12.7%	< 0.1	NA			NA			NA		
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	3866067		<0.02	<0.02	NA	< 0.02	96%	60%	140%	137%	60%	140%	121%	60%	140%
Toluene	3866067		<0.05	<0.05	NA	< 0.05	108%	60%	140%	134%	60%	140%	93%	60%	140%
Ethylbenzene	3866067		<0.05	<0.05	NA	< 0.05	134%	60%	140%	120%	60%	140%	130%	60%	140%
m & p-Xylene	3866067		<0.05	<0.05	NA	< 0.05	129%	60%	140%	107%	60%	140%	102%	60%	140%
o-Xylene	3866067		<0.05	<0.05	NA	< 0.05	125%	60%	140%	130%	60%	140%	102%	60%	140%
F1 (C6 - C10)	3866067		<5	<5	NA	< 5	97%	60%	140%	90%	60%	140%	102%	60%	140%

Certified By: N Popowkolof

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Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

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

Method Summary

CLIENT NAME: GOLDER ASSOCIATES LTD

AGAT WORK ORDER: 22Z895974

PROJECT: 21494078 - 1047 Richmond fengate

ATTENTION TO: Daniel Stabile

SAMPLING SITE:1047 Richmond Rd.

SAMPLED BY:DG/KG

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

1 Mech.

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

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 22Z895974

Cooler Quantity: one - loose ice.

Arrival Temperatures: 7.5 | 7.8 | 7.8
6.3 | 5.7 | 5.4

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: ice

Report Information:

Company: WSP - Golder
Contact: Daniel Stabile, Ben Waechter
Address: 1931 Robertson Rd. Nepean, ON. K2H 5B7
Phone: 905-213-4732 2nd Phone: 613-592-9600
Fax:
Reports to be sent to:
1. Email: daniel.stabile@wsp.com
2. Email: Ben.Waechter@wsp.com

Project Information:

Project: 21494078 - 1047 Richmond Fengate.
Site Location: 1047 Richmond Rd
Sampled By: Dany Giroux/ Kinjal Gajjar
AGAT ID #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company: WSP-Golder
Contact: Daniel Stabile
Address: 1931 Robertson Rd. Nepean, ON.
Email: daniel.stabile@wsp.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 7 (Indicate One)
☐ Ind/Com
☑ Res/Park
☐ Agriculture

Soil Texture (Check One)
☐ Coarse
☐ Fine

☐ Excess Soils R406
Table _____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
_____ (Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
_____ (Indicate One)

Is this submission for a Record of Site Condition? ☑ Yes ☐ No

Report Guideline on Certificate of Analysis ☑ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT (Most Analysis) ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs	Analyze F4G if required ☐ Yes ☐ No	PAHs	Total PCBs ☐ Aroclor	VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
BH22-01 SA2	11 May 22	AM/PM	3	S					✓				✓					
BH22-02 SA4	9 May 22	10:45 AM/PM	3	S					✓				✓					
BH22-03 SA2	10 May 22	AM/PM	3	S					✓				✓					
BH22-04 SA7	9 May 22	1:55 AM/PM	3	S					✓				✓					
BH22-05 SA4	11 May 22	AM/PM	3	S					✓				✓					
		AM/PM																
		AM/PM																
		AM/PM																
		AM/PM																
		AM/PM																
		AM/PM																

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Ben Waechter	16 May 22	14:48	C. Guillet MAY 16 2022		14h50
CC to purolator MAY 18 2022	16h00		Simon	17/5/22	9:00

Page _____ of _____

N°: T114985

Your Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Your C.O.C. #: C#998599-01-01

Attention: Keith Brown

Terrapex Environmental Ltd
1-20 Gurdwara Rd.
Ottawa, ON
CANADA K2E 8B3

Report Date: 2025/08/11
Report #: R8591546
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C4J8739
Received: 2024/06/28, 15:41

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
1,3-Dichloropropene Sum	5	N/A	2024/07/03		EPA 8260C m
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2024/07/02	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	1	2024/06/30	2024/07/01	CAM SOP-00316	CCME PHC-CWS m
Polychlorinated Biphenyl in Water	1	2024/07/04	2024/07/04	CAM SOP-00309	EPA 8082A m
pH (2)	1	2024/06/29	2024/06/29	CAM SOP-00413	SM 24th - 4500H+ B
Total Kjeldahl Nitrogen in Water	1	2024/07/02	2024/07/02	CAM SOP-00938	OMOE E3516 m
Total Phosphorus (Colourimetric)	1	2024/07/02	2024/07/02	CAM SOP-00407	SM 24 4500-P I
Total Suspended Solids	1	2024/06/29	2024/07/02	CAM SOP-00428	SM 24 2540D m
Volatile Organic Compounds and F1 PHCs	5	N/A	2024/07/03	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following “Alberta Environment’s

Your Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Your C.O.C. #: C#998599-01-01

Attention: Keith Brown

Terrapex Environmental Ltd
1-20 Gurdwara Rd.
Ottawa, ON
CANADA K2E 8B3

Report Date: 2025/08/11
Report #: R8591546
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C4J8739

Received: 2024/06/28, 15:41

Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
(2) "The CCME method and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) holding time. Bureau Veritas endeavors to analyze samples as soon as possible after receipt."

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Katherine Szozda, Project Manager
Email: Katherine.Szozda@bureauveritas.com
Phone# (613)274-0573 Ext:7063633
==========

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas Job #: C4J8739
Report Date: 2025/08/11

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Sampler Initials: EB

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		ZPF090			ZPF090	
Sampling Date		2024/06/27 15:45			2024/06/27 15:45	
COC Number		C#998599-01-01			C#998599-01-01	
	UNITS	**BH22-04**	**RDL**	**QC Batch**	**BH22-04 Lab-Dup**	**QC Batch**
Inorganics						
Total Kjeldahl Nitrogen (TKN)	mg/L	0.47	0.10	9489004		
pH	pH	7.22		9487646	7.22	9487646
Total Phosphorus	mg/L	0.072	0.020	9488971		
Total Suspended Solids	mg/L	51	10	9487214		

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

VOLATILE ORGANICS BY GC/MS (WATER)

Bureau Veritas ID		ZPF090	ZPF091	ZPF092	ZPF093		
Sampling Date		2024/06/27 15:45	2024/06/27 15:45	2024/06/27 14:30	2024/06/27 15:00		
COC Number		C#998599-01-01	C#998599-01-01	C#998599-01-01	C#998599-01-01		
	UNITS	**BH22-04**	**BH22-114**	**BH21-14**	**BH22-03**	**RDL**	**QC Batch**
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9487076
Volatile Organics							
Acetone (2-Propanone)	ug/L	13	11	<10	<10	10	9488077
Benzene	ug/L	<0.17	<0.17	<0.17	<0.17	0.17	9488077
Bromodichloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
Bromoform	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	9488077
Bromomethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
Carbon Tetrachloride	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
Chlorobenzene	ug/L	0.22	0.22	<0.20	<0.20	0.20	9488077
Chloroform	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
Dibromochloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
1,2-Dichlorobenzene	ug/L	0.61	0.64	<0.50	<0.50	0.50	9488077
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	9488077
1,1-Dichloroethane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
1,2-Dichloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
1,1-Dichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
1,2-Dichloropropane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	<0.30	<0.30	0.30	9488077
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9488077
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
Ethylene Dibromide	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
Hexane	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	9488077
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	9488077
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	<10	<10	10	9488077
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	9488077
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
Styrene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C4J8739
Report Date: 2025/08/11

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Sampler Initials: EB

VOLATILE ORGANICS BY GC/MS (WATER)

Bureau Veritas ID		ZPF090	ZPF091	ZPF092	ZPF093		
Sampling Date		2024/06/27 15:45	2024/06/27 15:45	2024/06/27 14:30	2024/06/27 15:00		
COC Number		C#998599-01-01	C#998599-01-01	C#998599-01-01	C#998599-01-01		
	UNITS	**BH22-04**	**BH22-114**	**BH21-14**	**BH22-03**	**RDL**	**QC Batch**
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
Tetrachloroethylene	ug/L	0.22	0.23	<0.20	<0.20	0.20	9488077
Toluene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
Trichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9488077
Vinyl Chloride	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
p+m-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
o-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
Total Xylenes	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9488077
F1 (C6-C10)	ug/L	59	110	<25	<25	25	9488077
F1 (C6-C10) - BTEX	ug/L	59	110	<25	<25	25	9488077
Surrogate Recovery (%)							
4-Bromofluorobenzene	%	101	103	95	93		9488077
D4-1,2-Dichloroethane	%	129	122	119	120		9488077
D8-Toluene	%	86	87	87	88		9488077

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

VOLATILE ORGANICS BY GC/MS (WATER)

Bureau Veritas ID		ZPF096		
Sampling Date		2024/06/27 16:00		
COC Number		C#998599-01-01		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	0.50	9487076
Volatile Organics				
Acetone (2-Propanone)	ug/L	<10	10	9488077
Benzene	ug/L	<0.17	0.17	9488077
Bromodichloromethane	ug/L	<0.50	0.50	9488077
Bromoform	ug/L	<1.0	1.0	9488077
Bromomethane	ug/L	<0.50	0.50	9488077
Carbon Tetrachloride	ug/L	<0.20	0.20	9488077
Chlorobenzene	ug/L	<0.20	0.20	9488077
Chloroform	ug/L	<0.20	0.20	9488077
Dibromochloromethane	ug/L	<0.50	0.50	9488077
1,2-Dichlorobenzene	ug/L	<0.50	0.50	9488077
1,3-Dichlorobenzene	ug/L	<0.50	0.50	9488077
1,4-Dichlorobenzene	ug/L	<0.50	0.50	9488077
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	1.0	9488077
1,1-Dichloroethane	ug/L	<0.20	0.20	9488077
1,2-Dichloroethane	ug/L	<0.50	0.50	9488077
1,1-Dichloroethylene	ug/L	<0.20	0.20	9488077
cis-1,2-Dichloroethylene	ug/L	<0.50	0.50	9488077
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	9488077
1,2-Dichloropropane	ug/L	<0.20	0.20	9488077
cis-1,3-Dichloropropene	ug/L	<0.30	0.30	9488077
trans-1,3-Dichloropropene	ug/L	<0.40	0.40	9488077
Ethylbenzene	ug/L	<0.20	0.20	9488077
Ethylene Dibromide	ug/L	<0.20	0.20	9488077
Hexane	ug/L	<1.0	1.0	9488077
Methylene Chloride(Dichloromethane)	ug/L	<2.0	2.0	9488077
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	10	9488077
Methyl Isobutyl Ketone	ug/L	<5.0	5.0	9488077
Methyl t-butyl ether (MTBE)	ug/L	<0.50	0.50	9488077
Styrene	ug/L	<0.50	0.50	9488077

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C4J8739
Report Date: 2025/08/11

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Sampler Initials: EB

VOLATILE ORGANICS BY GC/MS (WATER)

Bureau Veritas ID		ZPF096		
Sampling Date		2024/06/27 16:00		
COC Number		C#998599-01-01		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
1,1,1,2-Tetrachloroethane	ug/L	<0.50	0.50	9488077
1,1,2,2-Tetrachloroethane	ug/L	<0.50	0.50	9488077
Tetrachloroethylene	ug/L	<0.20	0.20	9488077
Toluene	ug/L	<0.20	0.20	9488077
1,1,1-Trichloroethane	ug/L	<0.20	0.20	9488077
1,1,2-Trichloroethane	ug/L	<0.50	0.50	9488077
Trichloroethylene	ug/L	<0.20	0.20	9488077
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	0.50	9488077
Vinyl Chloride	ug/L	<0.20	0.20	9488077
p+m-Xylene	ug/L	<0.20	0.20	9488077
o-Xylene	ug/L	<0.20	0.20	9488077
Total Xylenes	ug/L	<0.20	0.20	9488077
F1 (C6-C10)	ug/L	<25	25	9488077
F1 (C6-C10) - BTEX	ug/L	<25	25	9488077
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	95		9488077
D4-1,2-Dichloroethane	%	118		9488077
D8-Toluene	%	89		9488077

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Report Date: 2025/08/11

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Sampler Initials: EB

PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		ZPF090			ZPF095		
Sampling Date		2024/06/27 15:45			2024/06/17 16:00		
COC Number		C#998599-01-01			C#998599-01-01		
	UNITS	**BH22-04**	**RDL**	**QC Batch**	**TRIP SPIKE**	**RDL**	**QC Batch**
BTEX & F1 Hydrocarbons							
Benzene	ug/L				94	0.20	9487687
Toluene	ug/L				90	0.20	9487687
Ethylbenzene	ug/L				88	0.20	9487687
o-Xylene	ug/L				86	0.20	9487687
p+m-Xylene	ug/L				93	0.40	9487687
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/L	8100	100	9487970			
F3 (C16-C34 Hydrocarbons)	ug/L	100000	200	9487970			
F4 (C34-C50 Hydrocarbons)	ug/L	18000	200	9487970			
Reached Baseline at C50	ug/L	Yes		9487970			
Surrogate Recovery (%)							
1,4-Difluorobenzene	%				99		9487687
4-Bromofluorobenzene	%				98		9487687
D10-o-Xylene	%				93		9487687
D4-1,2-Dichloroethane	%				94		9487687
o-Terphenyl	%	104		9487970			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4J8739
Report Date: 2025/08/11

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Sampler Initials: EB

POLYCHLORINATED BIPHENYLS BY GC-ECD (WATER)

Bureau Veritas ID		ZPF090		
Sampling Date		2024/06/27 15:45		
COC Number		C#998599-01-01		
	UNITS	**BH22-04**	**RDL**	**QC Batch**
PCBs				
Aroclor 1242	ug/L	<0.5	0.5	9493852
Aroclor 1248	ug/L	<0.5	0.5	9493852
Aroclor 1254	ug/L	<0.5	0.5	9493852
Aroclor 1260	ug/L	<0.5	0.5	9493852
Total PCB	ug/L	<0.5	0.5	9493852
Surrogate Recovery (%)				
Decachlorobiphenyl	%	63		9493852

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4J8739
Report Date: 2025/08/11

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Sampler Initials: EB

TEST SUMMARY

Bureau Veritas ID: ZPF090
Sample ID: BH22-04
Matrix: Water

Collected: 2024/06/27
Shipped:
Received: 2024/06/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9487076	N/A	2024/07/03	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9487970	2024/06/30	2024/07/01	Mohammed Abdul Nafay Shoeb
Polychlorinated Biphenyl in Water	GC/ECD	9493852	2024/07/04	2024/07/04	Svitlana Shaula
pH	AT	9487646	2024/06/29	2024/06/29	Nachiketa Gohil
Total Kjeldahl Nitrogen in Water	SKAL	9489004	2024/07/02	2024/07/02	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9488971	2024/07/02	2024/07/02	Sachi Patel
Total Suspended Solids	BAL	9487214	2024/06/29	2024/07/02	Razieh Tabesh
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9488077	N/A	2024/07/03	Juan Pangilinan

Bureau Veritas ID: ZPF090 Dup
Sample ID: BH22-04
Matrix: Water

Collected: 2024/06/27
Shipped:
Received: 2024/06/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH	AT	9487646	2024/06/29	2024/06/29	Nachiketa Gohil

Bureau Veritas ID: ZPF091
Sample ID: BH22-114
Matrix: Water

Collected: 2024/06/27
Shipped:
Received: 2024/06/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9487076	N/A	2024/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9488077	N/A	2024/07/03	Juan Pangilinan

Bureau Veritas ID: ZPF092
Sample ID: BH21-14
Matrix: Water

Collected: 2024/06/27
Shipped:
Received: 2024/06/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9487076	N/A	2024/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9488077	N/A	2024/07/03	Juan Pangilinan

Bureau Veritas ID: ZPF093
Sample ID: BH22-03
Matrix: Water

Collected: 2024/06/27
Shipped:
Received: 2024/06/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9487076	N/A	2024/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9488077	N/A	2024/07/03	Juan Pangilinan

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Bureau Veritas Job #: C4J8739
Report Date: 2025/08/11

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD
Sampler Initials: EB

TEST SUMMARY

Bureau Veritas ID: ZPF095
Sample ID: TRIP SPIKE
Matrix: Water

Collected: 2024/06/17
Shipped:
Received: 2024/06/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	9487687	N/A	2024/07/02	Domnica Andronescu

Bureau Veritas ID: ZPF096
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2024/06/27
Shipped:
Received: 2024/06/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9487076	N/A	2024/07/03	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9488077	N/A	2024/07/03	Juan Pangilinan

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.7°C

Revised Report [2025/08/11]: Split report issued per client request.
Revised Report [2024/07/26]:Split report issued as per request.

Sample ZPF090 [BH22-04] : PCB analysis: Due to the nature of the sample matrix, a smaller portion of the sample was extracted. DLs were adjusted accordingly.

Sample ZPF095 [TRIP SPIKE] : F1/BTEX Analysis: Trip spike results are expressed as percent recovery.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9487214	RTB	Spiked Blank	Total Suspended Solids	2024/07/02		100	%	80 - 120
9487214	RTB	Method Blank	Total Suspended Solids	2024/07/02	<10		mg/L	
9487214	RTB	RPD	Total Suspended Solids	2024/07/02	NC		%	20
9487646	NGI	Spiked Blank	pH	2024/06/29		102	%	98 - 103
9487646	NGI	RPD [ZPF090-03]	pH	2024/06/29	0.11		%	N/A
9487687	DAN	Matrix Spike	1,4-Difluorobenzene	2024/07/02		105	%	70 - 130
			4-Bromofluorobenzene	2024/07/02		106	%	70 - 130
			D10-o-Xylene	2024/07/02		106	%	70 - 130
			D4-1,2-Dichloroethane	2024/07/02		95	%	70 - 130
			Benzene	2024/07/02		103	%	50 - 140
			Toluene	2024/07/02		94	%	50 - 140
			Ethylbenzene	2024/07/02		113	%	50 - 140
			o-Xylene	2024/07/02		107	%	50 - 140
			p+m-Xylene	2024/07/02		107	%	50 - 140
9487687	DAN	Spiked Blank	1,4-Difluorobenzene	2024/07/02		104	%	70 - 130
			4-Bromofluorobenzene	2024/07/02		105	%	70 - 130
			D10-o-Xylene	2024/07/02		103	%	70 - 130
			D4-1,2-Dichloroethane	2024/07/02		98	%	70 - 130
			Benzene	2024/07/02		105	%	50 - 140
			Toluene	2024/07/02		94	%	50 - 140
			Ethylbenzene	2024/07/02		111	%	50 - 140
			o-Xylene	2024/07/02		107	%	50 - 140
			p+m-Xylene	2024/07/02		106	%	50 - 140
9487687	DAN	Method Blank	1,4-Difluorobenzene	2024/07/02		109	%	70 - 130
			4-Bromofluorobenzene	2024/07/02		82	%	70 - 130
			D10-o-Xylene	2024/07/02		101	%	70 - 130
			D4-1,2-Dichloroethane	2024/07/02		102	%	70 - 130
			Benzene	2024/07/02	<0.20		ug/L	
			Toluene	2024/07/02	<0.20		ug/L	
			Ethylbenzene	2024/07/02	<0.20		ug/L	
			o-Xylene	2024/07/02	<0.20		ug/L	
			p+m-Xylene	2024/07/02	<0.40		ug/L	
9487687	DAN	RPD	Benzene	2024/07/02	2.3		%	30
			Toluene	2024/07/02	NC		%	30
			Ethylbenzene	2024/07/02	3.1		%	30
			o-Xylene	2024/07/02	1.0		%	30
			p+m-Xylene	2024/07/02	1.7		%	30
			Total Xylenes	2024/07/02	1.6		%	30
9487970	MSZ	Matrix Spike	o-Terphenyl	2024/07/01		101	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/07/01		98	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2024/07/01		101	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2024/07/01		92	%	60 - 140
9487970	MSZ	Spiked Blank	o-Terphenyl	2024/07/01		100	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/07/01		98	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2024/07/01		102	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2024/07/01		93	%	60 - 140
9487970	MSZ	Method Blank	o-Terphenyl	2024/07/01		99	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/07/01	<100		ug/L	
			F3 (C16-C34 Hydrocarbons)	2024/07/01	<200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2024/07/01	<200		ug/L	
9487970	MSZ	RPD	F2 (C10-C16 Hydrocarbons)	2024/07/01	NC		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F3 (C16-C34 Hydrocarbons)	2024/07/01	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2024/07/01	NC		%	30
9488077	JPN	Matrix Spike	4-Bromofluorobenzene	2024/07/02		101	%	70 - 130
			D4-1,2-Dichloroethane	2024/07/02		120	%	70 - 130
			D8-Toluene	2024/07/02		109	%	70 - 130
			Acetone (2-Propanone)	2024/07/02		124	%	60 - 140
			Benzene	2024/07/02		107	%	70 - 130
			Bromodichloromethane	2024/07/02		114	%	70 - 130
			Bromoform	2024/07/02		113	%	70 - 130
			Bromomethane	2024/07/02		101	%	60 - 140
			Carbon Tetrachloride	2024/07/02		103	%	70 - 130
			Chlorobenzene	2024/07/02		94	%	70 - 130
			Chloroform	2024/07/02		113	%	70 - 130
			Dibromochloromethane	2024/07/02		110	%	70 - 130
			1,2-Dichlorobenzene	2024/07/02		96	%	70 - 130
			1,3-Dichlorobenzene	2024/07/02		88	%	70 - 130
			1,4-Dichlorobenzene	2024/07/02		90	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2024/07/02		99	%	60 - 140
			1,1-Dichloroethane	2024/07/02		120	%	70 - 130
			1,2-Dichloroethane	2024/07/02		112	%	70 - 130
			1,1-Dichloroethylene	2024/07/02		109	%	70 - 130
			cis-1,2-Dichloroethylene	2024/07/02		109	%	70 - 130
			trans-1,2-Dichloroethylene	2024/07/02		110	%	70 - 130
			1,2-Dichloropropane	2024/07/02		118	%	70 - 130
			cis-1,3-Dichloropropene	2024/07/02		105	%	70 - 130
			trans-1,3-Dichloropropene	2024/07/02		110	%	70 - 130
			Ethylbenzene	2024/07/02		87	%	70 - 130
			Ethylene Dibromide	2024/07/02		109	%	70 - 130
			Hexane	2024/07/02		121	%	70 - 130
			Methylene Chloride(Dichloromethane)	2024/07/02		116	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2024/07/02		127	%	60 - 140
			Methyl Isobutyl Ketone	2024/07/02		92	%	70 - 130
			Methyl t-butyl ether (MTBE)	2024/07/02		95	%	70 - 130
			Styrene	2024/07/02		73	%	70 - 130
			1,1,1,2-Tetrachloroethane	2024/07/02		107	%	70 - 130
			1,1,2,2-Tetrachloroethane	2024/07/02		122	%	70 - 130
			Tetrachloroethylene	2024/07/02		96	%	70 - 130
			Toluene	2024/07/02		96	%	70 - 130
			1,1,1-Trichloroethane	2024/07/02		103	%	70 - 130
			1,1,2-Trichloroethane	2024/07/02		118	%	70 - 130
			Trichloroethylene	2024/07/02		98	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2024/07/02		108	%	70 - 130
			Vinyl Chloride	2024/07/02		120	%	70 - 130
			p+m-Xylene	2024/07/02		85	%	70 - 130
			o-Xylene	2024/07/02		92	%	70 - 130
			F1 (C6-C10)	2024/07/02		93	%	60 - 140
9488077	JPN	Spiked Blank	4-Bromofluorobenzene	2024/07/02		100	%	70 - 130
			D4-1,2-Dichloroethane	2024/07/02		114	%	70 - 130
			D8-Toluene	2024/07/02		108	%	70 - 130
			Acetone (2-Propanone)	2024/07/02		115	%	60 - 140
			Benzene	2024/07/02		104	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Bromodichloromethane	2024/07/02		108	%	70 - 130
			Bromoform	2024/07/02		107	%	70 - 130
			Bromomethane	2024/07/02		96	%	60 - 140
			Carbon Tetrachloride	2024/07/02		98	%	70 - 130
			Chlorobenzene	2024/07/02		92	%	70 - 130
			Chloroform	2024/07/02		107	%	70 - 130
			Dibromochloromethane	2024/07/02		105	%	70 - 130
			1,2-Dichlorobenzene	2024/07/02		95	%	70 - 130
			1,3-Dichlorobenzene	2024/07/02		89	%	70 - 130
			1,4-Dichlorobenzene	2024/07/02		89	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2024/07/02		93	%	60 - 140
			1,1-Dichloroethane	2024/07/02		115	%	70 - 130
			1,2-Dichloroethane	2024/07/02		105	%	70 - 130
			1,1-Dichloroethylene	2024/07/02		104	%	70 - 130
			cis-1,2-Dichloroethylene	2024/07/02		104	%	70 - 130
			trans-1,2-Dichloroethylene	2024/07/02		106	%	70 - 130
			1,2-Dichloropropane	2024/07/02		113	%	70 - 130
			cis-1,3-Dichloropropene	2024/07/02		102	%	70 - 130
			trans-1,3-Dichloropropene	2024/07/02		106	%	70 - 130
			Ethylbenzene	2024/07/02		88	%	70 - 130
			Ethylene Dibromide	2024/07/02		104	%	70 - 130
			Hexane	2024/07/02		117	%	70 - 130
			Methylene Chloride(Dichloromethane)	2024/07/02		110	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2024/07/02		120	%	60 - 140
			Methyl Isobutyl Ketone	2024/07/02		89	%	70 - 130
			Methyl t-butyl ether (MTBE)	2024/07/02		91	%	70 - 130
			Styrene	2024/07/02		74	%	70 - 130
			1,1,1,2-Tetrachloroethane	2024/07/02		102	%	70 - 130
			1,1,2,2-Tetrachloroethane	2024/07/02		115	%	70 - 130
			Tetrachloroethylene	2024/07/02		95	%	70 - 130
			Toluene	2024/07/02		94	%	70 - 130
			1,1,1-Trichloroethane	2024/07/02		98	%	70 - 130
			1,1,2-Trichloroethane	2024/07/02		110	%	70 - 130
			Trichloroethylene	2024/07/02		95	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2024/07/02		102	%	70 - 130
			Vinyl Chloride	2024/07/02		115	%	70 - 130
			p+m-Xylene	2024/07/02		86	%	70 - 130
			o-Xylene	2024/07/02		93	%	70 - 130
			F1 (C6-C10)	2024/07/02		90	%	60 - 140
9488077	JPN	Method Blank	4-Bromofluorobenzene	2024/07/02		96	%	70 - 130
			D4-1,2-Dichloroethane	2024/07/02		113	%	70 - 130
			D8-Toluene	2024/07/02		90	%	70 - 130
			Acetone (2-Propanone)	2024/07/02	<10		ug/L	
			Benzene	2024/07/02	<0.17		ug/L	
			Bromodichloromethane	2024/07/02	<0.50		ug/L	
			Bromoform	2024/07/02	<1.0		ug/L	
			Bromomethane	2024/07/02	<0.50		ug/L	
			Carbon Tetrachloride	2024/07/02	<0.20		ug/L	
			Chlorobenzene	2024/07/02	<0.20		ug/L	
			Chloroform	2024/07/02	<0.20		ug/L	
			Dibromochloromethane	2024/07/02	<0.50		ug/L	

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,2-Dichlorobenzene	2024/07/02	<0.50		ug/L	
			1,3-Dichlorobenzene	2024/07/02	<0.50		ug/L	
			1,4-Dichlorobenzene	2024/07/02	<0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2024/07/02	<1.0		ug/L	
			1,1-Dichloroethane	2024/07/02	<0.20		ug/L	
			1,2-Dichloroethane	2024/07/02	<0.50		ug/L	
			1,1-Dichloroethylene	2024/07/02	<0.20		ug/L	
			cis-1,2-Dichloroethylene	2024/07/02	<0.50		ug/L	
			trans-1,2-Dichloroethylene	2024/07/02	<0.50		ug/L	
			1,2-Dichloropropane	2024/07/02	<0.20		ug/L	
			cis-1,3-Dichloropropene	2024/07/02	<0.30		ug/L	
			trans-1,3-Dichloropropene	2024/07/02	<0.40		ug/L	
			Ethylbenzene	2024/07/02	<0.20		ug/L	
			Ethylene Dibromide	2024/07/02	<0.20		ug/L	
			Hexane	2024/07/02	<1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2024/07/02	<2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2024/07/02	<10		ug/L	
			Methyl Isobutyl Ketone	2024/07/02	<5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2024/07/02	<0.50		ug/L	
			Styrene	2024/07/02	<0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2024/07/02	<0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2024/07/02	<0.50		ug/L	
			Tetrachloroethylene	2024/07/02	<0.20		ug/L	
			Toluene	2024/07/02	<0.20		ug/L	
			1,1,1-Trichloroethane	2024/07/02	<0.20		ug/L	
			1,1,2-Trichloroethane	2024/07/02	<0.50		ug/L	
			Trichloroethylene	2024/07/02	<0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2024/07/02	<0.50		ug/L	
			Vinyl Chloride	2024/07/02	<0.20		ug/L	
			p+m-Xylene	2024/07/02	<0.20		ug/L	
			o-Xylene	2024/07/02	<0.20		ug/L	
			Total Xylenes	2024/07/02	<0.20		ug/L	
			F1 (C6-C10)	2024/07/02	<25		ug/L	
			F1 (C6-C10) - BTEX	2024/07/02	<25		ug/L	
9488077	JPN	RPD	Acetone (2-Propanone)	2024/07/02	NC		%	30
			Benzene	2024/07/02	NC		%	30
			Bromodichloromethane	2024/07/02	NC		%	30
			Bromoform	2024/07/02	NC		%	30
			Bromomethane	2024/07/02	NC		%	30
			Carbon Tetrachloride	2024/07/02	NC		%	30
			Chlorobenzene	2024/07/02	NC		%	30
			Chloroform	2024/07/02	NC		%	30
			Dibromochloromethane	2024/07/02	NC		%	30
			1,2-Dichlorobenzene	2024/07/02	NC		%	30
			1,3-Dichlorobenzene	2024/07/02	NC		%	30
			1,4-Dichlorobenzene	2024/07/02	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2024/07/02	NC		%	30
			1,1-Dichloroethane	2024/07/02	NC		%	30
			1,2-Dichloroethane	2024/07/02	NC		%	30
			1,1-Dichloroethylene	2024/07/02	NC		%	30
			cis-1,2-Dichloroethylene	2024/07/02	NC		%	30

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			trans-1,2-Dichloroethylene	2024/07/02	NC		%	30
			1,2-Dichloropropane	2024/07/02	NC		%	30
			cis-1,3-Dichloropropene	2024/07/02	NC		%	30
			trans-1,3-Dichloropropene	2024/07/02	NC		%	30
			Ethylbenzene	2024/07/02	NC		%	30
			Ethylene Dibromide	2024/07/02	NC		%	30
			Hexane	2024/07/02	NC		%	30
			Methylene Chloride(Dichloromethane)	2024/07/02	NC		%	30
			Methyl Ethyl Ketone (2-Butanone)	2024/07/02	NC		%	30
			Methyl Isobutyl Ketone	2024/07/02	NC		%	30
			Methyl t-butyl ether (MTBE)	2024/07/02	NC		%	30
			Styrene	2024/07/02	NC		%	30
			1,1,1,2-Tetrachloroethane	2024/07/02	NC		%	30
			1,1,2,2-Tetrachloroethane	2024/07/02	NC		%	30
			Tetrachloroethylene	2024/07/02	NC		%	30
			Toluene	2024/07/02	NC		%	30
			1,1,1-Trichloroethane	2024/07/02	NC		%	30
			1,1,2-Trichloroethane	2024/07/02	NC		%	30
			Trichloroethylene	2024/07/02	NC		%	30
			Trichlorofluoromethane (FREON 11)	2024/07/02	NC		%	30
			Vinyl Chloride	2024/07/02	NC		%	30
			p+m-Xylene	2024/07/02	NC		%	30
			o-Xylene	2024/07/02	NC		%	30
			Total Xylenes	2024/07/02	NC		%	30
			F1 (C6-C10)	2024/07/02	NC		%	30
			F1 (C6-C10) - BTEX	2024/07/02	NC		%	30
9488971	SPC	Matrix Spike	Total Phosphorus	2024/07/02		98	%	80 - 120
9488971	SPC	QC Standard	Total Phosphorus	2024/07/02		104	%	80 - 120
9488971	SPC	Spiked Blank	Total Phosphorus	2024/07/02		102	%	80 - 120
9488971	SPC	Method Blank	Total Phosphorus	2024/07/02	<0.020		mg/L	
9488971	SPC	RPD	Total Phosphorus	2024/07/02	4.6		%	20
9489004	RTY	Matrix Spike	Total Kjeldahl Nitrogen (TKN)	2024/07/02		96	%	80 - 120
9489004	RTY	QC Standard	Total Kjeldahl Nitrogen (TKN)	2024/07/02		103	%	80 - 120
9489004	RTY	Spiked Blank	Total Kjeldahl Nitrogen (TKN)	2024/07/02		96	%	80 - 120
9489004	RTY	Method Blank	Total Kjeldahl Nitrogen (TKN)	2024/07/02	<0.10		mg/L	
9489004	RTY	RPD	Total Kjeldahl Nitrogen (TKN)	2024/07/02	NC		%	20
9493852	SVS	Matrix Spike	Decachlorobiphenyl	2024/07/04		83	%	60 - 130
			Aroclor 1260	2024/07/04		85	%	60 - 130
			Total PCB	2024/07/04		85	%	60 - 130
9493852	SVS	Spiked Blank	Decachlorobiphenyl	2024/07/04		81	%	60 - 130
			Aroclor 1260	2024/07/04		79	%	60 - 130
			Total PCB	2024/07/04		79	%	60 - 130
9493852	SVS	Method Blank	Decachlorobiphenyl	2024/07/04		80	%	60 - 130
			Aroclor 1242	2024/07/04	<0.05		ug/L	
			Aroclor 1248	2024/07/04	<0.05		ug/L	
			Aroclor 1254	2024/07/04	<0.05		ug/L	
			Aroclor 1260	2024/07/04	<0.05		ug/L	
			Total PCB	2024/07/04	<0.05		ug/L	
9493852	SVS	RPD	Aroclor 1242	2024/07/04	NC		%	30
			Aroclor 1248	2024/07/04	NC		%	30
			Aroclor 1254	2024/07/04	NC		%	30

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Aroclor 1260	2024/07/04	NC		%	30
			Total PCB	2024/07/04	NC		%	40

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Supervisor-Afternoon Shift

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

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Bureau Veritas
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RUSH

NONT-2024-06-3214

Page 1 of 1

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#12638 Terrapex Environmental Ltd	Company Name:		Quotation #:	C35707
Attention:	Accounts Payable	Attention:	Keith Brown	P.O. #:	
Address:	1-20 Gurdwara Rd.	Address:		Project:	CO972.00
	Ottawa ON K2E 8B3			Project Name:	
Tel:	(613) 745-6471 Fax: (613) 745-0796	Tel:	(613) 745-6471 Ext: 225 Fax: (613) 745-0796	Site #:	1047 Richmond Road
Email:	accounts.payable@terrapex.com	Email:	k.brown@terrapex.com	Sampled By:	EB

Bottle Order #: 998599

COC #: C#998599-01-01

Project Manager: Katherine Szozda

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
- [ ] Table 1 [X] Res/Park [ ] Medium/Fine
- [ ] Table 2 [ ] Ind/Comm [ ] Coarse
- [ ] Table 3 [ ] Agri/Other [X] For RSC
- [X] Table 7

Other Regulations
- [ ] CCME [ ] Sanitary Sewer Bylaw
- [ ] Reg 558 [ ] Storm Sewer Bylaw
- [ ] MISA Municipality
- [ ] PWQO [ ] Reg 406 Table
- [ ] Other

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? N

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: [ ]
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: July 5. 24 Time Required: 3 da. [X]
Rush Confirmation Number: (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O Reg 153 VOCs by HS & F1-F4	Total Suspended Solids	Total Kjeldahl Nitrogen in Water	O Reg 153 PCBs (Water)	Total Phosphorus (Colourimetric)	pH	O Reg 153 VOCs by HS (Water)	Volatile Organic Compounds and F1 PHCs	BTEX	# of Bottles	Comments
1		BH22-04	Jun 27/24	15:45	GW	N	X	X	X	X	X	X	X			9	
2		BH22-114	"	15:45	GW	N								X		2	
3		BH21-14	"	14:30	GW	N								X		2	
4		BH22-03	"	15:00	GW	N								X		2	
5		BH21-04	↓	13:48	GW	N								X		2	
6		Trip Spike	Jun 17 2024	4pm	-	N									X	2	TSPK-VOC-24-0617
7		Trip Blank	Jun 27/24	16:00	-	N								X		2	TBLK-VOC/FIBTEX-24-0603
8																	
9																	Received in Ottawa
10																	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Keith Brown	24/06/28	3:45pm	Dinesh Kanawee	2024/06/28	15:41	
				2024/06/29	08:25	

Laboratory Use Only ICE

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	5 4 5	Present		
		Intact		

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

White: Bureau Veritas Yellow: Client

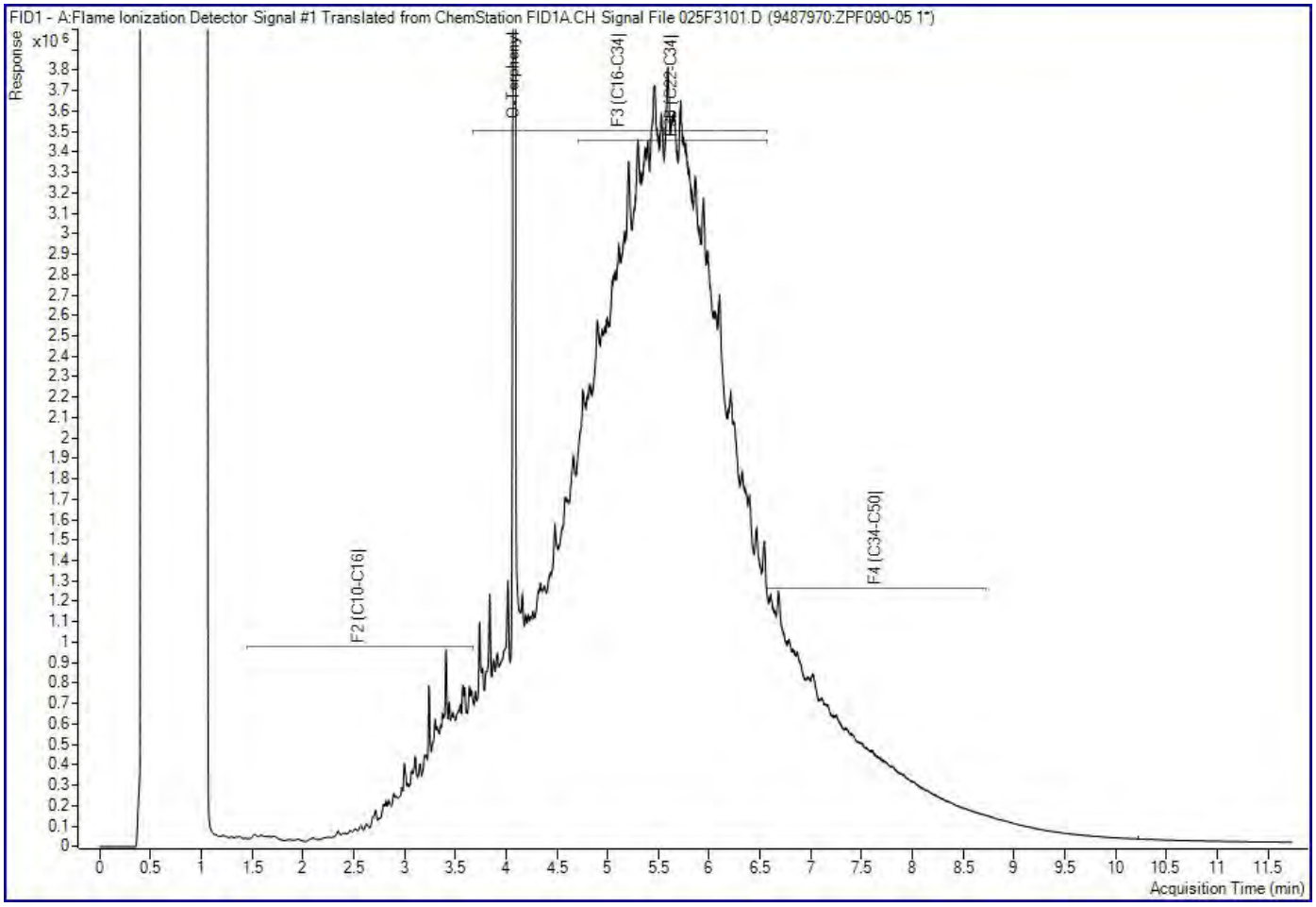
Bureau Veritas Canada (2019) Inc.

3/4/13 ON WW 201 STATION

Bureau Veritas Job #: C4J8739
Report Date: 2025/08/11
Bureau Veritas Sample: ZPF090

Terrapex Environmental Ltd
Client Project #: CO972.00
Project name: 1047 RICHMOND ROAD
Client ID: BH22-04

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: CO972.00
Site#: 1047 Richmond Road
Site Location: FEREATE RICHMOND
Your C.O.C. #: #1028251-01-01

Attention: Keith Brown

Terrapex Environmental Ltd
1-20 Gurdwara Rd.
Ottawa, ON
CANADA K2E 8B3

Report Date: 2025/08/14
Report #: R8593817
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C4BO251
Received: 2024/12/19, 16:40

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
1,3-Dichloropropene Sum	1	N/A	2024/12/30		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Water (1)	1	2024/12/28	2024/12/29	CAM SOP-00316	CCME PHC-CWS m
Volatile Organic Compounds and F1 PHCs	2	N/A	2024/12/27	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds in Water	1	N/A	2024/12/23	CAM SOP-00228	EPA 8260D

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following “Alberta Environment’s Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003”. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Your Project #: CO972.00
Site#: 1047 Richmond Road
Site Location: FEREATE RICHMOND
Your C.O.C. #: #1028251-01-01

Attention: Keith Brown

Terrapex Environmental Ltd
1-20 Gurdwara Rd.
Ottawa, ON
CANADA K2E 8B3

Report Date: 2025/08/14
Report #: R8593817
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C4BO251
Received: 2024/12/19, 16:40

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Katherine Szozda, Project Manager
Email: Katherine.Szozda@bureauveritas.com
Phone# (613)274-0573 Ext:7063633
==========

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas Job #: C4BO251
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FEREATE RICHMOND
Sampler Initials: SP

VOLATILE ORGANICS BY GC/MS (WATER)

Bureau Veritas ID		AMIG63			AMIG64			AMIG65		
Sampling Date		2024/12/19 12:00			2024/12/19 12:40			2024/12/19 12:40		
COC Number		#1028251-01-01			#1028251-01-01			#1028251-01-01		
	UNITS	**MW202**	**RDL**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**	**TRIP SPIKE**	**RDL**	**QC Batch**
Calculated Parameters										
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	0.50	9840494						
Volatile Organics										
Acetone (2-Propanone)	ug/L	<10	10	9843323	<10	10	9843323	98	10	9842957
Benzene	ug/L	<0.17	0.17	9843323	<0.17	0.17	9843323	100	0.20	9842957
Bromodichloromethane	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	110	0.50	9842957
Bromoform	ug/L	<1.0	1.0	9843323	<1.0	1.0	9843323	130	1.0	9842957
Bromomethane	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	87	0.50	9842957
Carbon Tetrachloride	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	120	0.19	9842957
Chlorobenzene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	95	0.20	9842957
Chloroform	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	110	0.20	9842957
Dibromochloromethane	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	120	0.50	9842957
1,2-Dichlorobenzene	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	100	0.40	9842957
1,3-Dichlorobenzene	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	98	0.40	9842957
1,4-Dichlorobenzene	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	98	0.40	9842957
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	1.0	9843323	<1.0	1.0	9843323	84	1.0	9842957
1,1-Dichloroethane	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	97	0.20	9842957
1,2-Dichloroethane	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	100	0.49	9842957
1,1-Dichloroethylene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	95	0.20	9842957
cis-1,2-Dichloroethylene	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	110	0.50	9842957
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	110	0.50	9842957
1,2-Dichloropropane	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	100	0.20	9842957
cis-1,3-Dichloropropene	ug/L	<0.30	0.30	9843323	<0.30	0.30	9843323	93	0.30	9842957
trans-1,3-Dichloropropene	ug/L	<0.40	0.40	9843323	<0.40	0.40	9843323	97	0.40	9842957
Ethylbenzene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	90	0.20	9842957
Ethylene Dibromide	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	110	0.19	9842957
Hexane	ug/L	<1.0	1.0	9843323	<1.0	1.0	9843323	61	1.0	9842957
Methylene Chloride(Dichloromethane)	ug/L	<2.0	2.0	9843323	<2.0	2.0	9843323	120	2.0	9842957
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	10	9843323	<10	10	9843323	98	10	9842957
Methyl Isobutyl Ketone	ug/L	<5.0	5.0	9843323	<5.0	5.0	9843323	93	5.0	9842957
Methyl t-butyl ether (MTBE)	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	100	0.50	9842957
Styrene	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	88	0.40	9842957

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C4BO251
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FEREATE RICHMOND
Sampler Initials: SP

VOLATILE ORGANICS BY GC/MS (WATER)

Bureau Veritas ID		AMIG63			AMIG64			AMIG65		
Sampling Date		2024/12/19 12:00			2024/12/19 12:40			2024/12/19 12:40		
COC Number		#1028251-01-01			#1028251-01-01			#1028251-01-01		
	UNITS	**MW202**	**RDL**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**	**TRIP SPIKE**	**RDL**	**QC Batch**
1,1,1,2-Tetrachloroethane	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	120	0.50	9842957
1,1,2,2-Tetrachloroethane	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	110	0.40	9842957
Tetrachloroethylene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	95	0.20	9842957
Toluene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	96	0.20	9842957
1,1,1-Trichloroethane	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	100	0.20	9842957
1,1,2-Trichloroethane	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	110	0.40	9842957
Trichloroethylene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	110	0.20	9842957
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	0.50	9843323	<0.50	0.50	9843323	100	0.50	9842957
Vinyl Chloride	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	93	0.20	9842957
p+m-Xylene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	85	0.20	9842957
o-Xylene	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	94	0.20	9842957
Total Xylenes	ug/L	<0.20	0.20	9843323	<0.20	0.20	9843323	180	0.20	9842957
F1 (C6-C10)	ug/L	<25	25	9843323	<25	25	9843323			
F1 (C6-C10) - BTEX	ug/L	<25	25	9843323	<25	25	9843323			
Surrogate Recovery (%)										
4-Bromofluorobenzene	%	101		9843323	100		9843323			
D4-1,2-Dichloroethane	%	103		9843323	102		9843323			
D8-Toluene	%	99		9843323	100		9843323			
4-Bromofluorobenzene	%							100		9842957
D4-1,2-Dichloroethane	%							101		9842957
D8-Toluene	%							96		9842957

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4BO251
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FEREATE RICHMOND
Sampler Initials: SP

PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		AMIG63		
Sampling Date		2024/12/19 12:00		
COC Number		#1028251-01-01		
	UNITS	**MW202**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/L	<90	90	9849225
F3 (C16-C34 Hydrocarbons)	ug/L	<200	200	9849225
F4 (C34-C50 Hydrocarbons)	ug/L	<200	200	9849225
Reached Baseline at C50	ug/L	Yes		9849225
Surrogate Recovery (%)				
o-Terphenyl	%	97		9849225

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C4BO251
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FEREATE RICHMOND
Sampler Initials: SP

TEST SUMMARY

Bureau Veritas ID: AMIG63
Sample ID: MW202
Matrix: Water

Collected: 2024/12/19
Shipped:
Received: 2024/12/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9840494	N/A	2024/12/30	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9849225	2024/12/28	2024/12/29	Mohammed Abdul Nafay Shoeb
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9843323	N/A	2024/12/27	Xueming Jiang

Bureau Veritas ID: AMIG64
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2024/12/19
Shipped:
Received: 2024/12/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9843323	N/A	2024/12/27	Xueming Jiang

Bureau Veritas ID: AMIG65
Sample ID: TRIP SPIKE
Matrix: Water

Collected: 2024/12/19
Shipped:
Received: 2024/12/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds in Water	GC/MS	9842957	N/A	2024/12/23	Noel Ramos

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.0°C

Revised Report [2025/08/14]: Split report requested by client.

Sample AMIG65 [TRIP SPIKE] : VOC Analysis: Trip Spike results are expressed as percent recoveries.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9842957	NRA	Matrix Spike	4-Bromofluorobenzene	2024/12/23		100	%	70 - 130
			D4-1,2-Dichloroethane	2024/12/23		98	%	70 - 130
			D8-Toluene	2024/12/23		99	%	70 - 130
			Acetone (2-Propanone)	2024/12/23		98	%	60 - 140
			Benzene	2024/12/23		107	%	70 - 130
			Bromodichloromethane	2024/12/23		112	%	70 - 130
			Bromoform	2024/12/23		133 (1)	%	70 - 130
			Bromomethane	2024/12/23		107	%	60 - 140
			Carbon Tetrachloride	2024/12/23		124	%	70 - 130
			Chlorobenzene	2024/12/23		100	%	70 - 130
			Chloroform	2024/12/23		109	%	70 - 130
			Dibromochloromethane	2024/12/23		124	%	70 - 130
			1,2-Dichlorobenzene	2024/12/23		108	%	70 - 130
			1,3-Dichlorobenzene	2024/12/23		109	%	70 - 130
			1,4-Dichlorobenzene	2024/12/23		108	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2024/12/23		132	%	60 - 140
			1,1-Dichloroethane	2024/12/23		98	%	70 - 130
			1,2-Dichloroethane	2024/12/23		103	%	70 - 130
			1,1-Dichloroethylene	2024/12/23		96	%	70 - 130
			cis-1,2-Dichloroethylene	2024/12/23		114	%	70 - 130
			trans-1,2-Dichloroethylene	2024/12/23		115	%	70 - 130
			1,2-Dichloropropane	2024/12/23		104	%	70 - 130
			cis-1,3-Dichloropropene	2024/12/23		106	%	70 - 130
			trans-1,3-Dichloropropene	2024/12/23		116	%	70 - 130
			Ethylbenzene	2024/12/23		101	%	70 - 130
			Ethylene Dibromide	2024/12/23		109	%	70 - 130
			Hexane	2024/12/23		109	%	70 - 130
			Methylene Chloride(Dichloromethane)	2024/12/23		113	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2024/12/23		102	%	60 - 140
			Methyl Isobutyl Ketone	2024/12/23		102	%	70 - 130
			Methyl t-butyl ether (MTBE)	2024/12/23		100	%	70 - 130
			Styrene	2024/12/23		104	%	70 - 130
			1,1,1,2-Tetrachloroethane	2024/12/23		122	%	70 - 130
			1,1,2,2-Tetrachloroethane	2024/12/23		106	%	70 - 130
			Tetrachloroethylene	2024/12/23		103	%	70 - 130
			Toluene	2024/12/23		102	%	70 - 130
			1,1,1-Trichloroethane	2024/12/23		106	%	70 - 130
			1,1,2-Trichloroethane	2024/12/23		107	%	70 - 130
			Trichloroethylene	2024/12/23		113	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2024/12/23		105	%	70 - 130
			Vinyl Chloride	2024/12/23		102	%	70 - 130
			p+m-Xylene	2024/12/23		97	%	70 - 130
			o-Xylene	2024/12/23		104	%	70 - 130
9842957	NRA	Spiked Blank	4-Bromofluorobenzene	2024/12/23		100	%	70 - 130
			D4-1,2-Dichloroethane	2024/12/23		99	%	70 - 130
			D8-Toluene	2024/12/23		99	%	70 - 130
			Acetone (2-Propanone)	2024/12/23		93	%	60 - 140
			Benzene	2024/12/23		100	%	70 - 130
			Bromodichloromethane	2024/12/23		106	%	70 - 130
			Bromoform	2024/12/23		126	%	70 - 130
			Bromomethane	2024/12/23		97	%	60 - 140

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Carbon Tetrachloride	2024/12/23		115	%	70 - 130
			Chlorobenzene	2024/12/23		94	%	70 - 130
			Chloroform	2024/12/23		102	%	70 - 130
			Dibromochloromethane	2024/12/23		118	%	70 - 130
			1,2-Dichlorobenzene	2024/12/23		102	%	70 - 130
			1,3-Dichlorobenzene	2024/12/23		103	%	70 - 130
			1,4-Dichlorobenzene	2024/12/23		101	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2024/12/23		123	%	60 - 140
			1,1-Dichloroethane	2024/12/23		92	%	70 - 130
			1,2-Dichloroethane	2024/12/23		96	%	70 - 130
			1,1-Dichloroethylene	2024/12/23		90	%	70 - 130
			cis-1,2-Dichloroethylene	2024/12/23		107	%	70 - 130
			trans-1,2-Dichloroethylene	2024/12/23		107	%	70 - 130
			1,2-Dichloropropane	2024/12/23		98	%	70 - 130
			cis-1,3-Dichloropropene	2024/12/23		96	%	70 - 130
			trans-1,3-Dichloropropene	2024/12/23		103	%	70 - 130
			Ethylbenzene	2024/12/23		96	%	70 - 130
			Ethylene Dibromide	2024/12/23		104	%	70 - 130
			Hexane	2024/12/23		99	%	70 - 130
			Methylene Chloride(Dichloromethane)	2024/12/23		106	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2024/12/23		98	%	60 - 140
			Methyl Isobutyl Ketone	2024/12/23		99	%	70 - 130
			Methyl t-butyl ether (MTBE)	2024/12/23		94	%	70 - 130
			Styrene	2024/12/23		99	%	70 - 130
			1,1,1,2-Tetrachloroethane	2024/12/23		115	%	70 - 130
			1,1,2,2-Tetrachloroethane	2024/12/23		101	%	70 - 130
			Tetrachloroethylene	2024/12/23		96	%	70 - 130
			Toluene	2024/12/23		96	%	70 - 130
			1,1,1-Trichloroethane	2024/12/23		99	%	70 - 130
			1,1,2-Trichloroethane	2024/12/23		102	%	70 - 130
			Trichloroethylene	2024/12/23		105	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2024/12/23		98	%	70 - 130
			Vinyl Chloride	2024/12/23		96	%	70 - 130
			p+m-Xylene	2024/12/23		91	%	70 - 130
			o-Xylene	2024/12/23		101	%	70 - 130
9842957	NRA	Method Blank	4-Bromofluorobenzene	2024/12/23		100	%	70 - 130
			D4-1,2-Dichloroethane	2024/12/23		98	%	70 - 130
			D8-Toluene	2024/12/23		95	%	70 - 130
			Acetone (2-Propanone)	2024/12/23	<10		ug/L	
			Benzene	2024/12/23	<0.20		ug/L	
			Bromodichloromethane	2024/12/23	<0.50		ug/L	
			Bromoform	2024/12/23	<1.0		ug/L	
			Bromomethane	2024/12/23	<0.50		ug/L	
			Carbon Tetrachloride	2024/12/23	<0.19		ug/L	
			Chlorobenzene	2024/12/23	<0.20		ug/L	
			Chloroform	2024/12/23	<0.20		ug/L	
			Dibromochloromethane	2024/12/23	<0.50		ug/L	
			1,2-Dichlorobenzene	2024/12/23	<0.40		ug/L	
			1,3-Dichlorobenzene	2024/12/23	<0.40		ug/L	
			1,4-Dichlorobenzene	2024/12/23	<0.40		ug/L	
			Dichlorodifluoromethane (FREON 12)	2024/12/23	<1.0		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,1-Dichloroethane	2024/12/23	<0.20		ug/L	
			1,2-Dichloroethane	2024/12/23	<0.49		ug/L	
			1,1-Dichloroethylene	2024/12/23	<0.20		ug/L	
			cis-1,2-Dichloroethylene	2024/12/23	<0.50		ug/L	
			trans-1,2-Dichloroethylene	2024/12/23	<0.50		ug/L	
			1,2-Dichloropropane	2024/12/23	<0.20		ug/L	
			cis-1,3-Dichloropropene	2024/12/23	<0.30		ug/L	
			trans-1,3-Dichloropropene	2024/12/23	<0.40		ug/L	
			Ethylbenzene	2024/12/23	<0.20		ug/L	
			Ethylene Dibromide	2024/12/23	<0.19		ug/L	
			Hexane	2024/12/23	<1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2024/12/23	<2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2024/12/23	<10		ug/L	
			Methyl Isobutyl Ketone	2024/12/23	<5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2024/12/23	<0.50		ug/L	
			Styrene	2024/12/23	<0.40		ug/L	
			1,1,1,2-Tetrachloroethane	2024/12/23	<0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2024/12/23	<0.40		ug/L	
			Tetrachloroethylene	2024/12/23	<0.20		ug/L	
			Toluene	2024/12/23	<0.20		ug/L	
			1,1,1-Trichloroethane	2024/12/23	<0.20		ug/L	
			1,1,2-Trichloroethane	2024/12/23	<0.40		ug/L	
			Trichloroethylene	2024/12/23	<0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2024/12/23	<0.50		ug/L	
			Vinyl Chloride	2024/12/23	<0.20		ug/L	
			p+m-Xylene	2024/12/23	<0.20		ug/L	
			o-Xylene	2024/12/23	<0.20		ug/L	
			Total Xylenes	2024/12/23	<0.20		ug/L	
9842957	NRA	RPD	Acetone (2-Propanone)	2024/12/23	NC		%	30
			Benzene	2024/12/23	NC		%	30
			Bromodichloromethane	2024/12/23	NC		%	30
			Bromoform	2024/12/23	NC		%	30
			Bromomethane	2024/12/23	NC		%	30
			Carbon Tetrachloride	2024/12/23	NC		%	30
			Chlorobenzene	2024/12/23	NC		%	30
			Chloroform	2024/12/23	NC		%	30
			Dibromochloromethane	2024/12/23	NC		%	30
			1,2-Dichlorobenzene	2024/12/23	NC		%	30
			1,3-Dichlorobenzene	2024/12/23	NC		%	30
			1,4-Dichlorobenzene	2024/12/23	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2024/12/23	NC		%	30
			1,1-Dichloroethane	2024/12/23	NC		%	30
			1,2-Dichloroethane	2024/12/23	NC		%	30
			1,1-Dichloroethylene	2024/12/23	NC		%	30
			cis-1,2-Dichloroethylene	2024/12/23	NC		%	30
			trans-1,2-Dichloroethylene	2024/12/23	NC		%	30
			1,2-Dichloropropane	2024/12/23	NC		%	30
			cis-1,3-Dichloropropene	2024/12/23	NC		%	30
			trans-1,3-Dichloropropene	2024/12/23	NC		%	30
			Ethylbenzene	2024/12/23	NC		%	30
			Ethylene Dibromide	2024/12/23	NC		%	30

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Hexane	2024/12/23	NC		%	30
			Methylene Chloride(Dichloromethane)	2024/12/23	NC		%	30
			Methyl Ethyl Ketone (2-Butanone)	2024/12/23	NC		%	30
			Methyl Isobutyl Ketone	2024/12/23	NC		%	30
			Methyl t-butyl ether (MTBE)	2024/12/23	NC		%	30
			Styrene	2024/12/23	NC		%	30
			1,1,1,2-Tetrachloroethane	2024/12/23	NC		%	30
			1,1,2,2-Tetrachloroethane	2024/12/23	NC		%	30
			Tetrachloroethylene	2024/12/23	NC		%	30
			Toluene	2024/12/23	2.8		%	30
			1,1,1-Trichloroethane	2024/12/23	NC		%	30
			1,1,2-Trichloroethane	2024/12/23	NC		%	30
			Trichloroethylene	2024/12/23	NC		%	30
			Trichlorofluoromethane (FREON 11)	2024/12/23	NC		%	30
			Vinyl Chloride	2024/12/23	NC		%	30
			p+m-Xylene	2024/12/23	NC		%	30
			o-Xylene	2024/12/23	NC		%	30
			Total Xylenes	2024/12/23	NC		%	30
9843323	XJI	Matrix Spike [AMIG61-02]	4-Bromofluorobenzene	2024/12/27		102	%	70 - 130
			D4-1,2-Dichloroethane	2024/12/27		102	%	70 - 130
			D8-Toluene	2024/12/27		100	%	70 - 130
			Acetone (2-Propanone)	2024/12/27		95	%	60 - 140
			Benzene	2024/12/27		89	%	70 - 130
			Bromodichloromethane	2024/12/27		89	%	70 - 130
			Bromoform	2024/12/27		98	%	70 - 130
			Bromomethane	2024/12/27		84	%	60 - 140
			Carbon Tetrachloride	2024/12/27		94	%	70 - 130
			Chlorobenzene	2024/12/27		84	%	70 - 130
			Chloroform	2024/12/27		90	%	70 - 130
			Dibromochloromethane	2024/12/27		95	%	70 - 130
			1,2-Dichlorobenzene	2024/12/27		93	%	70 - 130
			1,3-Dichlorobenzene	2024/12/27		93	%	70 - 130
			1,4-Dichlorobenzene	2024/12/27		95	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2024/12/27		94	%	60 - 140
			1,1-Dichloroethane	2024/12/27		86	%	70 - 130
			1,2-Dichloroethane	2024/12/27		95	%	70 - 130
			1,1-Dichloroethylene	2024/12/27		88	%	70 - 130
			cis-1,2-Dichloroethylene	2024/12/27		92	%	70 - 130
			trans-1,2-Dichloroethylene	2024/12/27		92	%	70 - 130
			1,2-Dichloropropane	2024/12/27		89	%	70 - 130
			cis-1,3-Dichloropropene	2024/12/27		84	%	70 - 130
			trans-1,3-Dichloropropene	2024/12/27		93	%	70 - 130
			Ethylbenzene	2024/12/27		89	%	70 - 130
			Ethylene Dibromide	2024/12/27		93	%	70 - 130
			Hexane	2024/12/27		97	%	70 - 130
			Methylene Chloride(Dichloromethane)	2024/12/27		88	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2024/12/27		104	%	60 - 140
			Methyl Isobutyl Ketone	2024/12/27		95	%	70 - 130
			Methyl t-butyl ether (MTBE)	2024/12/27		89	%	70 - 130
			Styrene	2024/12/27		90	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,1,1,2-Tetrachloroethane	2024/12/27		98	%	70 - 130
			1,1,2,2-Tetrachloroethane	2024/12/27		90	%	70 - 130
			Tetrachloroethylene	2024/12/27		88	%	70 - 130
			Toluene	2024/12/27		92	%	70 - 130
			1,1,1-Trichloroethane	2024/12/27		86	%	70 - 130
			1,1,2-Trichloroethane	2024/12/27		96	%	70 - 130
			Trichloroethylene	2024/12/27		91	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2024/12/27		86	%	70 - 130
			Vinyl Chloride	2024/12/27		85	%	70 - 130
			p+m-Xylene	2024/12/27		89	%	70 - 130
			o-Xylene	2024/12/27		94	%	70 - 130
			F1 (C6-C10)	2024/12/27		94	%	60 - 140
9843323	XJI	Spiked Blank	4-Bromofluorobenzene	2024/12/27		100	%	70 - 130
			D4-1,2-Dichloroethane	2024/12/27		99	%	70 - 130
			D8-Toluene	2024/12/27		101	%	70 - 130
			Acetone (2-Propanone)	2024/12/27		97	%	60 - 140
			Benzene	2024/12/27		97	%	70 - 130
			Bromodichloromethane	2024/12/27		94	%	70 - 130
			Bromoform	2024/12/27		98	%	70 - 130
			Bromomethane	2024/12/27		94	%	60 - 140
			Carbon Tetrachloride	2024/12/27		103	%	70 - 130
			Chlorobenzene	2024/12/27		91	%	70 - 130
			Chloroform	2024/12/27		97	%	70 - 130
			Dibromochloromethane	2024/12/27		100	%	70 - 130
			1,2-Dichlorobenzene	2024/12/27		99	%	70 - 130
			1,3-Dichlorobenzene	2024/12/27		100	%	70 - 130
			1,4-Dichlorobenzene	2024/12/27		102	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2024/12/27		119	%	60 - 140
			1,1-Dichloroethane	2024/12/27		94	%	70 - 130
			1,2-Dichloroethane	2024/12/27		100	%	70 - 130
			1,1-Dichloroethylene	2024/12/27		98	%	70 - 130
			cis-1,2-Dichloroethylene	2024/12/27		100	%	70 - 130
			trans-1,2-Dichloroethylene	2024/12/27		101	%	70 - 130
			1,2-Dichloropropane	2024/12/27		95	%	70 - 130
			cis-1,3-Dichloropropene	2024/12/27		90	%	70 - 130
			trans-1,3-Dichloropropene	2024/12/27		99	%	70 - 130
			Ethylbenzene	2024/12/27		97	%	70 - 130
			Ethylene Dibromide	2024/12/27		97	%	70 - 130
			Hexane	2024/12/27		110	%	70 - 130
			Methylene Chloride(Dichloromethane)	2024/12/27		95	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2024/12/27		106	%	60 - 140
			Methyl Isobutyl Ketone	2024/12/27		97	%	70 - 130
			Methyl t-butyl ether (MTBE)	2024/12/27		97	%	70 - 130
			Styrene	2024/12/27		97	%	70 - 130
			1,1,1,2-Tetrachloroethane	2024/12/27		104	%	70 - 130
			1,1,2,2-Tetrachloroethane	2024/12/27		91	%	70 - 130
			Tetrachloroethylene	2024/12/27		96	%	70 - 130
			Toluene	2024/12/27		101	%	70 - 130
			1,1,1-Trichloroethane	2024/12/27		94	%	70 - 130
			1,1,2-Trichloroethane	2024/12/27		101	%	70 - 130
			Trichloroethylene	2024/12/27		99	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Trichlorofluoromethane (FREON 11)	2024/12/27		98	%	70 - 130
			Vinyl Chloride	2024/12/27		99	%	70 - 130
			p+m-Xylene	2024/12/27		98	%	70 - 130
			o-Xylene	2024/12/27		101	%	70 - 130
			F1 (C6-C10)	2024/12/27		92	%	60 - 140
9843323	XJI	Method Blank	4-Bromofluorobenzene	2024/12/27		100	%	70 - 130
			D4-1,2-Dichloroethane	2024/12/27		98	%	70 - 130
			D8-Toluene	2024/12/27		100	%	70 - 130
			Acetone (2-Propanone)	2024/12/27	<10		ug/L	
			Benzene	2024/12/27	<0.17		ug/L	
			Bromodichloromethane	2024/12/27	<0.50		ug/L	
			Bromoform	2024/12/27	<1.0		ug/L	
			Bromomethane	2024/12/27	<0.50		ug/L	
			Carbon Tetrachloride	2024/12/27	<0.20		ug/L	
			Chlorobenzene	2024/12/27	<0.20		ug/L	
			Chloroform	2024/12/27	<0.20		ug/L	
			Dibromochloromethane	2024/12/27	<0.50		ug/L	
			1,2-Dichlorobenzene	2024/12/27	<0.50		ug/L	
			1,3-Dichlorobenzene	2024/12/27	<0.50		ug/L	
			1,4-Dichlorobenzene	2024/12/27	<0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2024/12/27	<1.0		ug/L	
			1,1-Dichloroethane	2024/12/27	<0.20		ug/L	
			1,2-Dichloroethane	2024/12/27	<0.50		ug/L	
			1,1-Dichloroethylene	2024/12/27	<0.20		ug/L	
			cis-1,2-Dichloroethylene	2024/12/27	<0.50		ug/L	
			trans-1,2-Dichloroethylene	2024/12/27	<0.50		ug/L	
			1,2-Dichloropropane	2024/12/27	<0.20		ug/L	
			cis-1,3-Dichloropropene	2024/12/27	<0.30		ug/L	
			trans-1,3-Dichloropropene	2024/12/27	<0.40		ug/L	
			Ethylbenzene	2024/12/27	<0.20		ug/L	
			Ethylene Dibromide	2024/12/27	<0.20		ug/L	
			Hexane	2024/12/27	<1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2024/12/27	<2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2024/12/27	<10		ug/L	
			Methyl Isobutyl Ketone	2024/12/27	<5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2024/12/27	<0.50		ug/L	
			Styrene	2024/12/27	<0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2024/12/27	<0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2024/12/27	<0.50		ug/L	
			Tetrachloroethylene	2024/12/27	<0.20		ug/L	
			Toluene	2024/12/27	<0.20		ug/L	
			1,1,1-Trichloroethane	2024/12/27	<0.20		ug/L	
			1,1,2-Trichloroethane	2024/12/27	<0.50		ug/L	
			Trichloroethylene	2024/12/27	<0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2024/12/27	<0.50		ug/L	
			Vinyl Chloride	2024/12/27	<0.20		ug/L	
			p+m-Xylene	2024/12/27	<0.20		ug/L	
			o-Xylene	2024/12/27	<0.20		ug/L	
			Total Xylenes	2024/12/27	<0.20		ug/L	
			F1 (C6-C10)	2024/12/27	<25		ug/L	
			F1 (C6-C10) - BTEX	2024/12/27	<25		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9843323	XJI	RPD [AMIG61-02]	Acetone (2-Propanone)	2024/12/27	NC		%	30
			Benzene	2024/12/27	NC		%	30
			Bromodichloromethane	2024/12/27	NC		%	30
			Bromoform	2024/12/27	NC		%	30
			Bromomethane	2024/12/27	NC		%	30
			Carbon Tetrachloride	2024/12/27	NC		%	30
			Chlorobenzene	2024/12/27	NC		%	30
			Chloroform	2024/12/27	NC		%	30
			Dibromochloromethane	2024/12/27	NC		%	30
			1,2-Dichlorobenzene	2024/12/27	NC		%	30
			1,3-Dichlorobenzene	2024/12/27	NC		%	30
			1,4-Dichlorobenzene	2024/12/27	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2024/12/27	NC		%	30
			1,1-Dichloroethane	2024/12/27	NC		%	30
			1,2-Dichloroethane	2024/12/27	NC		%	30
			1,1-Dichloroethylene	2024/12/27	NC		%	30
			cis-1,2-Dichloroethylene	2024/12/27	NC		%	30
			trans-1,2-Dichloroethylene	2024/12/27	NC		%	30
			1,2-Dichloropropane	2024/12/27	NC		%	30
			cis-1,3-Dichloropropene	2024/12/27	NC		%	30
			trans-1,3-Dichloropropene	2024/12/27	NC		%	30
			Ethylbenzene	2024/12/27	NC		%	30
			Ethylene Dibromide	2024/12/27	NC		%	30
			Hexane	2024/12/27	NC		%	30
			Methylene Chloride(Dichloromethane)	2024/12/27	NC		%	30
			Methyl Ethyl Ketone (2-Butanone)	2024/12/27	NC		%	30
			Methyl Isobutyl Ketone	2024/12/27	NC		%	30
			Methyl t-butyl ether (MTBE)	2024/12/27	NC		%	30
			Styrene	2024/12/27	NC		%	30
			1,1,1,2-Tetrachloroethane	2024/12/27	NC		%	30
			1,1,2,2-Tetrachloroethane	2024/12/27	NC		%	30
			Tetrachloroethylene	2024/12/27	NC		%	30
			Toluene	2024/12/27	NC		%	30
			1,1,1-Trichloroethane	2024/12/27	NC		%	30
			1,1,2-Trichloroethane	2024/12/27	NC		%	30
			Trichloroethylene	2024/12/27	NC		%	30
			Trichlorofluoromethane (FREON 11)	2024/12/27	NC		%	30
			Vinyl Chloride	2024/12/27	NC		%	30
			p+m-Xylene	2024/12/27	NC		%	30
			o-Xylene	2024/12/27	NC		%	30
			Total Xylenes	2024/12/27	NC		%	30
			F1 (C6-C10)	2024/12/27	NC		%	30
			F1 (C6-C10) - BTEX	2024/12/27	NC		%	30
9849225	MSZ	Matrix Spike	o-Terphenyl	2024/12/29		99	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/12/29		94	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2024/12/29		99	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2024/12/29		90	%	60 - 140
9849225	MSZ	Spiked Blank	o-Terphenyl	2024/12/29		99	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/12/29		97	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2024/12/29		102	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2024/12/29		92	%	60 - 140

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9849225	MSZ	Method Blank	o-Terphenyl	2024/12/29		99	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2024/12/29	<90		ug/L	
			F3 (C16-C34 Hydrocarbons)	2024/12/29	<200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2024/12/29	<200		ug/L	
9849225	MSZ	RPD	F2 (C10-C16 Hydrocarbons)	2024/12/29	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2024/12/29	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2024/12/29	NC		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) The recovery was above the upper control limit. This may represent a high bias in some results for this specific analyte. For results that were not detected (ND), this potential bias has no impact.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C4BO251
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FEREATE RICHMOND
Sampler Initials: SP

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

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C4BO251
2024/12/19 16:40

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NONT-2024-12-4358

INVOICE TO:		REPORT TO:		PROJECT INFORMATION	
Company Name:	#12638 Terrapex Environmental Ltd	Company Name:	Terrapex	Quotation #:	C35707
Attention:	Accounts Payable	Attention:	Keith Brown	P.O. #:	
Address:	1-20 Gurdwara Rd. Ottawa ON K2E 8B3	Address:	1-20 Gurdwara Rd, Nepean, ON	Project:	CO972.00
Tel:	(613) 745-6471 Fax: (613) 745-0796	Tel:	(613) 745-6471 Ext: 225 Fax: (613) 745-0796	Project Name:	Fairdale Richmond
Email:	accounts.payable@terrapex.com	Email:	k.brown@terrapex.com; e.boonstra@terrapex.com	Site #:	1047 Richmond Road
				Sampled By:	SP

Lab Use Only: Bottle Order #: 1028251 | COC #: C#1028251-01-01 | Project Manager: Katherine Szozda

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011): ☐ Table 1 ☒ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☒ Coarse ☐ Table 3 ☐ Agri/Other ☒ For RSC ☒ Table Z

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Reg 406 Table ☐ Other

Special Instructions:

Include Criteria on Certificate of Analysis (Y/N)? ____

Turnaround Time (TAT) Required: Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ____ Time Required: ____ ☐
Rush Confirmation Number: ____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O Reg 153 VOCs by HS & F1-F4	VOC F1	VOC	# of Bottles	Comments
1		MW201	19/12/2024	12:40	GW	N	✓			4	
2		MW2000	"	12:40	GW	N	✓			4	
3		MW202	"	12:00	GW	N	✓			4	
4		TRIP BLANK	"	12:40	—	N	✓			2	TBLK-VOC/F1BTEX-24-1120
5		TRIP SPIKE	"	12:40	—	N		✓		2	TSPK-VOC-24-1209
6											
7											
8											
9											
10											

Received in Ottawa

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
SREE	2024/12/19	13:30	Pedro da Silva	2024/12/19	16:40	
			S. L. Salvati	2024/12/20	08:54	

Laboratory Use Only: Time Sensitive | Temperature (°C) on Recei: 4/5/6 (ICE) | Custody Seal: Present ✓ Intact ✓ | Yes | No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS. C/O/2

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

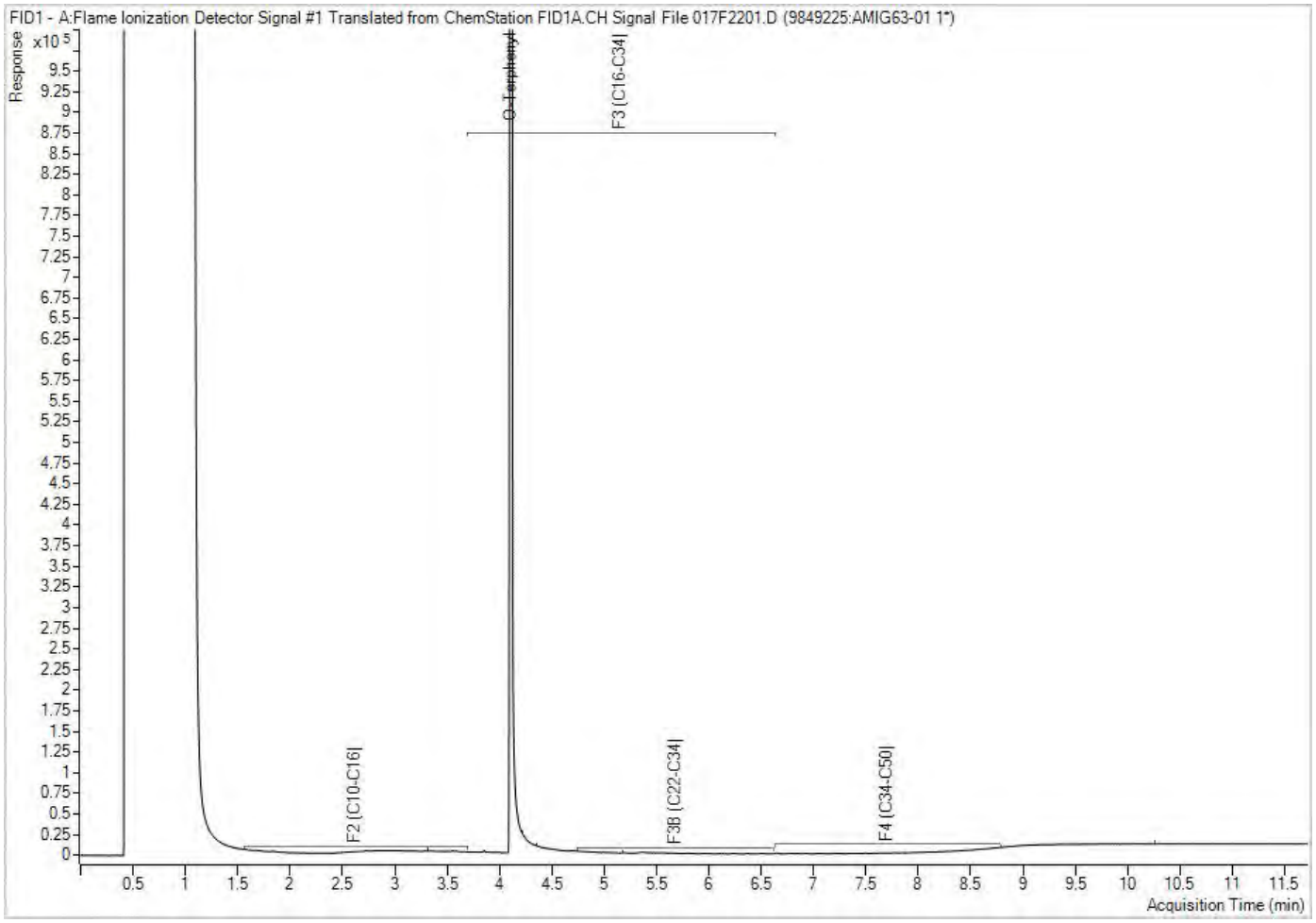
White: Bureau Veritas Yellow: Client
Custody Seal Present ✓ Intact
Cooling Media Yes No

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C4BO251
Report Date: 2025/08/14
Bureau Veritas Sample: AMIG63

Terrapex Environmental Ltd
Client Project #: CO972.00
Project name: FEREATE RICHMOND
Client ID: MW202

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: CO972.00
Site#: 1047 RICHMOND RD
Site Location: FENGATE RICHMOND
Your C.O.C. #: C#1038047-01-01

Attention: Keith Brown

Terrapex Environmental Ltd
1-20 Gurdwara Rd.
Ottawa, ON
CANADA K2E 8B3

Report Date: 2025/08/14
Report #: R8593836
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C529307
Received: 2025/03/18, 16:20

Sample Matrix: Ground Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
1,3-Dichloropropene Sum	1	N/A	2025/03/24		EPA 8260C m
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2025/03/21	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	1	2025/03/21	2025/03/21	CAM SOP-00316	CCME PHC-CWS m
Volatile Organic Compounds and F1 PHCs	1	N/A	2025/03/21	CAM SOP-00230	EPA 8260C m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following “Alberta Environment’s Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003”. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Your Project #: CO972.00
Site#: 1047 RICHMOND RD
Site Location: FENGATE RICHMOND
Your C.O.C. #: C#1038047-01-01

Attention: Keith Brown

Terrapex Environmental Ltd
1-20 Gurdwara Rd.
Ottawa, ON
CANADA K2E 8B3

Report Date: 2025/08/14
Report #: R8593836
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C529307
Received: 2025/03/18, 16:20

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Katherine Szozda, Project Manager
Email: Katherine.Szozda@bureauveritas.com
Phone# (613)274-0573 Ext:7063633
==========

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

VOLATILE ORGANICS BY GC/MS (GROUND WATER)

Bureau Veritas ID		APAL86		
Sampling Date		2025/03/18 11:00		
COC Number		C#1038047-01-01		
	UNITS	**MW202**	**RDL**	**QC Batch**
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	0.50	9893540
Volatile Organics				
Acetone (2-Propanone)	ug/L	<10	10	9894662
Benzene	ug/L	<0.17	0.17	9894662
Bromodichloromethane	ug/L	<0.50	0.50	9894662
Bromoform	ug/L	<1.0	1.0	9894662
Bromomethane	ug/L	<0.50	0.50	9894662
Carbon Tetrachloride	ug/L	<0.20	0.20	9894662
Chlorobenzene	ug/L	<0.20	0.20	9894662
Chloroform	ug/L	<0.20	0.20	9894662
Dibromochloromethane	ug/L	<0.50	0.50	9894662
1,2-Dichlorobenzene	ug/L	<0.50	0.50	9894662
1,3-Dichlorobenzene	ug/L	<0.50	0.50	9894662
1,4-Dichlorobenzene	ug/L	<0.50	0.50	9894662
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	1.0	9894662
1,1-Dichloroethane	ug/L	<0.20	0.20	9894662
1,2-Dichloroethane	ug/L	<0.50	0.50	9894662
1,1-Dichloroethylene	ug/L	<0.20	0.20	9894662
cis-1,2-Dichloroethylene	ug/L	<0.50	0.50	9894662
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	9894662
1,2-Dichloropropane	ug/L	<0.20	0.20	9894662
cis-1,3-Dichloropropene	ug/L	<0.30	0.30	9894662
trans-1,3-Dichloropropene	ug/L	<0.40	0.40	9894662
Ethylbenzene	ug/L	<0.20	0.20	9894662
Ethylene Dibromide	ug/L	<0.20	0.20	9894662
Hexane	ug/L	<1.0	1.0	9894662
Methylene Chloride(Dichloromethane)	ug/L	<2.0	2.0	9894662
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	10	9894662
Methyl Isobutyl Ketone	ug/L	<5.0	5.0	9894662
Methyl t-butyl ether (MTBE)	ug/L	<0.50	0.50	9894662
Styrene	ug/L	<0.50	0.50	9894662

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C529307
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FENGATE RICHMOND
Sampler Initials: EB

VOLATILE ORGANICS BY GC/MS (GROUND WATER)

Bureau Veritas ID		APAL86		
Sampling Date		2025/03/18 11:00		
COC Number		C#1038047-01-01		
	UNITS	**MW202**	**RDL**	**QC Batch**
1,1,1,2-Tetrachloroethane	ug/L	<0.50	0.50	9894662
1,1,2,2-Tetrachloroethane	ug/L	<0.50	0.50	9894662
Tetrachloroethylene	ug/L	<0.20	0.20	9894662
Toluene	ug/L	<0.20	0.20	9894662
1,1,1-Trichloroethane	ug/L	<0.20	0.20	9894662
1,1,2-Trichloroethane	ug/L	<0.50	0.50	9894662
Trichloroethylene	ug/L	<0.20	0.20	9894662
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	0.50	9894662
Vinyl Chloride	ug/L	<0.20	0.20	9894662
p+m-Xylene	ug/L	<0.20	0.20	9894662
o-Xylene	ug/L	<0.20	0.20	9894662
Total Xylenes	ug/L	<0.20	0.20	9894662
F1 (C6-C10)	ug/L	<25	25	9894662
F1 (C6-C10) - BTEX	ug/L	<25	25	9894662
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	92		9894662
D4-1,2-Dichloroethane	%	113		9894662
D8-Toluene	%	98		9894662

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C529307
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FENGATE RICHMOND
Sampler Initials: EB

PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		APAL84			APAL86		
Sampling Date		2025/03/18 11:30			2025/03/18 11:00		
COC Number		C#1038047-01-01			C#1038047-01-01		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**	**MW202**	**RDL**	**QC Batch**
BTEX & F1 Hydrocarbons							
Benzene	ug/L	<0.20	0.20	9895846			
Toluene	ug/L	<0.20	0.20	9895846			
Ethylbenzene	ug/L	<0.20	0.20	9895846			
o-Xylene	ug/L	<0.20	0.20	9895846			
p+m-Xylene	ug/L	<0.40	0.40	9895846			
Total Xylenes	ug/L	<0.40	0.40	9895846			
F1 (C6-C10)	ug/L	<25	25	9895846			
F1 (C6-C10) - BTEX	ug/L	<25	25	9895846			
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/L				<90	90	9895172
F3 (C16-C34 Hydrocarbons)	ug/L				<200	200	9895172
F4 (C34-C50 Hydrocarbons)	ug/L				<200	200	9895172
Reached Baseline at C50	ug/L				Yes		9895172
Surrogate Recovery (%)							
1,4-Difluorobenzene	%	107		9895846			
4-Bromofluorobenzene	%	92		9895846			
D10-o-Xylene	%	107		9895846			
D4-1,2-Dichloroethane	%	109		9895846			
o-Terphenyl	%				97		9895172

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C529307
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FENGATE RICHMOND
Sampler Initials: EB

TEST SUMMARY

Bureau Veritas ID: APAL84
Sample ID: TRIP BLANK
Matrix: Ground Water

Collected: 2025/03/18
Shipped:
Received: 2025/03/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	9895846	N/A	2025/03/21	Georgeta Rusu

Bureau Veritas ID: APAL86
Sample ID: MW202
Matrix: Ground Water

Collected: 2025/03/18
Shipped:
Received: 2025/03/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9893540	N/A	2025/03/24	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9895172	2025/03/21	2025/03/21	(Kent) Maolin Li
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9894662	N/A	2025/03/21	Cheng-Yu Sha

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	12.7°C
Package 2	2.7°C
Package 3	11.7°C

Revised Report [2025/08/14]: Split report requested by client.

Results relate only to the items tested.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9894662	CYS	Matrix Spike	4-Bromofluorobenzene	2025/03/21		97	%	70 - 130
			D4-1,2-Dichloroethane	2025/03/21		117	%	70 - 130
			D8-Toluene	2025/03/21		99	%	70 - 130
			Acetone (2-Propanone)	2025/03/21		111	%	60 - 140
			Benzene	2025/03/21		103	%	70 - 130
			Bromodichloromethane	2025/03/21		106	%	70 - 130
			Bromoform	2025/03/21		101	%	70 - 130
			Bromomethane	2025/03/21		104	%	60 - 140
			Carbon Tetrachloride	2025/03/21		102	%	70 - 130
			Chlorobenzene	2025/03/21		95	%	70 - 130
			Chloroform	2025/03/21		102	%	70 - 130
			Dibromochloromethane	2025/03/21		106	%	70 - 130
			1,2-Dichlorobenzene	2025/03/21		102	%	70 - 130
			1,3-Dichlorobenzene	2025/03/21		101	%	70 - 130
			1,4-Dichlorobenzene	2025/03/21		102	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2025/03/21		103	%	60 - 140
			1,1-Dichloroethane	2025/03/21		101	%	70 - 130
			1,2-Dichloroethane	2025/03/21		121	%	70 - 130
			1,1-Dichloroethylene	2025/03/21		102	%	70 - 130
			cis-1,2-Dichloroethylene	2025/03/21		110	%	70 - 130
			trans-1,2-Dichloroethylene	2025/03/21		104	%	70 - 130
			1,2-Dichloropropane	2025/03/21		108	%	70 - 130
			cis-1,3-Dichloropropene	2025/03/21		106	%	70 - 130
			trans-1,3-Dichloropropene	2025/03/21		120	%	70 - 130
			Ethylbenzene	2025/03/21		100	%	70 - 130
			Ethylene Dibromide	2025/03/21		107	%	70 - 130
			Hexane	2025/03/21		120	%	70 - 130
			Methylene Chloride(Dichloromethane)	2025/03/21		105	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2025/03/21		120	%	60 - 140
			Methyl Isobutyl Ketone	2025/03/21		120	%	70 - 130
			Methyl t-butyl ether (MTBE)	2025/03/21		107	%	70 - 130
			Styrene	2025/03/21		98	%	70 - 130
			1,1,1,2-Tetrachloroethane	2025/03/21		109	%	70 - 130
			1,1,2,2-Tetrachloroethane	2025/03/21		104	%	70 - 130
			Tetrachloroethylene	2025/03/21		89	%	70 - 130
			Toluene	2025/03/21		100	%	70 - 130
			1,1,1-Trichloroethane	2025/03/21		98	%	70 - 130
			1,1,2-Trichloroethane	2025/03/21		116	%	70 - 130
			Trichloroethylene	2025/03/21		99	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2025/03/21		96	%	70 - 130
			Vinyl Chloride	2025/03/21		96	%	70 - 130
			p+m-Xylene	2025/03/21		95	%	70 - 130
			o-Xylene	2025/03/21		105	%	70 - 130
			F1 (C6-C10)	2025/03/21		90	%	60 - 140
9894662	CYS	Spiked Blank	4-Bromofluorobenzene	2025/03/21		96	%	70 - 130
			D4-1,2-Dichloroethane	2025/03/21		104	%	70 - 130
			D8-Toluene	2025/03/21		102	%	70 - 130
			Acetone (2-Propanone)	2025/03/21		99	%	60 - 140
			Benzene	2025/03/21		102	%	70 - 130
			Bromodichloromethane	2025/03/21		100	%	70 - 130
			Bromoform	2025/03/21		93	%	70 - 130

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Bromomethane	2025/03/21		105	%	60 - 140
			Carbon Tetrachloride	2025/03/21		108	%	70 - 130
			Chlorobenzene	2025/03/21		96	%	70 - 130
			Chloroform	2025/03/21		103	%	70 - 130
			Dibromochloromethane	2025/03/21		100	%	70 - 130
			1,2-Dichlorobenzene	2025/03/21		103	%	70 - 130
			1,3-Dichlorobenzene	2025/03/21		105	%	70 - 130
			1,4-Dichlorobenzene	2025/03/21		106	%	70 - 130
			Dichlorodifluoromethane (FREON 12)	2025/03/21		112	%	60 - 140
			1,1-Dichloroethane	2025/03/21		101	%	70 - 130
			1,2-Dichloroethane	2025/03/21		109	%	70 - 130
			1,1-Dichloroethylene	2025/03/21		105	%	70 - 130
			cis-1,2-Dichloroethylene	2025/03/21		106	%	70 - 130
			trans-1,2-Dichloroethylene	2025/03/21		107	%	70 - 130
			1,2-Dichloropropane	2025/03/21		104	%	70 - 130
			cis-1,3-Dichloropropene	2025/03/21		101	%	70 - 130
			trans-1,3-Dichloropropene	2025/03/21		117	%	70 - 130
			Ethylbenzene	2025/03/21		106	%	70 - 130
			Ethylene Dibromide	2025/03/21		98	%	70 - 130
			Hexane	2025/03/21		122	%	70 - 130
			Methylene Chloride(Dichloromethane)	2025/03/21		99	%	70 - 130
			Methyl Ethyl Ketone (2-Butanone)	2025/03/21		104	%	60 - 140
			Methyl Isobutyl Ketone	2025/03/21		104	%	70 - 130
			Methyl t-butyl ether (MTBE)	2025/03/21		102	%	70 - 130
			Styrene	2025/03/21		100	%	70 - 130
			1,1,1,2-Tetrachloroethane	2025/03/21		110	%	70 - 130
			1,1,2,2-Tetrachloroethane	2025/03/21		94	%	70 - 130
			Tetrachloroethylene	2025/03/21		97	%	70 - 130
			Toluene	2025/03/21		101	%	70 - 130
			1,1,1-Trichloroethane	2025/03/21		102	%	70 - 130
			1,1,2-Trichloroethane	2025/03/21		108	%	70 - 130
			Trichloroethylene	2025/03/21		101	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2025/03/21		101	%	70 - 130
			Vinyl Chloride	2025/03/21		99	%	70 - 130
			p+m-Xylene	2025/03/21		101	%	70 - 130
			o-Xylene	2025/03/21		110	%	70 - 130
			F1 (C6-C10)	2025/03/21		98	%	60 - 140
9894662	CYS	Method Blank	4-Bromofluorobenzene	2025/03/21		95	%	70 - 130
			D4-1,2-Dichloroethane	2025/03/21		104	%	70 - 130
			D8-Toluene	2025/03/21		99	%	70 - 130
			Acetone (2-Propanone)	2025/03/21	<10		ug/L	
			Benzene	2025/03/21	<0.17		ug/L	
			Bromodichloromethane	2025/03/21	<0.50		ug/L	
			Bromoform	2025/03/21	<1.0		ug/L	
			Bromomethane	2025/03/21	<0.50		ug/L	
			Carbon Tetrachloride	2025/03/21	<0.20		ug/L	
			Chlorobenzene	2025/03/21	<0.20		ug/L	
			Chloroform	2025/03/21	<0.20		ug/L	
			Dibromochloromethane	2025/03/21	<0.50		ug/L	
			1,2-Dichlorobenzene	2025/03/21	<0.50		ug/L	
			1,3-Dichlorobenzene	2025/03/21	<0.50		ug/L	

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			1,4-Dichlorobenzene	2025/03/21	<0.50		ug/L	
			Dichlorodifluoromethane (FREON 12)	2025/03/21	<1.0		ug/L	
			1,1-Dichloroethane	2025/03/21	<0.20		ug/L	
			1,2-Dichloroethane	2025/03/21	<0.50		ug/L	
			1,1-Dichloroethylene	2025/03/21	<0.20		ug/L	
			cis-1,2-Dichloroethylene	2025/03/21	<0.50		ug/L	
			trans-1,2-Dichloroethylene	2025/03/21	<0.50		ug/L	
			1,2-Dichloropropane	2025/03/21	<0.20		ug/L	
			cis-1,3-Dichloropropene	2025/03/21	<0.30		ug/L	
			trans-1,3-Dichloropropene	2025/03/21	<0.40		ug/L	
			Ethylbenzene	2025/03/21	<0.20		ug/L	
			Ethylene Dibromide	2025/03/21	<0.20		ug/L	
			Hexane	2025/03/21	<1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2025/03/21	<2.0		ug/L	
			Methyl Ethyl Ketone (2-Butanone)	2025/03/21	<10		ug/L	
			Methyl Isobutyl Ketone	2025/03/21	<5.0		ug/L	
			Methyl t-butyl ether (MTBE)	2025/03/21	<0.50		ug/L	
			Styrene	2025/03/21	<0.50		ug/L	
			1,1,1,2-Tetrachloroethane	2025/03/21	<0.50		ug/L	
			1,1,2,2-Tetrachloroethane	2025/03/21	<0.50		ug/L	
			Tetrachloroethylene	2025/03/21	<0.20		ug/L	
			Toluene	2025/03/21	<0.20		ug/L	
			1,1,1-Trichloroethane	2025/03/21	<0.20		ug/L	
			1,1,2-Trichloroethane	2025/03/21	<0.50		ug/L	
			Trichloroethylene	2025/03/21	<0.20		ug/L	
			Trichlorofluoromethane (FREON 11)	2025/03/21	<0.50		ug/L	
			Vinyl Chloride	2025/03/21	<0.20		ug/L	
			p+m-Xylene	2025/03/21	<0.20		ug/L	
			o-Xylene	2025/03/21	<0.20		ug/L	
			Total Xylenes	2025/03/21	<0.20		ug/L	
			F1 (C6-C10)	2025/03/21	<25		ug/L	
			F1 (C6-C10) - BTEX	2025/03/21	<25		ug/L	
9894662	CYS	RPD	Acetone (2-Propanone)	2025/03/21	5.6		%	30
			Benzene	2025/03/21	NC		%	30
			Bromodichloromethane	2025/03/21	NC		%	30
			Bromoform	2025/03/21	NC		%	30
			Bromomethane	2025/03/21	NC		%	30
			Carbon Tetrachloride	2025/03/21	NC		%	30
			Chlorobenzene	2025/03/21	NC		%	30
			Chloroform	2025/03/21	1.9		%	30
			Dibromochloromethane	2025/03/21	NC		%	30
			1,2-Dichlorobenzene	2025/03/21	NC		%	30
			1,3-Dichlorobenzene	2025/03/21	NC		%	30
			1,4-Dichlorobenzene	2025/03/21	NC		%	30
			Dichlorodifluoromethane (FREON 12)	2025/03/21	NC		%	30
			1,1-Dichloroethane	2025/03/21	NC		%	30
			1,2-Dichloroethane	2025/03/21	NC		%	30
			1,1-Dichloroethylene	2025/03/21	NC		%	30
			cis-1,2-Dichloroethylene	2025/03/21	NC		%	30
			trans-1,2-Dichloroethylene	2025/03/21	NC		%	30
			1,2-Dichloropropane	2025/03/21	NC		%	30

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			cis-1,3-Dichloropropene	2025/03/21	NC		%	30
			trans-1,3-Dichloropropene	2025/03/21	NC		%	30
			Ethylbenzene	2025/03/21	NC		%	30
			Ethylene Dibromide	2025/03/21	NC		%	30
			Hexane	2025/03/21	NC		%	30
			Methylene Chloride(Dichloromethane)	2025/03/21	NC		%	30
			Methyl Ethyl Ketone (2-Butanone)	2025/03/21	NC		%	30
			Methyl Isobutyl Ketone	2025/03/21	NC		%	30
			Methyl t-butyl ether (MTBE)	2025/03/21	NC		%	30
			Styrene	2025/03/21	NC		%	30
			1,1,1,2-Tetrachloroethane	2025/03/21	NC		%	30
			1,1,2,2-Tetrachloroethane	2025/03/21	NC		%	30
			Tetrachloroethylene	2025/03/21	NC		%	30
			Toluene	2025/03/21	2.6		%	30
			1,1,1-Trichloroethane	2025/03/21	NC		%	30
			1,1,2-Trichloroethane	2025/03/21	NC		%	30
			Trichloroethylene	2025/03/21	NC		%	30
			Trichlorofluoromethane (FREON 11)	2025/03/21	NC		%	30
			Vinyl Chloride	2025/03/21	NC		%	30
			p+m-Xylene	2025/03/21	3.4		%	30
			o-Xylene	2025/03/21	2.1		%	30
			Total Xylenes	2025/03/21	2.9		%	30
			F1 (C6-C10)	2025/03/21	NC		%	30
			F1 (C6-C10) - BTEX	2025/03/21	NC		%	30
9895172	KLI	Matrix Spike	o-Terphenyl	2025/03/21		98	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/03/21		NC	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2025/03/21		105	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2025/03/21		98	%	60 - 140
9895172	KLI	Spiked Blank	o-Terphenyl	2025/03/21		97	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/03/21		98	%	60 - 140
			F3 (C16-C34 Hydrocarbons)	2025/03/21		107	%	60 - 140
			F4 (C34-C50 Hydrocarbons)	2025/03/21		99	%	60 - 140
9895172	KLI	Method Blank	o-Terphenyl	2025/03/21		96	%	60 - 140
			F2 (C10-C16 Hydrocarbons)	2025/03/21	<90		ug/L	
			F3 (C16-C34 Hydrocarbons)	2025/03/21	<200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2025/03/21	<200		ug/L	
9895172	KLI	RPD	F2 (C10-C16 Hydrocarbons)	2025/03/21	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2025/03/21	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2025/03/21	NC		%	30
9895846	GRU	Matrix Spike	1,4-Difluorobenzene	2025/03/21		102	%	70 - 130
			4-Bromofluorobenzene	2025/03/21		104	%	70 - 130
			D10-o-Xylene	2025/03/21		99	%	70 - 130
			D4-1,2-Dichloroethane	2025/03/21		108	%	70 - 130
			Benzene	2025/03/21		102	%	50 - 140
			Toluene	2025/03/21		95	%	50 - 140
			Ethylbenzene	2025/03/21		106	%	50 - 140
			o-Xylene	2025/03/21		102	%	50 - 140
			p+m-Xylene	2025/03/21		98	%	50 - 140
			F1 (C6-C10)	2025/03/21		113	%	60 - 140
9895846	GRU	Spiked Blank	1,4-Difluorobenzene	2025/03/21		103	%	70 - 130
			4-Bromofluorobenzene	2025/03/21		100	%	70 - 130

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			D10-o-Xylene	2025/03/21		99	%	70 - 130
			D4-1,2-Dichloroethane	2025/03/21		106	%	70 - 130
			Benzene	2025/03/21		99	%	50 - 140
			Toluene	2025/03/21		91	%	50 - 140
			Ethylbenzene	2025/03/21		101	%	50 - 140
			o-Xylene	2025/03/21		98	%	50 - 140
			p+m-Xylene	2025/03/21		94	%	50 - 140
			F1 (C6-C10)	2025/03/21		109	%	60 - 140
9895846	GRU	Method Blank	1,4-Difluorobenzene	2025/03/21		108	%	70 - 130
			4-Bromofluorobenzene	2025/03/21		95	%	70 - 130
			D10-o-Xylene	2025/03/21		97	%	70 - 130
			D4-1,2-Dichloroethane	2025/03/21		113	%	70 - 130
			Benzene	2025/03/21	<0.20		ug/L	
			Toluene	2025/03/21	<0.20		ug/L	
			Ethylbenzene	2025/03/21	<0.20		ug/L	
			o-Xylene	2025/03/21	<0.20		ug/L	
			p+m-Xylene	2025/03/21	<0.40		ug/L	
			Total Xylenes	2025/03/21	<0.40		ug/L	
			F1 (C6-C10)	2025/03/21	<25		ug/L	
			F1 (C6-C10) - BTEX	2025/03/21	<25		ug/L	
9895846	GRU	RPD	Benzene	2025/03/21	NC		%	30
			Toluene	2025/03/21	NC		%	30
			Ethylbenzene	2025/03/21	NC		%	30
			o-Xylene	2025/03/21	NC		%	30
			p+m-Xylene	2025/03/21	NC		%	30
			Total Xylenes	2025/03/21	NC		%	30
			F1 (C6-C10)	2025/03/21	NC		%	30
			F1 (C6-C10) - BTEX	2025/03/21	NC		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C529307
Report Date: 2025/08/14

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: FENGATE RICHMOND
Sampler Initials: EB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

C529307
2025/03/18 16:20

Bureau Veritas
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NONT-2025-03-3708

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#12638 Terrapex Environmental Ltd	Company Name:	Terrapex	Quotation #:	C45738
Attention:	Accounts Payable	Attention:	Keith Brown	P.O. #:	
Address:	1-20 Gurdwara Rd. Ottawa ON K2E 8B3	Address:	1-20 Gurdwara Rd, Ottawa ON	Project:	CO972.00
Tel:	(613) 745-6471 Fax: (613) 745-0796	Tel:	(613) 745-6471 Ext: 225 Fax: (613) 745-0796	Project Name:	Forgotte Richmond
Email:	accounts.payable@terrapex.com	Email:	k.brown@terrapex.com	Site #:	1047 Richmond Rd
				Sampled By:	EB

Bottle Order #: 1038047
COC #: C#1038047-01-01
Project Manager: Katherine Szozda

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
- [ ] Table 1 [X] Res/Park [ ] Medium/Fine
- [ ] Table 2 [ ] Ind/Comm [X] Coarse
- [ ] Table 3 [ ] Agr/Other [X] For RSC
- [X] Table 7

Other Regulations
- [ ] CCME [ ] Sanitary Sewer Bylaw
- [ ] Reg 558 [ ] Storm Sewer Bylaw
- [ ] MISA Municipality
- [ ] PWQO [ ] Reg 406 Table
- [ ] Other

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? N

Field Filtered (please circle): Metals / Hg / Cr VI

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required: [ ]
Rush Confirmation Number: (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered	O.Reg 153 VOCs by HS & F1-F4	BTEX-F1	BTEX	# of Bottles	Comments
1		MW201	Mar 18/25	10:32	GW	N	X			4	
2		MW2000	Mar 18/25	10:32	GW	N	X			4	
3		Trip Blank	Mar 18/25	11:30	-	N		X		2	TBLK-VOC/F1BTEX-25-0110
4		Trip Spike	Mar 18/25	2:00	-	N			X	2	TSPK-VOC-25-0310
5		MW202	Mar 18/25	11:00	GW	N	X			4	
6											
7											
8											
9											
10											

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Evie Boonstra	25/03/18	16:00	Jedso da Silva	2025/03/18	16:20	
			Ashita Sukkiwar	2025/03/19	06:40	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	Check ACTR	Present		J
		Intact		J

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

White: Bureau Veritas Yellow: Client
REFER TO ACTR

Bureau Veritas Canada (2019) Inc.

C529307
2025/03/18 16:20

BUREAU VERITAS

BOD MICRO

ADDITIONAL COOLER TEMPERATURE RECORD

CHAIN-OF-CUSTODY RECORD

CHAIN OF CUSTODY #	
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COOLER OBSERVATIONS: All coolers contained ice and smell

BV JOB#:

CUSTODY SEAL	YES	NO	COOLER ID	14	15	
PRESENT		J	TEMP	13	12	13
INTACT		J		1	2	3
ICE PRESENT	J					
CUSTODY SEAL	YES	NO	COOLER ID	16		
PRESENT		J	TEMP	3	4	1
INTACT		J		1	2	3
ICE PRESENT	J					
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT		J	TEMP	10	14	11
INTACT		J		1	2	3
ICE PRESENT	J					
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						

CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						
CUSTODY SEAL	YES	NO	COOLER ID			
PRESENT			TEMP			
INTACT				1	2	3
ICE PRESENT						

RECEIVED BY (SIGN & PRINT)		DATE (YYYY/MM/DD)	TIME (HH:MM)
Pedro da Silva		2025/03/18	16:20

Received in Ottawa

BUREAU VERITAS

ADDITIONAL COOLER TEMPI

CHAIN-OF-CUSTODY F

18-Mar-25 16:20
Katherine Szozda
C529307
J_L ENV-1627

CHAIN OF CUSTODY #	
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COOLER OBSERVATIONS:

BV JOB#:

CUSTODY SEAL	YES	NO	COOLER ID	1			
PRESENT	✓		TEMP	0 (1)	0 (2)	0 (3)	
INTACT	✓						
ICE PRESENT	✓						
CUSTODY SEAL	YES	NO	COOLER ID	2			
PRESENT	✓		TEMP	4 (1)	4 (2)	4 (3)	
INTACT	✓						
ICE PRESENT	✓						
CUSTODY SEAL	YES	NO	COOLER ID	3			
PRESENT	✓		TEMP	4 (1)	4 (2)	4 (3)	
INTACT	✓						
ICE PRESENT	✓						
CUSTODY SEAL	YES	NO	COOLER ID	4			
PRESENT	✓		TEMP	4 (1)	4 (2)	5 (3)	
INTACT	✓						
ICE PRESENT	✓						
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							

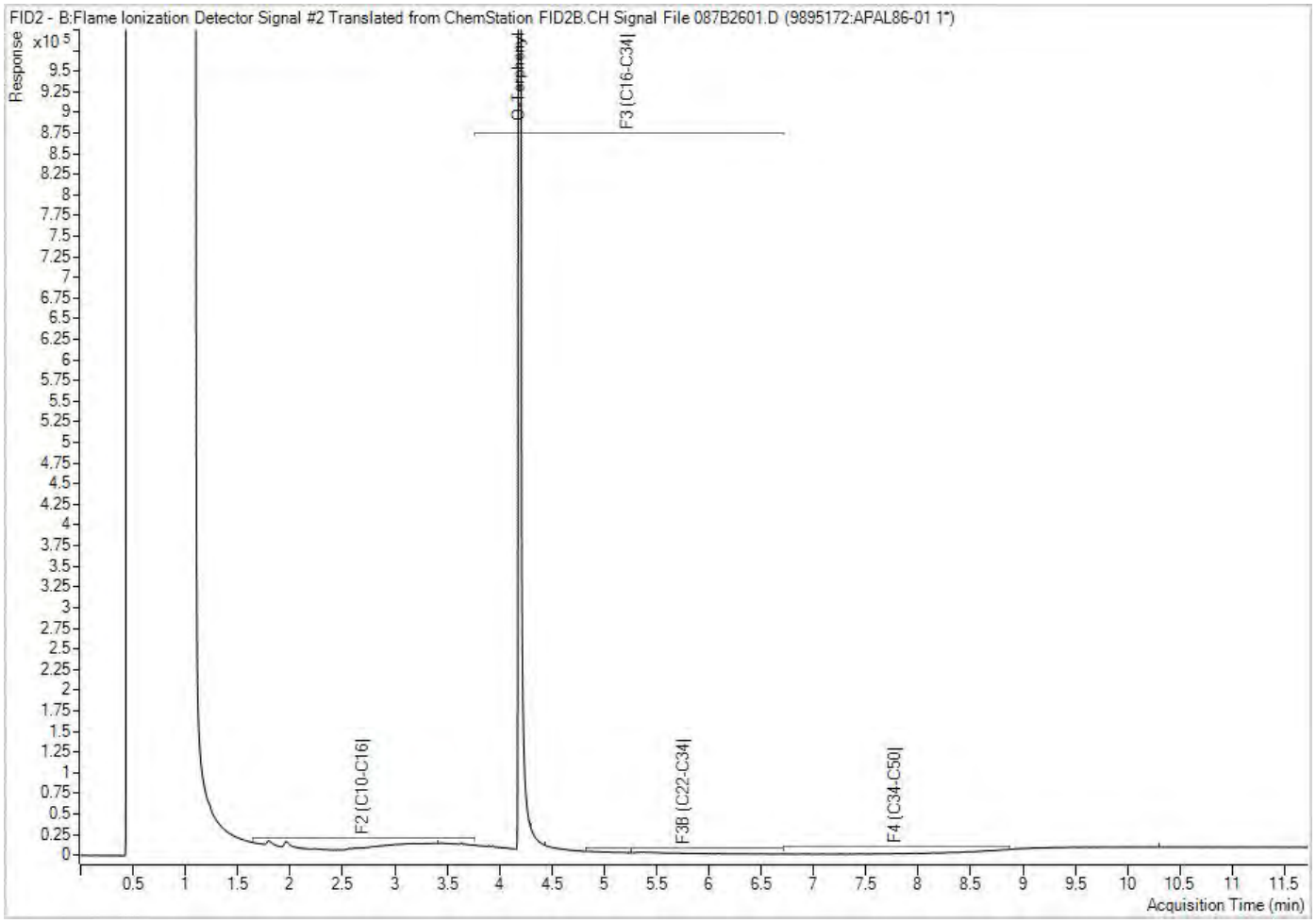
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							
CUSTODY SEAL	YES	NO	COOLER ID				
PRESENT			TEMP	1	2	3	
INTACT							
ICE PRESENT							

RECEIVED BY (SIGN & PRINT)		DATE (YYYY/MM/DD)	TIME (HH:MM)
[signature]	ASHLEY TIPTA Sullivan	2025/03/19	06:40

Bureau Veritas Job #: C529307
Report Date: 2025/08/14
Bureau Veritas Sample: APAL86

Terrapex Environmental Ltd
Client Project #: CO972.00
Project name: FENGATE RICHMOND
Client ID: MW202

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

APPENDIX V
BOREHOLE LOGS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-02

SHEET 1 OF 1

LOCATION: N 5026359.3 ;E 361297.8

BORING DATE: September 21, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.46							
0	Power Auger 200 mm Diam. (Hollow Stem)	ASPHALT		0.08							
		FILL - (SW) gravellyl SAND, angular; grey (PAVEMENT STRUCTURE); non-cohesive, moist		65.16	1	SS	22	ND			
		FILL - (SP) SAND, fine to medium, trace silt; brown; non-cohesive, moist, compact to dense		0.30	2	SS	31	ND		Metals	
1				64.24							
		FILL - (SM/GP) SILTY SAND and GRAVEL; dark brown, contains brick fragments and rootlets; non-cohesive, moist, compact		1.22	3	SS	10	ND			
				63.63							
2		Highly weathered BEDROCK		1.83	4	SS	>84	ND			Bentonite Seal
					5	SS	>50	ND		PHCs, VOCs	
3				62.41							
	Air Hammer H Bit	BEDROCK (Auger Refusal) (Air hammer from 3.05 M TO 7.62 M)		3.05							
4											Sllica Sand
5											
6											50 mm Diam. PVC #10 Slot Screen
7				57.84							
		End of Borehole		7.62							
8		Note(s):									
		1. Water level at BH21-03 measured at a depth of 3.17 m (Elev. 62.28 m) on October 4, 2021									
		2. Record of borehole log not prepared for geotechnical engineering purposes									
9											
10											

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DG

CHECKED: AG

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-03

SHEET 1 OF 1

LOCATION: N 5026355.1 ;E 361289.2

BORING DATE: September 21 & 22, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		65.24						
0	Power Auger 200 mm Diam. (Hollow Stem)	ASPHALT		0.08						Flush Mount Casing
		FILL - (SW) gravelly SAND, angular; grey (PAVEMENT STRUCTURE); non-cohesive, moist		64.63	1	SS	43	ND	VOCs	
		FILL - (SP) SAND, fine to medium, trace silt; brown; non-cohesive, moist, dense		0.61	2	SS	31	ND	PHCs	
1				64.02						
		FILL - (SM) SILTY SAND, some topsoil, trace gravel; dark brown, contains shale fragments; non-cohesive, moist, compact		1.22	3	SS	12	ND	Metals	
				63.41						
2		Highly weathered BEDROCK		1.83	4	SS	>94	ND		Bentonite Seal
					5	SS	52/ 6"			
3				62.19						
	Air Hammer H Bit	BEDROCK (Auger Refusal) (Air hammer from 3.05 m to 7.62 m)		3.05						
4										
										Sllica Sand
5										
6										50 mm Diam. PVC #10 Slot Screen
7				57.62						
		End of Borehole		7.62						
8		Note(s):								
		1. Water level at BH21-03 measured at a depth of 3.56 m (Elev. 61.68 m) on October 4, 2021								
		2. Record of borehole log not prepared for geotechnical engineering purposes								
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DG

CHECKED: AG

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-14

SHEET 1 OF 1

LOCATION: N 5026375.7 ;E 361302.2

BORING DATE: November 12, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected) 100 200 300 400 / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected) 100 200 300 400	HYDRAULIC CONDUCTIVITY, k, cm/s 10^{-6} 10^{-5} 10^{-4} 10^{-3} / WATER CONTENT PERCENT Wp W Wl 20 40 60 80	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		64.84						
0	Power Auger Geoprobe	GRAVEL		0.00	1	SS		⊕ ND		Flush Mount Casing
		(SP) SAND; brown; non-cohesive, dry		0.15						
		(SM) SILTY SAND; grey-brown; non-cohesive, dry		64.08						
1					2	SS		⊕ ND		Bentonite Seal
				63.16						
		Soft, crushed, LIMESTONE		1.68	3	SS		⊕ ND	PHCs, VOCs	
2										
3										Sllica Sand
4										50 mm Diam. PVC #10 Slot Screen
				60.27						
		End of Borehole Upon Refusal		4.57						
5		Note(s):								
		1. Water level at BH21-14 measured at a depth of 2.48 m (Elev. 62.36 m) on November 30, 2021								
		2. Record of borehole log not prepared for geotechnical engineering purposes								
6										
7										
8										
9										
10										

DEPTH SCALE

1 : 50

GOLDER

LOGGED: AB

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-22

SHEET 1 OF 1

LOCATION: N 5026381.4 ;E 361298.9

BORING DATE: December 21, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		64.62							
0	Power Auger / Geoprobe	ASPHALT		0.00							
		SAND; brown; non-cohesive, moist		0.15	1	SS		ND			Bentonite
1											Silica Sand
				63.10							
		SAND; brown; non-cohesive, moist		1.52	2	SS		ND			
2				62.18							
		SILT, trace sand; grey brown; non-cohesive, moist		2.44	3	SS		ND			PVC #10 Slot Screen
				61.88							
		BEDROCK		2.74							
3											
4				60.35							
		End of Borehole		4.27							

Note(s):

1. Water level at BH21-22 measured at a depth of 2.72 m (Elev. 61.90 m) on December 22, 2021

2. Record of borehole log not prepared for geotechnical engineering purposes

5 6 7 8 9 10

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DS

CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

LOCATION: N 5026373.77; E 361301.53

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

RECORD OF BOREHOLE: BH22-03

BORING DATE: May 10, 2022

DRILL RIG: Geoprobe

SHEET 1 OF 1

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		64.85						
0	Power Auger Geoprobe	FILL - (SW) gravelly SAND, asphalt, fragments; grey brown; non-cohesive, dry		0.00						Flush Mount Casing
				64.55						
		FILL - (SM) SILTY SAND, medium to coarse, gravelly; brown; non-cohesive, moist		0.30	1	DP	-	ND		
1					2	DP	-	ND		
					3	DP	-	ND		
2					4	DP	-	ND		Bentonite Seal
	Air Hammer	BEDROCK		62.11 2.74						
3										
4										
5										Silica Sand
6										52 mm Diam. PVC #10 Slot Screen
				58.15						
		END OF BOREHOLE		6.70						
7		Notes: 1. Water level at BH22-03 measured at a depth of 7.38 m (Elev. 57.47 m) on May 26, 2022. 2. Borehole log not prepared for geotechnical engineering purposes.								▽ S
8										

DEPTH SCALE

1 : 40

LOGGED: DG

CHECKED:

GTA-BHS 001 S:\CLIENTS\FENGATE\1047_RICHMOND_RD\02_DATA\GINT\21494078.GPJ GAL-MIS.GDT 10/2/23 ZS

CLIENT: FENGATE ASSET MANAGEMENT		PROJECT NO.: CO972.00	**RECORD OF: MW201**
ADDRESS: 1047 RICHMOND ROAD			
CITY/PROVINCE: OTTAWA, ONTARIO	NORTHING (m): 5024904.7	EASTING (m): 439027.4	ELEV. (m) 64.68
CONTRACTOR: STRATA DRILLING	METHOD: HOLLOW STEM AUGER		
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10	SAND TYPE: #2	SEALANT TYPE: BENTONITE

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) ● 40 80 120 160 / N-VALUE (Blows/300mm) ▲ 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		GRAVEL trace sand	0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6 6.5 7 7.5 --- wet 8 8.5	64.5 64 63.5 63 62.5 62 61.5 61 60.5 60 59.5 59 58.5 58 57.5 57 56.5 56									NO SAMPLES COLLECTED. DRILLED THROUGH BACKFILL FOR MONITORING WELL INSTALLATION.
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: EB	DRILLING DATE: 2-DEC-2024
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REVIEWED BY: KWB	PAGE 1 OF 1

CLIENT: FENGATE ASSET MANAGEMENT		PROJECT NO.: CO972.00	**RECORD OF: MW202**
ADDRESS: 1047 RICHMOND ROAD			
CITY/PROVINCE: OTTAWA, ONTARIO	NORTHING (m): 5024894.9	EASTING (m): 439023.4	ELEV. (m) 64.96
CONTRACTOR: STRATA DRILLING	METHOD: HOLLOW STEM AUGER		
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 / SAND TYPE: #2	SEALANT TYPE: BENTONITE

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) ● 40 80 120 160 / N-VALUE (Blows/300mm) ▲ 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		GRAVEL trace sand	0	64.5									NO SAMPLES COLLECTED. DRILLED THROUGH BACKFILL FOR MONITORING WELL INSTALLATION.
			0.5										
			1	64									
			1.5	63.5									
			2	63									
			2.5	62.5									
			3	62									
			3.5	61.5									
			4	61									
			4.5	60.5									
			5	60									
			5.5	59.5									
			6	59									
		GRAVEL	6.5	58.5									
			7	58									
			7.5	57.5									
		--- becomming wet	8	57									
			8.5	56.5									
			9	56									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: EB	DRILLING DATE: 2-DEC-2024
INPUT BY: JS	MONITORING DATE: 4-APR-2025
REVIEWED BY: KWB	PAGE 1 OF 1

APPENDIX XI
SOIL EXCAVATED AT OR BROUGHT TO THE PHASE TWO PROPERTY

July 18, 2024
CO972.00

1047 Richmond Investment LP
c/o Fengate Asset Management
2275 Upper Middle Road East, Suite 700
Oakville, Ontario
L6H 0C3

Attention: Ms. Corina Sajewski
Director, Development

Re: Excess Soil Characterization Report
1047 Richmond Road, Ottawa, Ontario

Dear Ms. Sajewski:

Terrapex Environmental Ltd. (Terrapex) was retained by 1047 Richmond Investment LP. (the Client) to conduct an Excess Soil Characterization program at a portion of the Site at the former automotive dealership and garage located at 1047 Richmond Road in Ottawa, Ontario (the "Site"). It is understood that the Client is proposing to redevelop the Site into a residential and commercial development. The Site location is provided on Figure 1. The general Site layout is provided on Figure 2.

This excess soil characterization is necessary to remove the overlying soil as part of the excavation of an area of petroleum hydrocarbon (PHC) impacted groundwater in the northern portion of the Site (the "Project Area"). This Excess Soils Characterization is limited to the soils directly overlying the groundwater PHC-impacted area where the bedrock excavation is expected to be completed in order to intercept the water table. Based on the expected area of excavation and an assumed depth to bedrock in the excavation area it is expected that approximately 1,000 cubic metres (m^3) of excess soil will be generated. The area of the expected excavation is provided on Figure 3.

The objective of the Excess Soil Characterization was to investigate the soil quality at the Project Area, as a result of concerns identified during the Assessment of Past Uses (APU), based on the Conceptual Site Mode (CSM), and the requirements of Ontario Regulation (O. Reg.) 406/19. The Excess Soils Characterization has used soil analytical data previously collected by Golder Associates Ltd. (Golder) reported in a report titled *Phase Two Environmental Site Assessment 1047 Richmond Road, Ottawa Ontario,* dated February 2022.

As the Site historically contained an automotive service garage, it is classified as an "enhanced investigation site" and as such, the excess soil reuse planning rules governed by O. Reg. 406/19: On-Site and Excess Soil Management must be applied prior to excess soil movement.

ASSESSMENT OF ON-SITE AND EXCESS SOIL

THE "WASTE RULES"

By default, excess soil is considered to be a "waste" per O. Reg. 406/19 unless all of the following conditions are met:

- The excess soil is transported directly to a reuse site;
- The owner or operator of the reuse site consents in writing to the acceptance of the excess soil for a beneficial purpose (e.g., site grading or backfilling an excavation);
- The excess soil is dry (i.e., passes the "slump test") and remains dry until being finally placed within two years of deposition at the reuse site, unless an instrument is in place that allows deposition of wet soil; and,
- The quality and quantity of the excess soil is appropriate for the beneficial purpose identified by the reuse site (e.g., excess soil meets the appropriate environmental quality standards and the total volume of excess soil relocated to the reuse site is not greater than amount required for the beneficial purpose).

THE "PLANNING RULES"

Effective January 1, 2023, certain Project Areas exporting greater than 100 m^3 of soil are required to register as a "Project Site" on the Excess Soil Registry. Prior to filing a Notice on the Registry, the Project Leader must ensure that a qualified person (QP) undertakes:

- An assessment of past uses (APU);
- Sampling and analysis plan (SAP);
- Soil characterization report (SCR); and
- Excess soil destination assessment report (ESDAR).

EXCESS SOIL QUALITY STANDARDS (ESQS)

For the purpose of informing possible options for excess soil reuse, the laboratory analytical results were compared to various excess soil quality standards (ESQS) of O. Reg. 406/19.

Small Volume ESQS

The "small volume" ESQS shall only be used where the total amount of excess soil to be finally placed at a reuse site is less than or equal to 350 m^3. "Small volume" ESQS are the same as the coarse-textured Site Condition Standards (SCS) values of O. Reg. 153/04, as provided in the MECP document titled *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* and dated April 15, 2011 (Tables 1 through 9).

Volume Independent ESQS

The "volume independent" ESQS apply to reuse sites accepting a total volume of excess soil greater than 350 m^3 for a beneficial purpose (i.e., the sum of the volumes of: 1) existing impacted soil at the reuse site; and, 2) excess soil received from all properties or project areas, not only from the Site). Volume independent ESQS are provided in Appendix 1 of the MECP document titled *Rules for Soil Management and Excess Soil Quality Standards* and dated December 8, 2020 (Table 1 and Tables 2.1 through 9.1).

Salt-Related Parameters

The Rules for Soil Management under O. Reg. 406/19 also allow soil failing only the salt-related parameters electrical conductivity (EC) and sodium adsorption ratio (SAR) to be considered to meet the applicable standards, if the following conditions are met:

I. The excess soil is finally placed at one of the following locations:
   - where it is reasonable to expect that the soil will be affected by salt (e.g. parking lot or road sub-grade);
   - at an industrial or commercial property use and to which non-potable Table 3 SCS would be applicable; or
   - be placed at least 1.5 metres below the surface of the soil; and
     - it is not placed within 30 m of a waterbody; or,
     - within 100 m of a potable water well; or
     - used for growing crops/livestock (unless it is buried >1.5 m below surface).

II. Additionally, the project leader or operator of the project area must inform the reuse site owner or operator that the excess soil is from a location that may be expected to contain EC/SAR and must identify any potential risks to surface water and ground water to the reuse site owner.

Baseline for Comparison of Results to ESQSs

As a baseline, soil analytical results were compared to the full-depth, volume independent Table 1 ESQS for Residential, Parkland, Institutional, Industrial, Commercial and Community uses.

The full depth Table 2/2.1 ESQS through Table 9/9.1 ESQS are less stringent than the Table 1 Agricultural ESQS. Therefore, if the soil concentrations meet the Table 1 ESQS for Agricultural, they will meet the Table 2/2.1 through Table 9/9.1 ESQS for all land uses.

Leachate

The results of the leachate analyses were compared to the Table 1 Leachate Screening Levels (LSL) for Excess Soil Reuse for non-agricultural property use.

EXCESS SOIL CHARACTERIZATION

ASSESSMENT OF CURRENT AND PAST USES

A Phase One Environmental Site Assessment (ESA) that included the Project Area titled *Phase One Environmental Site Assessment, 1047 March Road Richmond Road, Ottawa Ontario* was completed by Golder (precursor to WSP), dated January, 2022 For the Site. Terrapex subsequently completed a review the Golder Phase One ESA report update of the records review as reported in the report titled *Phase One ESA updated titled Phase One Environmental Site Assessment Update*, dated July 18, 2024 prepared by Terrapex. These documents will collectively serve as the APU report to assess the following:

- the likelihood that one or more contaminants may have affected the Site in a location where soil material will be excavated;
- if any areas of potential environmental concern (APECs) were identified, and if the APECs were located where soil material will be excavated; and
- if any contaminants of potential concern (CoPCs) were identified, whether these CoPCs should be assessed within the sampling and analysis plan for the area where soil material will be excavated.

The APU identified the following potentially contaminating activities (PCAs) and associated APECs that may have affected the quality of excess soil beneath the Site:

Area of Potential Environmental Concern[1]	Location Of Area of Potential Environmental Concern On Project Area	Potentially Contaminating Activity[2]	Location of PCA (On-Site Or Off-Site)	Contaminants Of Potential Concern[3]	Media Potentially Impacted (Ground water, Soil, and/or Sediment)
APEC 1 (In proposed Project Area)	Surrounding the footprint of the former dealership building	10 - Commercial Autobody Shops	On-Site	PHCs VOCs BTEX	Soil Groundwater
APEC 2A (In proposed Project Area)	Northeast of the former building	28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	BTEX PHCs	Soil Groundwater
APEC 2B	Southeast portion of the former building exterior	28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	BTEX PHCs	Soil Groundwater
APEC 3 (In proposed Project Area)	North of the former building	28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	BTEX PHCs	Soil Groundwater

Area of Potential Environmental Concern[1]	Location Of Area of Potential Environmental Concern On Project Area	Potentially Contaminating Activity[2]	Location of PCA (On-Site Or Off-Site)	Contaminants Of Potential Concern[3]	Media Potentially Impacted (Ground water, Soil, and/or Sediment)
APEC 4	Northeast of the former Site building	39 - Paints Manufacturing, Processing and Bulk Storage	On-Site	VOCs Metals PHCs Hydride-forming metals Other regulated parameters	Soil Groundwater
APEC 5 (In proposed Project Area)	Entire Site	30 - Importation of Fill Material of Unknown Quality	On-Site	Metals PHCs Hydride-forming metals Other regulated parameters	Soil
APEC 6	Located on the western portion of the site adjacent to four former pole mounted transformer	55 - Transformer Manufacturing, Processing and Use	On-Site	PCBs PHCs	Soil
APEC 7 (In proposed Project Area)	Entire Site	Other – The application of de-icing salt for the purposes of vehicular and pedestrian safety	On-Site	SAR EC Sodium Chloride	Soil Groundwater

[1] Areas of potential environmental concern means the area on, in or under a Project Area where one or more contaminants are potentially present, as determined through the assessment of past uses, including through,
(a) identification of past or present uses on, in or under the Project Area, and
(b) identification of potentially contaminating activity.

[2] Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in the APU Study Area.

[3] Contaminants of potential concern according to the Method Groups as identified in the "Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act", March 9, 2004, amended as of July 1, 2011. Contaminants of Potential Concern (CoPCs) acronyms defined as follows:

- Electrical Conductivity (EC)
- Sodium Adsorption Ratio (SAR)
- Metals and Hydride-Forming Metals (M & HFMs)
- Petroleum Hydrocarbons (PHCs)
- Volatile Organic Compounds (VOCs)
- Polychlorinated Biphenyls (PCBs)
- Organochlorine (OC) pesticides

The locations of the APECs referenced above are shown on Figure 2.

As the footprint of the proposed remedial excavation will only intersect with APEC 1, APEC 2A, APEC 3, APEC 5 and APEC 7, only the CoPCs associated with those specific APECs will be considered during the excess soils characterization.

PREVIOUSLY COLLECTED SOIL DATA

Golder previously completed a Phase Two ESA that included the collection of soil samples from within the Project Area as reported in *Phase Two Environmental Site Assessment 1047 Richmond Road, Ottawa Ontario,* dated February 2022. Review of the report has indicated that four of the boreholes (BH21-02, BH21-03, BH21-13 and BH21-22) drilled for environmental site assessment purposes were located within the expected area of the proposed bedrock remedial excavation and were therefore relevant for excess soil characterization purposes. A summary of the relevant information for soil characterization purposes is provided below.

Four boreholes (BH21-02, BH21-03, BH21-13 and BH21-22, as shown on Figure 3) were drilled within the expected footprint of the proposed bedrock groundwater remedial excavation. The soil stratigraphy was described as an asphalt cover overlying a sand or a silty sand fill before encountering weathered fractured limestone bedrock at depths between 1.68 m to 2.74 m bg. Competent bedrock was encountered between 2.74 and 3.05 m bg. It was noted that a trace amount of brick was encountered in borehole 21-02 at a depth of between 1.22 and 1.68 m bg. Golder submitted soil samples from the overburden or the fractured bedrock zone from each of the boreholes as follows for laboratory analysis as follows.

Borehole Information		Parameters						
Soil Sample ID	Depth (m bgs)	M & HFM	SAR	EC	ORPs	PHCs	BTEX	VOCs
MW21-02 SA2	0.6 – 1.2	✓	✓	✓	✓			
MW21-02 SA5	1.5 – 2.0		✓			✓	✓	✓
MW21-03 SA1	0.1 – 0.6		✓			✓	✓	✓
MW21-03 SA2	0.6 – 1.2		✓			✓	✓	
MW21-03 SA3	1.2 – 1.8	✓	✓	✓	✓			
MW21-03 Dup1	1.2 – 1.8	✓	✓	✓	✓			
MW21-13 SA2	0.8 – 1.5	✓	✓	✓	✓			
MW21-13 SA3	1.5 – 2.1	✓	✓	✓	✓			
MW21-22 SA3	2.4 – 2.7					✓	✓	✓
Total	-	5	8	5	5	4	4	3

Review and comparison of the analytical data indicated that the analytical results of soils samples submitted met the MECP Table 1 ESQS with the exception of the following:

- Soil samples BH21-03 SA2, BH21-03 SA3, BH21-12 SA3 each exhibited a value of SAR greater than the Table ESQS; and,
- Soil sample BH21-22 exhibited a concentration of PHC F3 marginally greater than the Table 1 ESQS.

The aforementioned data will be used to form a basis of the excess soil's characterization for the soils within the footprint of the proposed remedial bedrock excavation.

SAMPLING AND ANALYSIS PLAN

To supplement the previously collected data (as described above) and to ensure that the excess soils characterization is compliant with the requirements of the O. Reg. 406/19, a supplemental soil characterization program was conducted at the Site.

In accordance with O. Reg. 406/19, where greater than 600 m^3 of excess soil is anticipated to be generated, a minimum of at least one soil sample per 200 m^3 is required to be analysed for the relevant CoPCs. In addition, soil samples are required to be submitted for leachate analyses at a minimum of at least 10% of the total number of required for bulk analyses. However, no less than three leachate samples are required for volumes of excess greater than 350 m^3.

Based on the interpretation of O. Reg. 406/19 by the QP it was decided that at least five bulk soil samples and three leachate soil samples were required for laboratory analysis to properly characterize the excess soils per the regulation.

The mandatory minimum scope of laboratory analyses required by O. Reg. 406/19 comprises:

- Petroleum hydrocarbons (PHCs) fractions F1 through F4.
- Benzene, toluene, ethylbenzene, xylenes (collectively known as BTEX).
- pH, metals and hydride-forming metals (antimony, arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, selenium, silver, thallium, uranium, vanadium and zinc).
- Sodium adsorption ratio (SAR) and electrical conductivity (EC) if the soil is excavated from an area where a substance has been used for the purpose of keeping the area safe for use under conditions of snow or ice.
- Any contaminant of potential concern (COPC) identified during the assessment of past uses, namely:
    - Other Regulated Parameters (ORPs) comprising chromium VI, mercury, cyanide, and hot-water soluble boron; and,
    - Volatile Organic Compounds (VOCs).
- Modified Synthetic Precipitation Leachate Procedure (mSPLP) analysis for certain contaminants, if required.

Based on the review of the APECs present within the Project Area, the mandatory minimum scope of laboratory analyses (as mentioned above) and the inclusion of the CoPCs of VOCs and ORPs will be required for laboratory analysis to properly characterize the excess soils to be generated.

Accordingly, to supplement existing data, representative soil samples were collected on July 12, 2024 from the three boreholes (BH101 to BH103, as shown on Figure 3) drilled within the Project Area and were submitted Bureau Veritas Laboratories Ltd (BV Labs) for bulk chemical analysis of the following parameters:

Borehole Information		Parameters						
Sample ID	Depth (m bgs)	M & HFM	SAR	EC	ORPs	PHCs	BTEX	VOCs
BH101-1	0.2 – 0.8					✓	✓	✓
BH102-2	0.8 – 1.5					✓	✓	✓
BH103-1	0.2 – 0.8							
Total	-	0	0	0	0	2	2	2

In addition, three soil samples (BH101-1, BH102-1 and BH103-1) were submitted for analysis using the modified SPLP procedure and analysis of VOCs, molybdenum, thallium and silver. The analysis of these parameters was based on review of the relevant Golder data and the O. Reg 406/19 requirement for leachate analysis for parameters which the Table 1 ESQS is based on laboratory detection limits (as denoted by "RL") in the Table 1 ESQS in *Part II: Excess Soil Quality Standards in the Rules For Soil Management and Excess Soil Quality Standards* document.

BV Labs is accredited to carry out analyses in accordance with the *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act*. Bureau Veritas accreditation through the Standards Council of Canada (SCS) in accordance with the International Standard ISO/IEC17025-2017 – *General Requirements for the Competence of Testing and Calibration Laboratories*

FIELD OBSERVATIONS

On July 12, 2024, three boreholes (BH101, BH102 and BH103) were drilled within the expected footprint of the proposed bedrock groundwater remedial excavation using a Geoprobe 54LT drilling rig. The soil stratigraphy was described as an asphalt cover overlying a sand or a silty sand fill before encountering refusal at a depth between 1.2 to 1.6 m bg.

No visual or olfactory evidence of chemical impacts were observed at any of the borehole locations. No evidence of non-aqueous phase liquids (i.e., NAPL) or free-product was encountered during the field program. Combustible soil vapour (CSV) concentrations were measured for each soil sample recovered from the boreholes using a RKI Eagle. CSV concentrations were all less than 15 parts per million (ppm). The CSV concentrations measured for each soil sample are included on the borehole logs (Attachment A). Soil samples were submitted for laboratory analysis as indicated in the sampling and analysis plan.

Cross-section summarizing the stratigraphy are provided on Figures 4 (A to A') and 5 (B to B'), respectively.

QUALITY CONTROL/QUALITY CONTROL MEASURES

Quality Assurance and Quality Control (QA/QC) measures were implemented during the work program in accordance with Terrapex Standard Operating Procedures. A summary of these measures follows.

During drilling, to mitigate cross-contamination, split spoons were cleaned after the collection of each sample. Fresh nitrile gloves were worn for the handling of each sample.

Pre-cleaned sample containers for the specific parameters of interest were provided by the laboratory and used at each borehole location for the collection of soil samples. Samples for analyses were placed in an enclosed cooler with loose ice and shipped with a signed chain of custody and custody seals to BV Labs for chemical analysis.

The QA/QC sample collected as part of the work program was comprised of the following:

- One blind field duplicate soil sample (BH102-11, duplicate pair of BH102-1) for analysis of metals, hydride-forming metals, pH, EC, SAR, BTEX, VOCs and PHC fractions F1 to F4.

The laboratory was not informed of the nature or number of the field QA/QC samples outlined above.

LABORATORY RESULTS

Laboratory results for the relevant soil samples submitted for analyses of the CoPCs are summarized in Table 1 to Table 3 (bulk soil results), and Table 4 and Table 4 (leachate results) with the laboratory certificates of analysis enclosed in Attachment B.

Terrapex compared the bulk soil analytical results against the Table 1 ESQS for the purpose of informing feasible options for disposal or reuse of excess soil generated during the remedial excavation for an appropriate off-Site destination. The results of the leachate analyses were compared to the Table 1 LSL for Excess Soil Reuse for non-agricultural property use.

Metal and Inorganic Parameters: As shown in Table 1, the concentrations of metal and inorganic parameters were less than the applicable Table 6.1 ESQS in the soil samples submitted for testing with the following exceptions:

- SAR in soil samples BH21-02 SA5, BH21-03 SA2, BH21-03 SA3 (and duplicate), and BH21-13 SA3. SAR values in these samples ranged between 5.3 and 9.6, exceeding the Table 1 ESQS of 2.4.

BTEX: As shown in Table 2, the concentrations of benzene, toluene, ethylbenzene, and xylene in the soil samples submitted for analyses were below the Table 1 ESQS.

PHC F1 to F4: As shown in Table 2, with the exception of sample BH21-22 SA3, the concentrations of the PHC F1 to F4 fractions met the applicable Table 1 ESQS. Sample BH21-22 SA3 (collected from a depth of 2.4-2.4 m bg) had a PHC F3 fraction concentration of 260 µg/g, exceeding the Table 1 ESQS of 240 µg/g.

VOCs: As shown in Table 3, the concentrations of all VOC parameters in the soil samples submitted for analysis were less than the Table 1 ESQS.

mSPLP (Metals, VOCs): The results of the leachate testing as per the mSPLP are summarized in Table 4 (metals) and Table 5 (VOCs). As shown in the table, the concentrations of the metals and VOCs were less than the Table 1 LSL.

The results are further summarized in the table below.

COMPARISON OF LABORATORY ANALYTICAL RESULTS TO EXCESS SOIL QUALITY STANDARDS

Borehole Information			Meets Table 1 ESQS	Meets Table 2.1 ESQS	Meets Table 3.1 ESQS
Sample ID	Consultant	Depth (m bgs)	Non-Agricultural	I/I/C/C	I/I/C/C
MW21-02 SA2	Golder	0.6 – 1.2	Yes	Yes	Yes
MW21-02 SA5	Golder	2.4 – 2.7	No (SAR)	Yes	Yes
MW21-03 SA1	Golder	0.08 – 0.6	Yes	Yes	Yes
MW21-03 SA2	Golder	0.6 – 1.2	No (SAR)	No (SAR)	No (SAR)
MW21-03 SA3	Golder	1.2 – 1.8	No (SAR)	No (SAR)	No (SAR)
MW21-03 Dup1	Golder	1.2 – 1.8	No (SAR)	No (SAR)	No (SAR)
MW21-13 SA2	Golder	0.8 – 1.5	Yes	No (SAR)	No (SAR)
MW21-13 SA3	Golder	1.5 – 2.1	No (SAR)	Yes	Yes
MW21-22 SA3	Golder	2.4 – 2.7	No (PHC F3	No (PHC F3)	Yes
BH101-2	Terrapex	0.8 – 1.5	Yes	Yes	Yes
BH102-1	Terrapex	0.2 – 0.8	Yes	Yes	Yes
BH103-1	Terrapex	0.2 – 0.8	Yes	Yes	Yes

The laboratory certificates of analysis are provided in Attachment B.

LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

The BV Labs QA/QC program consisted of the analysis of laboratory duplicates, matrix spikes, method blanks spikes, and surrogate percent recoveries, as appropriate for the particular analysis protocol. A review of the quality assurance report attached to the certificates of analysis indicated that the laboratory QA/QC samples were within the quality control limits.

CONCLUSIONS

Based on laboratory analytical results of soil samples submitted for environmental testing and the testing completed previously the soil within the excess soil excavation area, the soil within the Project Area meet Table 1 ESQS with the following exception:

- The sample of the silt layer collected from borehole MW21-22 present at the northern portion of the planned excavation exhibited a PHC F3 concentration marginally greater than the Table 1 ESQS; and,
- The SAR value in a number of samples (BH21-03 SA2, BH21-03 SA3, BH21-03-DUP-1, BH21-13-SA3) exhibited a value of SAR greater than the Table 1 ESQS.

Boreholes MW21-22, is located at the northeastern boundary of the planned limit of the excavation and therefore is not necessarily representative of the soil to be generated during the proposed excavation. Also, it is noted that the PHC F3 concentration of 260 µg/g only marginally exceeded the Table 1 SCS of 240 µg/g. The PHC F3 results at MW21-22 would meet the Table 3, Table 7, Table 3.1 and Table 7.1 standard of 300 µg/g. Soils from this area will be segregated during the excavation activities for additional testing to confirm the environmental quality of the soils.

The soil with the SAR exceedances meets the Table 1 ESQS for Residential, Parkland, Institutional, Industrial, Commercial and Community uses, provided the following restrictions on final placement are observed:

i. The excess soil is finally placed at one of the following locations:
    a) where it is reasonable to expect that the soil will be affected by the same chemicals as a result of continued application of a substance for the safety of vehicular or pedestrian traffic under conditions of snow or ice;
    b) at an industrial or commercial property use and to which non-potable standards would be applicable; or
    c) at least 1.5 metres below the surface of the soil.

ii. The excess soil is not finally placed at any of the following locations:

a) within 30 metres of a waterbody;

b) within 100 metres of a potable water well or area with an intended property use that may require a potable water well; or,

c) a location that will be used for growing crops or pasturing livestock unless the excess soil is placed 1.5 metres or greater below the soil surface

The reuse site owner or operator must be informed that the excess soil is from a location that may be expected to contain SAR. Potential risks to surface water and ground water are not anticipated if the separation distances identified above are maintained.

CLOSURE

The excess soil characterization described herein was conducted in accordance with the terms of reference for this project, agreed upon by 1047 Richmond Investment LPand Terrapex Environmental Ltd.

The soil characterization at the Project Area located at 1047 Richmond Road in Ottawa, Ontario, was conducted in general accordance with O. Reg. 406/19 by, or under the supervision of, a Qualified Person as required by the regulation.

Terrapex Environmental Ltd. has exercised due care, diligence, and judgement in the performance of this work program; however, studies of this nature have inherent limitations. The reported information is believed to provide a reasonable representation of the general environmental conditions at the Site at the time the assessment was conducted. However, the data were collected at discrete locations and conditions may vary at other locations or with the passage of time. The assessment was also limited to a study of those chemical parameters specifically addressed in this report.

In addition, our comments, conclusions, and recommendations are based in part on the observations and data documented by third parties. By necessity, except where explicitly noted, we have relied upon the accuracy and completeness of information presented by said third parties, regardless of any disclaimers regarding reliance provided in the documentation subjected to peer review. Terrapex Environmental Ltd. does not assume any responsibility for errors, omissions, or other limitations pertaining to third party work programs.

This report was prepared for the sole use of 1047 Richmond Investment LP. Terrapex Environmental Ltd. accepts no liability for claims arising from the use of this report, or from decisions made or actions taken as a result of this report, by parties other than 1047 Richmond Investment LP

We trust this information meets your current requirements. If you have any questions regarding the information in this report, please do not hesitate to contact the undersigned.

Sincerely,

TERRAPEX ENVIRONMENTAL LTD.

Greg Sabourin, P.Eng.
Project Manager
Qualified Person per O. Reg. 153/04

Keith Brown, P.Eng., QP_{ESA}
Senior Project Reviewer
Qualified Person per O. Reg. 153/04

FIGURES

LEGEND

SITE BOUNDARY

DATA SOURCE: ESRI
MAP PROJECTION: NAD 1983 UTM Zone 18N

CLIENT: FENGATE

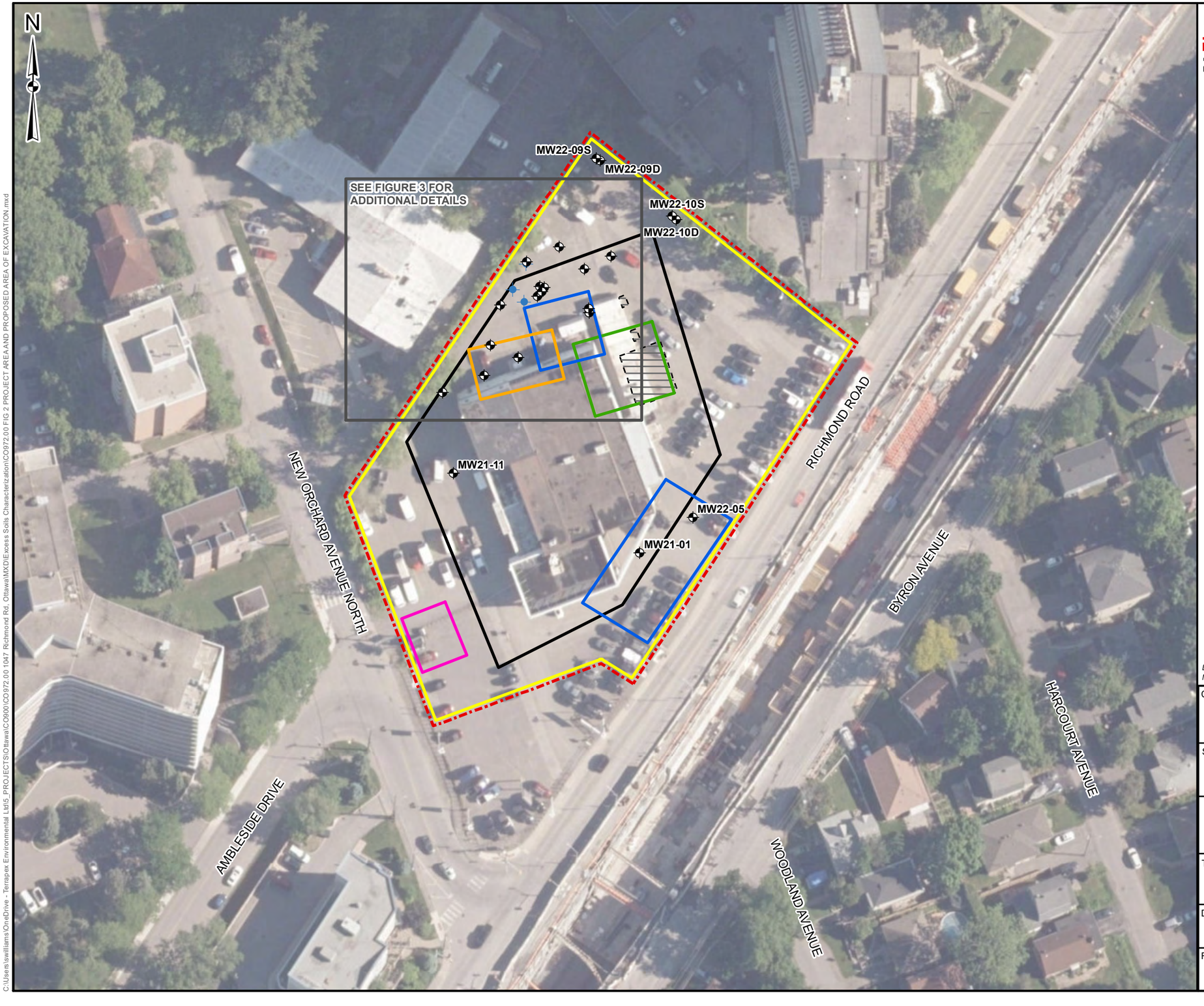
SITE LOCATION: 1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE: **PROJECT LOCATION**

DRAWN BY: JS	PROJECT NO.: CO972.00	CHECKED BY: KWB
REVISION: 00	DATE: JULY 2024	**FIGURE: 1**

swilliams C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO900\CO972.00 1047 Richmond Rd, Ottawa\MXD\Excess Soils Characterization\CO972.00 FIG 1 PROJECT LOCATION.mxd



LEGEND

- SITE BOUNDARY
- EXCAVATION LOCATION
- BOREHOLE (TERRAPEX)
- MONITORING WELL (OTHERS)

0 10 20 30 40
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT: FENGATE

SITE LOCATION:
1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:
PROJECT AREA AND PROPOSED AREA OF GROUNDWATER REMEDIAL EXCAVATION

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/SW	CO972.00	KWB
REVISION: 00	DATE: JULY 2024	FIGURE: **2**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO900\CO972.00 1047 Richmond Rd, Ottawa\MXD\Excess Soils Characterization\CO972.00 FIG 2 PROJECT AREA AND PROPOSED AREA OF EXCAVATION.mxd

N

A'

B

A

B'

MW21-21

MW22-02

MW21-22

BH101

MW21-15

MW21-14

BH102

MW22-06

MW22-08

MW22-03

BH103

MW22-04

MW22-07

MW21-04

MW21-13

MW21-02

MW21-03

MW21-12

LEGEND

- SITE BOUNDARY
- PROPOSED REMEDIAL EXCAVATION
- EXCAVATION LOCATION
- CROSS SECTION
- BOREHOLE (TERRAPEX)
- MONITORING WELL (OTHERS)

0 2 4 6 8 10

Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:

FENGATE

SITE LOCATION:

1047 RICHMOND ROAD
OTTAWA, ONTARIO

TERRAPEX

TITLE:

PROPOSED AREA OF EXCAVATION

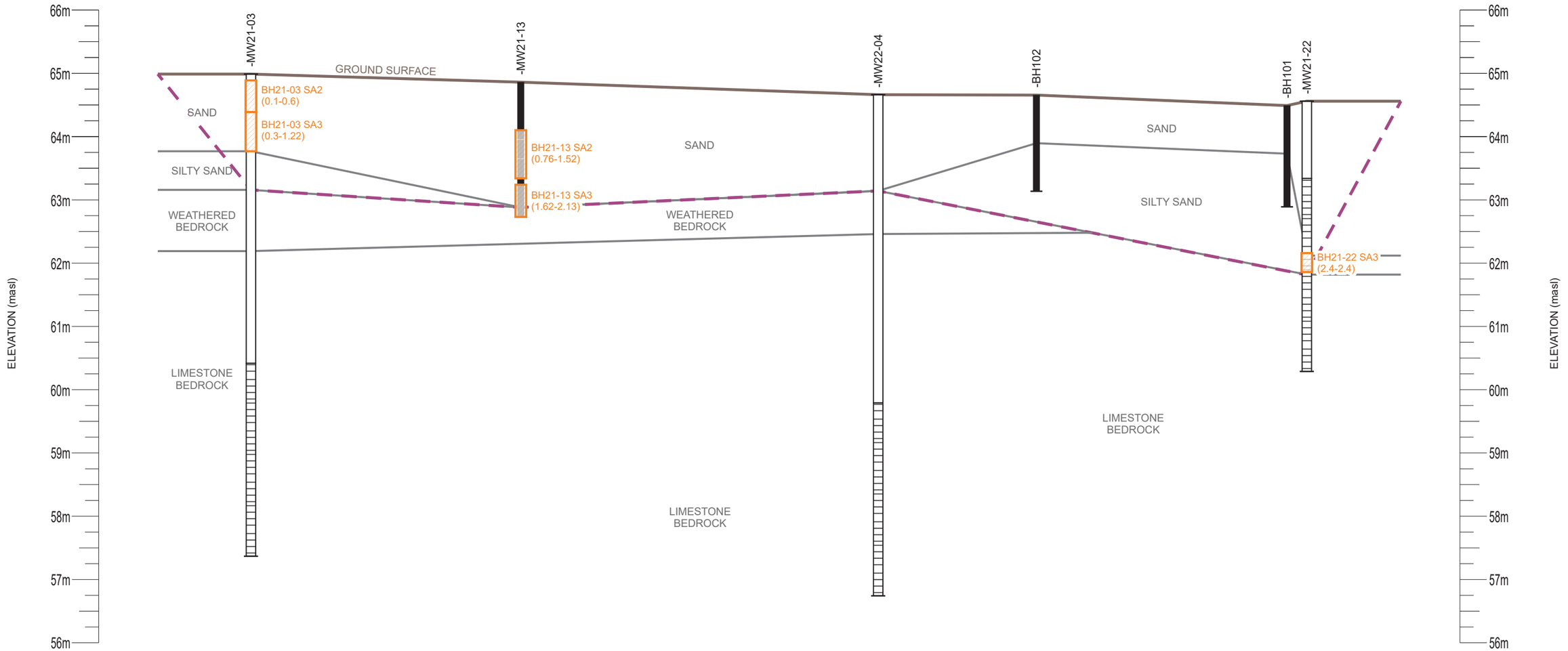
DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/SW	CO972.00	KWB
REVISION:	**DATE:**	**FIGURE:**
00	AUGUST 2024	**3**

C:\Users\s.finlay\OneDrive - Terrapex Environmental Ltd\PROJECTS\Ottawa\CO900\CO972.00 1047 Richmond Rd, Ottawa\MXD\Excess Soils Characterization\CO972.00 FIG 3 PROPOSED AREA OF EXCAVATION.mxd

A

A'

LOOKING WEST



LEGEND

- STRATIGRAPHIC UNIT
- PROPOSED OVERBURDEN EXCAVATION

-MW101
- MONITORING WELL
- SAMPLE NAME (DEPTH)
- SCREENED ZONE

-BH102
- BOREHOLE

HORIZONTAL SCALE:

0 2.5 5
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. DRAWING IS FOR CONCEPTUAL PURPOSES AND IS NOT TO BE USED FOR DESIGN

CLIENT: FENGATE

SITE LOCATION: 1047 RICHMOND ROAD OTTAWA, ONTARIO

TERRAPEX

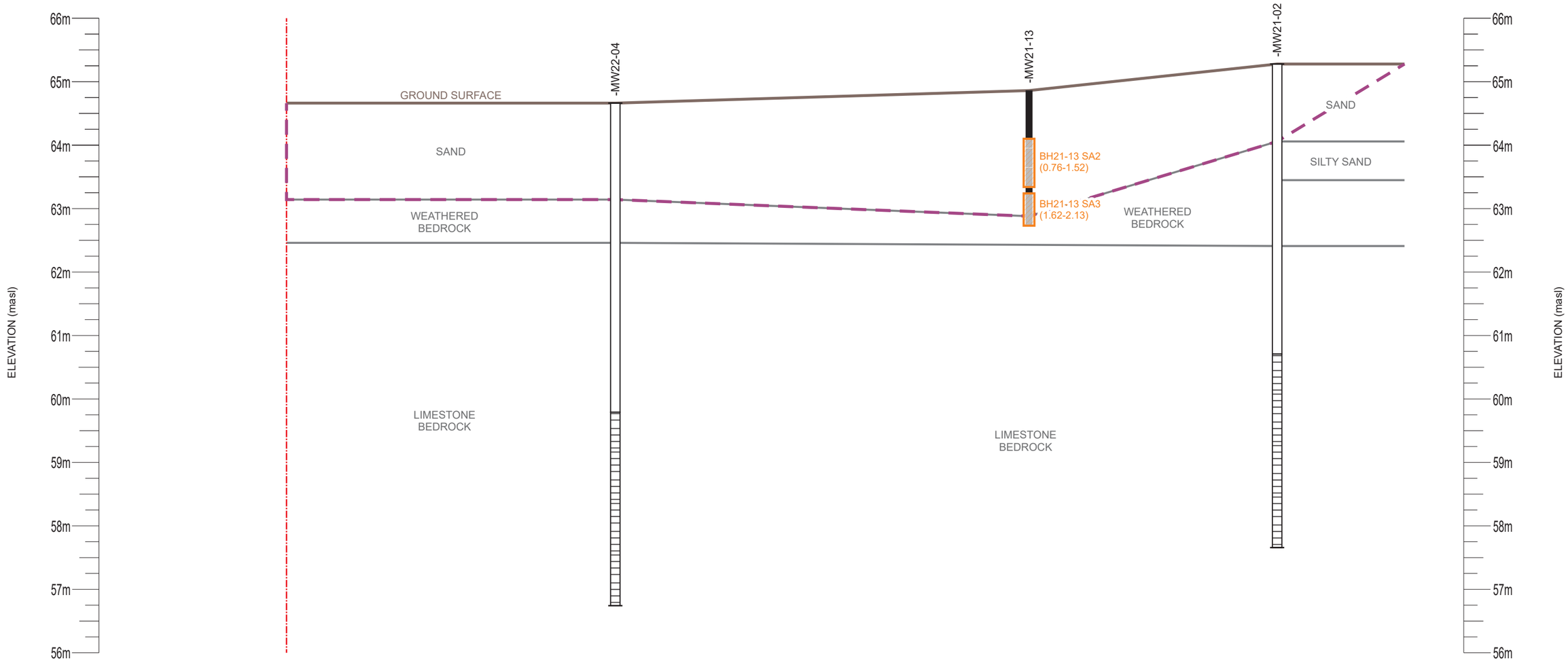
TITLE: **CROSS SECTION A-A'**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO972.00	XX
REVISION:	DATE:	FIGURE:
00	JULY 2024	**4**

B

B'

LOOKING EAST



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- PROPOSED OVERBURDEN EXCAVATION

-MW101
- MONITORING WELL
- SAMPLE NAME (DEPTH)
- SCREENED ZONE

-BH102
- BOREHOLE

HORIZONTAL SCALE:

0 1 2
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.

CLIENT: FENGATE

SITE LOCATION: 1047 RICHMOND ROAD OTTAWA, ONTARIO

TERRAPEX

TITLE: **CROSS SECTION B-B'**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO972.00	XX
REVISION:	DATE:	FIGURE:
00	JULY 2024	**5**

TABLES

TABLE 1: SUMMARY OF SOIL ANALYTICAL RESULTS - METALS, HFMs AND OTHER REGULATED PARAMETERS
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME	UNITS	STANDARDS Table 1 Non-Agricultural	BH21-2 SA2	BH21-2 SA5	BH21-3 SA3	BH21-3 DUP-1	BH21-13 SA2	BH21-13 SA3
Sample Depth	m bgs	-	0.6 - 1.2	2.4 - 2.7	1.2 - 1.8	1.2 - 1.8	0.8 - 1.5	1.5 - 2.1
Sampling Date	dd-mmm-yy	-	21-Sep-21	21-Sep-21	22-Sep-21	22-Sep-21	11-Nov-21	11-Nov-21
METALS								
Barium	-	220	21	-	99	110	24	81
Beryllium	-	2.5	< 0.20	-	0.52	0.72	< 0.20	1.1
Boron (Total)	-	36	< 5.0	-	7.8	12	< 5.0	16
Cadmium	-	1.2	< 0.10	-	0.45	0.37	< 0.10	< 0.10
Chromium Total	-	70	8.3	-	27	33	7	41
Cobalt	-	21	3.1	-	13	14	2.8	20
Copper	-	92	4.6	-	18	60	5.3	7.8
Lead		120	2	-	23	48	1.9	5.2
Mercury	-	0.27	< 0.050	-	0.063	0.077	< 0.050	< 0.050
Molybdenum	-	2.0	< 0.50	-	< 0.50	0.52	< 0.50	0.76
Nickel	-	82	5.5	-	25	34	4.9	47
Silver	-	0.50	< 0.20	-	< 0.20	< 0.20	< 0.20	< 0.20
Thallium	-	1.0	< 0.050	-	0.14	0.21	0.11	0.21
Uranium	-	2.5	0.45	-	0.49	0.64	0.54	0.31
Vanadium	-	86	20	-	26	29	27	27
Zinc	-	290	16	-	54	89	32	35
HYDRIDE-FORMING METALS								
Antimony	-	1.3	< 0.20	-	0.33	0.46	< 0.20	< 0.20
Arsenic	-	18	< 1.0	-	1.7	2.8	< 1.0	2
Selenium	-	1.5	< 0.50	-	< 0.50	< 0.50	< 0.50	< 0.50
OTHER REGULATED PARAMETERS (ORPs)								
Boron (Hot Water Soluble)[1]	-	NA	0.15	-	0.87	0.67	0.14	0.41
Cyanide (CN-)	-	0.051	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01
Chromium VI	-	0.66	< 0.18	-	< 0.18	< 0.18	< 0.18	< 0.18
pH	-	NV	6.97	-	7.54	7.43	6.88	7.68
Electrical Conductivity	-	0.57	0.26	-	0.34	0.41	0.06	0.38
Sodium Adsorption Ratio	-	2.4	0.88	**4.1**	**6.1**	**9.6**	0.54	**7.3**

Table 1: Full Depth Background SCS
Non-Agricultural Property-Use, Any Soil Texture

-	Parameter not analyzed
m bg	meters below grade
ppm	parts per million by volume
% LEL	percent of the lower explosive limit
NV	No Value; no standard established
NA	Not Applicable; no standard established because a standard is not required
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard
[1]	Hot water soluble boron applies to surface soils (<1.5 m bg).

TABLE 2: SUMMARY OF SOIL ANALYTICAL RESULTS - BTEX AND PHCs
1047 RICHMOND ROAD, OTTAWA, ON

SAMPLE NAME	UNITS	STANDARDS Table 1 Non-Agricultural	BH21-2 SA5	BH21-3 SA1	BH21-3 SA2	BH21-22 SA3	BH101-2	BH102-2	BH103-1
Sample Depth	m bgs	-	2.44-2.66	0.076-0.6	0.6-1.22	2.43-2.74 m	0.8 - 1.5	0.8 - 1.5	0.2 - 0.8
Sampling Date	dd-mmm-yy	-	21-Sep-21	22-Sep-21	22-Sep-21	21-Dec-21	12-Jul-24	12-Jul-24	12-Jul-24
BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (BTEX)									
Benzene	ug/g	0.020	< 0.0060	< 0.0060	< 0.020	< 0.02	<0.0060	<0.0060	-
Toluene	ug/g	0.20	< 0.020	0.039	< 0.020	< 0.05	<0.020	<0.020	-
Ethylbenzene	ug/g	0.050	< 0.010	< 0.010	< 0.020	< 0.05	<0.010	<0.010	-
m-Xylene & p-Xylene	ug/g	0.050	< 0.020	0.045	< 0.040	< 0.05	<0.020	<0.020	-
o-Xylene	ug/g	0.050	< 0.020	< 0.020	< 0.020	< 0.05	<0.020	<0.020	-
Xylenes (Total)	ug/g	0.050	< 0.020	0.045	< 0.040	< 0.05	<0.020	<0.020	-
PETROLEUM HYDROCARBONS (PHCs)									
Petroleum Hydrocarbons F1-BTEX	ug/g	25	< 10	-	< 10	6	<10	<10	-
Petroleum Hydrocarbons F2	ug/g	10	< 10	-	< 10	6	<10	<10	<10
Petroleum Hydrocarbons F3	ug/g	240	< 50	-	< 50	**260**	<50	52	<50
Petroleum Hydrocarbons F4	ug/g	120	< 50	-	< 50	<50	<50	120	<50

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended).

Table 1: Full Depth Background SCS
Non-Agricultural Property-Use, Any Soil Texture

-	Not analyzed
m bg	meters below grade
ppm	parts per million by volume
% LEL	percent of the lower explosive limit
NV	No Value; no standard established
NA	Not Applicable; no standard established because a standard is not required
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 3: SUMMARY OF SOIL ANALYTICAL RESULTS - VOCs
1047 RICHMOND RAOD, OTTAWA, ON

SAMPLE NAME	UNITS	STANDARDS Table 1 Non-Agricultural	BH21-2 SA5	BH21-3 SA1	BH21-22 SA3	BH101-2	BH102-2
Sample Depth	m bgs	-	2.4 - 2.7	0.1 - 0.6	2.4 - 2.7	0.8 - 1.5	0.8 - 1.5
Sampling Date	dd-mmm-yy	-	21-Sep-21	22-Sep-21	21-Dec-21	12-Jul-24	12-Jul-24
VOLATILE ORGANIC COMPOUNDS (VOCs)							
Acetone	ug/g	0.50	< 0.49	< 0.49	<0.50	<0.49	<0.49
Bromodichloromethane	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Bromoform	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Bromomethane	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Carbon Tetrachloride	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Chlorobenzene	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Chloroform	ug/g	0.050	< 0.040	< 0.040	< 0.04	<0.040	<0.040
Dibromochloromethane	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Dichlorobenzene, 1,2-	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Dichlorobenzene, 1,3-	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Dichlorobenzene, 1,4-	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Dichlorodifluoromethane	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Dichloroethane, 1,1-	ug/g	0.050	< 0.040	< 0.040	< 0.02	<0.040	<0.040
Dichloroethane, 1,2-	ug/g	0.050	< 0.049	< 0.049	< 0.03	<0.049	<0.049
Dichloroethylene, 1,1-	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Dichloroethylene, 1,2-cis-	ug/g	0.050	< 0.040	< 0.040	< 0.02	<0.040	<0.040
Dichloroethylene, 1,2-trans-	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Dichloropropane, 1,2-	ug/g	0.050	< 0.040	< 0.040	< 0.03	<0.040	<0.040
Dichloropropene,1,3-cis	ug/g	0.050	< 0.030	< 0.030	<0.05	<0.030	<0.030
Dichloropropene,1,3-trans	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Dichloropropene,1,3-	ug/g	0.050	< 0.050	< 0.050	< 0.04	<0.050	<0.050
Ethylene dibromide	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Hexane (n)	ug/g	0.050	< 0.040	0.19	<0.05	<0.040	<0.040
Methyl Ethyl Ketone	ug/g	0.50	< 0.40	< 0.40	< 0.50	<0.40	<0.40
Methyl Isobutyl Ketone	ug/g	0.50	< 0.40	< 0.40	< 0.50	<0.40	<0.40
Methyl tert-Butyl Ether (MTBE)	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Methylene Chloride	ug/g	0.050	< 0.049	< 0.049	<0.05	<0.049	<0.049
Styrene	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Tetrachloroethane, 1,1,1,2-	ug/g	0.050	< 0.040	< 0.040	< 0.04	<0.040	<0.040
Tetrachloroethane, 1,1,2,2-	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Tetrachloroethylene	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Trichloroethane, 1,1,1-	ug/g	0.050	< 0.040	< 0.040	<0.05	<0.040	<0.040
Trichloroethane, 1,1,2-	ug/g	0.050	< 0.040	< 0.040	< 0.04	<0.040	<0.040
Trichloroethylene	ug/g	0.050	< 0.010	< 0.010	< 0.03	<0.010	<0.010
Trichlorofluoromethane	ug/g	0.25	< 0.040	< 0.040	<0.25	<0.040	<0.040
Vinyl Chloride	ug/g	0.020	< 0.019	< 0.019	<0.02	<0.019	<0.019

Table 1: Full Depth Background SCS
Non-Agricultural Property-Use, Any Soil Texture

-	Not analyzed
m bg	meters below grade
ppm	parts per million by volume
% LEL	percent of the lower explosive limit
NV	No Value; no standard established
NA	Not Applicable; no standard established because a standard is not required
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 4: SUMMARY OF SOIL ANALYTICAL RESULTS - METALS, HFMs AND OTHER REGULATED PARAMETERS
1047 RICHMOND ROAD, OTTAWA, ONTARIO

SAMPLE NAME	UNITS	STANDARDS Table 1 Non-Agricultural	BH101-1	BH102-1	BH103-1
Sample Depth	m bgs	-	0.2 - 08	0.2 - 08	0.2 - 08
Sampling Date	dd-mmm-yy	-	12-Jul-24	12-Jul-24	12-Jul-24
METALS					
Molybdenum	ug/L	15	2	2	2
Silver	ug/L	0.3	<0.1	<0.1	<0.1
Thallium	ug/L	2	<0.05	<0.05	<0.05

Table 1: Leachate Screening Levels for Excess Soil Reuse
Non-Agricultural Property-Use, Any Soil Texture

-	Parameter not analyzed
m bg	meters below grade
ppm	parts per million by volume
% LEL	percent of the lower explosive limit
NV	No Value; no standard established
NA	Not Applicable; no standard established because a standard is not required
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

TABLE 5: SUMMARY OF SOIL ANALYTICAL RESULTS - VOCs
1047 RICHMOND ROAD, OTTAWA, ON

SAMPLE NAME	UNITS	STANDARDS Table 1 Non-Agricultural	BH101-1	BH102-1	BH103-1
Sample Depth	m bgs	-	0.2 - 0.8	0.2 - 0.8	0.2 - 0.8
Sampling Date	dd-mmm-yy	-	12-Jul-24	12-Jul-24	12-Jul-24
VOLATILE ORGANIC COMPOUNDS (VOCs)					
Bromomethane	ug/L	0.5	<0.40	<0.40	<0.40
Carbon Tetrachloride	ug/L	0.2	<0.19	<0.19	<0.19
Chloroform	ug/L	1	<0.90	<0.90	<0.90
Dichlorobenzene, 1,2-	ug/L	0.55	<0.40	<0.40	<0.40
Dichlorobenzene, 1,4-	ug/L	0.5	<0.40	<0.40	<0.40
Dichloroethane, 1,1-	ug/L	0.5	<0.40	<0.40	<0.40
Dichloroethane, 1,2-	ug/L	0.5	<0.40	<0.40	<0.40
Dichloroethylene, 1,1-	ug/L	0.5	<0.40	<0.40	<0.40
Dichloroethylene, 1,2-cis-	ug/L	0.5	<0.40	<0.40	<0.40
Dichloroethylene, 1,2-trans-	ug/L	0.5	<0.40	<0.40	<0.40
Dichloropropane, 1,2-	ug/L	0.5	<0.40	<0.40	<0.40
Dichloropropene,1,3-cis	ug/L	0.5	<0.30	<0.30	<0.30
Dichloropropene,1,3-trans	ug/L	0.5	<0.30	<0.30	<0.30
Dichloropropene,1,3-	ug/L	0.5	<0.42	<0.42	<0.42
Ethylene dibromide	ug/L	0.2	<0.19	<0.19	<0.19
Tetrachloroethane, 1,1,1,2-	ug/L	0.5	<0.40	<0.40	<0.40
Tetrachloroethane, 1,1,2,2-	ug/L	0.5	<0.40	<0.40	<0.40
Tetrachloroethylene	ug/L	0.5	<0.40	<0.40	<0.40
Trichloroethane, 1,1,2-	ug/L	0.5	<0.40	<0.40	<0.40
Trichloroethylene	ug/L	0.5	<0.40	<0.40	<0.40

Table 1: Leachate Screening Levels for Excess Soil Reuse
Non-Agricultural Property-Use, Any Soil Texture

-	Not analyzed
m bg	meters below grade
ppm	parts per million by volume
% LEL	percent of the lower explosive limit
NV	No Value; no standard established
NA	Not Applicable; no standard established because a standard is not required
Value	Exceeds applicable site condition standard
Value	Detection limit exceeds standard

ATTACHMENT A
BOREHOLE LOGS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-02

SHEET 1 OF 1

LOCATION: N 5026359.3 ;E 361297.8

BORING DATE: September 21, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400)	HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) WATER CONTENT PERCENT Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0		GROUND SURFACE		65.46								
		ASPHALT		0.00								Flush Mount Casing
		FILL - (SW) gravelly SAND, angular; grey (PAVEMENT STRUCTURE); non-cohesive, moist		65.16 0.30	1	SS	22	ND				
	Power Auger 200 mm Diam. (Hollow Stem)	FILL - (SP) SAND, fine to medium, trace silt; brown; non-cohesive, moist, compact to dense			2	SS	31	ND			Metals	
1				64.24								
		FILL - (SM/GP) SILTY SAND and GRAVEL; dark brown, contains brick fragments and rootlets; non-cohesive, moist, compact		1.22	3	SS	10	ND				
				63.63								
2		Highly weathered BEDROCK		1.83	4	SS	>84	ND				Bentonite Seal
					5	SS	>50	ND			PHCs, VOCs	
3				62.41								
	Air Hammer H Bit	BEDROCK (Auger Refusal) (Air hammer from 3.05 M TO 7.62 M)		3.05								
4												Silica Sand
5												
6												50 mm Diam. PVC #10 Slot Screen
7				57.84								
		End of Borehole		7.62								
8		Note(s):										
		1. Water level at BH21-03 measured at a depth of 3.17 m (Elev. 62.28 m) on October 4, 2021										
		2. Record of borehole log not prepared for geotechnical engineering purposes										
9												
10												

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DG

CHECKED: AG

PROJECT: 21494078

RECORD OF BOREHOLE: 21-03

SHEET 1 OF 1

LOCATION: N 5026355.1 ;E 361289.2

BORING DATE: September 21 & 22, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp W Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0	Power Auger 200 mm Diam. (Hollow Stem)	GROUND SURFACE		65.24							
		ASPHALT		0.08							Flush Mount Casing
		FILL - (SW) gravelly SAND, angular; grey (PAVEMENT STRUCTURE); non-cohesive, moist		64.63	1	SS	43	ND		VOCs	
1		FILL - (SP) SAND, fine to medium, trace silt; brown; non-cohesive, moist, dense		0.61	2	SS	31	ND		PHCs	
		FILL - (SM) SILTY SAND, some topsoil, trace gravel; dark brown, contains shale fragments; non-cohesive, moist, compact		64.02 1.22	3	SS	12	ND		Metals	
2		Highly weathered BEDROCK		63.41 1.83	4	SS	>94	ND			Bentonite Seal
					5	SS	52/ 6"				
3	Air Hammer H Bit	BEDROCK (Auger Refusal) (Air hammer from 3.05 m to 7.62 m)		62.19 3.05							
4											
5											Silica Sand
6											50 mm Diam. PVC #10 Slot Screen
7				57.62							
		End of Borehole		7.62							
8		Note(s):									
		1. Water level at BH21-03 measured at a depth of 3.56 m (Elev. 61.68 m) on October 4, 2021									
9		2. Record of borehole log not prepared for geotechnical engineering purposes									
10											

DEPTH SCALE

1 : 50

GOLDER

LOGGED: DG

CHECKED: AG

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-13

SHEET 1 OF 1

LOCATION: N 5026364.0 ;E 361291.0

BORING DATE: November 11, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLES: NUMBER	TYPE	BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ (ND = Not Detected; 100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ (ND = Not Detected; 100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT (Wp — W — Wl; 20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		GROUND SURFACE		64.86							
0	Power Auger Geoprobe	GRAVEL		0.00							
				64.56							
		(SP) SAND; brown; non-cohesive, dry		0.30	1	SS		ND			
1					2	SS		ND		Metals	
				63.18							
		Soft, crushed, LIMESTONE		1.68	3	SS		ND		Metals	
2				62.73							
		End of Borehole Upon Refusal		2.13							
		Note(s): 1. Record of borehole log not prepared for geotechnical engineering purposes									
3											
4											
5											
6											
7											
8											
9											
10											

DEPTH SCALE
1 : 50

GOLDER

LOGGED: AB
CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

PROJECT: 21494078

RECORD OF BOREHOLE: 21-22

SHEET 1 OF 1

LOCATION: N 5026381.4 ;E 361298.9

BORING DATE: December 21, 2021

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES NUMBER	SAMPLES TYPE	SAMPLES BLOWS/0.30m	HEADSPACE COMBUSTIBLE VAPOUR CONCENTRATIONS [PPM] ⊕ ND = Not Detected (100 200 300 400) / HEADSPACE ORGANIC VAPOUR CONCENTRATIONS [PPM] □ ND = Not Detected (100 200 300 400)	HYDRAULIC CONDUCTIVITY, k, cm/s (10^{-6} 10^{-5} 10^{-4} 10^{-3}) / WATER CONTENT PERCENT Wp — W — Wl (20 40 60 80)	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0	Power Auger Geoprobe	GROUND SURFACE		64.62							
		ASPHALT		0.00							
		SAND; brown; non-cohesive, moist		0.15	1	SS		ND			Bentonite
1				63.10							Silica Sand
		SAND; brown; non-cohesive, moist		1.52	2	SS		ND			
2				62.18							
		SILT, trace sand; grey brown; non-cohesive, moist		2.44	3	SS		⊕ □ ND			PVC #10 Slot Screen
		BEDROCK		61.88 2.74							
3											
4				60.35							
		End of Borehole		4.27							
5		Note(s):									
		1. Water level at BH21-22 measured at a depth of 2.72 m (Elev. 61.90 m) on December 22, 2021									
		2. Record of borehole log not prepared for geotechnical engineering purposes									
6											
7											
8											
9											
10											

DEPTH SCALE
1 : 50

GOLDER

LOGGED: DS
CHECKED: DS

MIS-BHS 001 21494078.GPJ GAL-MIS.GDT 3/3/22 ZS

CLIENT: FENGATE ASSET MANAGEMENT	PROJECT NO.: CO972.00	**RECORD OF: BH101**
ADDRESS: 1047 RICHMOND ROAD	STATION:	
CITY/PROVINCE: OTTAWA, ONTARIO	NORTHING (m): 5024914.77	EASTING (m): 439032.85 ELEV. (m) 64.49
CONTRACTOR: STRATA	METHOD: DIRECT PUSH	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm): -	SCREEN SLOT #: - SAND TYPE: - SEALANT TYPE: -

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON | GRAB

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) 40 80 120 160 / N-VALUE (Blows/300mm) 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		ASPHALT (150mm)	0										
		moist, brown SAND	0.5	64			1			15			mSPLP: VOCs, thallium silver and molybdenum
		moist, dark brown SILTY SAND trace gravel	1	63.5			2			5			Bulk: VOCs and PHC F1-F4
			1.5	63									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: SH	DRILLING DATE: 12-JUL-24
INPUT BY: SW	MONITORING DATE: -
REVIEWED BY: GS	PAGE 1 OF 1

CLIENT: FENGATE ASSET MANAGEMENT	PROJECT NO.: CO972.00	**RECORD OF: BH102**
ADDRESS: 1047 RICHMOND ROAD	STATION:	
CITY/PROVINCE: OTTAWA, ONTARIO	NORTHING (m): 5024908.78	EASTING (m): 439029.80 ELEV. (m) 64.66
CONTRACTOR: STRATA	METHOD: DIRECT PUSH	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm): -	SCREEN SLOT #: - SAND TYPE: - SEALANT TYPE: -

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON | GRAB

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) 40 80 120 160 / N-VALUE (Blows/300mm) 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		ASPHALT (150mm)	0	64.5									
		moist, brown SAND	0.5	64			1			<5			mSPLP: VOCs, thallium silver and molybdenum
		moist, dark brown SILTY SAND trace gravel	1	63.5			2			<5			Bulk: VOCs and PHC F1-F4
		END OF BOREHOLE	1.5										

TERRAPEX

LOGGED BY: SH	DRILLING DATE: 12-JUL-24
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REVIEWED BY: GS	PAGE 1 OF 1

CLIENT: FENGATE ASSET MANAGEMENT	PROJECT NO.: CO972.00	**RECORD OF: BH103**
ADDRESS: 1047 RICHMOND ROAD	STATION:	
CITY/PROVINCE: OTTAWA, ONTARIO	NORTHING (m): 5024905.95	EASTING (m): 439032.41 ELEV. (m) 64.82
CONTRACTOR: STRATA	METHOD: DIRECT PUSH	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm): -	SCREEN SLOT #: - SAND TYPE: - SEALANT TYPE: -

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON | GRAB

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) 40 80 120 160 / N-VALUE (Blows/300mm) 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		ASPHALT (150mm)	0										
		moist, brown SAND	0.5	64.5			1			<5			Bulk: PHC F2-F4 mSPLP: VOCs, thallium silver and molybdenum
			1	64									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: SH	DRILLING DATE: 12-JUL-24
INPUT BY: SW	MONITORING DATE: -
REVIEWED BY: GS	PAGE 1 OF 1

ATTACHMENT B
CERTIFICATE OF ANALYSIS

Your Project #: CO972.00
Site Location: 1047 RICHMOND ROAD, OTTAWA
Your C.O.C. #: N/A

Attention: Keith Brown

Terrapex Environmental Ltd
20 Gurdwara Road
Unit 1
Ottawa, ON
CANADA K2E 8B3

Report Date: 2024/07/18
Report #: R8239464
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4L5498
Received: 2024/07/15, 16:07

Sample Matrix: Soil
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
1,3-Dichloropropene Sum (1)	2	N/A	2024/07/17		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Soil (1, 2)	3	2024/07/16	2024/07/17	CAM SOP-00316	CCME CWS m
Moisture (1)	3	N/A	2024/07/16	CAM SOP-00445	Carter 2nd ed 70.2 m
Volatile Organic Compounds and F1 PHCs (1)	2	N/A	2024/07/17	CAM SOP-00230	EPA 8260C m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following “Alberta Environment’s Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003”. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Your Project #: CO972.00
Site Location: 1047 RICHMOND ROAD, OTTAWA
Your C.O.C. #: N/A

Attention: Keith Brown

Terrapex Environmental Ltd
20 Gurdwara Road
Unit 1
Ottawa, ON
CANADA K2E 8B3

Report Date: 2024/07/18
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CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4L5498
Received: 2024/07/15, 16:07

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Katherine Szozda, Project Manager
Email: Katherine.Szozda@bureauveritas.com
Phone# (613)274-0573 Ext:7063633

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID		ZSP612	ZSP613			ZSP613		
Sampling Date		2024/07/12 02:40	2024/07/12 02:55			2024/07/12 02:55		
COC Number		N/A	N/A			N/A		
	UNITS	BH101-2	BH102-2	RDL	QC Batch	BH102-2 Lab-Dup	RDL	QC Batch
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	9516843			
Volatile Organics								
Acetone (2-Propanone)	ug/g	<0.49	<0.49	0.49	9519624	<0.49	0.49	9519624
Benzene	ug/g	<0.0060	<0.0060	0.0060	9519624	<0.0060	0.0060	9519624
Bromodichloromethane	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
Bromoform	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
Bromomethane	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
Carbon Tetrachloride	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
Chlorobenzene	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
Chloroform	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
Dibromochloromethane	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
1,1-Dichloroethane	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
1,2-Dichloroethane	ug/g	<0.049	<0.049	0.049	9519624	<0.049	0.049	9519624
1,1-Dichloroethylene	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
1,2-Dichloropropane	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	9519624	<0.030	0.030	9519624
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
Ethylbenzene	ug/g	<0.010	<0.010	0.010	9519624	<0.010	0.010	9519624
Ethylene Dibromide	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
Hexane	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	0.049	9519624	<0.049	0.049	9519624
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	0.40	9519624	<0.40	0.40	9519624
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	0.40	9519624	<0.40	0.40	9519624
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID		ZSP612	ZSP613			ZSP613		
Sampling Date		2024/07/12 02:40	2024/07/12 02:55			2024/07/12 02:55		
COC Number		N/A	N/A			N/A		
	UNITS	BH101-2	BH102-2	RDL	QC Batch	BH102-2 Lab-Dup	RDL	QC Batch
Styrene	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
Tetrachloroethylene	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
Toluene	ug/g	<0.020	<0.020	0.020	9519624	<0.020	0.020	9519624
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
Trichloroethylene	ug/g	<0.010	<0.010	0.010	9519624	<0.010	0.010	9519624
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	0.040	9519624	<0.040	0.040	9519624
Vinyl Chloride	ug/g	<0.019	<0.019	0.019	9519624	<0.019	0.019	9519624
p+m-Xylene	ug/g	<0.020	<0.020	0.020	9519624	<0.020	0.020	9519624
o-Xylene	ug/g	<0.020	<0.020	0.020	9519624	<0.020	0.020	9519624
Total Xylenes	ug/g	<0.020	<0.020	0.020	9519624	<0.020	0.020	9519624
F1 (C6-C10)	ug/g	<10	<10	10	9519624	<10	10	9519624
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	9519624	<10	10	9519624
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	9519036			
F3 (C16-C34 Hydrocarbons)	ug/g	<50	52	50	9519036			
F4 (C34-C50 Hydrocarbons)	ug/g	<50	120	50	9519036			
Reached Baseline at C50	ug/g	Yes	Yes		9519036			
Surrogate Recovery (%)								
o-Terphenyl	%	90	89		9519036			
4-Bromofluorobenzene	%	101	100		9519624	102		9519624
D10-o-Xylene	%	94	93		9519624	94		9519624
D4-1,2-Dichloroethane	%	105	106		9519624	108		9519624
D8-Toluene	%	91	91		9519624	85		9519624

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Job #: C4L5498
Report Date: 2024/07/18

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD, OTTAWA
Sampler Initials: SH

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		ZSP612	ZSP613	ZSP614		
Sampling Date		2024/07/12 02:40	2024/07/12 02:55	2024/07/12 03:05		
COC Number		N/A	N/A	N/A		
	UNITS	BH101-2	BH102-2	BH103-1	RDL	QC Batch
Inorganics						
Moisture	%	14	18	17	1.0	9518262

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		ZSP614		
Sampling Date		2024/07/12 03:05		
COC Number		N/A		
	UNITS	**BH103-1**	**RDL**	**QC Batch**
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	9519036
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	9519036
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	9519036
Reached Baseline at C50	ug/g	Yes		9519036
Surrogate Recovery (%)				
o-Terphenyl	%	90		9519036

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Job #: C4L5498
Report Date: 2024/07/18

Terrapex Environmental Ltd
Client Project #: CO972.00
Site Location: 1047 RICHMOND ROAD, OTTAWA
Sampler Initials: SH

TEST SUMMARY

Bureau Veritas ID: ZSP612 **Collected:** 2024/07/12
Sample ID: BH101-2 **Shipped:**
Matrix: Soil **Received:** 2024/07/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9516843	N/A	2024/07/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9519036	2024/07/16	2024/07/17	Ksenia Trofimova
Moisture	BAL	9518262	N/A	2024/07/16	Raj Patel
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9519624	N/A	2024/07/17	Juan Pangilinan

Bureau Veritas ID: ZSP613 **Collected:** 2024/07/12
Sample ID: BH102-2 **Shipped:**
Matrix: Soil **Received:** 2024/07/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9516843	N/A	2024/07/17	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9519036	2024/07/16	2024/07/17	Ksenia Trofimova
Moisture	BAL	9518262	N/A	2024/07/16	Raj Patel
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9519624	N/A	2024/07/17	Juan Pangilinan

Bureau Veritas ID: ZSP613 Dup **Collected:** 2024/07/12
Sample ID: BH102-2 **Shipped:**
Matrix: Soil **Received:** 2024/07/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9519624	N/A	2024/07/17	Juan Pangilinan

Bureau Veritas ID: ZSP614 **Collected:** 2024/07/12
Sample ID: BH103-1 **Shipped:**
Matrix: Soil **Received:** 2024/07/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9519036	2024/07/16	2024/07/17	Ksenia Trofimova
Moisture	BAL	9518262	N/A	2024/07/16	Raj Patel

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	10.7°C

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9519036	o-Terphenyl	2024/07/17	92	60 - 130	97	60 - 130	90	%		
9519624	4-Bromofluorobenzene	2024/07/17	100	60 - 140	101	60 - 140	101	%		
9519624	D10-o-Xylene	2024/07/17	116	60 - 130	101	60 - 130	90	%		
9519624	D4-1,2-Dichloroethane	2024/07/17	107	60 - 140	101	60 - 140	103	%		
9519624	D8-Toluene	2024/07/17	101	60 - 140	109	60 - 140	92	%		
9518262	Moisture	2024/07/16							3.7	20
9519036	F2 (C10-C16 Hydrocarbons)	2024/07/17	97	60 - 130	104	80 - 120	<10	ug/g	NC	30
9519036	F3 (C16-C34 Hydrocarbons)	2024/07/17	93	60 - 130	98	80 - 120	<50	ug/g	NC	30
9519036	F4 (C34-C50 Hydrocarbons)	2024/07/17	93	60 - 130	96	80 - 120	<50	ug/g	NC	30
9519624	1,1,1,2-Tetrachloroethane	2024/07/17	101	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
9519624	1,1,1-Trichloroethane	2024/07/17	101	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
9519624	1,1,2,2-Tetrachloroethane	2024/07/17	101	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
9519624	1,1,2-Trichloroethane	2024/07/17	105	60 - 140	106	60 - 130	<0.040	ug/g	NC	50
9519624	1,1-Dichloroethane	2024/07/17	100	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9519624	1,1-Dichloroethylene	2024/07/17	102	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
9519624	1,2-Dichlorobenzene	2024/07/17	102	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
9519624	1,2-Dichloroethane	2024/07/17	102	60 - 140	100	60 - 130	<0.049	ug/g	NC	50
9519624	1,2-Dichloropropane	2024/07/17	100	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
9519624	1,3-Dichlorobenzene	2024/07/17	101	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
9519624	1,4-Dichlorobenzene	2024/07/17	101	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
9519624	Acetone (2-Propanone)	2024/07/17	103	60 - 140	100	60 - 140	<0.49	ug/g	NC	50
9519624	Benzene	2024/07/17	100	60 - 140	97	60 - 130	<0.0060	ug/g	NC	50
9519624	Bromodichloromethane	2024/07/17	99	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
9519624	Bromoform	2024/07/17	100	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9519624	Bromomethane	2024/07/17	89	60 - 140	88	60 - 140	<0.040	ug/g	NC	50
9519624	Carbon Tetrachloride	2024/07/17	101	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
9519624	Chlorobenzene	2024/07/17	98	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9519624	Chloroform	2024/07/17	100	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
9519624	cis-1,2-Dichloroethylene	2024/07/17	102	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9519624	cis-1,3-Dichloropropene	2024/07/17	92	60 - 140	93	60 - 130	<0.030	ug/g	NC	50
9519624	Dibromochloromethane	2024/07/17	99	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9519624	Dichlorodifluoromethane (FREON 12)	2024/07/17	87	60 - 140	84	60 - 140	<0.040	ug/g	NC	50

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9519624	Ethylbenzene	2024/07/17	98	60 - 140	100	60 - 130	<0.010	ug/g	NC	50
9519624	Ethylene Dibromide	2024/07/17	98	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9519624	F1 (C6-C10) - BTEX	2024/07/17					<10	ug/g	NC	30
9519624	F1 (C6-C10)	2024/07/17	86	60 - 140	88	80 - 120	<10	ug/g	NC	30
9519624	Hexane	2024/07/17	112	60 - 140	108	60 - 130	<0.040	ug/g	NC	50
9519624	Methyl Ethyl Ketone (2-Butanone)	2024/07/17	99	60 - 140	97	60 - 140	<0.40	ug/g	NC	50
9519624	Methyl Isobutyl Ketone	2024/07/17	81	60 - 140	82	60 - 130	<0.40	ug/g	NC	50
9519624	Methyl t-butyl ether (MTBE)	2024/07/17	94	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
9519624	Methylene Chloride(Dichloromethane)	2024/07/17	98	60 - 140	92	60 - 130	<0.049	ug/g	NC	50
9519624	o-Xylene	2024/07/17	100	60 - 140	103	60 - 130	<0.020	ug/g	NC	50
9519624	p+m-Xylene	2024/07/17	98	60 - 140	100	60 - 130	<0.020	ug/g	NC	50
9519624	Styrene	2024/07/17	80	60 - 140	81	60 - 130	<0.040	ug/g	NC	50
9519624	Tetrachloroethylene	2024/07/17	104	60 - 140	104	60 - 130	<0.040	ug/g	NC	50
9519624	Toluene	2024/07/17	95	60 - 140	102	60 - 130	<0.020	ug/g	NC	50
9519624	Total Xylenes	2024/07/17					<0.020	ug/g	NC	50
9519624	trans-1,2-Dichloroethylene	2024/07/17	102	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9519624	trans-1,3-Dichloropropene	2024/07/17	96	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
9519624	Trichloroethylene	2024/07/17	99	60 - 140	100	60 - 130	<0.010	ug/g	NC	50
9519624	Trichlorofluoromethane (FREON 11)	2024/07/17	105	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
9519624	Vinyl Chloride	2024/07/17	100	60 - 140	95	60 - 130	<0.019	ug/g	NC	50

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

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Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

C4L5498
2024/07/15 16:07

RUSH

Received in Ottawa

www.BVNA.com

6740 Campobello Road, Mississauga, Ontario L5N 2L8
Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266

CHAIN OF CUSTODY RECORD

ENV COC - 00014v5

NONT-2024-07-1601

Invoice Information		Report Information (if differs from Invoice)		Project Information	
Invoice to (requires report) ☐					
Company:	#4398 Terrapex Environmental Ltd.	Company:	#4398 Terrapex Environmental Ltd.	Quotation #:	
Contact Name:	Accounts Payable	Contact Name:	Keith Brown	P.O. #/ AFE#:	
Street Address:	90 Scarsdale Rd.	Street Address:	20 Gurdwara Rd., Unit 1	Project #:	CO972.00
City: Toronto Prov: ON Postal Code:	M3B2R7	City: Ottawa Prov: ON Postal Code:	K2E8B3	Site #:	
Phone:	416-245-0011	Phone:	613-745-6471	Site Location:	1047 Richmond Road, Ottawa
Email:	accounts.payable@terrapex.com	Email:	k.brown@terrapex.com	Site Location Province:	Ontario
Copies:		Copies:		Sampled By:	SH

Regulatory Criteria

REG 153: ☐ Table 1 ☐ Table 2 ☐ Table 3 ☒ Table 7 — ☒ Res/Park ☐ Ind/Comm ☐ Agri/other — ☐ Med/Fine ☒ Coarse ☒ For RSC

OTHER: ☐ CCME ☐ Reg 558* *min 3 day TAT ☐ MISA ☐ PWQO — ☐ Reg 406, Table: ☐ Sanitary Sewer Bylaw ☐ Storm Sewer Bylaw Municipality ☐ Other:

Include Criteria on Certificate of Analysis (check if yes): ☐

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Regular Turnaround Time (TAT)

☐ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply

☐ Same Day ☐ 1 Day ☐ 2 Day ☒ 3 Day ☐ 4 Day

Date Required: YYYY 2024 MM 07 DD 18

Comments

	Sample Identification (Please print or Type)	Date Sampled YYYY	MM	DD	Time (24hr) HH	MM	Matrix	FIELD FILTERED	FIELD PRESERVED	LAB FILTRATION REQUIRED	BTEX/ F1	F2 - F4	VOCs	Reg 153 metals and inorganics	Reg 153 ICPMS metals	Reg 153 metals (Hg, Cr VI, ICPMS metals, HWS - B)	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	BH101-2	24	07	12	2	46	Soil	–	–	–	X	X	X				3	
2	BH102-2	24	07	12	2	55	Soil	–	–	–	X	X	X				3	
3	BH103-1	24	07	12	3	05	Soil	–	–	–		X					3	
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

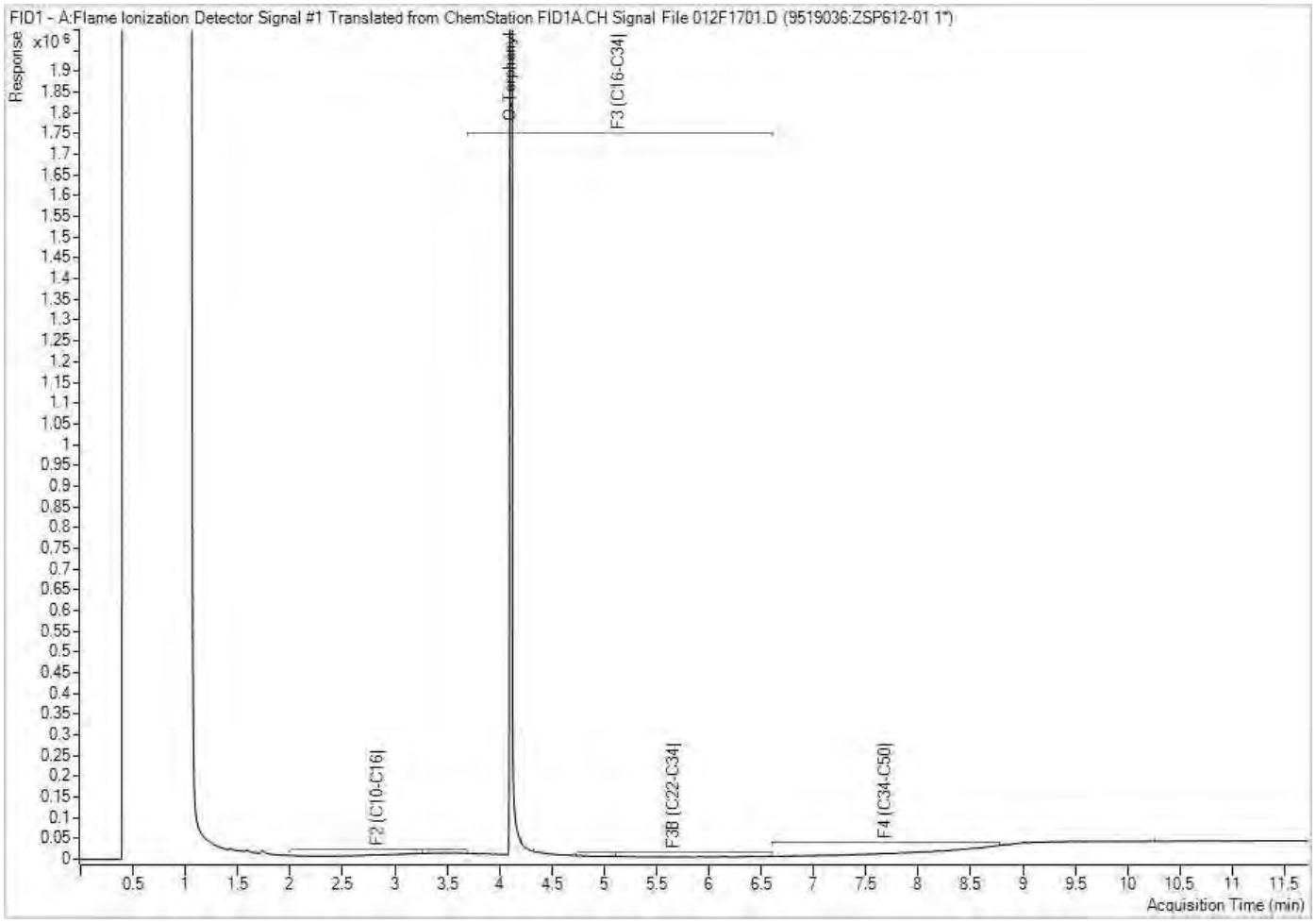
LAB USE ONLY	Yes	No	°C				LAB USE ONLY	Yes	No	°C				LAB USE ONLY	Yes	No	°C				Temperature reading by:
Seal present		✓					Seal present							Seal present							
Seal intact TLE		–					Seal intact							Seal intact							
Cooling media present	✓			11	11	10	Cooling media present				10	9	16	Cooling media present				1	2	3	
				1	2	3					1	2	3								

Relinquished by: (Signature/ Print)	Date YYYY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YYYY	MM	DD	Time HH	MM	Special Instructions
1	2024	07	15	3	55	1 Dinesh Ranchhodbhai	2024	07	15	16	07	
2 Keith Brown						2 SUGAM SALVAM	2024	07	16	08	01	

Bureau Veritas Job #: C4L5498
Report Date: 2024/07/18
Bureau Veritas Sample: ZSP612

Terrapex Environmental Ltd
Client Project #: CO972.00
Project name: 1047 RICHMOND ROAD, OTTAWA
Client ID: BH101-2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

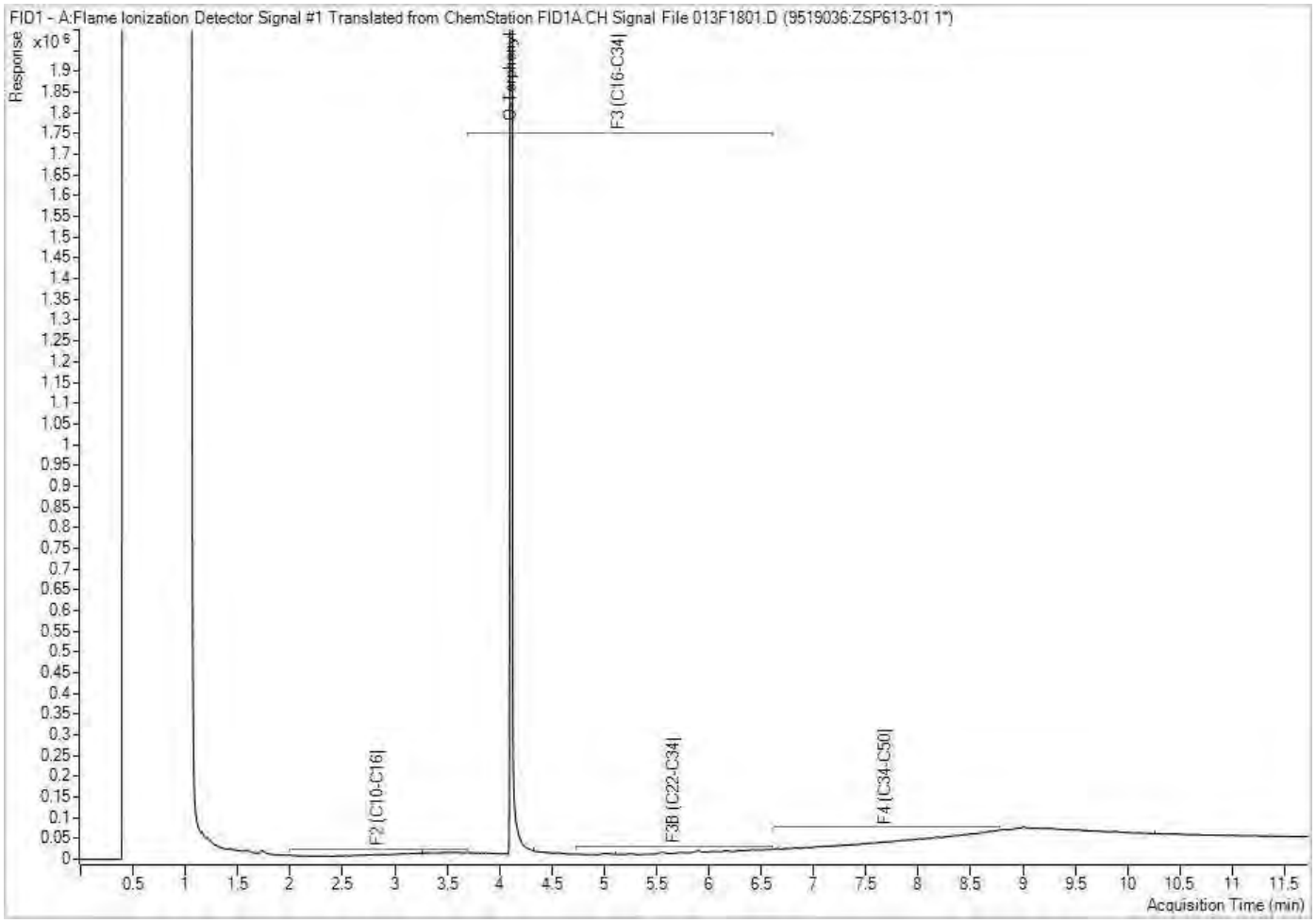


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C4L5498
Report Date: 2024/07/18
Bureau Veritas Sample: ZSP613

Terrapex Environmental Ltd
Client Project #: CO972.00
Project name: 1047 RICHMOND ROAD, OTTAWA
Client ID: BH102-2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

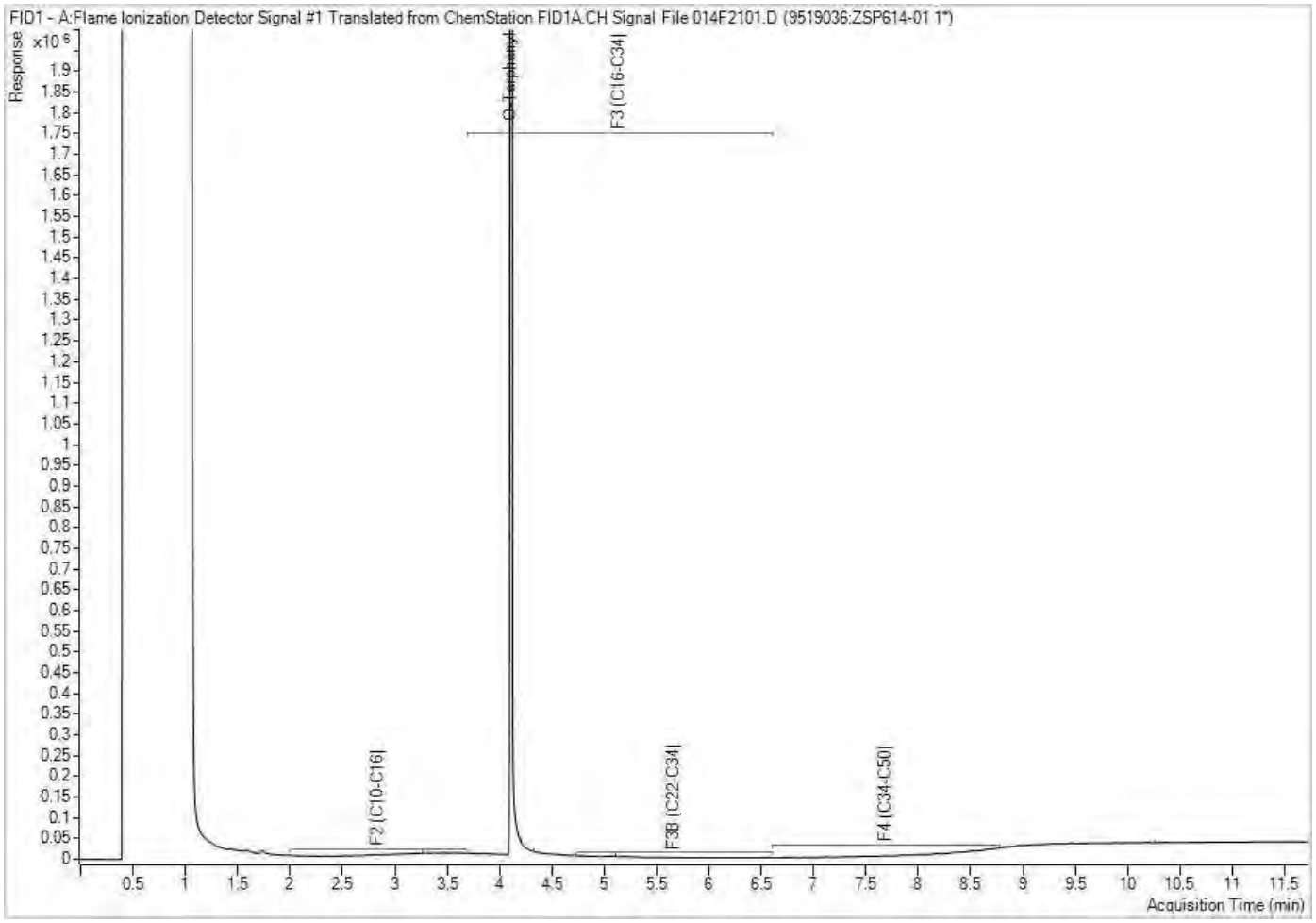


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C4L5498
Report Date: 2024/07/18
Bureau Veritas Sample: ZSP614

Terrapex Environmental Ltd
Client Project #: CO972.00
Project name: 1047 RICHMOND ROAD, OTTAWA
Client ID: BH103-1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: CO972.00
Site Location: 1047 RICHMOND ROAD, OTTAWA
Your C.O.C. #: N/A

Attention: Keith Brown

Terrapex Environmental Ltd
20 Gurdwara Road
Unit 1
Ottawa, ON
CANADA K2E 8B3

Report Date: 2024/07/18
Report #: R8240278
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4L5502
Received: 2024/07/15, 16:07

Sample Matrix: Soil
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
1,3-Dichloropropene Sum (1)	3	N/A	2024/07/18		EPA 8260D m
Total Metals in SPLP Leachate by ICPMS (1)	3	2024/07/18	2024/07/18	CAM SOP-00447	EPA 6020B m
Modified SPLP extraction - Weight (1)	3	N/A	2024/07/17	CAM SOP-00941	OMOECP LaSB E9003 R3
SPLP Zero Headspace Extraction (1)	3	2024/07/16	2024/07/17	CAM SOP-00430	EPA 1312 m
Volatile organics in SPLP leachates (1)	3	N/A	2024/07/18	CAM SOP-00228	EPA 8260D m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8

Your Project #: CO972.00
Site Location: 1047 RICHMOND ROAD, OTTAWA
Your C.O.C. #: N/A

Attention: Keith Brown

Terrapex Environmental Ltd
20 Gurdwara Road
Unit 1
Ottawa, ON
CANADA K2E 8B3

Report Date: 2024/07/18
Report #: R8240278
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4L5502
Received: 2024/07/15, 16:07

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Katherine Szozda, Project Manager
Email: Katherine.Szozda@bureauveritas.com
Phone# (613)274-0573 Ext:7063633

==========

This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

O.REG 406 EXCESS SOIL SPLP METALS (SOIL)

Bureau Veritas ID		ZSP626	ZSP627	ZSP628		
Sampling Date		2024/07/12 02:30	2024/07/12 02:50	2024/07/12 03:05		
COC Number		N/A	N/A	N/A		
	UNITS	BH101-1	BH102-1	BH103-1	RDL	QC Batch
Metals						
Leachable (SPLP) Molybdenum (Mo)	ug/L	2	2	2	1	9522222
Leachable (SPLP) Silver (Ag)	ug/L	<0.1	<0.1	<0.1	0.1	9522222
Leachable (SPLP) Thallium (Tl)	ug/L	<0.05	<0.05	<0.05	0.05	9522222

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

O.REG 406 EXCESS SOIL MSPLP PREP (SOIL)

Bureau Veritas ID		ZSP626	ZSP627	ZSP628	
Sampling Date		2024/07/12 02:30	2024/07/12 02:50	2024/07/12 03:05	
COC Number		N/A	N/A	N/A	
	UNITS	BH101-1	BH102-1	BH103-1	QC Batch
Inorganics					
Dry Weight	g	100	100	100	9517500

QC Batch = Quality Control Batch

O.REG 406 EXCESS SOIL SPLP VOCS (SOIL)

Bureau Veritas ID		ZSP626			ZSP626			ZSP627		
Sampling Date		2024/07/12 02:30			2024/07/12 02:30			2024/07/12 02:50		
COC Number		N/A			N/A			N/A		
	UNITS	BH101-1	RDL	QC Batch	BH101-1 Lab-Dup	RDL	QC Batch	BH102-1	RDL	QC Batch
Charge/Prep Analysis										
Amount Extracted (Wet Weight) (g)	N/A	25	N/A	9517840	25	N/A	9517840	25	N/A	9517840
Calculated Parameters										
Leachable (ZHE) 1,3-Dichloropropene (cis+trans)	ug/L	<0.42	0.42	9517102				<0.42	0.42	9517102
Volatile Organics										
Leachable (SPLP) Bromomethane	ug/L	<0.40	0.40	9520731	<0.40	0.40	9520731	<0.40	0.40	9520731
Leachable (SPLP) Carbon Tetrachloride	ug/L	<0.19	0.19	9520731	<0.19	0.19	9520731	<0.19	0.19	9520731
Leachable (SPLP) Chloroform	ug/L	<0.90	0.90	9520731	<0.90	0.90	9520731	<0.90	0.90	9520731
Leachable (SPLP) 1,2-Dichlorobenzene	ug/L	<0.40	0.40	9520731	<0.40	0.40	9520731	<0.40	0.40	9520731
Leachable (SPLP) 1,4-Dichlorobenzene	ug/L	<0.40	0.40	9520731	<0.40	0.40	9520731	<0.40	0.40	9520731
Leachable (SPLP) 1,1-Dichloroethane	ug/L	<0.40	0.40	9520731	<0.40	0.40	9520731	<0.40	0.40	9520731
Leachable (SPLP) 1,2-Dichloroethane	ug/L	<0.40	0.40	9520731	<0.40	0.40	9520731	<0.40	0.40	9520731
Leachable (SPLP) 1,1-Dichloroethylene	ug/L	<0.40	0.40	9520731	<0.40	0.40	9520731	<0.40	0.40	9520731
Leachable (SPLP) cis-1,2-Dichloroethylene	ug/L	<0.40	0.40	9520731	<0.40	0.40	9520731	<0.40	0.40	9520731
Leachable (SPLP) trans-1,2-Dichloroethylene	ug/L	<0.40	0.40	9520731	<0.40	0.40	9520731	<0.40	0.40	9520731
Leachable (SPLP) 1,2-Dichloropropane	ug/L	<0.40	0.40	9520731	<0.40	0.40	9520731	<0.40	0.40	9520731
Leachable (SPLP) cis-1,3-Dichloropropene	ug/L	<0.30	0.30	9520731	<0.30	0.30	9520731	<0.30	0.30	9520731
Leachable (SPLP) trans-1,3-Dichloropropene	ug/L	<0.30	0.30	9520731	<0.30	0.30	9520731	<0.30	0.30	9520731
Leachable (SPLP) Ethylene Dibromide	ug/L	<0.19	0.19	9520731	<0.19	0.19	9520731	<0.19	0.19	9520731
Leachable (SPLP) 1,1,1,2-Tetrachloroethane	ug/L	<0.40	0.40	9520731	<0.40	0.40	9520731	<0.40	0.40	9520731
Leachable (SPLP) 1,1,2,2-Tetrachloroethane	ug/L	<0.40	0.40	9520731	<0.40	0.40	9520731	<0.40	0.40	9520731
Leachable (SPLP) Tetrachloroethylene	ug/L	<0.40	0.40	9520731	<0.40	0.40	9520731	<0.40	0.40	9520731
Leachable (SPLP) 1,1,2-Trichloroethane	ug/L	<0.40	0.40	9520731	<0.40	0.40	9520731	<0.40	0.40	9520731
Leachable (SPLP) Trichloroethylene	ug/L	<0.40	0.40	9520731	<0.40	0.40	9520731	<0.40	0.40	9520731
Surrogate Recovery (%)										
Leachable (SPLP) 4-Bromofluorobenzene	%	104		9520731	106		9520731	103		9520731
Leachable (SPLP) D4-1,2-Dichloroethane	%	108		9520731	106		9520731	108		9520731
Leachable (SPLP) D8-Toluene	%	94		9520731	92		9520731	94		9520731

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

O.REG 406 EXCESS SOIL SPLP VOCS (SOIL)

Bureau Veritas ID		ZSP628		
Sampling Date		2024/07/12 03:05		
COC Number		N/A		
	UNITS	BH103-1	RDL	QC Batch
Charge/Prep Analysis				
Amount Extracted (Wet Weight) (g)	N/A	25	N/A	9517840
Calculated Parameters				
Leachable (ZHE) 1,3-Dichloropropene (cis+trans)	ug/L	<0.42	0.42	9517102
Volatile Organics				
Leachable (SPLP) Bromomethane	ug/L	<0.40	0.40	9520731
Leachable (SPLP) Carbon Tetrachloride	ug/L	<0.19	0.19	9520731
Leachable (SPLP) Chloroform	ug/L	<0.90	0.90	9520731
Leachable (SPLP) 1,2-Dichlorobenzene	ug/L	<0.40	0.40	9520731
Leachable (SPLP) 1,4-Dichlorobenzene	ug/L	<0.40	0.40	9520731
Leachable (SPLP) 1,1-Dichloroethane	ug/L	<0.40	0.40	9520731
Leachable (SPLP) 1,2-Dichloroethane	ug/L	<0.40	0.40	9520731
Leachable (SPLP) 1,1-Dichloroethylene	ug/L	<0.40	0.40	9520731
Leachable (SPLP) cis-1,2-Dichloroethylene	ug/L	<0.40	0.40	9520731
Leachable (SPLP) trans-1,2-Dichloroethylene	ug/L	<0.40	0.40	9520731
Leachable (SPLP) 1,2-Dichloropropane	ug/L	<0.40	0.40	9520731
Leachable (SPLP) cis-1,3-Dichloropropene	ug/L	<0.30	0.30	9520731
Leachable (SPLP) trans-1,3-Dichloropropene	ug/L	<0.30	0.30	9520731
Leachable (SPLP) Ethylene Dibromide	ug/L	<0.19	0.19	9520731
Leachable (SPLP) 1,1,1,2-Tetrachloroethane	ug/L	<0.40	0.40	9520731
Leachable (SPLP) 1,1,2,2-Tetrachloroethane	ug/L	<0.40	0.40	9520731
Leachable (SPLP) Tetrachloroethylene	ug/L	<0.40	0.40	9520731
Leachable (SPLP) 1,1,2-Trichloroethane	ug/L	<0.40	0.40	9520731
Leachable (SPLP) Trichloroethylene	ug/L	<0.40	0.40	9520731
Surrogate Recovery (%)				
Leachable (SPLP) 4-Bromofluorobenzene	%	103		9520731
Leachable (SPLP) D4-1,2-Dichloroethane	%	108		9520731
Leachable (SPLP) D8-Toluene	%	94		9520731

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

TEST SUMMARY

Bureau Veritas ID: ZSP626 **Collected:** 2024/07/12
Sample ID: BH101-1 **Shipped:**
Matrix: Soil **Received:** 2024/07/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9517102	N/A	2024/07/18	Automated Statchk
Total Metals in SPLP Leachate by ICPMS	ICP/MS	9522222	2024/07/18	2024/07/18	Nan Raykha
Modified SPLP extraction - Weight		9517500	N/A	2024/07/17	Jian (Ken) Wang
SPLP Zero Headspace Extraction		9517840	2024/07/16	2024/07/17	Abdul Rahman Mohammed
Volatile organics in SPLP leachates	HS/MS	9520731	N/A	2024/07/18	Mariana Cojocar

Bureau Veritas ID: ZSP626 Dup **Collected:** 2024/07/12
Sample ID: BH101-1 **Shipped:**
Matrix: Soil **Received:** 2024/07/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
SPLP Zero Headspace Extraction		9517840	2024/07/16	2024/07/17	Abdul Rahman Mohammed
Volatile organics in SPLP leachates	HS/MS	9520731	N/A	2024/07/18	Mariana Cojocar

Bureau Veritas ID: ZSP627 **Collected:** 2024/07/12
Sample ID: BH102-1 **Shipped:**
Matrix: Soil **Received:** 2024/07/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9517102	N/A	2024/07/18	Automated Statchk
Total Metals in SPLP Leachate by ICPMS	ICP/MS	9522222	2024/07/18	2024/07/18	Nan Raykha
Modified SPLP extraction - Weight		9517500	N/A	2024/07/17	Jian (Ken) Wang
SPLP Zero Headspace Extraction		9517840	2024/07/16	2024/07/17	Abdul Rahman Mohammed
Volatile organics in SPLP leachates	HS/MS	9520731	N/A	2024/07/18	Mariana Cojocar

Bureau Veritas ID: ZSP628 **Collected:** 2024/07/12
Sample ID: BH103-1 **Shipped:**
Matrix: Soil **Received:** 2024/07/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9517102	N/A	2024/07/18	Automated Statchk
Total Metals in SPLP Leachate by ICPMS	ICP/MS	9522222	2024/07/18	2024/07/18	Nan Raykha
Modified SPLP extraction - Weight		9517500	N/A	2024/07/17	Jian (Ken) Wang
SPLP Zero Headspace Extraction		9517840	2024/07/16	2024/07/17	Abdul Rahman Mohammed
Volatile organics in SPLP leachates	HS/MS	9520731	N/A	2024/07/18	Mariana Cojocar

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	10.7°C

Results relate only to the items tested.

QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
9520731	Leachable (SPLP) 4-Bromofluorobenzene	2024/07/18	107	70 - 130	105	70 - 130	104	%				
9520731	Leachable (SPLP) D4-1,2-Dichloroethane	2024/07/18	107	70 - 130	102	70 - 130	107	%				
9520731	Leachable (SPLP) D8-Toluene	2024/07/18	102	70 - 130	102	70 - 130	94	%				
9520731	Leachable (SPLP) 1,1,1,2-Tetrachloroethane	2024/07/18	110	70 - 130	107	70 - 130	<0.40	ug/L	NC	30		
9520731	Leachable (SPLP) 1,1,2,2-Tetrachloroethane	2024/07/18	110	70 - 130	104	70 - 130	<0.40	ug/L	NC	30		
9520731	Leachable (SPLP) 1,1,2-Trichloroethane	2024/07/18	114	70 - 130	109	70 - 130	<0.40	ug/L	NC	30		
9520731	Leachable (SPLP) 1,1-Dichloroethane	2024/07/18	100	70 - 130	98	70 - 130	<0.40	ug/L	NC	30		
9520731	Leachable (SPLP) 1,1-Dichloroethylene	2024/07/18	94	70 - 130	93	70 - 130	<0.40	ug/L	NC	30		
9520731	Leachable (SPLP) 1,2-Dichlorobenzene	2024/07/18	102	70 - 130	100	70 - 130	<0.40	ug/L	NC	30		
9520731	Leachable (SPLP) 1,2-Dichloroethane	2024/07/18	104	70 - 130	98	70 - 130	<0.40	ug/L	NC	30		
9520731	Leachable (SPLP) 1,2-Dichloropropane	2024/07/18	99	70 - 130	95	70 - 130	<0.40	ug/L	NC	30		
9520731	Leachable (SPLP) 1,4-Dichlorobenzene	2024/07/18	98	70 - 130	99	70 - 130	<0.40	ug/L	NC	30		
9520731	Leachable (SPLP) Bromomethane	2024/07/18	90	60 - 140	86	60 - 140	<0.40	ug/L	NC	30		
9520731	Leachable (SPLP) Carbon Tetrachloride	2024/07/18	111	70 - 130	109	70 - 130	<0.19	ug/L	NC	30		
9520731	Leachable (SPLP) Chloroform	2024/07/18	107	70 - 130	104	70 - 130	<0.90	ug/L	NC	30		
9520731	Leachable (SPLP) cis-1,2-Dichloroethylene	2024/07/18	105	70 - 130	102	70 - 130	<0.40	ug/L	NC	30		
9520731	Leachable (SPLP) cis-1,3-Dichloropropene	2024/07/18	83	70 - 130	79	70 - 130	<0.30	ug/L	NC	30		
9520731	Leachable (SPLP) Ethylene Dibromide	2024/07/18	109	70 - 130	103	70 - 130	<0.19	ug/L	NC	30		
9520731	Leachable (SPLP) Tetrachloroethylene	2024/07/18	106	70 - 130	106	70 - 130	<0.40	ug/L	NC	30		
9520731	Leachable (SPLP) trans-1,2-Dichloroethylene	2024/07/18	107	70 - 130	104	70 - 130	<0.40	ug/L	NC	30		
9520731	Leachable (SPLP) trans-1,3-Dichloropropene	2024/07/18	81	70 - 130	77	70 - 130	<0.30	ug/L	NC	30		
9520731	Leachable (SPLP) Trichloroethylene	2024/07/18	107	70 - 130	105	70 - 130	<0.40	ug/L	NC	30		
9522222	Leachable (SPLP) Molybdenum (Mo)	2024/07/18	101	80 - 120	100	80 - 120	<1	ug/L	NC	35	<1	ug/L
9522222	Leachable (SPLP) Silver (Ag)	2024/07/18	96	80 - 120	96	80 - 120	<0.1	ug/L	NC	35	<0.1	ug/L

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		Leachate Blank	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	Value	UNITS
9522222	Leachable (SPLP) Thallium (Tl)	2024/07/18	99	80 - 120	99	80 - 120	<0.05	ug/L	NC	35	<0.05	ug/L

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Leachate Blank: A blank matrix containing all reagents used in the leaching procedure. Used to determine any process contamination.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

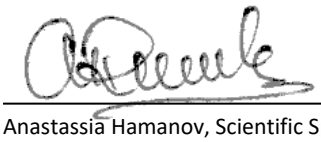
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Anastassia Hamanov, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

C4L5502
2024/07/15 16:07

BUREAU VERITAS
www.BVNA.com

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Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266

RUSH

Received in Ottawa

CHAIN OF CUSTODY RECORD

ENV COC - 00014v5

NONT-2024-07-1602

Invoice Information		Report Information (if differs from invoice)		Project Information	
Invoice to (requires report) ☐					
Company:	#4398 Terrapex Environmental Ltd.	Company:	#4398 Terrapex Environmental Ltd.	Quotation #:	
Contact Name:	Accounts Payable	Contact Name:	Keith Brown	P.O. #/ AFE#:	
Street Address:	90 Scarsdale Rd.	Street Address:	20 Gurdwara Rd., Unit 1	Project #:	CO972.00
City: Toronto Prov: ON Postal Code: M3B2R7		City: Ottawa Prov: ON Postal Code: K2E8B3		Site #:	
Phone:	416-245-0011	Phone:	613-745-6471	Site Location:	1047 Richmond Road, Ottawa
Email:	accounts.payable@terrapex.com	Email:	k.brown@terrapex.com	Site Location Province:	Ontario
Copies:		Copies:		Sampled By:	SH

Regulatory Criteria

REG 153: ☐ Table 1 ☐ Table 2 ☐ Table 3 ☐ Table ____ | ☐ Res/Park ☐ Ind/Comm ☐ Agri/other | ☐ Med/Fine ☐ Coarse ☐ For RSC

OTHER: ☐ CCME ☐ Reg 558* ☐ MISA ☐ PWQO | ☐ Reg 406, Table: ____ ☐ Sanitary Sewer Bylaw ☐ Storm Sewer Bylaw Municipality ____ ☐ Other: | *min 3 day TAT

Include Criteria on Certificate of Analysis (check if yes): ☐

SAMPLES MUST BE KEPT COOL (<10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Regular Turnaround Time (TAT): ☐ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply: ☐ Same Day ☐ 1 Day ☐ 2 Day ☒ 3 Day ☐ 4 Day

Date Required: YYYY 2024 MM 07 DD 18

Comments

	Sample Identification (Please print or Type)	Date Sampled YYYY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX/ F1	5 F2 - F4	6 VOCs	7 Reg 153 metals and inorganics	8 Reg 153 ICPMS metals	9 Reg 153 metals (Hg, Cr VI, ICPMS metals, HWS - B)	10 mSPLP - silver	11 mSPLP - molybdenum	12 mSPLP - thallium	13 mSPLP - VOCs	14	15	16	17	18	19	20	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE
1	BH101-1	24	07	12	2	30	Soil	—	—	—							X	X	X	X								1	
2	BH102-1	24	07	12	2	50	Soil	—	—	—							X	X	X	X								1	
3	BH103-1	24	07	12	3	05	Soil	—	—	—							X	X	X	X								1	
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

*UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS AND CONDITIONS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS OR BY CALLING THE LABORATORY LISTED ABOVE TO OBTAIN A COPY

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present		✓				
Seal Intact ICE		✓				
Cooling media present	✓					
				11	11	10

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present						
Seal Intact						
Cooling media present	✓					
				10	9	10

LAB USE ONLY	Yes	No	°C	1	2	3	Temperature reading by:
Seal present							
Seal Intact							
Cooling media present							

	Relinquished by: (Signature/ Print)	Date YYYY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YYYY	MM	DD	Time HH	MM	Special Instructions
1		2024	07	15	3	55	Dinesh Ranaweera	2024	07	15	16	07	
2	Keith Brown						SUGAR SAZVAKI	2024	07	16	08	01	