



Phase Two Environmental Site Assessment 1820-1846 Bank Street, Ottawa, Ontario

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*Sun Life Assurance Company of Canada c/o BentallGreenOak (Canada) LP
Phase Two Environmental Site Assessment
1820-1846 Bank Street, Ottawa, Ontario
OTT-23002538-B0
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Legal Notification

This report was prepared by EXP Services Inc. for the account of **Sun Life Assurance Company of Canada c/o BentallGreenOak (Canada) LP**.

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Executive Summary

EXP Services Inc. (EXP) was retained by Sun Life Assurance Company of Canada c/o BentallGreenOak (Canada) LP to conduct a Phase Two Environmental Site Assessment (ESA) for the property located at 1820-1846 Bank Street in Ottawa, Ontario (hereinafter referred to as the 'Phase Two property'). At the time of the investigation, the Phase Two property was occupied by a commercial strip mall and associated parking lot.

The objective of the Phase Two ESA investigation was to assess the quality of the soil and groundwater conditions within the areas of potential environmental concern (APEC) identified in a Phase One ESA prepared by EXP. EXP understands that the most recent use of the Phase One property is commercial and that the proposed future use is residential and commercial. Consequently, since the proposed future use of the property is more sensitive than its previous use, a Record of Site Condition (RSC) will be required.

The Phase Two property has the municipal addresses of 1820-1846 Bank Street in Ottawa, Ontario and is located on the northwest corner of the intersection of Bank Street and Walkley Road. The Phase Two property is irregular in shape with an approximate area of 1.74 hectares.

The Phase Two property is occupied by single-storey, slab-on-grade commercial buildings containing multiple units. The building has an approximately footprint of 3,925 square meters (42,240 square feet). As of December 2023, the building tenants included Value Village, Algonquin Careers Academy, Ruby Inn (restaurant), Bel-O-Sol (tanning salon), Savannah Afro Caribbean (retail), and Hera Beauty (retail).

The legal description of the Phase Two property is Part Lot 23, Concession Junction Gore, as in CT131445 and NS95310 Except Parts 16, 17 and 18 on Expropriation NS275909 and Parts 1, 2 and 3 on Plan 5R284; subject to OT55584 Ottawa/Gloucester. The property identification number (PIN) is 040690603.

Multiple previous investigations have been conducted at the Phase Two property. A limited Phase II ESA was conducted by JWEL in 1999 to address the dry-cleaning operations. Concentrations of volatile organic compounds (VOC) in exceedance of the Ministry of the Environment (MOE) applicable standards were present in the groundwater. In addition, the north adjacent property was historically occupied by an industrial plant (Westinghouse), and a dry-cleaning operation and several gas stations and repair garages were identified to the northeast and northwest of the Phase One property. As these operations were located inferred cross-gradient to the site, they were not anticipated to contribute to APEC.

In February 2002, a total of three boreholes were advanced at the site by Trow to approximately 6.4 metres below ground surface. All three of the boreholes were completed as monitoring wells. Subsurface stratigraphy generally consisted of sandy silt fill to approximately 0.6 m bgs, overlying native silty sand with some gravel. Highly fractured shale bedrock was encountered approximately 2.0 to 2.5 m bgs in all three boreholes. It is noted that all of the monitoring wells were installed in the bedrock. A total of three soil samples were submitted for analysis of VOC, and one soil sample was submitted for analysis of polycyclic aromatic hydrocarbons (PAH), and metals. Three groundwater samples were submitted for analysis of VOC, and one groundwater sample was also submitted for analysis of PAH and metals. One soil sample (MW 101), and one groundwater sample (MW 102) exceeded the applicable non-potable criteria for tetrachloroethylene (PCE).

In February 2002, Trow retained a video inspection company to conduct video imaging to assess the integrity of the sewers in/around the dry-cleaning unit. A floor drain was noted in the dry-cleaning unit which connected to the sanitary sewer. The video assessment of the sanitary sewer indicated that the condition of the sanitary sewer in the vicinity of the floor drain/toilet was in suspect condition and may be allowing seepage of wastewater to the subsurface beneath the building. Swab samples were also collected from the sanitary sewer pipe in the vicinity of the dry-cleaning machine and submitted for analysis of VOC. Results of the swab analysis indicated that trichloroethylene (TCE) and PCE were present in the sanitary sewer. It was inferred from these results that the former dry-cleaning machine was connected to the sanitary sewer and discharging waste PCE.

It was noted that a new dry-cleaning machine was installed in March 2002. It was noted that the new unit was self-contained and not connected to the municipal sewers. Waste PCE was stored in tanks that formed part of the machine and was removed from the site by a licensed contractor.

It was recommended that bi-annual groundwater sampling be conducted to monitor the concentrations of VOCs. It was recommended that the floor drain in the vicinity of the dry-cleaning machine be capped, as the new machine was self-contained, and a sewer connection was no longer required. The 1999 JWEL monitoring well was decommissioned to prevent further migration of impacted groundwater.

An enhanced Phase I ESA investigation was conducted in 2013 by Pinchin. Three monitoring wells north of the dry-cleaning unit, and one monitoring well on the east part of the site in the area of the former gas station were sampled as part of this investigation. Groundwater samples were submitted for analysis of VOC and/or petroleum hydrocarbons (PHC). The groundwater samples were compared to the MECP Table 3 site condition standards (SCS) for commercial land use. All of the groundwater samples were within the Table 3 SCS. Based on the results of the groundwater sampling program, it was Pinchin's opinion that none of the on-site operations had resulted in any subsurface impacts. No additional subsurface investigation was recommended by Pinchin. Pinchin noted that, based on the age of the site building, there was potential for asbestos-containing materials to be present in the site-building.

EXP prepared a report entitled *Phase One Environmental Site Assessment, 1820-1846 Bank Street, Ottawa, Ontario*, dated September 30, 2024. The Phase One study area included the entire Phase Two property as well as properties within 250 m of the Phase Two property. Based on the results of the Phase One ESA, EXP identified eleven APECs on the Phase One property. A summary is provided in the table below:

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
#1. Former on-site dry-cleaner	North end of site building	PCA #37 – Operations of dry cleaning equipment (where chemicals are used) (PCA 9)	On-site	VOC	Soil and groundwater
#2. Former on-site gas station	East part of Phase Two property	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 10)	On-site	PHC, VOC, metals	Soil and groundwater
#3. Former on-site rail siding	Northwest part of Phase Two property	PCA #46 – Rail yard, tracks, and spurs (PCA 1)	On-site	PAH, metals	Soil
#4. Fill material	Entire Phase Two property	PCA #30 – Importation of fill material of unknown quality (PCA 20)	On-site	PHC, PAH, metals	Soil
#5. Former dry cleaner at 1800 Bank Street & historical furnace oil leak from UST	Along north property line	PCA #37 – Operations of dry cleaning equipment (where chemicals are used) and PCA #28 – Gasoline and associated products storage in fixed tanks (PCAs 10 & 11)	Off-site	PHC, VOC	Soil and groundwater
#6. Former gas station at 1841 Bank Street	Along southeast property line	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 3)	Off-site	PHC, VOC	Soil and groundwater

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
#7. Repair garage at 1841 Bank Street	Along southeast property line	PCA #10 – Commercial autobody shop (PCA 4)	Off-site	PHC, VOC, metals	Soil and groundwater
#8. Gas station at 1847 Bank Street	Along southeast property line	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 7)	Off-site	PHC, VOC	Soil and groundwater
#9. Former car dealership at 1850 Bank Street	Along south property line	PCA #10 – Commercial autobody shop (PCA 14)	Off-site	PHC, VOC, metals	Soil and groundwater
#10. Former USTs associated with car dealership at 1850 Bank Street	Along south property line	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 15)	Off-site	BTEX, PHC	Soil and groundwater
#11. Former rail line to the west of the site	Along west property line	PCA #46 – Rail yard, tracks, and spurs (PCA 2)	Off-site	PAH, metals	Soil

The Phase Two ESA was conducted in conjunction with a hydrogeological investigation and geotechnical investigation completed by EXP. The scope of work for the Phase Two ESA was as follows:

- Advancing eighteen boreholes on the subject property, and completing ten of them as monitoring wells (five shallow bedrock and five deep bedrock);
- Advancing six probe holes to confirm depth to bedrock in portions of the site;
- Submitting select soil samples for laboratory analysis of PHC fractions F1 to F4, VOC, PAH, metals and inorganics;
- Collecting four rounds of groundwater samples from the monitoring wells and submitting them for analysis of PHC, VOC, PAH, and/or metals;
- Comparing the results of the soil and groundwater chemical analyses to applicable criteria, as set out by the Ontario MECP;
- Conducting an elevation survey of the boreholes and monitoring wells;
- Preparing a report summarizing the results of the assessment activities.

For assessment purposes, EXP selected the Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional properties, Coarse Textured Soil. The selection of this category was based on the following factors:

The selection of these categories was based on the following factors:

- Bedrock is less than 2 metres below grade across 2/3 of the subject property;
- The Phase Two property is not located within 30 metres of a waterbody;
- The Phase Two property is not located within an area of natural significance, does not include nor is adjacent to an area of natural significance, and does not include land that is within 30 metres of an area of natural significance;
- The stratigraphy of the Site predominantly consists of coarse-textured soil, as per the grain size analysis. Results included in Appendix D;

- The Phase Two property is located in an area serviced with potable water by the City of Ottawa through its water distribution system;
- The proposed future use of the Phase Two property is residential and commercial; and.
- It is the opinion of the Qualified Person who oversaw this work that the Phase Two property is not a sensitive site.

Considering that the Site will likely be developed in stages and recognizing that the depth to bedrock varies across the Site, EXP also utilized the Table 3 Generic Site Condition Standards for Full Depth Generic Site Condition Standards in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional properties, Coarse Textured Soil for portions of the Site where those standards apply.

Seventeen soil samples and three duplicate sample were submitted for analysis of PHC, VOC, PAH and metals and inorganics. The following exceedances of the MECP Table 7 residential SCS were noted:

	Parameter	Table 7 Residential SCS
VOC	Tetrachloroethylene	BH/MW-1 SS3, BH/MW-3 SS1, BH/MW4 SS2
PHC	PHC F4	BH/MW9 AS1
PAH	Benzo(a)anthracene	BH-6 SS1, BH/MW-7 SS2B
	Benzo(a)pyrene	BH-6 SS1, BH/MW-7 SS2A, BH/MW7 SS2B
	Benzo(b)fluoranthene	BH-6 SS1
	Fluoranthene	BH-6 SS1, BH/MW-7 SS2A, BH/MW-7 SS2B
Metals	Cobalt	BH/MW-1 SS3
Inorganics	Electrical Conductivity	BH/MW-1 SS2
	Sodium Adsorption Ratio	BH/MW-1 SS2 (and DUP 2), BH/MW-1 SS3, BH/MW-2 AS3, BH-6 SS1, BH-6 SS2, BH/MW-7 SS2A, BH/MW-7 SS2B, BH/MW-8 AS3, BH/MW-9 SS2, BH/MW-10 SS2 (and DUP 1), BH/MW-11 SS1, BH/MW-11 SS2 (and DUP 3)
	pH	DUP 2 (BH/MW-1 SS2)

In accordance with Section 49.1 of O.Reg. 153/04 if, in the opinion of the Qualified Person, the applicable SCS at the Phase Two property are exceeded solely due to the application of a substance to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both, the applicable SCS is deemed not to be exceeded. Road salt is considered to have been applied to the driving and parking surfaces on the Phase Two property. Therefore, for the purpose of this investigation, the elevated EC and SAR in the soil samples collected are deemed not to exceed the Table 7 SCS.

Four rounds of groundwater monitoring have been undertaken with samples being submitted for chemical analysis of VOC, PHC, PAH and metals. The following Table 7 exceedances were noted:

	Parameter	Table 7 Residential SCS
VOC	Chloroform	BH/MW-3, BH/MW-7
	Hexane	BH/MW-8
	Tetrachloroethylene, Trichloroethylene	BH/MW-3, BH/MW-12 (TCE)

PHC + BTEX	Benzene	BH/MW-8, BH/MW-10 (and DUP), BH/MW-12
	Ethylbenzene	BH/MW-8
	Xylenes	BH/MW-8
	PHC F1	BH/MW-8
Metals	Sodium	BH/MW-7

In accordance with Section 49.1.2 of O.Reg. 153/04, standards are deemed to be met if there has been a discharge of drinking water within the meaning of the Safe Drinking Water Act, 2002. As a municipal water source was used for bedrock coring, it is inferred that the municipal water is the source of the chloroform in the groundwater samples from BH/MW-3 and BH/MW-7, and the applicable SCS are deemed not to be exceeded for this parameter.

According to Section 49.1 of O.Reg. 153/04 if, in the opinion of the Qualified Person, the applicable SCS at the Phase Two property are exceeded solely due to the application of a substance to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both, the applicable SCS is deemed not to be exceeded. Road salt is considered to have been applied to the driving and parking surfaces on the Phase Two property. As all of the monitoring wells were located in the parking lot, for the purpose of this investigation, the elevated sodium levels in the groundwater samples collected from BH/MW-7 are deemed not to exceed the Table 7 SCS.

A soil sample collected from BH/MW-9 exceeded Table 7 SCS for PHC, and groundwater collected from BH/MW-8 exceeded Table 7 SCS for PHC, benzene, hexane, and xylenes. This impact is likely associated with the operation of the former on-site gas station.

Groundwater samples collected from BH/MW-10 and BH/MW-12 exceeded the Table 7 SCS for benzene. The groundwater impact identified in BH/MW-10 may originate from an off-site source. Additional investigation is required.

Soil samples collected from BH/MW-1, BH/MW-3, and BH/MW-4 and groundwater samples collected from BH/MW-3 and BH/MW-12 exceeded the Table 7 SCS for TCE. This impact is inferred to be associated with the operation of the former on-site dry cleaner.

Soil samples collected from the BH-6 and BH/MW-7 exceeded the Table 7 SCS for PAH. No groundwater exceedances for PAH were present in any of the groundwater samples collected from the Phase Two property. The PAH impact is inferred to be associated with poor-quality fill material.

A soil sample collected from BH/MW-1 exceeded the Table 7 SCS for cobalt. This sample was collected from the highly weathered shale layer, and the exceedance is inferred to be associated with naturally elevated levels of cobalt in the Ottawa area.

Additional studies are planned to delineate the Table 7 and/or Table 3 exceedances such that an appropriate remedial strategy can be prepared in conjunction with the overall development approach for the site. Remedial efforts will coincide the phased approach to site development.

This executive summary is a brief synopsis of the report and should not be read in lieu of reading the report in its entirety.

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1.0 Introduction

EXP Services Inc. (EXP) was retained by Sun Life Assurance Company of Canada c/o BentallGreenOak (Canada) LP to conduct a Phase Two Environmental Site Assessment (ESA) for the property located at 1820-1846 Bank Street in Ottawa, Ontario (hereinafter referred to as the 'Phase Two property'). At the time of the investigation, the Phase Two property was occupied by a commercial strip mall and associated parking lot.

The objective of the Phase Two ESA investigation was to assess the quality of the soil and groundwater conditions within the areas of potential environmental concern (APEC) identified in a Phase One ESA prepared by EXP. EXP understands that the most recent use of the Phase One property is commercial and that the proposed future use is residential and commercial. Consequently, since the proposed future use of the property is more sensitive than its previous use, a Record of Site Condition (RSC) will be required.

This report has been prepared in accordance with the Phase Two ESA standard as defined by Ontario Regulation 153/04 (as amended), and in accordance with generally accepted professional practices. Subject to this standard of care, EXP makes no express or implied warranties regarding its services and no third-party beneficiaries are intended. Limitation of liability, scope of report and third-party reliance are outlined in Section 8 of this report.

1.1 Site Description

The Phase Two property has the municipal addresses of 1820-1846 Bank Street in Ottawa, Ontario and is located on the northwest corner of the intersection of Bank Street and Walkley Road. The Phase Two property is irregular in shape with an approximate area of 1.74 hectares. The Phase Two property site location and site layout are shown on Figure 1 and 2 in Appendix A.

The Phase Two property is occupied by single storey, slab on grade commercial buildings containing multiple units. The building has an approximately footprint of 3,925 square meters (42,240 square feet). As of December 2023, the building tenants included Value Village, Algonquin Careers Academy, Ruby Inn (restaurant), Bel-O-Sol (tanning salon), Savannah Afro Caribbean (retail), and Hera Beauty (retail).

The legal description of the Phase Two property is Part Lot 23, Concession Junction Gore, as in CT131445 and NS95310 Except Parts 16, 17 and 18 on Expropriation NS275909 and Parts 1, 2 and 3 on Plan 5R284; subject to OT55584 Ottawa/Gloucester. The property identification number (PIN) is 040690603.

Refer to Table 1.1 for the Site identification information.

Table 1.1: Site Identification Details

Civic Address	1820-1846 Bank Street, Ottawa, Ontario
Current Land Use	Commercial
Proposed Future Land Use	Residential and commercial
Property Identification Number	040690603
UTM Coordinates	Zone 18, 447944 m E and 5024339 m N
Site Area	1.74 hectares
Property Owner	Sun Life Assurance Company of Canada

A survey plan of the Phase Two property was completed by Annis, O'Sullivan, Vollebeck Ltd. in December 2017. A copy of the survey plan is provided in Appendix B.

1.2 Property Ownership

The registered owner of the Phase Two property is Sun Life Assurance Company of Canada. Authorization to proceed with this investigation was provided by Mr. Dylan Gillingham of BentallGreenOak on behalf of Sun Life Assurance Company of Canada. Contact information for Mr. Gillingham is 1875 Buckhorn Gate, Suite 601, Mississauga, Ontario, L4W 5P1.

1.3 Current and Proposed Future Use

The most recent use of the Phase One property is commercial and that the proposed future use is residential and commercial. Consequently, since the proposed future use of the property is more sensitive than its previous use an RSC will be required.

1.4 Applicable Site Condition Standards

Analytical results obtained for soil and groundwater samples were compared to Site Condition Standards (SCS) established under subsection 169.4(1) of the Environmental Protection Act, and presented in the document entitled *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, 2011*. This document provides tabulated background SCS (Table 1) applicable to environmentally sensitive sites and effects-based generic SCS (Tables 2 to 9) applicable to non-environmentally sensitive sites. The effects-based SCS (Tables 2 to 9) are protective of human health and the environment for different groundwater conditions (potable and non-potable), land use scenarios (residential, parkland, institutional, commercial, industrial, community and agricultural/other), soil texture (coarse or medium/fine) and restoration depth (full or stratified).

Table 1 to 9 SCS are summarized as follows:

- Table 1 – applicable to sites where background concentrations must be met (full depth), such as sensitive sites where site-specific criteria have not been derived
- Table 2 – applicable to sites with potable groundwater and full depth restoration
- Table 3 – applicable to sites with non-potable groundwater and full depth restoration
- Table 4 – applicable to sites with potable groundwater and stratified restoration
- Table 5 – applicable to sites with non-potable groundwater and stratified restoration
- Table 6 – applicable to sites with potable groundwater and shallow soils (bedrock encountered at depths of 2 metres or less across one-third or more of the site)
- Table 7 – applicable to sites with non-potable groundwater and shallow soils (bedrock encountered at depths of 2 metres or less across one-third or more of the site)
- Table 8 – applicable to sites with potable groundwater and that are within 30 m of a water body
- Table 9 – applicable to sites with non-potable groundwater and that are within 30 m of a water body

Application of the generic or background SCS to a specific site is based on a consideration of site conditions related to soil pH, thickness and extent of overburden material, and proximity to an area of environmental sensitivity or of natural significance. For some chemical parameters, consideration is also given to soil textural classification with SCS having been derived for both coarse and medium-fine textured soil conditions.

For assessment purposes, EXP selected the Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional properties, Coarse Textured Soil. The selection of this category was based on the following factors:

The selection of these categories was based on the following factors:

- Bedrock is less than 2 metres below grade across 2/3 of the subject property;

- The Phase Two property is not located within 30 metres of a waterbody;
- The Phase Two property is not located within an area of natural significance, does not include nor is adjacent to an area of natural significance, and does not include land that is within 30 metres of an area of natural significance;
- The stratigraphy of the Site predominantly consists of coarse textured soil, as per the grain size analysis. Results included in Appendix D;
- The Phase Two property is located in an area serviced with potable water by the City of Ottawa through its water distribution system;
- The proposed future use of the Phase Two property is residential and commercial; and.
- It is the opinion of the Qualified Person who oversaw this work that the Phase Two property is not a sensitive site.

Considering that the Site will likely be developed in stages and recognizing that the depth to bedrock varies across the Site, EXP also utilized the Table 3 Generic Site Condition Standards for Full Depth Generic Site Condition Standards in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional properties, Coarse Textured Soil for portions of the Site where those standards apply.

2.0 Background Information

2.1 Physical Setting

The Phase Two property has the municipal addresses of 1820-1846 Bank Street in Ottawa, Ontario and is located on the northwest corner of the intersection of Bank Street and Walkley Road. The Phase Two property is irregular in shape with an approximate area of 1.74 hectares.

The Phase Two property, and all other properties located, in whole or in part, within 250 metres of the boundaries of the Phase Two property, are supplied by a municipal drinking water system provided by the City of Ottawa. Further, the Phase Two property is not located in an area designated in the municipal official plan as a well-head protection area and no properties within the Phase Two study area have a well that is being used or is intended for use as a source of potable water. Thus, in accordance with Section 35 of Ontario Regulation 153/04, non-potable water standards apply to the Phase Two property.

In accordance with Section 41 of the Ontario Regulation 153/04 (as amended), the Phase Two property is not an environmentally sensitive area. In addition, the Phase Two property is not located within an area of natural significance and it does not include land that is within 30 metres of an area of natural significance.

Based on the Phase Two ESA investigation, the depth to bedrock varies across the Site, fluctuating greater than and less than 2 m. Portions of the property is considered a shallow soil property as defined in Section 43.1 of the regulation as more than 1/3 of the whole Phase Two property has less than 2 metres of soil. Considering that the property may be developed in stages, portions of the Site may be severed during redevelopment, such that the full depth standards may apply.

Beneath any fill, the surficial geology of the subject site is characterised by Champlain Sea fine textured glacial marine deposits of silt and clay. The bedrock geology underlying the site consists of shale of the Carlsbad Formation. Previous investigations have determined that the site geology generally consists of clay, sand and gravel fill overlying shale bedrock. Bedrock is present between 0.9 m and 2.7 metres below ground surface across the Phase Two property (Figure 3 b). Topographically, the Phase Two property is relatively flat. Regionally, topography slopes to the west towards Sawmill Creek. Ground surface elevation at the Phase Two property is approximately 90 metres above sea level.

The inferred groundwater flow direction is to the north-northwest towards the Rideau River.

2.2 Past Investigations

Multiple previous investigations have been conducted at the Phase Two property. A limited Phase II ESA was conducted by JWEL in 1999 to address the dry-cleaning operations. Concentrations of volatile organic compound (VOC) in exceedance of the Ministry of the Environment (MOE) applicable standards were present in the groundwater. In addition, the north adjacent property was historically occupied by an industrial plant (Westinghouse), and a dry-cleaning operation and several gas stations and repair garages were identified to the northeast and northwest of the Phase One property. As these operations were located inferred cross-gradient to the site, they were not anticipated to contribute to areas of potential environmental concern (APEC).

In February 2002, a total of three boreholes were advanced at the site by Trow to approximately 6.4 metres below ground surface. All three of the boreholes were completed as monitoring wells. Subsurface stratigraphy generally consisted of sandy silt fill to approximately 0.6 m bgs, overlying native silty sand with some gravel. Highly fractured shale bedrock was encountered approximately 2.0 to 2.5 m bgs in all three boreholes. It is noted that all of the monitoring wells were installed in the bedrock. A total of three soil samples were submitted for analysis of VOC, one soil sample was submitted for analysis of polycyclic aromatic hydrocarbons (PAH), and metals. Three groundwater samples were submitted for analysis of VOC, and one groundwater sample was also submitted for analysis of PAH and metals. One soil sample (MW 101), and one groundwater sample (MW 102) exceeded the applicable non-potable criteria for PCE.

In February 2002, Trow retained a video inspection company to conduct video imaging to assess the integrity of the sewers in/around the dry-cleaning unit. A floor drain was noted in the dry-cleaning unit which connected to the sanitary sewer. The video assessment of the sanitary sewer indicated that the condition of the sanitary sewer in the vicinity of the floor drain/toilet was in suspect condition and may be allowing seepage of wastewater to the subsurface beneath the building. Swab samples were also collected from the sanitary sewer pipe in the vicinity of the dry-cleaning machine and submitted for analysis of VOC. Results of the swab analysis indicated that trichloroethylene (TCE) and PCE were present in the sanitary sewer. It was inferred from these results that the former dry-cleaning machine was connected to the sanitary sewer and discharging waste PCE.

It was noted that a new dry-cleaning machine was installed in March 2002. It was noted that the new unit was self-contained and not connected to the municipal sewers. Waste PCE was stored in tanks that formed part of the machine and is removed from site by a licensed contractor.

It was recommended that bi-annual groundwater sampling be conducted to monitor the concentrations of VOCs. It was recommended that the floor drain in the vicinity of the dry-cleaning machine be capped, as the new machine was self-contained, and a sewer connection was no longer required. The 1999 JWEL monitoring well was decommissioned to prevent further migration of impacted groundwater.

An enhanced Phase I ESA investigation was conducted in 2013 by Pinchin. Three monitoring wells north of the dry-cleaning unit, and one monitoring well on the east part of the site in the area of the former gas station were sampled as part of this investigation. Groundwater samples were submitted for analysis of VOC and/or petroleum hydrocarbons (PHC). The groundwater samples were compared to the MECP Table 3 site condition standards (SCS) for commercial land use. All of the groundwater samples were within the Table 3 SCS. Based on the results of the groundwater sampling program, it was Pinchin's opinion that none of the on-site operations had resulted in any subsurface impacts. No additional subsurface investigation was recommended by Pinchin. Pinchin noted that, based on the age of the site building, there was potential for asbestos containing materials to be present in the site building.

Most recently, EXP prepared a report entitled *Phase One Environmental Site Assessment, 1820-1846 Bank Street, Ottawa, Ontario*, dated August 14, 2023. The Phase One study area included the entire Phase Two property as well as properties within 250 m of the Phase Two property. Based on the results of the Phase One ESA, EXP identified eleven APECs on the Phase One property. A summary is provided in Table 2.1.

Table 2.1: Findings of Phase One ESA

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
#1. Former on-site dry-cleaner	North end of site building	PCA #37 – Operations of dry cleaning equipment (where chemicals are used) (PCA 9)	On-site	VOC	Soil and groundwater
#2. Former on-site gas station	East part of Phase Two property	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 10)	On-site	PHC, VOC, metals	Soil and groundwater
#3. Former on-site rail siding	Northwest part of Phase Two property	PCA #46 – Rail yard, tracks, and spurs (PCA 1)	On-site	PAH, metals	Soil
#4. Fill material	Entire Phase Two property	PCA #30 – Importation of fill material of unknown quality (PCA 20)	On-site	PHC, PAH, metals	Soil

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
#5. Former dry cleaner at 1800 Bank Street & historical furnace oil leak from UST	Along north property line	PCA #37 – Operations of dry cleaning equipment (where chemicals are used) and PCA #28 – Gasoline and associated products storage in fixed tanks (PCAs 10 & 11)	Off-site	PHC, VOC	Soil and groundwater
#6. Former gas station at 1841 Bank Street	Along southeast property line	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 3)	Off-site	PHC, VOC	Soil and groundwater
#7. Repair garage at 1841 Bank Street	Along southeast property line	PCA #10 – Commercial autobody shop (PCA 4)	Off-site	PHC, VOC, metals	Soil and groundwater
#8. Gas station at 1847 Bank Street	Along southeast property line	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 7)	Off-site	PHC, VOC	Soil and groundwater
#9. Former car dealership at 1850 Bank Street	Along south property line	PCA #10 – Commercial autobody shop (PCA 14)	Off-site	PHC, VOC, metals	Soil and groundwater
#10. Former USTs associated with car dealership at 1850 Bank Street	Along south property line	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 15)	Off-site	BTEX, PHC	Soil and groundwater
#11. Former rail line to the west of the site	Along west property line	PCA #46 – Rail yard, tracks, and spurs (PCA 2)	Off-site	PAH, metals	Soil

The locations of the APEC are shown on Figure 3 in Appendix A.

3.0 Scope of the Investigation

3.1 Overview of Site Investigation

The objective of the Phase Two ESA was to assess the quality of soil and groundwater quality on the Phase Two property. The field program was conducted in conjunction with geotechnical and hydrogeological investigations.

The most recent use of the was commercial, and it is proposed that residential and commercial buildings be constructed on the Phase Two property. As the proposed land use is more sensitive than the previous land use, an RSC will be required as per O. Reg. 153/04.

3.2 Scope of Work

As mentioned above, the Phase Two ESA was conducted in conjunction with a hydrogeological investigation and geotechnical investigation completed by EXP. The scope of work for the Phase Two ESA was as follows:

- Advancing eighteen boreholes on the subject property, and completing ten of them as monitoring wells (five shallow bedrock and five deep bedrock);
- Advancing six probe holes to determine depth to bedrock at various locations;
- Submitting select soil samples for laboratory analysis of PHC fractions F1 to F4, VOC, PAH, metals and inorganics;
- Collecting four rounds of groundwater samples from the monitoring wells and submitting them for analysis of PHC, VOC, PAH, and metals;
- Comparing the results of the soil and groundwater chemical analyses to applicable criteria, as set out by the Ontario MECP;
- Conducting an elevation survey of the boreholes;
- Preparing a report summarizing the results of the assessment activities.

This report has been prepared in accordance with the Phase Two ESA standard as defined by Ontario Regulation 153/04 (as amended), and in accordance with generally accepted professional practices. Subject to this standard of care, EXP makes no express or implied warranties regarding its services and no third-party beneficiaries are intended. Limitation of liability, scope of report and third-party reliance are outlined in Section 8 of this report.

3.3 Media Investigated

The Phase Two ESA included the investigation of soil and groundwater on the Phase Two property. There are no waterbodies on the Phase Two property, therefore sediment or surface water sampling was not required.

The contaminants of potential concern (COPC) identified in the Phase One ESA were identified as target parameters for this Phase Two ESA. The APEC and COPC identified in the Phase One ESA are outlined in Section 2.2.

3.4 Phase One Conceptual Site Model

The Phase One conceptual site model (CSM) was developed by considering the following physical characteristics and pathways. The CSM showing the topography of the site, inferred groundwater flow, general site features, APEC, and PCA is shown in Figure 2 in Appendix A.

3.4.1 Buildings and Structures

The Phase Two property is occupied by single storey, slab on grade commercial buildings containing multiple units. The building has an approximately footprint of 3,925 square meters (42,240 square feet). As of December 2023, the building tenants included Value Village, Algonquin Careers Academy, Ruby Inn (restaurant), Bel-O-Sol (tanning salon), Savannah Afro Caribbean (retail), and Hera Beauty (retail). Outside of the building footprint, the Phase Two property mainly consists of asphalt parking lot.

3.4.2 Water Bodies and Groundwater Flow Direction

There are no water bodies on the subject site. The closest body of water is Sawmill Creek, located approximately 300 m west of the Phase Two property. Sawmill Creek flows to the north towards the Rideau River. The inferred groundwater flow direction is to the north-northwest towards the Rideau River.

3.4.3 Areas of Natural Significance

There are no ANSI within the Phase Two study area.

3.4.4 Water Wells

There were 52 well records for the Phase Two study area. None of the well records appear to be for the Phase Two property, although historically there were monitoring wells present on the site.

Eighteen of the records were for water supply wells installed between 1949 and 1959. As municipal services are no present in the study area, it is unlikely that these wells are still in use.

The remaining well records were for monitoring wells. There were 17 records for the installation/abandonment of monitoring wells at 1841 Bank Street. Ten of the records were for monitoring wells installed by the city in the Bank Street right-of-way between Surrey Avenue and Alta Vista Drive.

3.4.5 Potentially Contaminating Activity

Based on the Phase One ESA, the following PCAs were identified:

- PCA 1: 1822 Bank Street – former on-site rail siding (PCA #46)
- PCA 2: Glenhaven Private – former rail line (PCA #46)
- PCA 3: 1841 Bank Street – former gas station (PCA #28)
- PCA 4: 1841 Bank Street – active repair garage (PCA #10)
- PCA 5: 1827 (1811 Bank Street – former contractor’s repair garage (PCA #10)
- PCA 6: 1827 (1811) Bank Street – former UST (PCA #28)
- PCA 7: 1847 Bank Street – active gas station (PCA #28)
- PCA 8: 1877 Bank Street – former gas station (PCA #28)
- PCA 9: 1846 Bank Street (Phase Two property) – former dry cleaner (PCA #37)
- PCA 10: 1832 Bank Street (Phase Two property) – former gas station (PCA #28)
- PCA 11: 1800 Bank Street – former dry cleaner (PCA #37) and historical furnace oil UST leak
- PCA 12: 1811 Bank Street – car dealership with repair garage (PCA #10)

- PCA 13: 1811 Bank Street – gasoline and waste oil USTs for car dealership (PCA #28)
- PCA 14: 1850 Bank Street – former car dealership with repair garage (PCA #10)
- PCA 15: 1850 Bank Street – Former gasoline and waste oil USTs (PCA #28)
- PCA 16: 1792 Bank Street – active repair garage (PCA #10)
- PCA 17: 1792 Bank Street – former gas station (PCA #28)
- PCA 18: 1770 Bank Street – car dealership with repair garage (PCA #10)
- PCA 19: 1770 Bank Street – gasoline and waste oil UST for car dealership/repair garage (PCA #28)
- PCA 20: 1820-1846 Bank Street – fill material of unknown quality (PCA #30)
- PCA 21: 2629 Alta Vista Drive – dry cleaner (PCA #37)
- PCA 22: 2706 Alta Vista Drive – dry cleaner (PCA #37)
- PCA 23: 1750 Bank Street – former repair garage (PCA #10)
- PCA 24: 1750 Bank Street – former gas stations (PCA #28)
- PCA 25: 1750 Bank Street – former dry cleaner (PCA #37)

All of the on-site PCAs were determined to result in APECs. A dry cleaner (PCA 9) operated in the northernmost unit from the 1970s until 2018. A gas station (PCA 10) was present on the east part of the site for a brief period in the 1970s. Previous investigations conducted on this part of the site identified tetrachloroethylene (PCE) impacted soil and groundwater, although it is noted that the most recent investigation conducted by Pinchin Limited did not identify any exceedances of the applicable standards in the monitoring wells sampled near the former on-site dry cleaner or gas station. The previous investigation also identified between 0.9 m and 2 m of fill material on the Phase One property (PCA 20). A rail siding (PCA 1) was historically located on the Phase Two property prior to the construction of the existing site building.

With respect to off-site PCAs, due to the proximity and/or inferred upgradient location from the Phase Two property, the gas stations at 1841 and 1847 Bank Street, the repair garages/car dealerships at 1841 and 1850 Bank Street, the former rail line to the west, and the former dry cleaner at 1800 Bank Street were considered to contribute to APECs on the Phase Two property.

The remaining PCAs identified in the study area were located at least 100 m from the Phase Two property and/or down/cross-gradient to the Phase Two property and were not considered to contribute to APECs on the Phase Two property.

3.4.6 Areas of Potential Environmental Concern

The APEC identified are summarized in Table 3.1.

Table 3.1: Areas of Potential Environmental Concern

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
#1. Former on-site dry-cleaner	North end of site building	PCA #37 – Operations of dry cleaning equipment (where chemicals are used) (PCA 9)	On-site	VOC	Soil and groundwater

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
#2. Former on-site gas station	East part of Phase Two property	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 10)	On-site	PHC, VOC, metals	Soil and groundwater
#3. Former on-site rail siding	Northwest part of Phase Two property	PCA #46 – Rail yard, tracks, and spurs (PCA 1)	On-site	PAH, metals	Soil
#4. Fill material	Entire Phase Two property	PCA #30 – Importation of fill material of unknown quality (PCA 20)	On-site	PHC, PAH, metals	Soil
#5. Former dry cleaner at 1800 Bank Street & historical furnace oil leak from UST	Along north property line	PCA #37 – Operations of dry cleaning equipment (where chemicals are used) and PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 10 & 11)	Off-site	PHC, VOC	Soil and groundwater
#6. Former gas station at 1841 Bank Street	Along southeast property line	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 3)	Off-site	PHC, VOC	Soil and groundwater
#7. Repair garage at 1841 Bank Street	Along southeast property line	PCA #10 – Commercial autobody shop (PCA 4)	Off-site	PHC, VOC, metals	Soil and groundwater
#8. Gas station at 1847 Bank Street	Along southeast property line	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 7)	Off-site	PHC, VOC	Soil and groundwater
#9. Former car dealership at 1850 Bank Street	Along south property line	PCA #10 – Commercial autobody shop (PCA 14)	Off-site	PHC, VOC, metals	Soil and groundwater
#10. Former USTs associated with car dealership at 1850 Bank Street	Along south property line	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 15)	Off-site	BTEX, PHC	Soil and groundwater
#11. Former rail line to the west of the site	Along west property line	PCA #46 – Rail yard, tracks, and spurs (PCA 2)	Off-site	PAH, metals	Soil

3.4.7 Underground Utilities

The Site is serviced with municipal sewer and water, hydro and natural gas. Sanitary and storm sewer lines are present throughout the Phase One property.

The locations of the utilities on the Phase Two property are shown on Figure 5.

3.4.8 Subsurface Stratigraphy

Beneath any fill, the surficial geology of the subject site is characterised by Champlain Sea fine textured glacial marine deposits of silt and clay. The bedrock geology underlying the site consists of shale of the Carlsbad Formation.

Previous investigations have determined that the site geology generally consists of clay, sand and gravel fill overlying shale bedrock. Bedrock is present between 0.9 m and 2 metres below ground surface across the Phase Two property.

Topographically, the Phase Two property is relatively flat. Regionally, topography slopes to the west towards Sawmill Creek. Ground surface elevation at the Phase Two property is approximately 90 metres above sea level.

3.4.9 Uncertainty Analysis

The CSM is a simplification of reality, which aims to provide a description and assessment of any areas where potentially contaminating activity that occurred within the Phase Two study area may have adversely affected the Phase Two property. All information collected during this investigation, including records, interviews, and site reconnaissance, has contributed to the formulation of the CSM.

Information was assessed for consistency, however EXP has confirmed neither the completeness nor the accuracy of any of the records that were obtained or of any of the statements made by others. All reasonable inquiries to obtain accessible information were made, as required by Schedule D, Table 1, Mandatory Requirements for Phase Two Environmental Site Assessment Reports. The CSM reflects our best interpretation of the information that was available during this investigation.

3.5 Deviations from Sampling and Analysis Plan

The field investigative and sampling program was carried out following the requirements of the Phase Two property, as described in Section 4.

The SAAP indicated that eighteen boreholes would be advanced at the site. Due to conflict with existing utilities, one of the boreholes (BH-5) was not completed.

3.6 Impediments

No impediments were encountered during this investigation.

4.0 Investigation Method

4.1 General

The current investigation was performed following requirements given under Ontario Regulation 153/04 and in accordance with generally accepted professional practices.

The site investigative activities were conducted in conjunction with a hydrogeological investigation and geotechnical investigation and consisted of the advancement of boreholes on the site to facilitate the collection of soil and groundwater samples for visual inspection and chemical analyses.

Prior to the commencement of excavating, the locations of underground public utilities including telephone, natural gas and electrical lines were marked at the subject property by public locating companies. A private utility locating contractor was also retained to clear the individual borehole locations.

4.2 Borehole Drilling

The site investigative activities consisted of the drilling of boreholes to facilitate the collection of soil samples for visual inspection and chemical analysis. Select boreholes were instrumented with monitoring wells to facilitate the collection of groundwater samples.

The borehole locations were selected to address the APECs identified in the Phase One ESA, and to provide site coverage for geotechnical purposes. The exterior drilling program was completed between October 26 and November 3, 2023, by George Downing Estate Drilling Ltd. (Downing), a licensed well contractor. Downing advanced fifteen geotechnical boreholes (BH/MW-1, BH/MW-2, BH-6 to BH-18) across the Phase Two property, using a CME-75 truck mounted drill. On December 13 and 14, 2023, Strata Drilling Group (Strata) completed two interior environmental boreholes (BH-3 and BH-4) inside the former dry cleaner using a Geoprobe model 450 using direct push sampling for the overburden soils and cored the bedrock using a Hilti drill using an N-size core barrel.

BH/MW-1 to BH/MW-7 and BH/MW-11 to BH-18 the boreholes were extended past the depth of refusal through rock coring to termination depths of 2.6 m to 14.9 metres below ground surface. Monitoring wells diameter of either thirty-two (32) mm, thirty-eight (38) mm or fifty (50) mm diameter were installed in BH/MW-1, BH/MW-2, BH/MW-7 to BH/MW-12 and BH/MW-15 for long-term monitoring of the groundwater levels as well as groundwater sampling. The boreholes were backfilled upon completion of drilling. In addition, six probe holes were advanced to determine the depth to bedrock in certain portions of the site.

EXP staff continuously monitored the drilling activities to log the stratigraphy observed, to record the depth of soil sample collection, to record total depths of excavation, and to record visual or olfactory observations of potential impacts. Field observations are summarized on the borehole logs provided in Appendix E. Nitrile gloves (i.e., one pair per sample) were used during sample handling. No petroleum-based greases or solvents were used during drilling activities.

The locations and geodetic elevations of the boreholes were established by a survey crew from EXP and are shown in Figure 3 and 3b.

4.3 Soil Sampling

The soil sampling during the completion of this Phase Two ESA was undertaken in general accordance with the SAAP presented in Appendix C.

Soil samples were selected for laboratory analysis based on visual and olfactory evidence of impacts, where observed. Soil samples identified for possible laboratory analysis were placed directly into pre-cleaned, laboratory-supplied glass sample jars/vials. Samples to be analysed for PHC fraction F1 and BTEX were collected using a soil core sampler and placed into vials

containing methanol as a preservative. The jars and vials were sealed with Teflon-lined lids to minimize headspace and reduce the potential for induced volatilization during storage/transport prior to analysis. All soil samples were placed in clean coolers containing ice prior to and during transportation to the subcontract laboratory, Bureau Veritas Laboratories (BV Labs) of Ottawa, Ontario. The samples were transported/submitted within 24 hours of collection to the laboratory following chain of custody protocols for chemical analysis. Soil samples were submitted for laboratory analysis of PHC, VOC, PAH, and metals and inorganics.

4.4 Groundwater: Monitoring Well Installation

Monitoring wells were installed in general accordance with the Ontario Water Resources Act - R.R.O. 1990, Regulation 903 (as amended). The monitoring wells consisted of a 52 mm diameter Schedule 40 PVC screen that was no more than 3.0 m long and a 32-, 38- or 52-mm diameter Schedule 40 PVC riser pipe that was at least 0.8 m long. The annular space around the wells was backfilled with sand to an average height of 0.3 m above the top of the screen. A bentonite seal was added from the top of the sand pack to approximately 0.3 m below ground surface. The monitoring wells were completed with flush mount casings. Monitoring wells were installed in BH/MW-1, BH/MW-2, BH/MW-7 to BH/MW-12 and BH/MW-15.

Measures taken to minimize the potential for cross contamination or the introduction of contaminants during well construction included:

- The use of well pipe components (e.g. riser pipe and well screens) with factory machined threaded flush coupling joints
- Construction of wells without the use of glues or adhesives
- Removing the protective plastic wraps from well components at the time of borehole insertion to prevent contact with the ground and other surfaces
- Cleaning or disposal of drilling equipment between sampling locations

Details of the monitoring well installations are shown on the borehole logs provided in Appendix E.

4.5 Groundwater: Field Measurement and Water Quality Parameters

Field measurement of water quality parameters is described in Section 4.7.

All measurements of petroleum vapours in the monitor riser were made with an RKI Eagle 2 in methane elimination mode. Immediately after removing the well cap, the collection tube of the Eagle was inserted into the riser and the peak instrument reading was recorded. EXP used a Heron water level tape to measure the static water level in each monitoring well. The measuring tape was cleaned with phosphate-free soap and tap water, rinsed with distilled water after each measurement.

4.6 Groundwater: Sampling

All groundwater samples were collected via a low flow sampling technique using a Horiba U-52 multi probe water quality meter. The U-52 probe was calibrated using in-house reference standards. Prior to collecting the groundwater samples, water quality field parameters (turbidity, dissolved oxygen, conductivity, temperature, pH, and oxidation reduction potential) were monitored until stable readings were achieved to ensure that the samples collected were representative of actual groundwater conditions. These parameters are considered to be stable when three consecutive readings meet the following conditions:

- Turbidity: within 10% for values greater than 5 nephelometric turbidity units (NTU), or three values less than 5 NTU;
- Dissolved oxygen: within 10% for values greater than 0.5 mg/L, or three values less than 0.5 mg/L;
- Conductivity: within 3%;

- Temperature: $\pm 1^{\circ}\text{C}$;
- pH: ± 0.1 unit; and,
- Oxidation reduction potential: ± 10 millivolts.

When stabilization occurs, equilibrium between groundwater within a monitor and the surrounding formation water is attained. As such, samples collected when stabilization occurs are considered to be representative of formation water.

The groundwater sampling during the completion of this Phase Two ESA was undertaken in general accordance with industry standards. The groundwater samples were placed in clean coolers containing ice packs prior to and during transportation to the laboratory. The samples were transported to the laboratory within 24 hours of collection with a chain of custody.

4.7 Sediment: Sampling

There are no waterbodies present on the Phase Two property, therefore sediment sampling was not required.

4.8 Analytical Testing

The contracted laboratory selected to perform chemical analysis on all soil and groundwater samples was BV Labs. BV Labs is accredited laboratories under the Standards Council of Canada/Canadian Association for Laboratory Accreditation in accordance with ISO/IEC 17025:1999- General Requirements for the Competence of Testing and Calibration Laboratories.

4.9 Residue Management

Boreholes were backfilled with soil cuttings upon completion. The soil cuttings from monitoring well installations and purged water from groundwater development and sampling were placed in drums on the Phase Two property. The drums were collected by Clean Water Works on November 20, 2023. Fluids from cleaning drilling equipment were disposed of by the driller at their facility.

4.10 Elevation Surveying

An elevation survey was conducted by EXP. The ground surface elevation of each monitoring well location was surveyed relative to a geodetic reference. The Universal Transverse Mercator (UTM) coordinates of each monitoring well were also recorded so that their locations could be plotted accurately.

4.11 Quality Assurance and Quality Control Measures

All soil and groundwater samples were placed in coolers containing ice packs prior to and during transportation to the contract laboratory. BV Labs is accredited to the ISO/IEC 17025:2005 standard - *General Requirements for the Competence of Testing and Calibration Laboratories*.

A QA/QC program was also implemented to ensure that the analytical results received are accurate and dependable. A QA/QC program is a system of documented checks that validate the reliability of the data. Quality Assurance is a system that ensures that quality control procedures are correctly performed and documented. Quality Control refers to the established procedures observed both in the field and in the laboratory, designed to ensure that the resulting end data meet intended quality objectives. The QA/QC program implemented by EXP incorporated the following components:

- Using dedicated and/or disposable sampling equipment;
- Following proper decontamination protocols to minimize cross-contamination;
- Maintaining field notes and completing field forms to document field activities; and,

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- Using only laboratory-supplied sample containers and following prescribed sample protocols, including using proper preservation techniques, meeting sample hold times, and documenting sample transmission on chains of custody, to ensure the integrity of the samples is maintained.

BV Labs' QA/QC program involved the systematic analysis of control standards for the purpose of optimizing the measuring system as well as establishing system precision and accuracy and included calibration standards, method blanks, reference standards, spiked samples, surrogates and duplicates.

5.0 Review and Evaluation

5.1 Geology

All of the exterior boreholes are located in a paved area. A 50 mm to 120 mm thick asphaltic concrete layer was contacted in all the exterior the boreholes at the site with the exception of BH-16. For the two interior boreholes, a concrete slab 165-200 mm thick was encountered at the surface of BH/MW-3 and BH/MW-4.

A layer of fill was contacted underlying the asphaltic concrete or concrete all the boreholes. The fill extends to 0.3 to 1.8 m depths. The fill generally consists of sand and gravel.

A layer of glacial till was encountered underlying the fill at 0.3 m depth in BH/MW-9. The glacial till contains varying amounts of gravel, sand, silt and clay within the soil matrix as well as cobbles and boulders. A layer of highly weathered shale bedrock was contacted underlying the fill or the glacial till at depths of 0.7 m to 1.8 m depths in all of the boreholes except BH-14 and BH-16.

Auger refusal was met at 1.3 m to 2.8 m depths (Elevation 92.0 m to Elevation 88.2 m). In BH/MW-1 to BH/MW-7 and BH/MW-11 to BH-18 the boreholes were extended past the depth of refusal through rock coring to termination depths of 2.6 m to 14.9 (Elevation 89.4 m to 76.2 m). The rock coring determined the bedrock to be shale.

A plan view showing cross-sections is provided as Figure 5 in Appendix A, while the Phase Two property geology is depicted in cross-sections on Figure 6 in Appendix A. The borehole logs are included in Appendix E.

5.2 Groundwater: Elevations and Flow Direction

Prior to monitoring and sampling, the monitoring wells were inspected for general physical condition, groundwater depth, the presence of light non-aqueous phase liquid (LNAPL). None of the monitoring wells installed during previous investigations were monitored due to the poor condition of the wells.

Four rounds of overburden and bedrock groundwater monitoring and elevation data are provided below.

Table 5.1: Monitoring and Elevation Data

Borehole (BH)	Ground Surface Elevation (m)	Screened Material	Date of Measurement	Groundwater Depth Below Ground Surface (Elevation), (m)
			(Elapsed Time in Days from	
			Date of Installation)	
BH1	91.67	HIGHLY WEATHERED SHALE & SHALE BEDROCK	November 23, 2023 (28)	1.8 (89.9)
			December 6, 2023 (41)	2.2 (89.5)
			March 15, 2023 (140)	2.1 (89.6)
			June 19, 2024 (237)	2.1 (89.6)
			September 20, 2024	2.2 (89.5)
BH2	92.59	SHALE BEDROCK	November 23, 2023 (24)	10.9 (81.7)
			--	--
			March 14, 2024 (136)	8.2 (84.4)
			--	--
			September 20, 2024	7.63 (85.0)
BH3	92.06		December 21, 2023 (7)	2.3 (89.8)

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Borehole (BH)	Ground Surface Elevation (m)	Screened Material	Date of Measurement	Groundwater Depth Below Ground Surface (Elevation), (m)
			(Elapsed Time in Days from	
			Date of Installation)	
		HIGHLY WEATHERED SHALE & SHALE BEDROCK	March 14, 2024 (91)	2.3 (89.8)
			June 14, 2024 (188)	2.3 (89.8)
			September 20, 2024	2.3 (89.8)
BH4	92.06	HIGHLY WEATHERED SHALE & SHALE BEDROCK	December 21, 2023 (7)	1.8 (90.3)
			March 14, 2024 (91)	1.9 (90.2)
			June 14, 2024 (188)	2.0 (90.0)
			September 20, 2024	2.0 (90.0)
BH7	92.51	SHALE BEDROCK	November 23, 2023 (28)	5.8 (86.8)
			December 3, 2023 (41)	8.6 (87.0)
			March 14, 2024 (140)	6.2 (86.3)
			June 19, 2024 (237)	5.5 (87.0)
			September 20, 2024	6.3 (86.5)
BH8	92.5	HIGHLY WEATHERED SHALE	November 23, 2023 (28)	1.3 (91.2)
			December 6, 2023 (41)	1.3 (91.3)
			March 14, 2024 (140)	0.6 (91.9)
			June 19, 2024 (237)	1.2 (91.3)
			September 20, 2024	1.2 (91.3)
BH9	92.71	GLACIAL TILL AND	November 23, 2023 (28)	1.4 (91.3)
		HIGHLY WEATHERED SHALE	December 6, 2023 (33)	1.3 (91.5)
			March 14, 2024 (132)	1.1 (91.7)
			June 19, 2024 (229)	1.3 (91.5)
			September 20, 2024	1.3 (91.5)
BH10	91.66	HIGHLY WEATHERED SHALE	November 23, 2023 (24)	1.5 (90.1)
			December 6, 2023 (37)	1.4 (90.2)
			March 14, 2024 (136)	1.3 (90.4)
			June 19, 2024 (233)	1.4 (90.2)
			September 20, 2024	1.4 (90.2)
BH11	90.35	SHALE BEDROCK	November 23, 2023 (22)	10.8 (79.6)
			December 6, 2023 (35)	10.2 (87.5)
			March 9, 2023 (134)	4.0 (86.3)
			June 19, 2024 (231)	2.9 (87.5)
			September 20, 2024	5.2 (85.2)
BH12	91.6	SHALE BEDROCK	--	--

Borehole (BH)	Ground Surface Elevation (m)	Screened Material	Date of Measurement	Groundwater Depth Below Ground Surface (Elevation), (m)
			(Elapsed Time in Days from	
			Date of Installation)	
			December 6, 2023 (33)	11.6 (80.0)
			March 14, 2024 (132)	14.1 (77.5)
			June 19, 2024 (229)	13.7 (77.9)
			September 20, 2024	13.6 (78.0)
BH15	92.2	SHALE BEDROCK	November 23, 2023 (21)	10.1 (82.1)
			December 6, 2023 (34)	6.9 (85.4)
			March 14, 2024 (133)	6.2 (86.0)
			June 19, 2024 (230)	6.1 (86.1)
			September 20, 2024	7.1 (85.2)

Notes: Elevations were measured to a geodetic datum
mbgs – metres below ground surface
masl – metres above sea level
mbTOC – metres below the top of monitor casing
-- Not monitored
N/O – not observed

Based on the groundwater level measurements, groundwater contours in the overburden and deep bedrock were plotted, as shown on Figures 4A and 4B. The groundwater flow direction in the deep bedrock aquifer was to the west, towards Sawmill Creek and the Rideau River. The groundwater flow direction in the shallow bedrock wells was to the northwest.

5.3 Groundwater: Hydraulic Gradients

Horizontal hydraulic gradients were estimated for the groundwater flow components identified in the bedrock aquifer based on the December 2023 groundwater elevations.

The horizontal hydraulic gradient is calculated across the using the following equation:

$$i = \Delta h / \Delta s$$

Where,

i = horizontal hydraulic gradient;

Δh (m) = groundwater elevation difference; and,

Δs (m) = separation distance.

The horizontal hydraulic gradient was calculated to be 0.174 m/m.

On November 28, 2023, three rising head tests (BH/MW-1, BH/MW-7, and BH/MW-10) were conducted. The rising head test requires that the static water level be measured in each monitoring well prior to the removal of groundwater. Groundwater is removed from the monitoring well using a bailer. After the water level has been sufficiently lowered, an interface probe is lowered into the monitor as quickly as possible to measure the new water level. The time at which the new water level is measured is noted as time equal to zero. Water level readings are subsequently taken at frequent intervals. Both the water levels and the time they were taken are recorded.

The frequency of the time measurement is determined by the rate the water level recovers to the static water level. Measurements are taken until at least 70% recovery has been achieved or, in cases where recovery is extremely slow, until it

is deemed that a sufficient amount of time has elapsed. Using the Hvorslev model, the hydraulic conductivity for the monitoring well was calculated.

All water level measurements were made with a Heron oil/water interface probe. Both the probe and the measuring tape that come into contact with liquids within a monitor are cleaned with phosphate-free soap and tap water, rinsed with distilled water and then finally rinsed with methanol after each hydraulic conductivity test is concluded.

Table 5.2: Rising Head Tests

Monitoring Well ID/ Installation ID	Horizon	Screen Depth (mbgs)	Initial Static Water Level (mbToC)	Water Level after Purging (mbToC)	% Recovery to Static after Elapsed time	Hydraulic Conductivity (m/s)
BH/MW-1	Highly weathered shale	4.6 to 5.9	2.46	1.82	86	1.31×10^{-9}
BH/MW-7	Bedrock	10.3 to 13.7	11.52	8.99	99	1.25×10^{-10}
BH/MW-10	Highly weathered shale	1.0 to 2.5	1.22	1.17	63	3.45×10^{-8}

Notes: mbTOC – metres below the top of monitor casing

It was noted that the result of SWRT at BH-7 is presumed to be in error as the hydraulic conductivity value and recovery data does not match the observed trend at this well location.

5.4 Soil: Quality

In accordance with the scope of work, chemical analyses were performed on selected soil samples recovered from the boreholes.

Seventeen soil samples and three duplicate sample were submitted for analysis of PHC, VOC, PAH and metals and inorganics. A summary of the soil analytical results is presented in Tables 1 to 3 along with the Table 3 and 7 SCS comparators (Appendix F). The laboratory certificates are resented in Appendix G. The analytical results are also depicted graphically in Figures 7 to 12 (Appendix A)

The following exceedances of the MECP Table 3 and 7 residential SCS were noted:

- BH/MW-1 SS3, BH/MW-3 SS1 and BH/MW-4 SS2 exceeded for TCE;
- BH/MW-9 AS1 exceeded for PHC F4;
- BH-6 SS1, BH/MW-7 SS2A and BH/MW-7 SS2B exceeded for multiple PAH parameters;
- BH/MW-1 SS3 exceeded for cobalt; and,
- BH/MW-1 SS2 and duplicate, BH/MW-1 SS3, BH/MW-2 AS3, BH-6 SS1, BH-6 SS2, BH/MW-7 SS2A, BH/MW-7 SS2B, BH/MW-8 AS3, BH/MW-9 SS2, BH/MW-10 SS2 and duplicate, BH/MW-11 SS1, BH/MW-11 SS2 and duplicate exceeded for EC and/or SAR.

In accordance with Section 49.1 of O.Reg. 153/04 if, in the opinion of the Qualified Person, the applicable SCS at the Phase Two property are exceeded solely due to the application of a substance to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both, the applicable SCS is deemed not to be exceeded. Road salt is considered to have been applied to the driving and parking surfaces on the Phase Two property. Therefore, for the purpose of this investigation, the elevated EC and SAR in the soil samples collected are deemed not to exceed the Table 7 SCS.

5.5 Groundwater: Quality

All groundwater samples were collected via a low-flow sampling technique. EXP monitored several water quality parameters (such as water level, temperature, dissolved oxygen, conductivity, salinity, pH, oxygen reduction potential and turbidity) in order to ensure that the samples collected were representative of actual groundwater conditions.

A summary of the groundwater monitoring program is provided in Tables 4 to 6 along with the Table 3 and 7 SCS comparators in Appendix F and shown on Figures 13 to 18, in Appendix A. Copies of the laboratory Certificates of Analysis are provided in Appendix G.

Initially, eight groundwater samples, a duplicate sample, and field blank and a trip blank were submitted for chemical analysis of VOC. Six groundwater samples, a duplicate sample, a trip blank, and a field blank were submitted for were submitted for chemical analysis of PHC, PAH and metals. The following Table 7 exceedances were noted during the fall/winter 2023 sampling (Figure 14):

- BH/MW-8, BH/MW-10 and duplicate and BH/MW-12 exceeded for benzene;
- BH/MW-3 and BH/MW-7 exceeded for chloroform;
- BH/MW-8 exceeded for PHC F1, ethylbenzene, hexane, and xylenes;
- BH/MW-3 and BH/MW-12 exceeded for TCE; and,
- BH/MW-7 exceeded for sodium.

In comparison to Table 3, the following exceedances were noted from the initial sampling round (Figure 13):

- BH/MW-12 for PCE and TCE
- BH/MW-3 for PCE.

In accordance with Section 49.1.2 of O.Reg. 153/04, standards are deemed to be met if there has been a discharge of drinking water within the meaning of the Safe Drinking Water Act, 2002. As a municipal water source was used for bedrock coring, it is inferred that the municipal water is the source of the chloroform in the groundwater samples from BH/MW-3 and BH/MW-7, and the applicable SCS are deemed not to be exceeded for this parameter.

According to Section 49.1 of O.Reg. 153/04 if, in the opinion of the Qualified Person, the applicable SCS at the Phase Two property are exceeded solely due to the application of a substance to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both, the applicable SCS is deemed not to be exceeded. Road salt is considered to have been applied to the driving and parking surfaces on the Phase Two property. As all of the monitoring wells were located in the parking lot or service garage, for the purpose of this investigation, the elevated sodium levels in the groundwater samples collected from BH/MW-7 are deemed not to exceed the Table 7 SCS.

Recognizing that seasonal variation and/or sediment in the well water can influence groundwater analytical results, additional samples were collected March, June and September 2024 based on exceedances observed in the November and December 2023 sampling events. Additional groundwater samples were submitted for analysis of VOC (BH/MW-1, BH/MW-3, BH/MW-4, and BH/MW-12), one groundwater sample and one duplicate sample were submitted for analysis of BTEX and PHC (BH/MW-8), and one groundwater sample was submitted for analysis of BTEX.

In total, four rounds of groundwater sampling have been completed on the Site (November/December 2023, March 2024, June 2024 September 2024). Additional studies are planned to delineate the Table 7 and/or Table 3 exceedances such that an appropriate remedial strategy can be prepared in conjunction with the overall development approach for the site.

5.5.1 Chemical Transformation and Contaminant Sources

A variety of physical, chemical and biochemical mechanisms affect the fate and transport of the potential COC in soil and groundwater, the contribution of which is dependent on the soil and groundwater conditions at the Phase Two property, as well as the chemical/physical properties of the COC. Relevant fate and transport mechanisms are natural attenuation mechanisms, including advection mixing, mechanical dispersion/molecular diffusion, phase partitions (i.e. sorption and volatilization), and possibly abiotic or biotic chemical reactions, which effectively reduce COC concentrations.

PAH-impacted soil was identified in the vicinity of BH-6 and BH/MW-7 and is associated with poor-quality fill material. PAHs preferentially sorb to soil. All PAH parameters in groundwater were below the detection limits.

TCE-impacted soil was identified at BH/MW-1, BH/MW-3 and BH/MW-4. TCE-impacted groundwater was identified at BH/MW-3 and BH/MW-12. It is noted that the TCE concentrations in the groundwater sample collected from BH/MW-3 decreased during the spring sampling event, and were below the Table 7 SCS, while TCE concentrations in BH/MW-12 increased from the fall sampling event. These impacts are assumed to be associated with historic dry-cleaning operations in the northernmost unit of the site-building. Since chlorinated VOC were detected in groundwater above the Table 7 SCS, there is potential for reductive dechlorination. Under anaerobic conditions, tetrachloroethylene can transform via a microbially mediated reductive dechlorination pathway into daughter products such as trichloroethylene, cis-1,2-dichloroethylene, and vinyl chloride. Evidence of reductive dechlorination was not observed in groundwater on the Phase Two property, as no daughter products were observed above the laboratory detection levels in the groundwater samples collected at the site.

5.5.2 Evidence of Non-Aqueous Phase Liquid

Inspection of the groundwater monitoring wells did not indicate the presence of non-aqueous phase liquid (NAPL).

5.5.3 Maximum Concentrations

Contaminants that exceeded the Table 7 SCS for residential land use were:

Soil: PHC F4, tetrachloroethylene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, fluoranthene, cobalt, SAR, and EC.

Groundwater: PHC F1, benzene, chloroform, ethylbenzene, hexane, tetrachloroethylene, trichloroethylene, xylenes and sodium.

It is noted that the electrical conductivity and sodium adsorption ratio soil exceedances and the sodium groundwater exceedance are attributed to the use of road salt in the parking lot. Therefore, in accordance with Section 49.1 of O.Reg. 153/04, these parameters are considered to meet the applicable SCS.

It is also noted that the chloroform exceedance is inferred to be associated with the use of municipal water for bedrock coring. Therefore, in accordance with Section 49.1.2 of O.Reg. 153/04, the groundwater standards for chloroform are deemed to be met.

Maximum soil and groundwater concentrations are shown on Tables 7 and 8 respectively in Appendix F.

5.6 Sediment: Quality

There are no water bodies on the Phase Two property, therefore sediment sampling was not required.

5.7 Quality Assurance and Quality Control Results

Quality assurance and quality control measures were taken during the field activities to meet the objectives of the sampling and quality assurance plan to collect unbiased and representative samples to characterize existing conditions in the fill materials and groundwater at the site. QA/QC measures, included:

- Collection and analysis of blind duplicate soil and groundwater samples to ensure sample collection precision;
- Analysis of a groundwater field blank for all parameters that were analysed to assess potential impact during sampling;
- Using dedicated and/or disposable sampling equipment;
- Following proper decontamination protocols to minimize cross-contamination;
- Maintaining field notes and completing field forms to document on-site activities; and,
- Using only laboratory-supplied sample containers and following prescribed sample protocols, including proper preservation, meeting sample hold times, and proper chain of custody documentation, to ensure the integrity of the samples.

BV Labs' QA/QC program consisted of the preparation and analysis of laboratory duplicate samples to assess precision and sample homogeneity, method blanks to assess analytical bias, spiked blanks and QC standards to evaluate analyte recovery, matrix spikes to evaluate matrix interferences and surrogate compound recoveries to evaluate extraction efficiency. The laboratory QA/QC results are presented in the Quality Assurance Report provided in the Certificates of Analysis prepared by Paracel and Caduceon. The QA/QC results are reported as percent recoveries for matrix spikes, spiked blanks and QC standards, relative percent difference for laboratory duplicates and analyte concentrations for method blanks.

A review of the laboratory QA/QC results reported indicated that they were mostly within acceptable control limits or below applicable alert criteria for the sampled media and analytical test groups. For QA/QC purposes, the analytical sample results are quantitatively evaluated by calculating the relative percent difference (RPD) between the samples and their duplicates. To accurately calculate a statistically valid RPD, the concentration of the analytes found in both the original and duplicate sample must be greater than five times the reporting detection limit (RDL).

The results of the RPD calculations are provided in Appendix F in Tables 7 to 12. All of the RPD for soil and groundwater were either not calculable or within the applicable alert limits, with the exception of the soil sample BH/MW-11 SS2 which was outside of the acceptable RPD limits for hot water-soluble boron. As both the sample and the duplicate were within the applicable SCS for silver, the exceedance of the acceptable RPD does not affect the conclusions of this report.

6.0 Phase Two Conceptual Site Model

A Conceptual Site Model (CSM) provides a narrative, graphical and tabulated description integrating information related to the Phase Two property's geologic and hydrogeological conditions, areas of potential environmental concern/potential contaminating activities, the presence and distribution of contaminants of concern, contaminant fate and transport, and potential exposure pathways. The P2CSM was completed in accordance with Ontario Regulation 153/04, as amended (O.Reg.153/04), as defined by the Ontario Ministry of the Environment, Conservation and Parks (MECP).

6.1 Introduction

EXP Services Inc. (EXP) was retained by Sun Life Assurance Company of Canada c/o BentallGreenOak (Canada) LP to conduct a Phase Two ESA for the property located at 1820-1846 Bank Street in Ottawa, Ontario (hereinafter referred to as the 'Phase Two property'). At the time of the investigation, the Phase Two property was occupied by a commercial strip mall and associated parking lot.

The objective of the Phase Two ESA investigation was to assess the quality of the soil and groundwater conditions within the APEC identified in a Phase One ESA prepared by EXP.

6.2 Current and Proposed Future Uses

The most recent use of the Phase One property is commercial and that the proposed future use is residential and commercial. Consequently, since the proposed future use of the property is more sensitive than its previous use a will be required.

6.3 Site Description

The Phase Two property has the municipal addresses of 1820-1846 Bank Street in Ottawa, Ontario and is located on the northwest corner of the intersection of Bank Street and Walkley Road. The Phase Two property is irregular in shape with an approximate area of 1.74 hectares. The Phase Two property site location and site layout are shown on Figures 1 and 2 in Appendix A.

The Phase Two property is occupied by single-storey, slab-on-grade commercial buildings containing multiple units. The building has an approximate footprint of 3,925 square meters (42,240 square feet). As of December 2023, the building tenants included Value Village, Algonquin Careers Academy, Ruby Inn (restaurant), Bel-O-Sol (tanning salon), Savannah Afro Caribbean (retail), and Hera Beauty (retail).

The legal description of the Phase Two property is Part Lot 23, Concession Junction Gore, as in CT131445 and NS95310 Except Parts 16, 17 and 18 on Expropriation NS275909 and Parts 1, 2 and 3 on Plan 5R284; subject to OT55584 Ottawa/Gloucester. The property identification number (PIN) is 040690603.

Refer to Table 5.3 for the Site identification information.

Table 5.3: Site Identification Details

Civic Address	1820-1846 Bank Street, Ottawa, Ontario
Current Land Use	Commercial
Proposed Future Land Use	Residential and commercial
Property Identification Number	040690603
UTM Coordinates	Zone 18, 447944 m E and 5024339 m N
Site Area	1.74 hectares

Property Owner	Sun Life Assurance Company of Canada
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6.3.1 Buildings and Structures

The Phase Two property is currently occupied by a multi-tenant, slab-on-grade, single-storey, commercial building. The building has a footprint of approximately 3,925 square meters (43,240 square feet). Outside of the building footprint, the site property consists of asphalt parking and driving lanes.

The proposed development will consist of two apartment buildings ranging from twenty-five to thirty stories, and two mixed-use buildings ranging from twenty-four to forty stories. The buildings will be located around the edges of the site with a central park area located in the center of the property. It is understood that a two-storey community building and a mid-rise six-storey building are also being considered to be constructed within the northern area of the central park. It is assumed that the buildings will have three to four levels of underground parking. The proposed building locations are shown on Figure 5.

6.3.2 Utilities

The existing building on the Phase Two property is slab-on-grade and is serviced with municipal sewer and water, underground hydro and natural gas. The locations of the utilities on the Phase Two property are shown on Figure 5.

6.4 Geological and Hydrogeological Setting

A summary of factors that apply to the Phase Two property is provided in Table 5.4.

Table 5.4: Site Characteristics

Minimum Depth to Bedrock	1.3 metres below ground surface
Minimum Depth to Groundwater	Overburden – 1.28 (December 6, 2023) Bedrock – 6.85 (December 6, 2023)
Shallow Soil Property	Yes, bedrock is less than 2.0 mbgs across 2/3 of the Phase Two property
Proximity to water body or ANSI	Approximately 300 m west– Sawmill Creek
Soil pH	Surface and sub-surface pH was within the applicable ranges
Soil Texture	Coarse
Current Property Use	Commercial
Future Property Use	Residential and commercial
Proposed Future Building	Two 25 to 40 storey residential apartment buildings, and two 24 to 40 storey mixed-use buildings all with three to four levels of underground parking
Areas Containing Suspected Fill	Entire Phase Two property

6.4.1 Site Stratigraphy

Beneath any fill, the surficial geology of the subject site is characterised by Champlain Sea fine textured glacial marine deposits of silt and clay. The bedrock geology underlying the site consists of shale of the Carlsbad Formation. Previous investigations have determined that the site geology generally consists of clay, sand and gravel fill overlying shale bedrock. Bedrock is present between 0.9 m and 2.7 metres below ground surface across the Phase One property. Topographically, the Phase Two property is relatively flat. Regionally, topography slopes to the west towards Sawmill Creek. Ground surface elevation at the Phase Two property is approximately 90 metres above sea level.

All of the exterior boreholes are located in a paved area. A 50 mm to 120 mm thick asphaltic concrete layer was contacted in all the exterior the boreholes at the site with the exception of BH-16. For the two interior boreholes, a concrete slab 165-200 mm thick was encountered at the surface of BH/MW-3 and BH/MW-4.

A layer of fill was contacted underlying the asphaltic concrete or concrete all the boreholes. The fill extends to 0.3 to 1.8 m depths. The fill generally consists of sand and gravel.

A layer of glacial till was encountered underlying the fill at 0.3 m depth in BH/MW-9. The glacial till contains varying amounts of gravel, sand, silt and clay within the soil matrix as well as cobbles and boulders. A layer of highly weathered shale bedrock was contacted underlying the fill or the glacial till at depths of 0.7 m to 1.8 m depths in all of the boreholes except BH-14 and BH-16.

Auger refusal was met at 1.3 m to 2.8 m depths (Elevation 92.0 m to Elevation 88.2 m). In BH/MW-1 to BH/MW-7 and BH/MW-11 to BH-18 the boreholes were extended past the depth of refusal through rock coring to termination depths of 2.6 m to 14.9 (Elevation 89.4 m to 76.2 m). The rock coring determined the bedrock to be shale.

A plan view showing cross-sections is provided as Figure 5 in Appendix A, while the Phase Two property geology is depicted in cross-sections on Figure 6 in Appendix A.

6.4.2 Approximate Depth to Water Table

The depth to groundwater was measured to range from 1.28 to 2.18 m below ground surface in the shallow bedrock wells, and 6.85 to 11.64 metres below ground surface in the deep bedrock wells.

Based on the groundwater level measurements, groundwater contours in the overburden and deep bedrock were plotted, as shown on Figures 4A and 4B. The groundwater flow direction in the deep bedrock aquifer was to the west, towards Sawmill Creek and the Rideau River. The groundwater flow direction in the shallow bedrock wells was to the northwest.

EXP notes that groundwater levels can be influenced by seasonal changes, the presence of subsurface structures, or fill, however based on the depth of the water table (within the bedrock), it is unlikely that any of these factors will affect the groundwater flow direction at the Phase Two property.

6.4.3 Hydrogeological Conditions

There are no water bodies on the subject site. There are no water bodies on the subject site. The closest body of water is Sawmill Creek, located approximately 300 m west of the Phase Two property. Sawmill Creek flows to the north towards the Rideau River. The inferred groundwater flow direction is to the north-northwest towards the Rideau River.

The hydraulic conductivity was calculated to range between 3.45×10^{-8} and 1.31×10^{-9} in the fractured bedrock.

Vertical hydraulic gradients were not calculated as overburden groundwater consisted of minimal perched water at the bedrock-overburden interface.

6.4.4 Approximate Depth to Bedrock

Investigations at the Phase Two property have determined that the stratigraphy generally consisted of fill overlying glacial till. Bedrock was encountered between 1.3 to 2.7 m bgs.

6.4.5 Site Sensitivity

The Phase Two property, and all other properties located, in whole or in part, within 250 metres of the boundaries of the Phase Two property, are supplied by a municipal drinking water system provided by the City of Ottawa. Further, the Phase Two property is not located in an area designated in the municipal official plan as a well-head protection area and no properties within the Phase Two property study area has a well that is being used or is intended for use as a source of potable water. Thus, in accordance with Section 35 of Ontario Regulation 153/04, non-potable water standards apply to the Phase Two property.

In accordance with Section 41 of Ontario Regulation 153/04, the Phase Two property is not an environmentally sensitive area. In addition, the Phase Two property is not located within an area of natural significance, and it does not include land that is within 30 metres of an area of natural significance. The Phase Two property is located greater than 30 metres from a water body. In the opinion of the Qualified Person who oversaw the entire investigation, the Phase Two property is not a sensitive site.

Based on the Phase Two ESA investigation, the property is considered a shallow soil property as defined in Section 43.1 of the regulation, as the depth to bedrock is less than 2 metres across 2/3 of the Phase Two property.

Considering that the Site will likely be developed in stages and recognizing that the depth to bedrock varies across the Site, EXP also utilized the Table 3 Generic Site Condition Standards for Full Depth Generic Site Condition Standards in a Non-Potable Groundwater Condition for Residential/Parkland/Institutional properties, Coarse Textured Soil for portions of the Site where those standards apply.

6.5 Potentially Contaminating Activities

The following PCAs were identified:

- PCA 1: 1822 Bank Street – former on-site rail siding (PCA #46)
- PCA 2: Glenhaven Private – former rail line (PCA #46)
- PCA 3: 1841 Bank Street – former gas station (PCA #28)
- PCA 4: 1841 Bank Street – active repair garage (PCA #10)
- PCA 5: 1827 (1811 Bank Street – former contractor’s repair garage (PCA #10)
- PCA 6: 1827 (1811) Bank Street – former UST (PCA #28)
- PCA 7: 1847 Bank Street – active gas station (PCA #28)
- PCA 8: 1877 Bank Street – former gas station (PCA #28)
- PCA 9: 1846 Bank Street (Phase Two property) – former dry cleaner (PCA #37)
- PCA 10: 1832 Bank Street (Phase Two property) – former gas station (PCA #28)
- PCA 11: 1800 Bank Street – former dry cleaner (PCA #37)
- PCA 12: 1811 Bank Street – car dealership with repair garage (PCA #10)
- PCA 13: 1811 Bank Street – gasoline and waste oil USTs for car dealership (PCA #28)

- PCA 14: 1850 Bank Street – former car dealership with repair garage (PCA #10)
- PCA 15: 1850 Bank Street – Former gasoline and waste oil USTs (PCA #28)
- PCA 16: 1792 Bank Street – active repair garage (PCA #10)
- PCA 17: 1792 Bank Street – former gas station (PCA #28)
- PCA 18: 1770 Bank Street – car dealership with repair garage (PCA #10)
- PCA 19: 1770 Bank Street – gasoline and waste oil UST for car dealership/repair garage (PCA #28)
- PCA 20: 1820-1846 Bank Street – fill material of unknown quality (PCA #30)
- PCA 21: 2629 Alta Vista Drive – dry cleaner (PCA #37)
- PCA 22: 2706 Alta Vista Drive – dry cleaner (PCA #37)
- PCA 23: 1750 Bank Street – former repair garage (PCA #10)
- PCA 24: 1750 Bank Street – former gas stations (PCA #28)
- PCA 25: 1750 Bank Street – former dry cleaner (PCA #37)

All of the on-site PCAs were determined to result in APECs. A dry cleaner (PCA 9) operated in the northernmost unit from the 1970s until 2018. A gas station (PCA 10) was present on the east part of the site for a brief period in the 1970s. Previous investigations conducted on this part of the site identified tetrachloroethylene (PCE) impacted soil and groundwater, although it is noted that the most recent investigation conducted by Pinchin Limited did not identify any exceedances of the applicable standards in the monitoring wells sampled near the former on-site dry cleaner or gas station. The previous investigation also identified between 0.9 m and 2 m of fill material on the Phase One property (PCA 20). A rail siding (PCA 1) was historically located on the Phase Two property prior to the construction of the existing site-building.

With respect to off-site PCAs, due to the proximity and/or inferred upgradient location from the Phase Two property, the gas stations at 1841 and 1847 Bank Street, the repair garages/car dealerships at 1841 and 1850 Bank Street, the former rail line to the west, and the former dry cleaner at 1800 Bank Street were considered to contribute to APECs on the Phase Two property.

The remaining PCAs identified in the study area were located at least 100 m from the Phase Two property and/or down/cross-gradient to the Phase Two property and were not considered to contribute to APECs on the Phase Two property.

6.6 Areas of Potential Environmental Concern

The APEC identified are summarized in Table 5.5.

Table 5.5: Findings of Phase One ESA

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
#1. Former on-site dry-cleaner	North end of site building	PCA #37 – Operations of dry cleaning equipment (where chemicals are used) (PCA 9)	On-site	VOC	Soil and groundwater
#2. Former on-site gas station	East part of Phase Two property	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 10)	On-site	PHC, VOC, metals	Soil and groundwater

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
#3. Former on-site rail siding	Northwest part of Phase Two property	PCA #46 – Rail yard, tracks, and spurs (PCA 1)	On-site	PAH, metals	Soil
#4. Fill material	Entire Phase Two property	PCA #30 – Importation of fill material of unknown quality (PCA 20)	On-site	PHC, PAH, metals	Soil
#5. Former dry cleaner at 1800 Bank Street & historical furnace oil leak from UST	Along north property line	PCA #37 – Operations of dry cleaning equipment (where chemicals are used) and PCA #28 – Gasoline and associated products storage in fixed tanks (PCA's 10 & 11)	Off-site	PHC, VOC	Soil and groundwater
#6. Former gas station at 1841 Bank Street	Along southeast property line	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 3)	Off-site	PHC, VOC	Soil and groundwater
#7. Repair garage at 1841 Bank Street	Along southeast property line	PCA #10 – Commercial autobody shop (PCA 4)	Off-site	PHC, VOC, metals	Soil and groundwater
#8. Gas station at 1847 Bank Street	Along southeast property line	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 7)	Off-site	PHC, VOC	Soil and groundwater
#9. Former car dealership at 1850 Bank Street	Along south property line	PCA #10 – Commercial autobody shop (PCA 14)	Off-site	PHC, VOC, metals	Soil and groundwater
#10. Former USTs associated with car dealership at 1850 Bank Street	Along south property line	PCA #28 – Gasoline and associated products storage in fixed tanks (PCA 15)	Off-site	BTEX, PHC	Soil and groundwater
#11. Former rail line to the west of the site	Along west property line	PCA #46 – Rail yard, tracks, and spurs (PCA 2)	Off-site	PAH, metals	Soil

The locations of the APEC are shown on Figure 3 in Appendix A.

6.7 Previous Investigations

Multiple previous investigations have been conducted at the Phase Two property. A limited Phase II ESA was conducted by JWEL in 1999 to address the dry-cleaning operations. In addition, the north adjacent property was historically occupied by an industrial plant (Westinghouse), and a dry-cleaning operation and several gas stations and repair garages were identified to the northeast and northwest of the Phase One property. As these operations were located inferred cross-gradient to the site, they were not anticipated to contribute to areas of potential environmental concern. Concentrations of volatile organic compound (VOC) in exceedance of the Ministry of the Environment (MOE) applicable standards were present in the groundwater.

In February 2002, a total of three boreholes were advanced at the site by Trow to approximately 6.4 metres below ground surface. All three of the boreholes were completed as monitoring wells. Subsurface stratigraphy generally consisted of sandy silt fill to approximately 0.6 m bgs, overlying native silty sand with some gravel. Highly fractured shale bedrock was

encountered approximately 2.0 to 2.5 m bgs in all three boreholes. It is noted that all of the monitoring wells were installed in the bedrock. A total of three soil samples were submitted for analysis of VOC, one soil sample was submitted for analysis of polycyclic aromatic hydrocarbons (PAH), and metals. Three groundwater samples were submitted for analysis of VOC, and one groundwater sample was also submitted for analysis of PAH and metals. One soil sample (MW 101), and one groundwater sample (MW 102) exceeded the applicable non-portable criteria for PCE.

In February 2002, Trow retained a video inspection company to conduct video imaging to assess the integrity of the sewers in/around the dry-cleaning unit. A floor drain was noted in the dry-cleaning unit which connected to the sanitary sewer. The video assessment of the sanitary sewer indicated that the condition of the sanitary sewer in the vicinity of the floor drain/toilet was in suspect condition and may be allowing seepage of wastewater to the subsurface beneath the building. Swab samples were also collected from the sanitary sewer pipe in the vicinity of the dry-cleaning machine and submitted for analysis of VOC. Results of the swab analysis indicated that trichloroethylene (TCE) and PCE were present in the sanitary sewer. It was inferred from these results that the former dry-cleaning machine was connected to the sanitary sewer and discharging waste PCE.

It was noted that a new dry-cleaning machine was installed in March 2002. It was noted that the new unit was self-contained and not connected to the municipal sewers. Waste PCE was stored in tanks that formed part of the machine and is removed from the site by a licensed contractor.

It was recommended that bi-annual groundwater sampling be conducted to monitor the concentrations of VOCs. It was recommended that the floor drain in the vicinity of the dry-cleaning machine be capped, as the new machine was self-contained, and a sewer connection was no longer required. The 1999 JWEL monitoring well was decommissioned to prevent further migration of impacted groundwater.

An enhanced Phase I ESA investigation was conducted in 2013 by Pinchin. Three monitoring wells north of the dry-cleaning unit, and one monitoring well on the east part of the site in the area of the former gas station were sampled as part of this investigation. Groundwater samples were submitted for analysis of VOC and/or petroleum hydrocarbons (PHC). The groundwater samples were compared to the MECP Table 3 site condition standards (SCS) for commercial land use. All of the groundwater samples were within the Table 3 SCS. Based on the results of the groundwater sampling program, it was Pinchin's opinion that none of the on-site operations had resulted in any subsurface impacts. No additional subsurface investigation was recommended by Pinchin. Pinchin noted that, based on the age of the site building, there was potential for asbestos-containing materials to be present in the site-building.

6.8 Scope of the Investigation

The objective of the Phase Two ESA was to assess the quality of soil and groundwater quality on the Phase Two property. The field program was conducted in conjunction with geotechnical and hydrogeological investigations.

The following table summarizes the soil and groundwater locations on the Phase Two property, and the APECs each sample location addresses.

Table 5.6: Summary of Investigation

Area of Potential Environmental Concern (APEC)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)	Addressed by BH/MW/sample #
#1. Former on-site dry-cleaner	VOC	Soil and groundwater	BH/MW-3, BH/MW-4, BH/MW-12
#2. Former on-site gas station	PHC, VOC, metals	Soil and groundwater	BH/MW-7, BH/MW-8

#3. Former on-site rail siding	PAH, metals	Soil	BH/MW-3, BH-6
#4. Fill material	PHC, PAH, metals	Soil	BH/MW-1, BH/MW-2, BH/MW-3, BH/MW-4, BH-6, BH/MW-7, BH/MW-8, BH/MW-9, BH/MW-10, BH/MW-11
#5. Former dry cleaner at 1800 Bank Street & historical furnace oil leak from UST	PHC, VOC	Soil and Groundwater	BH/MW-1
#6. Former gas station at 1841 Bank Street	PHC, VOC	Soil and Groundwater	BH/MW-8, BH/MW-9
#7. Repair garage at 1841 Bank Street	PHC, VOC, metals	Soil and groundwater	BH/MW-8, BH/MW-9
#8. Gas station at 1847 Bank Street	PHC, VOC	Soil and groundwater	BH/MW-8, BH/MW-9
#9. Former car dealership at 1850 Bank Street	PHC, VOC, metals	Soil and groundwater	BH/MW-10, BH/MW-11
#10. Former USTs associated with car dealership at 1850 Bank Street	BTEX, PHC	Soil and groundwater	BH/MW-10, BH/MW-11
#11. Former rail line to the west of the site	PAH, metals	Soil	BH/MW-3, BH/MW-11

6.8.1 Investigation

The site investigative activities were conducted in conjunction with a hydrogeological investigation and geotechnical investigation and consisted of the advancement of boreholes on the site to facilitate the collection of soil and groundwater samples for visual inspection and chemical analyses.

Prior to the commencement of excavating, the locations of underground public utilities including telephone, natural gas and electrical lines were marked at the subject property by public locating companies. A private utility locating contractor was also retained to clear the individual borehole locations.

The borehole locations were selected to address the APECs identified in the Phase One ESA, and to provide site coverage for geotechnical purposes. The exterior drilling program was completed between October 26 and November 3, 2023, by George Downing Estate Drilling Ltd. (Downing), a licensed well contractor. Downing advanced fifteen geotechnical boreholes (BH/MW-1, BH/MW-2, BH-6 to BH-18) across the Phase Two property, using a CME-75 truck-mounted drill. On December 13 and 14, 2023, Strata Drilling Group (Strata) completed two interior environmental boreholes (BH/MW-3 and BH/MW-4) inside the former dry cleaner using a Geoprobe model 450 using direct push sampling for the overburden soils and cored the bedrock using a Hilti drill using an N-size core barrel.

BH/MW-1 to BH/MW-7 and BH/MW-11 to BH-18 the boreholes were extended past the depth of refusal through rock coring to termination depths of 2.6 m to 14.9 metres below ground surface. Monitoring wells with diameters of either thirty-two (32) mm, thirty-eight (38) mm or fifty (50) mm diameter were installed in BH/MW-1, BH/MW-2, BH/MW-7 to BH/MW-12 and BH/MW-15 for long-term monitoring of the groundwater levels as well as groundwater sampling. The boreholes were backfilled upon completion of drilling.

EXP staff continuously monitored the drilling activities to log the stratigraphy observed, to record the depth of soil sample collection, to record total depths of excavation, and to record visual or olfactory observations of potential impacts. Field observations are summarized on the borehole logs provided in Appendix E. Nitrile gloves (i.e., one pair per sample) were used during sample handling. No petroleum-based greases or solvents were used during drilling activities.

6.8.2 Soil Sampling

In accordance with the scope of work, chemical analyses were performed on selected soil samples recovered from the boreholes.

Seventeen soil samples and three duplicate sample were submitted for analysis of PHC, VOC, PAH and metals and inorganic. The following exceedances of the MECP Table 7 residential SCS were noted:

- BH/MW-1 SS3, BH/MW-3 SS1 and BH/MW-4 SS2 exceeded for TCE;
- BH/MW-9 AS1 exceeded for PHC F4;
- BH-6 SS1, BH//MW-7 SS2A and BH/MW-7 SS2B exceeded for multiple PAH parameters;
- BH/MW-1 SS3 exceeded for cobalt; and,
- BH/MW-1 SS2 and duplicate, BH/MW-1 SS3, BH/MW-2 AS3, BH-6 SS1, BH-6 SS2, BH/MW-7 SS2A, BH/MW-7 SS2B, BH/MW-8 AS3, BH/MW-9 SS2, BH/MW-10 SS2 and duplicate, BH/MW-11 SS1, BH/MW-11 SS2 and duplicate exceeded for EC and/or SAR.

In accordance with Section 49.1 of O.Reg. 153/04 if, in the opinion of the Qualified Person, the applicable SCS at the Phase Two property are exceeded solely due to the application of a substance to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both, the applicable SCS is deemed not to be exceeded. Road salt is considered to have been applied to the driving and parking surfaces on the Phase Two property. Therefore, for the purpose of this investigation, the elevated EC and SAR in the soil samples collected are deemed not to exceed the Table 7 SCS.

The soil sample collected from BH/MW-1 exceeded the Table 7 SCS for cobalt. This sample was collected from the highly weathered shale layer, and the exceedance is inferred to be associated with naturally elevated levels of cobalt in the Ottawa area.

6.8.3 Groundwater Sampling

All groundwater samples were collected via a low-flow sampling technique. EXP monitored several water quality parameters (such as water level, temperature, dissolved oxygen, conductivity, salinity, pH, oxygen reduction potential and turbidity) in order to ensure that the samples collected were representative of actual groundwater conditions.

In November and December 2023, eight groundwater samples, a duplicate sample, and field blank and a trip blank were submitted for chemical analysis of VOC. Six groundwater samples, a duplicate sample, a trip blank, and a field blank were submitted for were submitted for chemical analysis of PHC, PAH and metals. The following Table 7 exceedances were noted during the fall/winter 2023 sampling:

- BH/MW-8, BH/MW-10 and duplicate and BH/MW-12 exceeded for benzene;
- BH/MW-3 and BH/MW-7 exceeded for chloroform;

- BH/MW-8 exceeded for PHC F1, ethylbenzene, hexane, and xylenes;
- BH/MW-3 and BH/MW-12 exceeded for TCE; and,
- BH/MW-7 exceeded for sodium.

In comparison to Table 3, the following exceedances were noted from the initial sampling round (Figure 13):

- BH/MW-12 for PCE and TCE
- BH/MW-3 for PCE

In accordance with Section 49.1.2 of O.Reg. 153/04, standards are deemed to be met if there has been a discharge of drinking water within the meaning of the Safe Drinking Water Act, 2002. As a municipal water source was used for bedrock coring, it is inferred that the municipal water is the source of the chloroform in the groundwater samples from BH/MW-3 and BH/MW-7, and the applicable SCS are deemed not to be exceeded for this parameter.

According to Section 49.1 of O.Reg. 153/04 if, in the opinion of the Qualified Person, the applicable SCS at the Phase Two property are exceeded solely due to the application of a substance to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both, the applicable SCS is deemed not to be exceeded. Road salt is considered to have been applied to the driving and parking surfaces on the Phase Two property. As all of the monitoring wells were located in the parking lot or service garage, for the purpose of this investigation, the elevated sodium levels in the groundwater samples collected from BH/MW-7 are deemed not to exceed the Table 7 SCS.

In March, June and September 2024, additional samples were collected based on exceedances observed in the 2023 sampling event. Four groundwater samples were submitted for analysis of VOC (BH/MW-1, BH/MW-3, BH/MW-4, and BH/MW-12), one groundwater sample and one duplicate sample were submitted for analysis of BTEX and PHC (BH/MW-8), and one groundwater sample was submitted for analysis of BTEX. It is noted that no sample was collected from BH/MW-7 due to insufficient volume. The following exceedances were noted during the spring 2024 sampling:

- BH/MW-8 and duplicate, and BH/MW-12 exceeded for benzene;
- BH/MW-12 exceeded for TCE.

It is noted that the benzene concentration in BH/MW-8 (and duplicate) has decreased since the 2023 sampling event, and the benzene concentration in the groundwater sample and duplicate (0.70 µg/L and 0.69 µg/L) only slightly exceeded the Table 3 residential SCS for benzene (0.5 µg/L). The concentrations of both benzene and TCE in the sample collected from BH/MW-12 were noted to fluctuate with subsequent sample. It is noted that a sediment free sample has not been able to be collected from BH/MW-12 due to the small diameter and deep construction of monitoring wells BH/MW-12.

Additional studies are planned to delineate the Table 7 and/or Table 3 exceedances such that an appropriate remedial strategy can be prepared in conjunction with the overall development approach for the site.

6.8.4 Contaminants of Concern

The following contaminants of concern were identified:

Soil: PHC, VOC, PAH, metals

Groundwater: PHC, VOC, metals

Contaminants that exceeded the Table 7 SCS for residential land use were:

Soil: PHC F4, tetrachloroethylene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, fluoranthene, cobalt, SAR, and EC.

Groundwater: PHC F1, benzene, chloroform, ethylbenzene, hexane, tetrachloroethylene, trichloroethylene, xylenes and sodium.

It is noted that the electrical conductivity and sodium adsorption ratio soil exceedances and the sodium groundwater exceedance are attributed to the use of road salt in the parking lot. Therefore, in accordance with Section 49.1 of O.Reg. 153/04 these parameters are considered to meet the applicable SCS.

It is also noted that the chloroform exceedance is inferred to be associated with the use of municipal water for bedrock coring. Therefore, in accordance with Section 49.1.2 of O.Reg. 153/04, the groundwater standards for chloroform are deemed to be met.

6.8.5 Contaminant Fate and Transport

A variety of physical, chemical and biochemical mechanisms affect the fate and transport of the potential COC in soil and groundwater, the contribution of which is dependent on the soil and groundwater conditions at the Phase Two property, as well as the chemical/physical properties of the COC. Relevant fate and transport mechanisms are natural attenuation mechanisms, including advection mixing, mechanical dispersion/molecular diffusion, phase partitions (i.e. sorption and volatilization), and possibly abiotic or biotic chemical reactions, which effectively reduce COC concentrations.

PAH-impacted soil was identified in the vicinity of BH-6 and BH/MW-7 and is associated with poor-quality fill material. PAH impact appears to be limited to poor-quality fill material. PAHs preferentially sorb to soil. All PAH parameters in groundwater were below the detection limits.

TCE-impacted soil was identified at BH/MW-1, BH/MW-3 and BH/MW-4. TCE-impacted groundwater was identified at BH/MW-3 and BH/MW-12. It is noted that the TCE concentrations in the groundwater sample collected from BH/MW-3 decreased during the spring sampling event, and were below the Table 7 SCS, while TCE concentrations in BH/MW-12 increased from the fall sampling event. These impacts are assumed to be associated with historic dry-cleaning operations in the northernmost unit of the site-building. Since chlorinated VOC were detected in groundwater above the Table 7 SCS, there is potential for reductive dechlorination. Under anaerobic conditions, tetrachloroethylene can transform via a microbially mediated reductive dechlorination pathway into daughter products such as trichloroethylene, cis-1,2-dichloroethylene, and vinyl chloride. Evidence of reductive dechlorination was not observed in groundwater on the Phase Two property, as no daughter products were observed above the laboratory detection levels in the groundwater samples collected at the site.

PHC-impacted soil was identified at BH/MW-9. PHC and BTEX-impacted groundwater was identified at BH/MW-8. The source of the PHC impact in the vicinity of BH/MW-8 and BH/MW-9 is inferred to be the historic operation of a gas station on the Phase Two property. Benzene was detected in the groundwater sample and duplicate sample from BH/MW-10 and the groundwater sample from BH/MW-12. It is noted that the benzene concentrations in the groundwater sample collected from BH/MW-10 decreased during the spring sampling event, and were below the detection limits, while benzene concentrations in BH/MW-12 increased from the fall sampling event.

6.8.6 Preferential Pathways

The preferential pathways for contaminants present in soil and groundwater include underground utilities and surface features. Storm and sanitary sewers are present across the property, as shown on Figure 5.

Areas of impacted groundwater on the Phase Two property have not been delineated. It is possible that utilities on the site are provided immigration pathways or groundwater contaminants, particularly in the vicinity of the former dry cleaning unit.

6.8.7 Climactic Conditions

It is noted that climatic or meteorological conditions may influence the distribution and migration of COCs at the Phase Two property. Seasonal fluctuations in groundwater due to cyclical increases and decreases in precipitation can affect

groundwater recharge and hence flow direction. Groundwater levels may be elevated in the spring and fall due to snow melt and/or increases in precipitation; and groundwater levels may be lowered in the winter and summer due to snow storage and/or increased evaporation. Such fluctuations have the potential to increase the vertical distribution of COCs in the capillary zone, as well as alter the direction of groundwater flow paths based on changes in infiltration rates.

6.8.8 Human Health Receptors and Exposure Pathways

Residential apartments with underground parking and ground floor commercial are currently proposed for the Phase Two property. The potential on-site human receptors are identified as property residents (adult, teen, child, toddler and infant), property visitors (adult, teen, child, toddler and infant), indoor and outdoor long-term workers, indoor and outdoor short-term workers, and construction workers.

Possible routes of exposure for human receptors include the following: incidental soil ingestion, soil particulate inhalation, and soil dermal contact.

6.8.9 Ecological Receptors and Exposure Pathways

While the footprint of the building and parking lot will occupy most of the property, there will be some landscaped areas on the Phase Two property. Therefore, the Phase Two property is capable of supporting some ecological receptors. Relevant ecological receptors include terrestrial vegetation (bushes, grasses and weeds); soil invertebrates (earthworms, millipedes and beetles); birds (seagulls, pigeons, sparrows and robins); and small terrestrial mammals (moles, voles, and mice).

Possible routes of exposure for ecological receptors are root uptake of soil (terrestrial vegetation), and soil particulate inhalation, soil dermal contact, and soil ingestion (soil invertebrates, mammals, and birds).

7.0 Conclusion

During the current investigation, the soil and groundwater quality at the Phase Two property were investigated. Results were compared to Regulation 153/04 Table 3 and Table 7 SCS for residential/parkland/institutional use and coarse-textured soils.

Seventeen soil samples and three duplicate sample were submitted for analysis of PHC, VOC, PAH and metals and inorganics. The following exceedances of the MECP Table 7 residential SCS were noted:

Parameter		Table 7 Residential SCS
VOC	Tetrachloroethylene	BH/MW-1 SS3, BH/MW-3 SS1, BH/MW4 SS2
PHC	PHC F4	BH/MW9 AS1
PAH	Benzo(a)anthracene	BH-6 SS1, BH/MW-7 SS2B
	Benzo(a)pyrene	BH-6 SS1, BH/MW-7 SS2A, BH/MW7 SS2B
	Benzo(b)fluoranthene	BH-6 SS1
	Fluoranthene	BH-6 SS1, BH/MW-7 SS2A, BH/MW-7 SS2B
Metals	Cobalt	BH/MW-1 SS3
Inorganics	Electrical Conductivity	BH/MW-1 SS2
	Sodium Adsorption Ratio	BH/MW-1 SS2 (and DUP 2), BH/MW-1 SS3, BH/MW-2 AS3, BH-6 SS1, BH-6 SS2, BH/MW-7 SS2A, BH/MW-7 SS2B, BH/MW-8 AS3, BH/MW-9 SS2, BH/MW-10 SS2 (and DUP 1), BH/MW-11 SS1, BH/MW-11 SS2 (and DUP 3)
	pH	DUP 2 (BH/MW-1 SS2)

In accordance with Section 49.1 of O.Reg. 153/04 if, in the opinion of the Qualified Person, the applicable SCS at the Phase Two property are exceeded solely due to the application of a substance to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both, the applicable SCS is deemed not to be exceeded. Road salt is considered to have been applied to the driving and parking surfaces on the Phase Two property. Therefore, for the purpose of this investigation, the elevated EC and SAR in the soil samples collected are deemed not to exceed the Table 7 SCS.

Eight groundwater samples, a duplicate sample, and field blank and a trip blank were submitted for chemical analysis of VOC. Six groundwater samples, a duplicate sample, a trip blank, and a field blank were submitted for were submitted for chemical analysis of PHC, PAH and metals. The following exceedances were noted:

Parameter	Table 7 Residential SCS		
	Fall 2023 Sampling	Spring 2024 Sampling	
VOC	Chloroform	BH/MW-3, BH/MW-7	None
	Hexane	BH/MW-8	None
	Tetrachloroethylene, trichloroethylene	BH/MW-3, BH/MW-12	BH/MW-12
PHC + BTEX	Benzene	BH/MW-8, BH/MW-10 (and DUP), BH/MW-12	BH/MW-8 (and DUP), BH/MW-12
	Ethylbenzene	BH/MW-8	None

Parameter		Table 7 Residential SCS	
		Fall 2023 Sampling	Spring 2024 Sampling
	Xylenes	BH/MW-8	None
	PHC F1	BH/MW-8	None
Metals	Sodium	BH/MW-7	N/A

In accordance with Section 49.1.2 of O.Reg. 153/04, standards are deemed to be met if there has been a discharge of drinking water within the meaning of the Safe Drinking Water Act, 2002. As a municipal water source was used for bedrock coring, it is inferred that the municipal water is the source of the chloroform in the groundwater samples from BH/MW-3 and BH/MW-7, and the applicable SCS are deemed not to be exceeded for this parameter.

According to Section 49.1 of O.Reg. 153/04 if, in the opinion of the Qualified Person, the applicable SCS at the Phase Two property are exceeded solely due to the application of a substance to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both, the applicable SCS is deemed not to be exceeded. Road salt is considered to have been applied to the driving and parking surfaces on the Phase Two property. As all of the monitoring wells were located in the parking lot or service garage, for the purpose of this investigation, the elevated sodium levels in the groundwater samples collected from BH/MW-7 are deemed not to exceed the Table 7 SCS.

A soil sample collected from BH/MW-9 exceeded Table 7 SCS for PHC, and groundwater collected from BH/MW-8 exceeded Table 7 SCS for PHC, benzene, hexane, and xylenes. This impact is likely associated with the operation of the former on-site gas station.

Groundwater samples collected from BH/MW-10 and BH/MW-12 exceeded the Table 7 SCS for benzene. The groundwater impact identified in BH/MW-10 may originate from an off-site source. Additional investigation is required.

Soil samples collected from BH/MW-1, BH/MW-3, and BH/MW-4 and groundwater samples collected from BH/MW-3 and BH/MW-12 exceeded the Table 7 SCS for TCE. This impact is inferred to be associated with the operation of the former on-site dry cleaner.

Soil samples collected from the BH-6 and BH/MW-7 exceeded the Table 7 SCS for PAH. No groundwater exceedances for PAH were present in any of the groundwater samples collected from the Phase Two property. The PAH impact is inferred to be associated with poor quality fill material.

A soil sample collected from BH/MW-1 exceeded the Table 7 SCS for cobalt. This sample was collected from the highly weathered shale layer, and the exceedance is inferred to be associated with naturally elevated levels of cobalt in the Ottawa area.

Additional studies are planned to delineate the Table 7 and/or Table 3 exceedances such that an appropriate remedial strategy can be prepared in conjunction with the overall development approach for the site.

The Qualified Person can confirm that the Phase Two Environmental Site Assessment was conducted per the requirements of Ontario Regulation 153/04, as amended, and in accordance with generally accepted professional practices.

8.0 References

This study was conducted in accordance with the applicable Regulations, Guidelines, Policies, Standards, Protocols and Objectives. Specific reference is made to the following documents.

- EXP Services Inc., *Phase One Environmental Site Assessment, 1820-1846 Bank Street, Ottawa, Ontario*, September 2024.
- EXP Services Inc., *Geotechnical Investigation, Proposed Walkley Development, 1820-1846 Bank Street, Ottawa, Ontario*, August 2024.
- EXP Services Inc., *Hydrogeological Investigation, 1820-1846 Bank Street, Ottawa, Ontario*, September 2024.
- Ontario Ministry of the Environment, Conservation and Parks, *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*, December 1996.
- Ontario Ministry of the Environment, Conservation and Parks, *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*, April 15, 2011.
- Ontario Ministry of the Environment, Conservation and Parks, *Guide for Completing Phase Two Environmental Site Assessments under Ontario Regulation 153/04*, June 2011.
- Ontario Ministry of the Environment, Conservation and Parks, *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act*, July 1, 2011.
- Ontario Ministry of the Environment, Conservation and Parks, *Management of Excess Soil – A Guide for Best Management Practices*, January 2014.
- Ontario Regulation 153/04, made under the *Environmental Protection Act*, as amended.
- Ontario R.R.O. 1990, Regulation 347, made under the *Environmental Protection Act*, as amended.
- Ontario R.R.O. 1990, Regulation 903, made under the *Water Resources Act*, as amended.

9.0 General Limitations

Basis of Report

This report ("Report") is based on site conditions known or inferred by the investigation undertaken as of the date of the Report. Should changes occur which potentially impact the condition of the site the recommendations of EXP may require re-evaluation. Where special concerns exist, or Sun Life Assurance Company of Canada c/o BentallGreenOak (Canada) LP ("the Client") has special considerations or requirements, these should be disclosed to EXP to allow for additional or special investigations to be undertaken not otherwise within the scope of investigation conducted for the purpose of the Report.

Reliance on Information Provided

The evaluation and conclusions contained in the Report are based on conditions in evidence at the time of site inspections and information provided to EXP by the Client and others. The Report has been prepared for the specific site, development, building, design or building assessment objectives and purpose as communicated by the Client. EXP has relied in good faith upon such representations, information and instructions and accepts no responsibility for any deficiency, misstatement or inaccuracy contained in the Report as a result of any misstatements, omissions, misrepresentation or fraudulent acts of persons providing information. Unless specifically stated otherwise, the applicability and reliability of the findings, recommendations, suggestions or opinions expressed in the Report are only valid to the extent that there has been no material alteration to or variation from any of the information provided to exp. If new information about the environmental conditions at the Site is found, the information should be provided to EXP so that it can be reviewed and revisions to the conclusions and/or recommendations can be made, if warranted.

Standard of Care

The Report has been prepared in a manner consistent with the degree of care and skill exercised by engineering consultants currently practicing under similar circumstances and locale. No other warranty, expressed or implied, is made. Unless specifically stated otherwise, the Report does not contain environmental consulting advice.

Complete Report

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment form part of the Report. This material includes, but is not limited to, the terms of reference given to EXP by the Client, communications between EXP and the Client, other reports, proposals or documents prepared by EXP for the Client in connection with the site described in the Report. In order to properly understand the suggestions, recommendations and opinions expressed in the Report, reference must be made to the Report in its entirety. EXP is not responsible for use by any party of portions of the Report.

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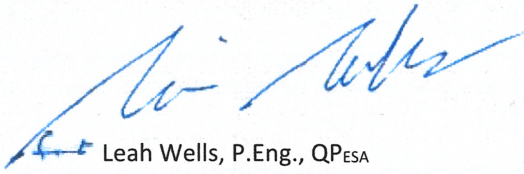
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Sun Life Assurance Company of Canada c/o BentallGreenOak (Canada) LP
Phase Two Environmental Site Assessment
1820-1846 Bank Street, Ottawa, Ontario
OTT-23002538-B0
September 30, 2024

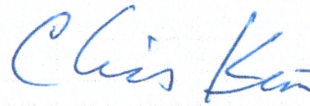
10.0 Signatures

We trust this report meets your current needs. If you have any questions pertaining to the investigation undertaken by EXP, please do not hesitate to contact the undersigned.

The Qualified Person confirms that the Phase Two Environmental Site Assessment was conducted per the requirements of Ontario Regulation 153/04, as amended, and in accordance with generally accepted professional practices.



Leah Wells, P.Eng., QP_{ESA}
Environmental Engineer
Earth and Environment



Chris Kimmerly, P.Geo., QP_{ES}
Senior Project Manager
Earth and Environment

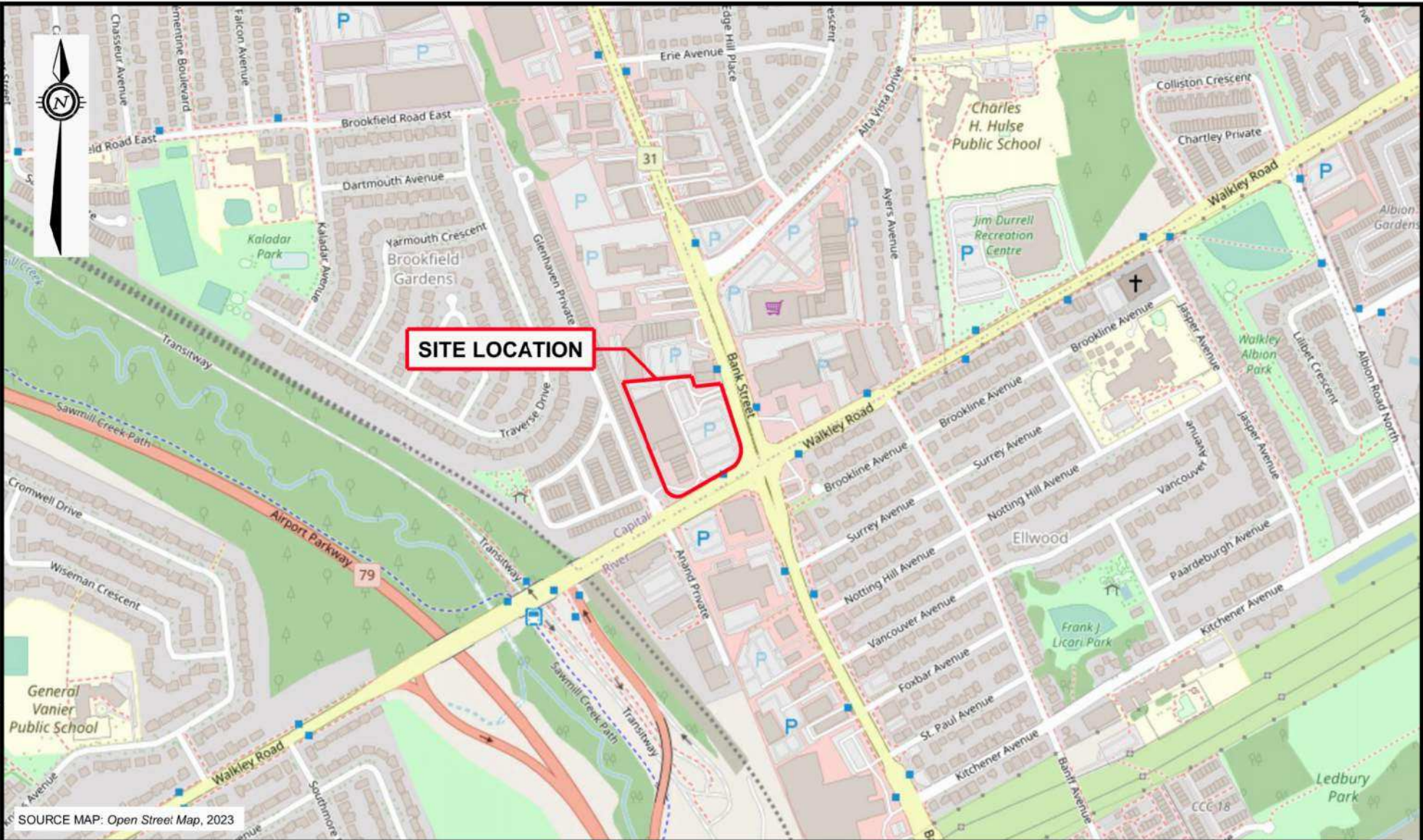


EXP Services Inc.

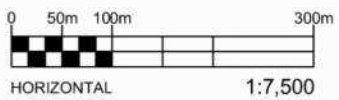
*Sun Life Assurance Company of Canada c/o BentallGreenOak (Canada) LP
Phase Two Environmental Site Assessment
1820-1846 Bank Street, Ottawa, Ontario
OTT-22002538-B0
September 30, 2024*

Appendix A: Figures

Filename: E:\OTT\OTT-23002538-B0_Execution\65 Drawings\23002538-B0_Ph-2_Oct-2024.dwg
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 Last Plotted: Oct 9, 2024 3:38 PM
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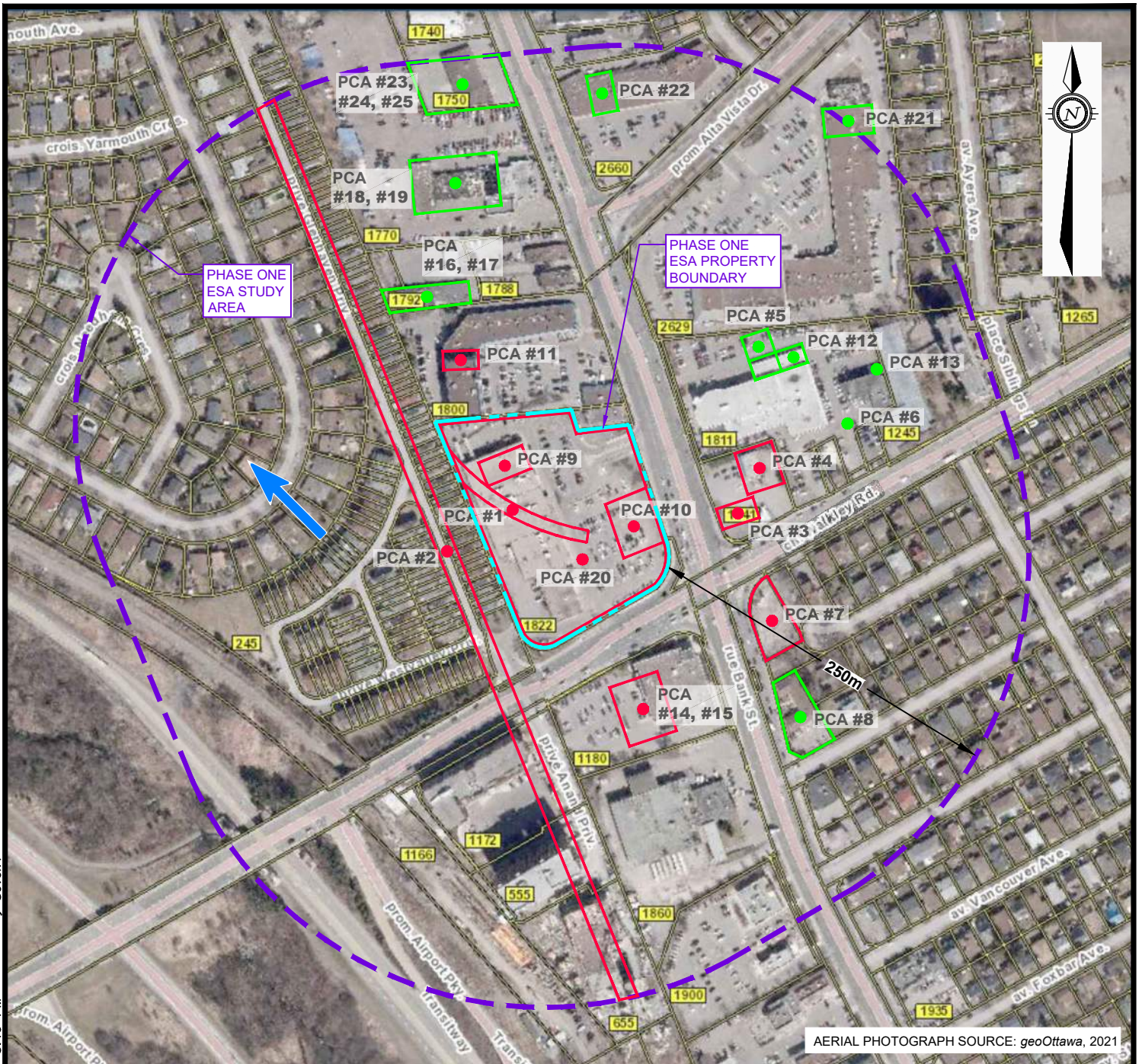


SOURCE MAP: Open Street Map, 2023








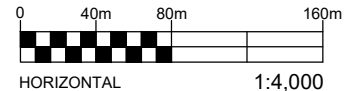
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 2650 Queensview Drive, Suite 100
 Ottawa, ON K2B 8H6, Canada

DATE SEPTEMBER 2024		CLIENT: BGO	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no. OTT-23002538-B0
DESIGN CK / MM	CHECKED CK	TITLE: SITE LOCATION PLAN		scale 1:7,500
DRAWN BY AS		WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO		FIG 1




LEGEND

-  PROPERTY BOUNDARY
-  PHASE ONE ESA STUDY AREA (250 m)
-  INFERRED GROUNDWATER FLOW DIRECTION
-  1 POTENTIALLY CONTAMINATING ACTIVITY (PCA) RESULTING IN APECS
-  2 POTENTIALLY CONTAMINATING ACTIVITY (PCA) NOT RESULTING IN APECS



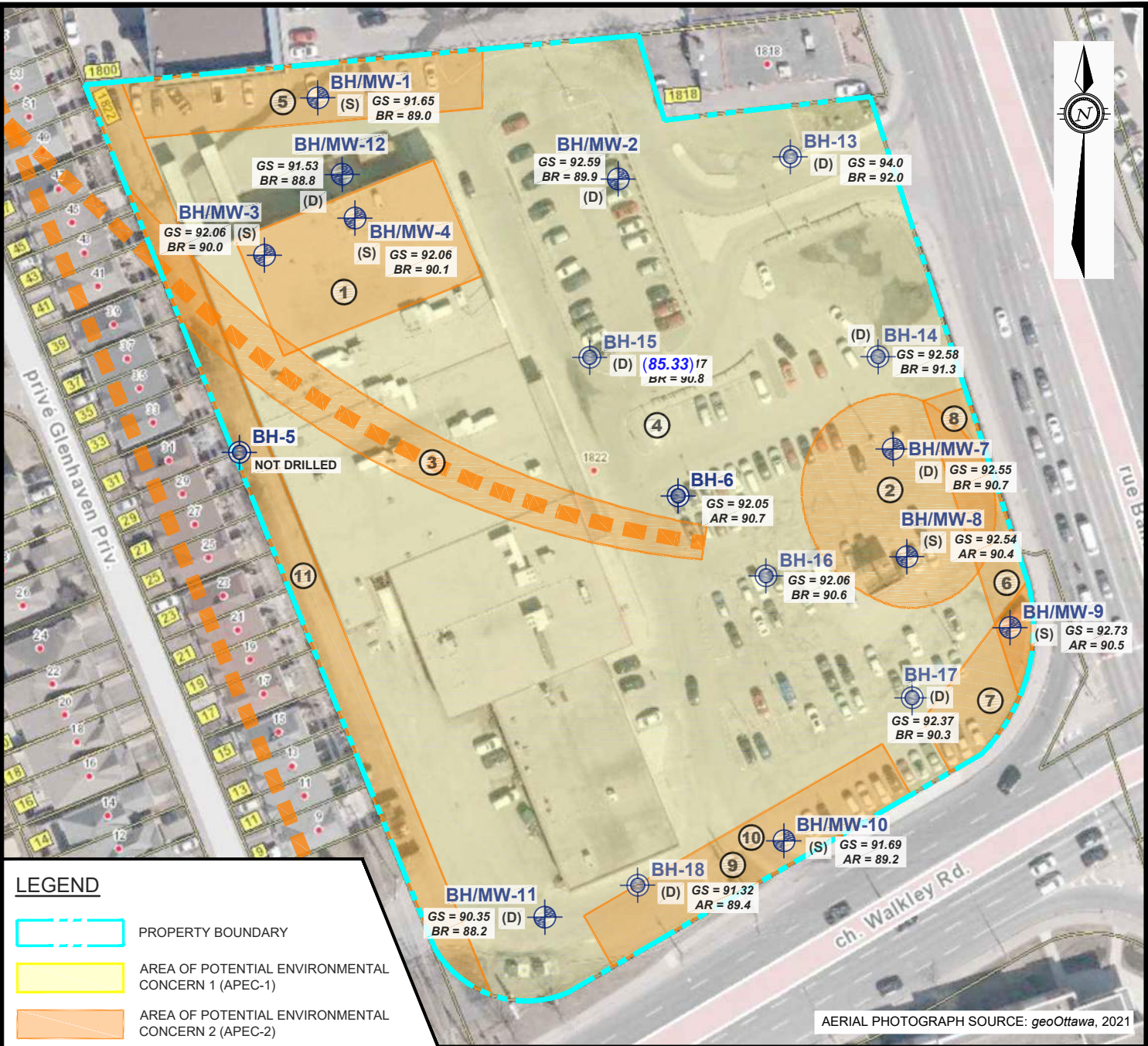
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 2650 Queensview Drive, Suite 100
 Ottawa, ON K2B 8H6, Canada

DATE SEPTEMBER 2024		CLIENT: 	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no. OTT-23002538-B0
DESIGN CK / MM	CHECKED CK	TITLE: PHASE ONE CONCEPTUAL SITE MODEL WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO		scale 1:4,000
DRAWN BY AS				FIG 2

Filename: E:\OTT-23002538-B0_Execution\65 Drawings\23002538-B0_Ph-2_Oct-2024.dwg
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 Last Saved: Oct 9, 2024 9:36 AM Last Plotted: Oct 9, 2024 3:41 PM Plotted By: SeverA



LEGEND

- PROPERTY BOUNDARY
- AREA OF POTENTIAL ENVIRONMENTAL CONCERN 1 (APEC-1)
- AREA OF POTENTIAL ENVIRONMENTAL CONCERN 2 (APEC-2)

- ① FORMER ON-SITE DRY-CLEANER (NORTH END OF SITE BUILDING)
- ② FORMER ON-SITE GAS STATION (EAST PART OF PHASE TWO PROPERTY)
- ③ FORMER ON-SITE RAIL SIDING (NORTHWEST PART OF PHASE TWO PROPERTY)
- ④ FILL MATERIAL (ENTIRE PHASE TWO PROPERTY)
- ⑤ FORMER DRY CLEANER AT 1800 BANK STREET & HISTORICAL FURNACE OIL LEAK FROM UST (ALONG NORTH PROPERTY LINE)
- ⑥ FORMER GAS STATION AT 1841 BANK STREET (ALONG SOUTHEAST PROPERTY LINE)
- ⑦ REPAIR GARAGE AT 1841 BANK STREET (ALONG SOUTHEAST PROPERTY LINE)
- ⑧ GAS STATION AT 1847 BANK STREET (ALONG SOUTHEAST PROPERTY LINE)
- ⑨ FORMER CAR DEALERSHIP AT 1850 BANK STREET (ALONG SOUTH PROPERTY LINE)
- ⑩ FORMER USTS ASSOCIATED WITH CAR DEALERSHIP AT 1850 BANK STREET (ALONG SOUTH PROPERTY LINE)
- ⑪ FORMER RAIL LINE TO THE WEST OF THE SITE (ALONG WEST PROPERTY LINE)

BH/MW-1 MONITORING WELL NAME & LOCATION
 (S) = SHALLOW | (D) = DEEP

BH-5 BOREHOLE NAME & LOCATION

GS = 91.67 GROUND SURFACE LEVEL ELEVATION (m)
 AR = 90.7 AUGER REFUSAL ELEVATION (m)
 BR = 89.0 BEDROCK ELEVATION (m)

0 10m 20m 40m
 HORIZONTAL 1:1000

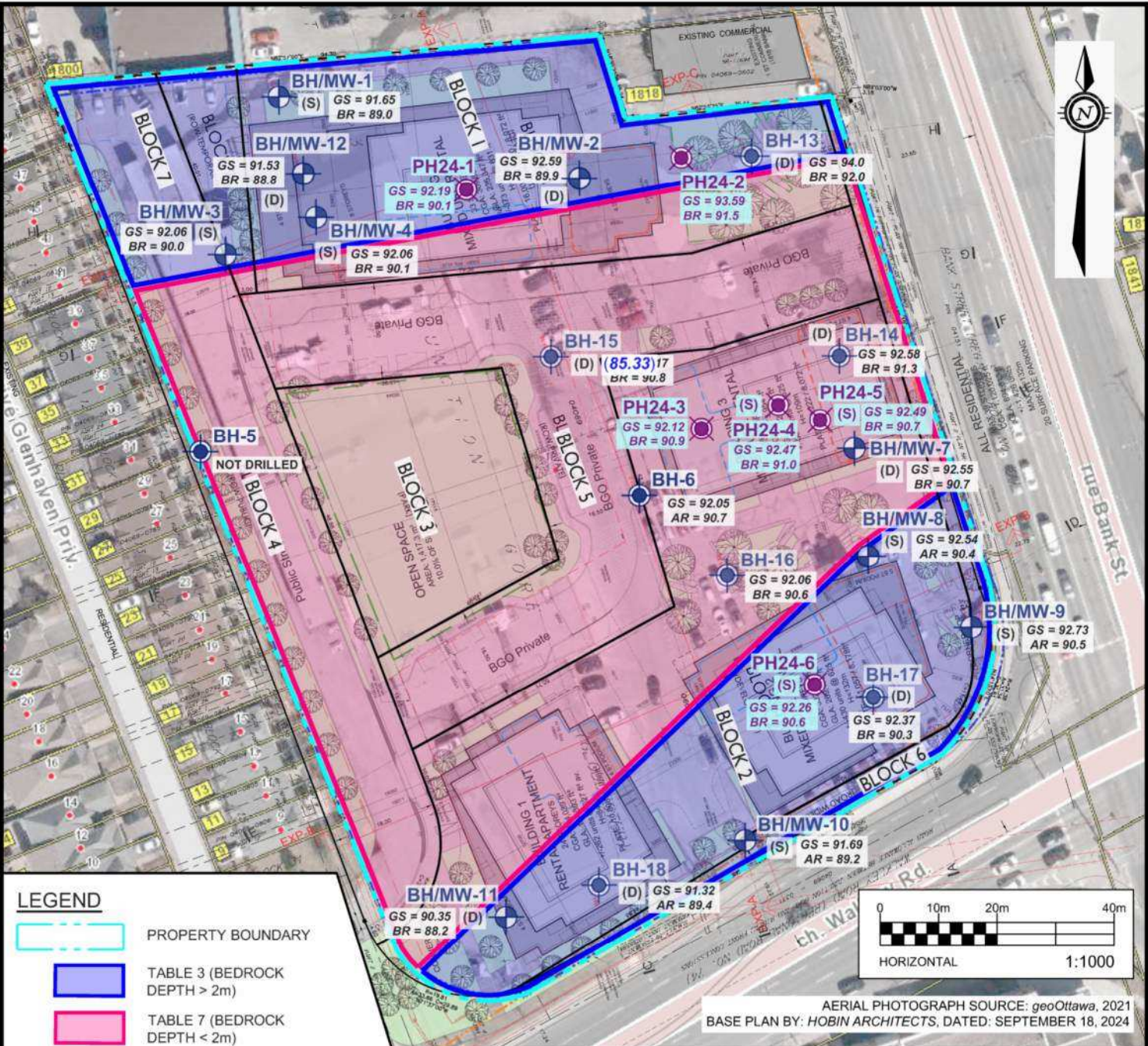
AERIAL PHOTOGRAPH SOURCE: geoOttawa, 2021



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DATE SEPTEMBER 2024		CLIENT: 	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no. OTT-23002538-BO
DESIGN CK / MM	CHECKED CK	TITLE: BOREHOLE LOCATION PLAN		scale 1:1,000
DRAWN BY AS		WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO		FIG 3

File: E:\OTT-23002538-B0_60_Execution\65 Drawings\23002538-B0_Ph-2_Oct-2024.dwg
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 Plotted by: Severa



LEGEND

- PROPERTY BOUNDARY
- TABLE 3 (BEDROCK DEPTH > 2m)
- TABLE 7 (BEDROCK DEPTH < 2m)

BH/MW-1 MONITORING WELL LOCATION
 (S) = SHALLOW | (D) = DEEP
BH-6 BOREHOLE LOCATION
 GS = 91.67 GROUND SURFACE LEVEL ELEVATION (m)
 AR = 90.7 AUGER REFUSAL ELEVATION (m)
 BR = 89.0 BEDROCK ELEVATION (m)
 BRD / BRD BEDROCK DEPTH (m)
PH24-1 PROBE HOLE NAME & LOCATION
 (S) = SHALLOW | (D) = DEEP

GENERAL NOTES:

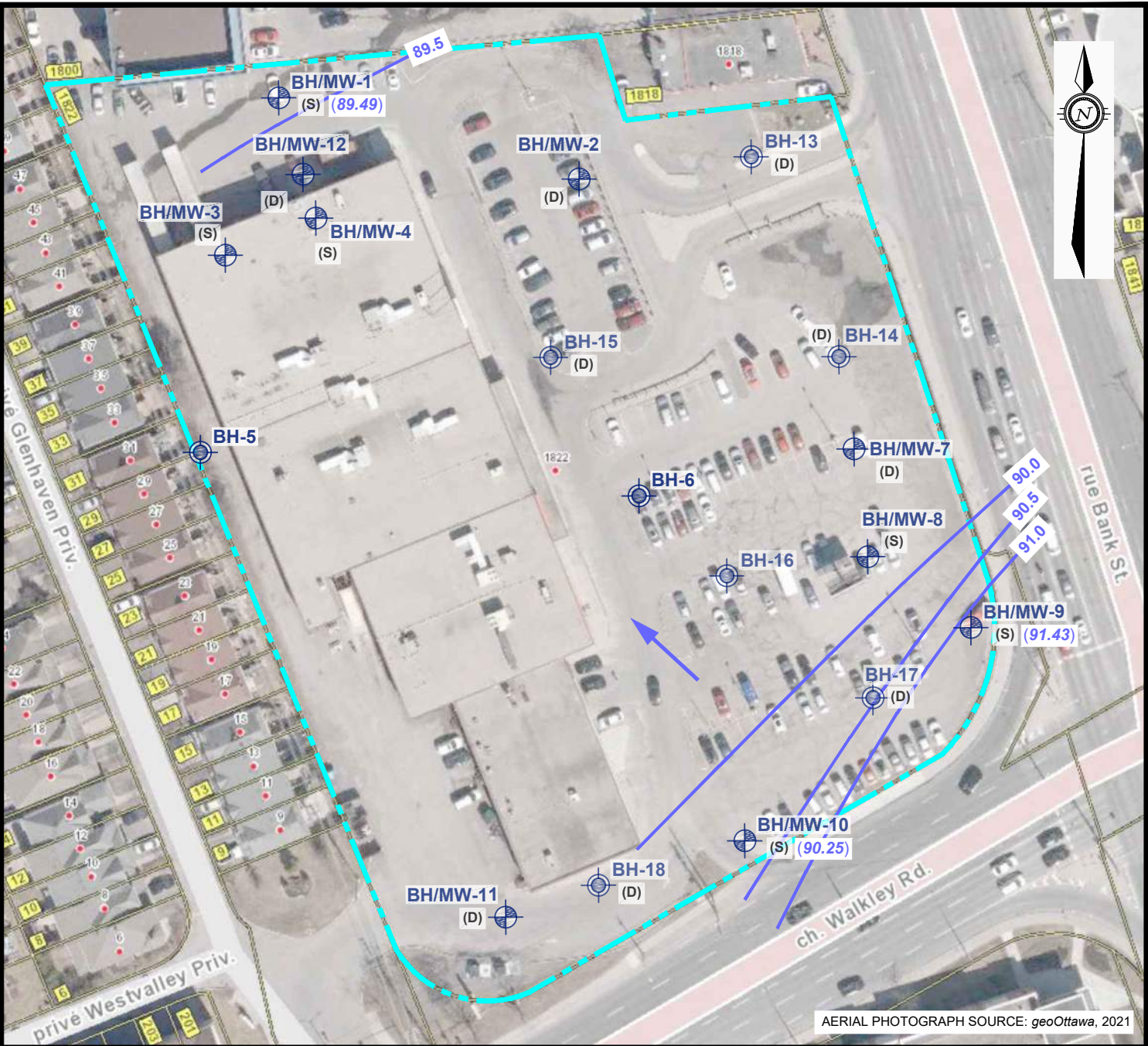
1. THE BOUNDARIES, SOIL AND ROCK TYPES HAVE BEEN ESTABLISHED ONLY AT BOREHOLE LOCATIONS. BETWEEN BOREHOLES THEY ARE ASSUMED AND MAY BE SUBJECT TO CONSIDERABLE ERROR.
2. SOIL SAMPLES AND ROCK CORES WILL BE RETAINED IN STORAGE FOR THREE MONTHS AND THEN DESTROYED UNLESS THE CLIENT ADVISES THAT AN EXTENDED TIME PERIOD IS REQUIRED.
3. ASPHALT QUANTITIES SHOULD NOT BE ESTABLISHED FROM THE INFORMATION PROVIDED AT THE BOREHOLE LOCATIONS.
4. BOREHOLE ELEVATIONS SHOULD NOT BE USED TO DESIGN BUILDING(S) OR FLOOR SLABS OR PARKING LOT(S) GRADES.
5. THIS DRAWING FORMS PART OF THE REPORT PROJECT NUMBER AS REFERENCED AND SHOULD BE USED ONLY IN CONJUNCTION WITH THIS REPORT.



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DATE: SEPTEMBER 2024		CLIENT: BGO	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no.: OTT-23002538-B0
DESIGN: CK / MM	CHECKED: CK	TITLE: TEST HOLE LOCATION PLAN (BEDROCK DEPTHS) WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO		scale: 1:1,000
DRAWN BY: AS				FIG 3b

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 Plotted By: Severa



AERIAL PHOTOGRAPH SOURCE: geoOttawa, 2021

LEGEND

PROPERTY BOUNDARY

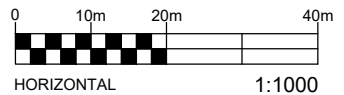
BH/MW-1 MONITORING WELL NAME & LOCATION
 (S) = SHALLOW | (D) = DEEP

BH-5 BOREHOLE NAME & LOCATION

(89.49) SHALLOW GROUNDWATER LEVEL (masl)

SHALLOW GROUNDWATER FLOW DIRECTION

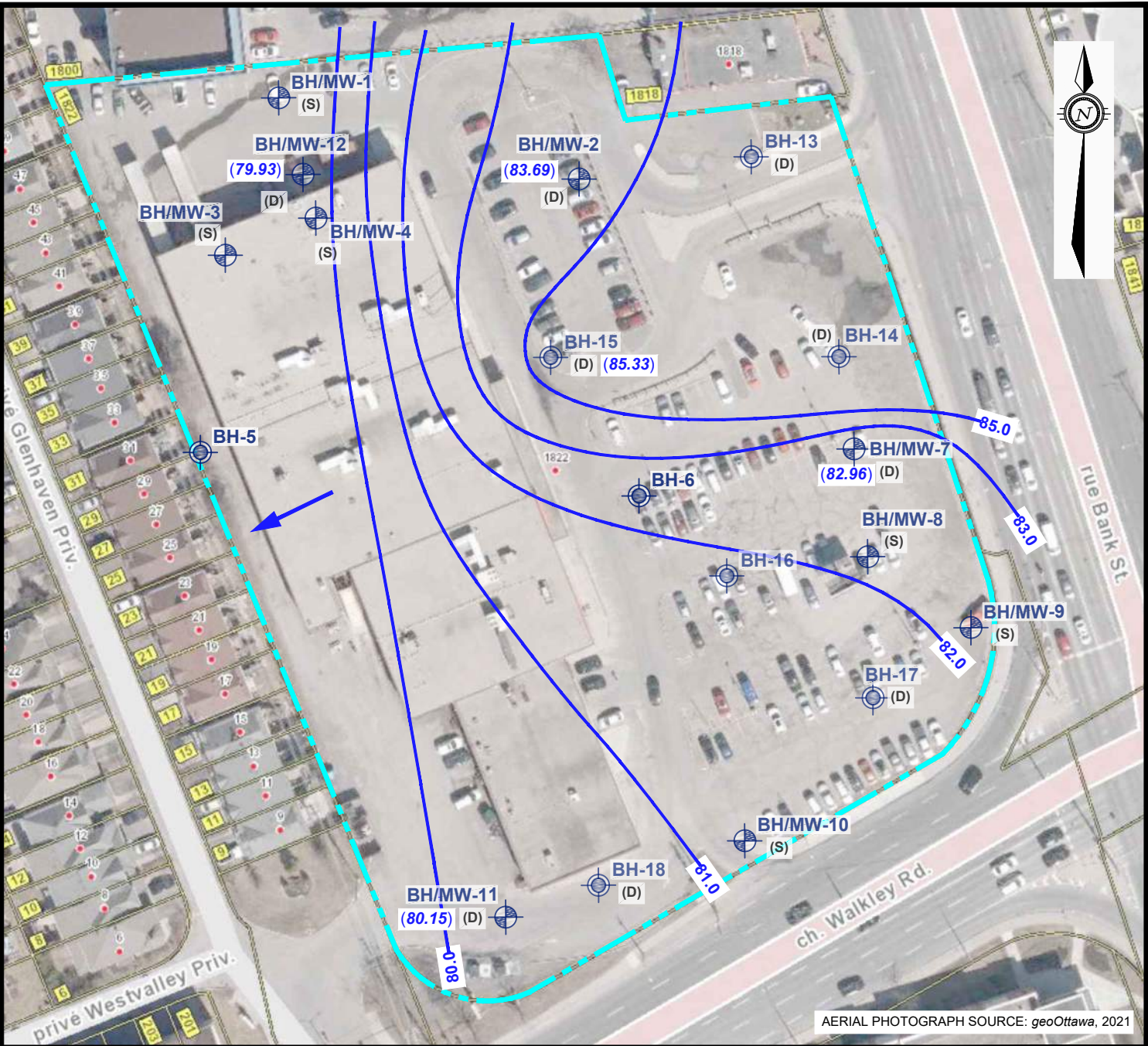
90.0 SHALLOW GROUNDWATER CONTOURS



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DATE SEPTEMBER 2024		CLIENT: 	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no. OTT-23002538-B0
DESIGN CK / MM	CHECKED CK	TITLE: GROUNDWATER CONTOUR PLAN - SHALLOW BEDROCK WELLS WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO		scale 1:1,000
DRAWN BY AS				FIG 4A

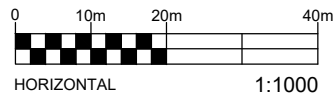
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 Last Saved: Oct 9, 2024 9:36 AM Last Plotted: Oct 9, 2024 3:47 PM Plotted By: Severa



AERIAL PHOTOGRAPH SOURCE: geoOttawa, 2021

LEGEND

-  PROPERTY BOUNDARY
-  **BH/MW-1** MONITORING WELL NAME & LOCATION
(S) = SHALLOW | (D) = DEEP
-  **BH-5** BOREHOLE NAME & LOCATION
-  **(83.69)** DEEP GROUNDWATER LEVEL (masl)
-  DEEP GROUNDWATER FLOW DIRECTION
-  **85.0** DEEP GROUNDWATER CONTOURS



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DATE SEPTEMBER 2024		CLIENT: 	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no. OTT-23002538-B0
DESIGN CK / MM	CHECKED CK	TITLE: GROUNDWATER CONTOUR PLAN - DEEP BEDROCK WELLS WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO		scale 1:1,000
DRAWN BY AS				FIG 4B

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AERIAL PHOTOGRAPH SOURCE: geoOttawa, 2021
 BASE PLAN BY: HOBIN ARCHITECTS, DATED: JULY 12, 2023

UTILITIES LEGEND (APPROX. LOCATION):

- WASTEWATER - STORM
- WASTEWATER - SANITARY
- WATER
- HYDRO
- NATURAL GAS

LEGEND

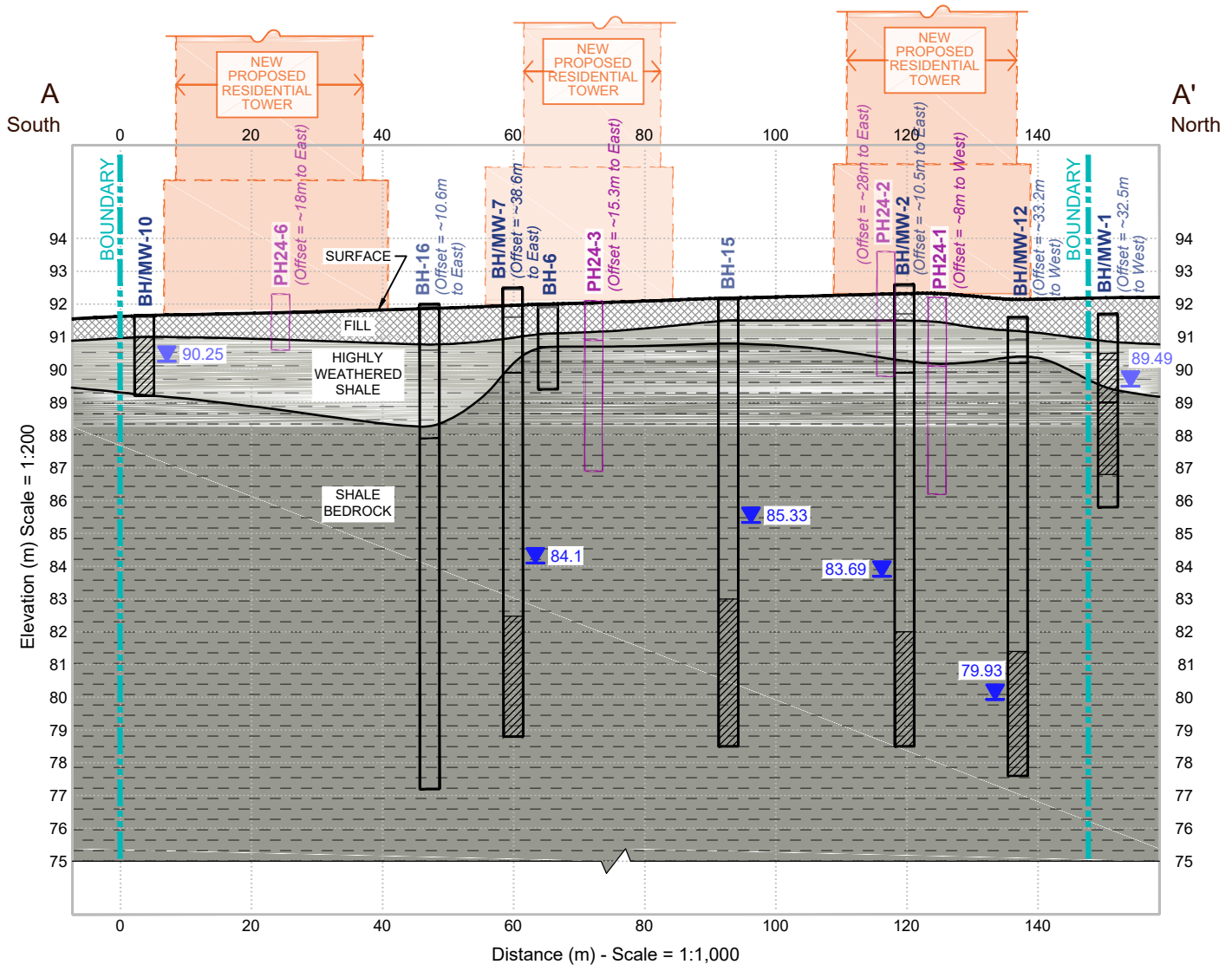
PROPERTY BOUNDARY	BH/MW-1 MONITORING WELL NAME & LOCATION (S) = SHALLOW (D) = DEEP	 HORIZONTAL 1:1000
PROPOSED BUILDING FOOTPRINTS	BH-5 BOREHOLE NAME & LOCATION	
SECTION MARK	GS = 91.67 GROUND SURFACE LEVEL ELEVATION (m) AR = 90.7 AUGER REFUSAL ELEVATION (m) BR = 89.0 BEDROCK ELEVATION (m)	



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DATE SEPTEMBER 2024	CLIENT: BGO	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no. OTT-23002538-B0
DESIGN CK / MM	CHECKED CK	TITLE: CROSS SECTION PLAN	scale 1:1,000
DRAWN BY AS	WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO		FIG 5

Filename: E:\OTT-23002538-BO\60_Execution\65_Drawings\23002538-BO_Ph-2_Oct-2024.dwg
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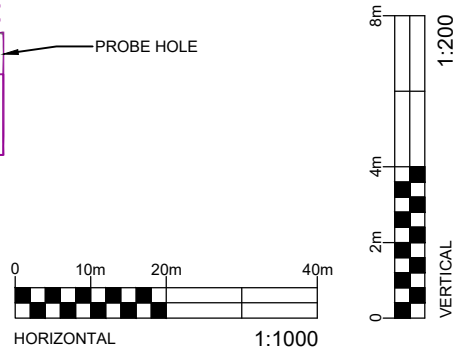
CROSS SECTION A-A'

LEGEND

- FILL: SAND, GRAVEL, Etc.
- HIGHLY WEATHERED SHALE
- SHALE BEDROCK
- BOREHOLE / MONITORING WELL
- SHALLOW GROUNDWATER LEVEL (masl)
- SCREEN
- DEEP GROUNDWATER LEVEL (masl)
- PROBE HOLE

LEGEND (GENERAL)

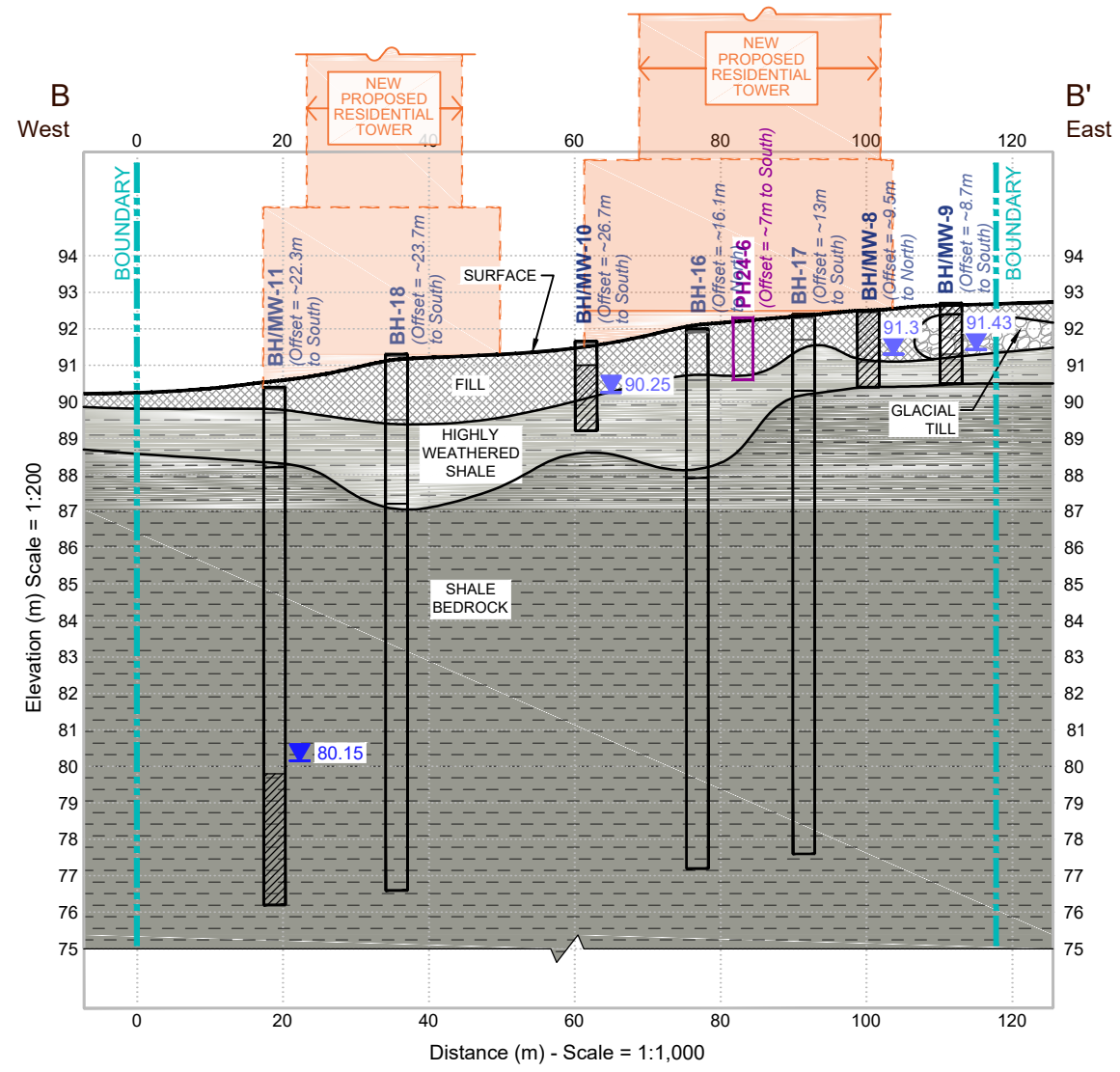
- PROPERTY BOUNDARY
- NEW PROPOSED MIXED USE AND RENTAL APARTMENTS TOWERS (24 - 40 STORIES)



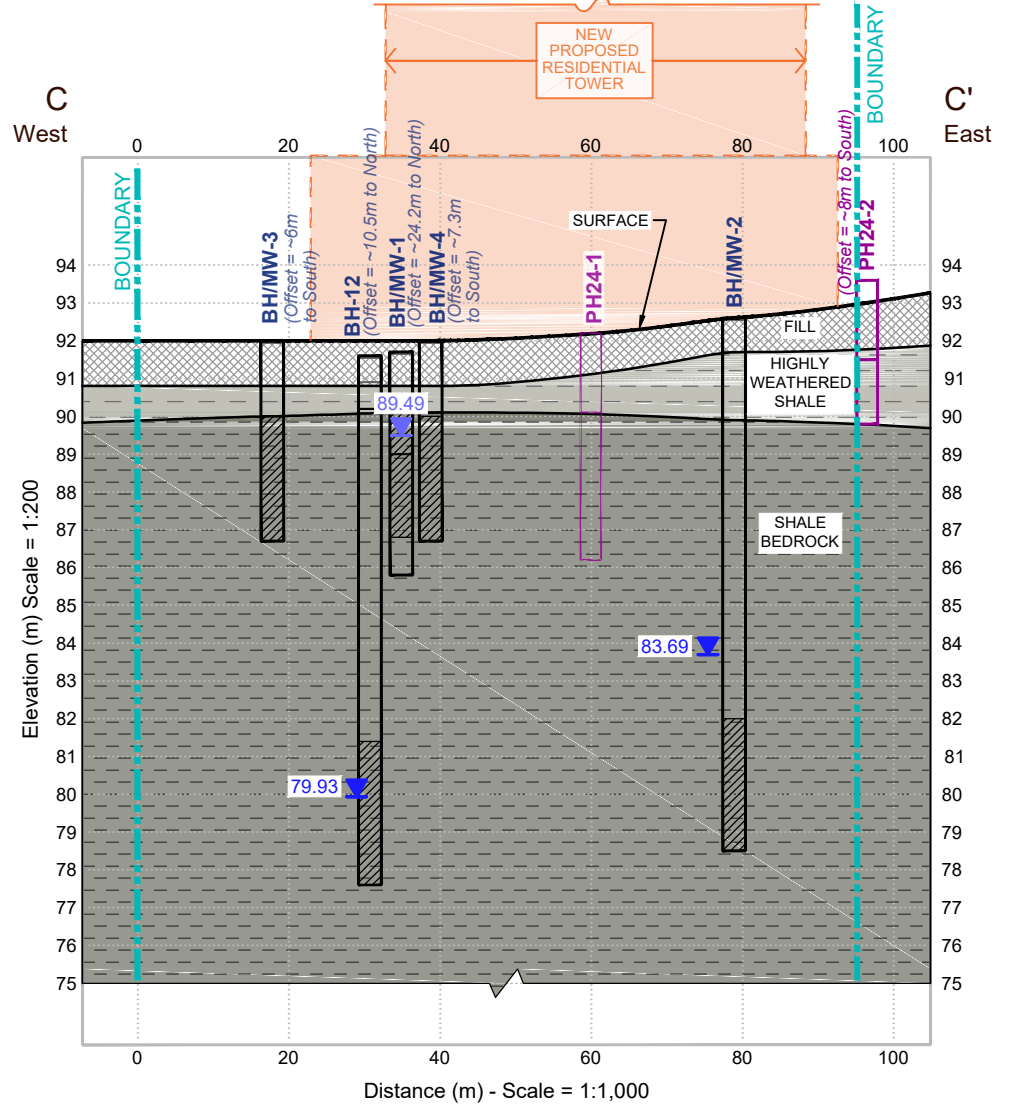
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DATE SEPTEMBER 2024		CLIENT: 	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no. OTT-23002538-B0
DESIGN CK / MM	CHECKED CK	TITLE: CROSS SECTION A-A'		scale H = 1:1,000 V = 1:200
DRAWN BY AS		WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO		FIG 6A

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 Plotted by: SeverA



CROSS SECTION B-B'



CROSS SECTION C-C'

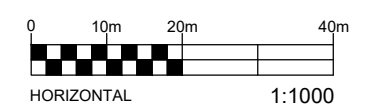
LEGEND

- FILL: SAND, GRAVEL, Etc.
- GLACIAL TILL
- HIGHLY WEATHERED SHALE
- SHALE BEDROCK
- BOREHOLE / MONITORING WELL
- SHALLOW GROUNDWATER LEVEL (masl)
- SCREEN
- DEEP GROUNDWATER LEVEL (masl)
- PROBE HOLE

LEGEND (GENERAL)

- PROPERTY BOUNDARY
- NEW PROPOSED MIXED USE AND RENTAL APARTMENTS TOWERS (24 - 40 STORIES)

ORIGINAL SHEET SIZE: 17' x 11'



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DATE SEPTEMBER 2024	CLIENT: 	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no. OTT-23002538-B0
DESIGN CK / MM	CHECKED CK	TITLE: CROSS SECTIONS B-B' & C-C' WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO	scale H = 1:1,000 V = 1:200
DRAWN BY AS			FIG 6B

File: E:\OTT-23002538-B0\60 Execution\65 Drawings\23002538-B0_Ph-2_Oct-2024.dwg
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BH-1	Depth (m bgs)	B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC	26-Oct-23
SS1	0.9 to 1.5	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	0.16	<0.010	<0.019	
DUP 1	0.9 to 1.5	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	0.27	<0.010	<0.019	
SS3	1.7 to 2.3	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	0.90	<0.010	<0.019	

BH-2	Depth (m bgs)	B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC	30-Oct-23
SS1	0.2 to 0.8	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019	
AS3	1.7 to 2.3	<0.0060	<0.010	<0.020	0.12	50	44	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019	

BH-3	Depth (m bgs)	B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC	14-Dec-23
SS1	0.1 to 1.2	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	1.7	<0.010	<0.019	

BH-4	Depth (m bgs)	B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC	14-Dec-23
SS2	1.2 to 1.5	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	0.89	<0.010	<0.019	

BH-6	Depth (m bgs)	B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC	27-Oct-23
SS1	0.1 to 0.7	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019	
SS2	0.9 to 1.3	<0.0060	<0.010	<0.020	0.066	26	34	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019	

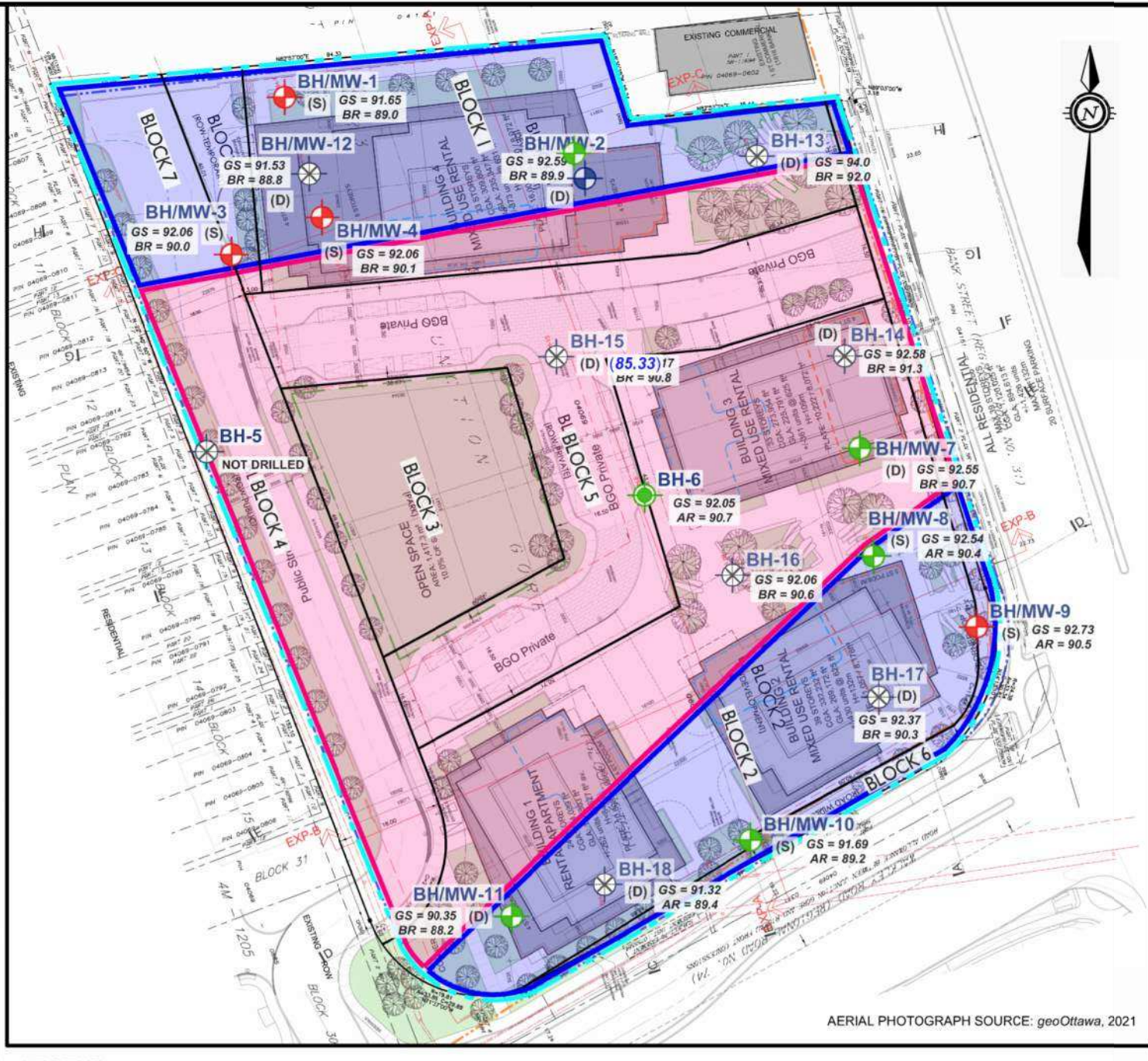
BH-7	Depth (m bgs)	B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC	27-Oct-23
SS2A	0.9 to 1.2	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019	
SS2B	1.2 to 1.5	<0.0060	<0.020	<0.020	<0.020	32	<20	<95	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019	

BH-8	Depth (m bgs)	B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC	27-Oct-23
AS3	1.5 to 2.1	0.092	0.14	0.063	0.45	<10	<10	170	510	2500	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019	

BH-9	Depth (m bgs)	B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC	26-Oct-23
AS1	0.1 to 0.5	<0.0060	0.01	<0.020	<0.020	<10	<10	150	450	3100	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019	
SS2	0.8 to 2.4	0.029	0.14	0.10	<0.020	13	26	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019	

BH-10	Depth (m bgs)	B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC	26-Oct-23
AS1	0.17 to 0.7	<0.0060	<0.010	<0.020	<0.020	<10	<10	110	430	2400	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019	
SS2	0.9 to 1.5	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019	
DUP 2	0.9 to 1.5	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019	

BH-11	Depth (m bgs)	B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC	30-Oct-23
SS1	0.1 to 0.7	<0.0060	<0.010	<0.020	<0.020	<10	<10	69	88	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019	
SS2	0.8 to 1.4	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019	
DUP 3	0.8 to 1.4	<0.0060	<0.010	<0.020	<0.020	<10	<10	24	57	<50	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019	



PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential	PARAMETERS	ABBREVIATION	REG 153/04 TABLE 7 SCS Residential
Benzene	B	0.21	Benzene	B	0.21
Ethylbenzene	E	2	Ethylbenzene	E	1.1
Toluene	T	2.3	Toluene	T	2.3
Xylenes	X	3.1	Xylenes	X	3.1
PHC F1	PHC F1	55	PHC F1	PHC F1	55
PHC F2	PHC F2	98	PHC F2	PHC F2	98
PHC F3	PHC F3	300	PHC F3	PHC F3	300
PHC F4	PHC F4	2800	PHC F4	PHC F4	2800
1,1-Dichloroethane	1,1-DCA	3.5	1,1-Dichloroethane	1,1-DCA	3.5
1,2-Dichloroethane	1,2-DCA	0.05	1,2-Dichloroethane	1,2-DCA	0.05
1,1-Dichloroethene	1,1-DCE	0.05	1,1-Dichloroethene	1,1-DCE	0.05
Cis-1,2-Dichloroethene	c-1,2-DCE	3.4	Cis-1,2-Dichloroethene	c-1,2-DCE	3.4
Trans-1,2-Dichloroethene	t-1,2-DCE	0.084	Trans-1,2-Dichloroethene	t-1,2-DCE	0.084
Tetrachloroethene	PCE	0.28	Tetrachloroethene	PCE	0.28
Trichloroethene	TCE	0.061	Trichloroethene	TCE	0.061
Vinyl Chloride	VC	0.02	Vinyl Chloride	VC	0.02

LEGEND

- PROPERTY BOUNDARY
- SAMPLE EXCEEDS TABLE 7 SCS REGULATIONS
- SAMPLE MEETS TABLE 7 SCS REGULATIONS
- NOT SAMPLED
- BH/MW-1 MONITORING WELL NAME & LOCATION (S) = SHALLOW | (D) = DEEP
- BH-5 BOREHOLE NAME & LOCATION
- GS = 91.67 AR = 90.7 BR = 89.0 GROUND SURFACE LEVEL ELEVATION (m) AUGER REFUSAL ELEVATION (m) BEDROCK ELEVATION (m)
- TABLE 3 (BEDROCK DEPTH > 2m)
- TABLE 7 (BEDROCK DEPTH < 2m)

HORIZONTAL 1:1000

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DATE: SEPTEMBER 2024	CLIENT: BGO	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	PROJECT NO.: OTT-23002538-B0
DESIGN: CK / MM	CHECKED: CK	TITLE: SOIL ANALYTICAL RESULTS - PHC & VOC	SCALE: 1:1,000
DRAWN BY: AS	WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO		FIG 7

File: E:\OTT-23002538-B0_60_Execution\65 Drawings\23002538-B0_Ph-2_Oct-2024.dwg
 Last Saved: Oct 9, 2024 9:36 AM
 Plotted by: Severa

BH-1	Depth (mbgs)	26-Oct-23																
		Ace	Acl	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	Fl	F	I(123)P	T-MN	N	P	Py
SS1	0.9 to 1.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	<0.0050	<0.0050	
DUP 1	0.9 to 1.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	<0.0050	<0.0050	
SS3	1.7 to 2.3	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	0.0069	<0.0050	

BH-2	Depth (mbgs)	30-Oct-23																
		Ace	Acl	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	Fl	F	I(123)P	T-MN	N	P	Py
SS1	0.2 to 0.8	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.11	<0.0050	0.0071	<0.0050	
AS3	1.7 to 2.3	<0.0050	<0.0050	<0.0050	0.0070	0.0061	0.010	<0.0050	<0.0050	0.0064	<0.0050	0.015	<0.0050	<0.0050	<0.0071	<0.0050	0.0065	0.014

BH-3	Depth (mbgs)	14-Dec-23																
		Ace	Acl	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	Fl	F	I(123)P	T-MN	N	P	Py
SS1	0.1 to 1.2	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	<0.0050	<0.0050	

BH-4	Depth (mbgs)	14-Dec-23																
		Ace	Acl	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	Fl	F	I(123)P	T-MN	N	P	Py
SS2	1.2 to 1.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	<0.0050	<0.0050	

BH-6	Depth (mbgs)	27-Oct-23																
		Ace	Acl	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	Fl	F	I(123)P	T-MN	N	P	Py
SS1	0.1 to 0.7	0.18	0.0073	0.64	0.91	0.66	0.87	0.24	0.31	0.73	0.099	2.1	0.29	0.075	0.035	2.1	1.6	
SS2	0.9 to 1.3	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	0.011	<0.0050	

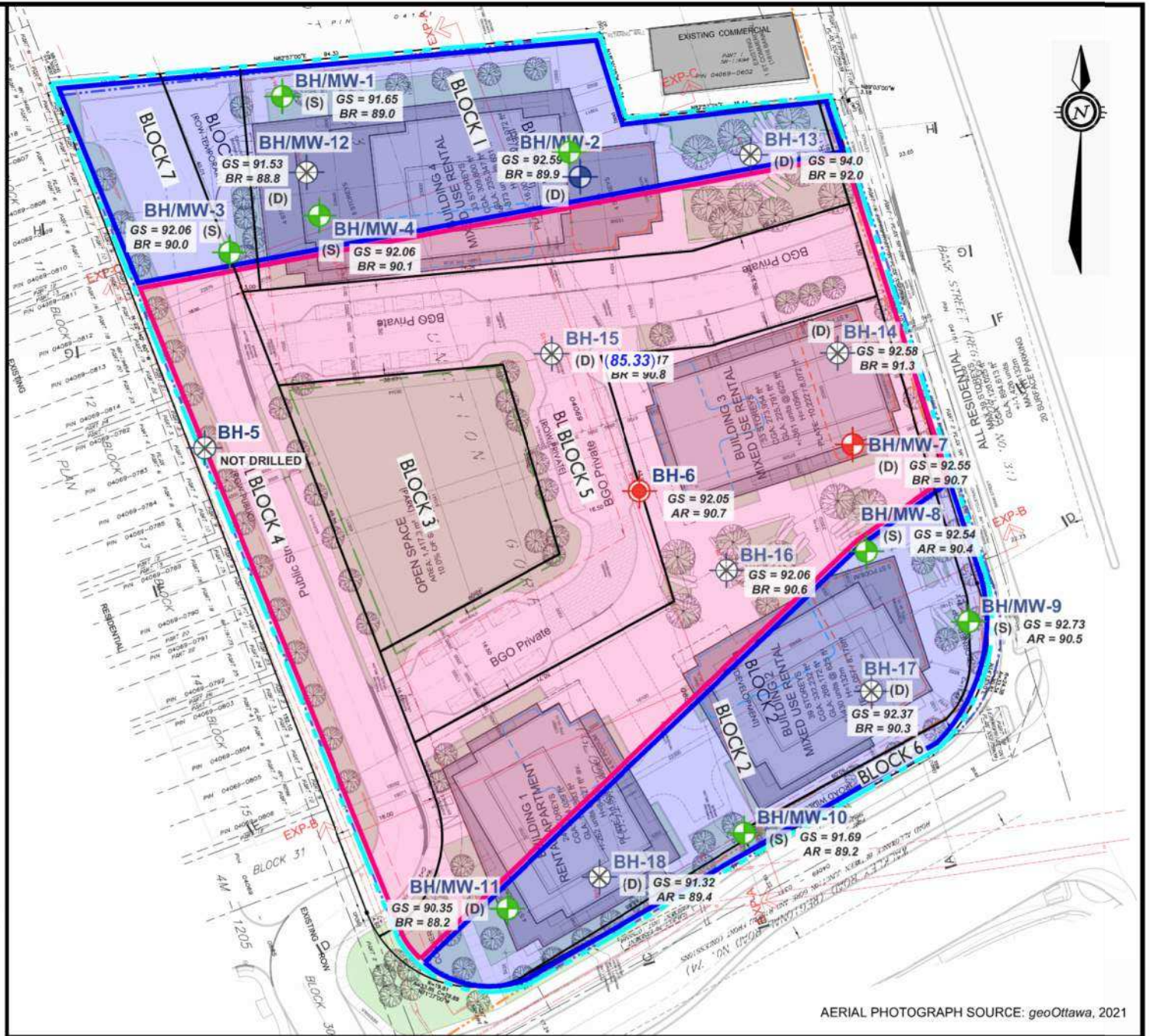
BH-7	Depth (mbgs)	27-Oct-23																
		Ace	Acl	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	Fl	F	I(123)P	T-MN	N	P	Py
SS2A	0.9 to 1.2	0.012	<0.0050	0.16	0.45	0.38	0.52	0.17	0.20	0.37	0.061	0.86	0.024	0.19	0.043	0.0078	0.47	0.71
SS2B	1.2 to 1.5	0.069	<0.0050	0.22	0.58	0.58	0.78	0.27	0.30	0.46	0.093	0.99	0.048	0.31	0.053	0.016	0.40	0.82

BH-8	Depth (mbgs)	27-Oct-23																
		Ace	Acl	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	Fl	F	I(123)P	T-MN	N	P	Py
AS3	1.5 to 2.1	<0.0050	<0.0050	0.091	0.24	0.21	0.30	0.10	0.12	0.19	<0.0050	0.51	<0.0050	0.12	<0.0071	<0.0050	0.36	0.38

BH-9	Depth (mbgs)	26-Oct-23																
		Ace	Acl	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	Fl	F	I(123)P	T-MN	N	P	Py
AS1	0.1 to 0.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	<0.0050	<0.0050	
SS2	0.8 to 2.4	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	0.0056	0.010	<0.0050	

BH-10	Depth (mbgs)	26-Oct-23																
		Ace	Acl	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	Fl	F	I(123)P	T-MN	N	P	Py
AS1	0.17 to 0.7	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	<0.0050	<0.0050	
SS2	0.9 to 1.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	<0.0050	<0.0050	
DUP 2	0.9 to 1.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	<0.0050	<0.0050	

BH-11	Depth (mbgs)	30-Oct-23																
		Ace	Acl	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	Fl	F	I(123)P	T-MN	N	P	Py
SS1	0.1 to 0.7	<0.0050	<0.0050	0.016	0.041	0.036	0.053	0.016	0.019	0.038	<0.0050	0.089	0.007	0.015	<0.0071	<0.0050	0.068	0.073
SS2	0.8 to 1.4	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0055	<0.0050	<0.0071	<0.0050	<0.0050	<0.0050	
DUP 3	0.8 to 1.4	<0.0050	<0.0050	<0.0050	0.0082	0.0070	0.011	<0.0050	<0.0050	0.0094	<0.0050	0.018	<0.0050	<0.0071	<0.0050	<0.0050	0.018	0.016



PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Acenaphthene	Ace	7.9
Acenaphthylene	Acl	0.15
Anthracene	An	0.67
Benzo(a)anthracene	B(a)A	0.5
Benzo(a)pyrene	B(a)P	0.3
Benzo(b)fluoranthene	B(b)F	0.78
Benzo(g,h,i)perylene	B(ghi)P	6.6
Benzo(k)fluoranthene	B(k)F	0.78
Chrysene	C	7
Dibenzo(a,h)anthracene	DA	0.1
Fluoranthene	Fl	0.69
Fluorene	F	62
Indeno(1,2,3-cd)pyrene	I(123)P	0.38
Methylnaphthalene, 2-(1-)	T-MN	0.99
Naphthalene	N	0.6
Phenanthrene	P	6.2
Pyrene	Py	78

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 7 SCS Residential
Acenaphthene	Ace	7.9
Acenaphthylene	Acl	0.15
Anthracene	An	0.67
Benzo(a)anthracene	B(a)A	0.5
Benzo(a)pyrene	B(a)P	0.3
Benzo(b)fluoranthene	B(b)F	0.78
Benzo(g,h,i)perylene	B(ghi)P	6.6
Benzo(k)fluoranthene	B(k)F	0.78
Chrysene	C	7
Dibenzo(a,h)anthracene	DA	0.1
Fluoranthene	Fl	0.69
Fluorene	F	62
Indeno(1,2,3-cd)pyrene	I(123)P	0.38
Methylnaphthalene, 2-(1-)	T-MN	0.99
Naphthalene	N	0.6
Phenanthrene	P	6.2
Pyrene	Py	78

LEGEND

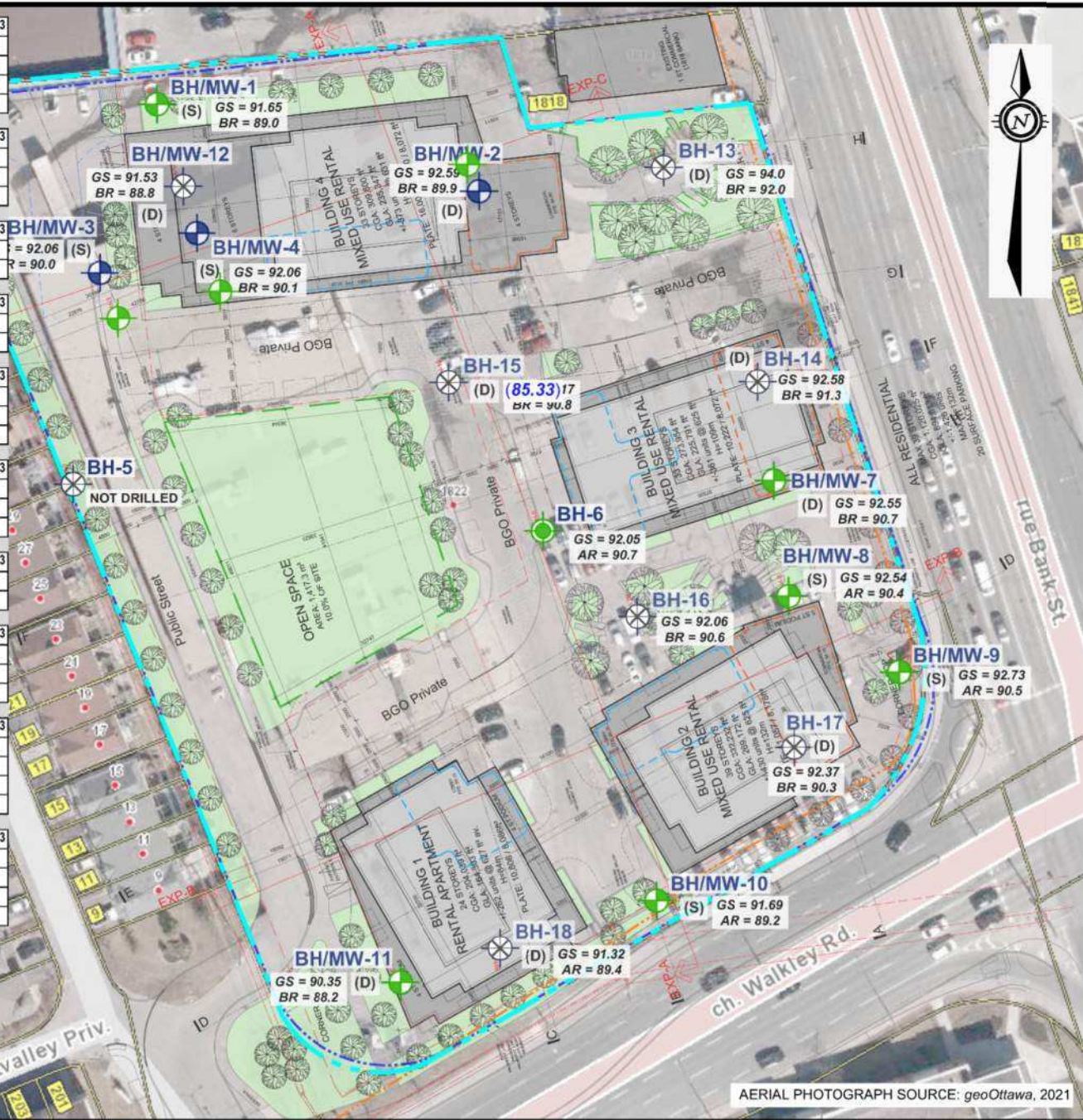
- PROPERTY BOUNDARY
- SAMPLE EXCEEDS TABLE 7 SCS REGULATIONS
- SAMPLE MEETS TABLE 7 SCS REGULATIONS
- NOT SAMPLED
- BH/MW-1 MONITORING WELL NAME & LOCATION (S) = SHALLOW | (D) = DEEP
- BH-5 BOREHOLE NAME & LOCATION
- GS = 91.67 AR = 90.7 BR = 89.0 GROUND SURFACE LEVEL ELEVATION (m) AUGER REFUSAL ELEVATION (m) BEDROCK ELEVATION (m)
- TABLE 3 (BEDROCK DEPTH > 2m)
- TABLE 7 (BEDROCK DEPTH < 2m)

0 10m 20m 40m
HORIZONTAL 1:1000

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 2650 Queensview Drive, Suite 100
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DATE: SEPTEMBER 2024	CLIENT: BGO	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	PROJECT NO.: OTT-23002538-B0
DESIGN: CK / MM	CHECKED: CK	TITLE: SOIL ANALYTICAL RESULTS - PAH	SCALE: 1:1,000
DRAWN BY: AS	WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO		FIG 8

BH-1	Depth (mbgs)	Sb	As	Ba	Be	B	B (HWS)	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	U	V	Zn	EC	SAR	26-Oct-23
SS1	0.9 b 1.5	<0.20	4.4	66	0.77	<5.0	0.092	0.1	25	0.22	10	23	11	<0.050	<0.50	28	<0.50	<0.20	0.14	0.61	30	49	1.1	11	
DUP 1	0.9 b 1.5	<0.20	5.0	71	0.88	5.2	0.11	0.12	28	0.23	11	27	13	<0.050	<0.50	31	<0.50	<0.20	0.16	0.77	34	55	0.65	13	
SS3	1.7 b 2.3	0.20	7.6	100	1.0	6.5	0.16	0.13	32	<0.18	23	40	18	0.067	1.0	42	<0.50	<0.20	0.19	0.74	36	90	0.51	18	



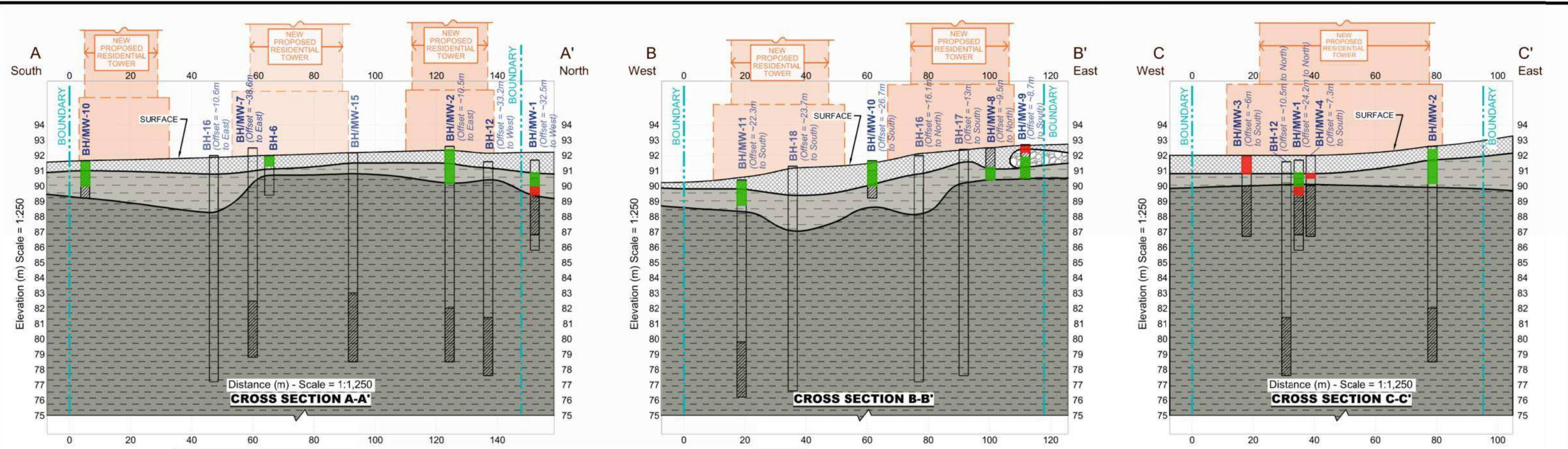
PARAMETERS	ABBREVIATION	REG 153/04 TABLE 7 SCS Residential
Antimony	Sb	7.5
Arsenic	As	18
Barium	Ba	390
Beryllium	Be	4
Boron (Total)	B	120
Boron (Hot Water Soluble)	B (HWS)	1.5
Cadmium	Cd	1.2
Chromium (Total)	Cr	160
Chromium VI	Cr VI	8
Cobalt	Co	22
Copper	Cu	140
Lead	Pb	120
Mercury	Hg	0.27
Molybdenum	Mo	6.9
Nickel	Ni	100
Selenium	Se	2.4
Silver	Ag	20
Thallium	Tl	1
Uranium	U	23
Vanadium	V	86
Zinc	Zn	340

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Ottawa, ON K2B 8H6, Canada

DATE: SEPTEMBER 2024	CLIENT: BGO	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no.: OTT-23002538-B0
DESIGN: CK / MM	CHECKED: CK	TITLE: SOIL ANALYTICAL RESULTS - METALS	scale: 1:1,000
DRAWN BY: AS	WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO		FIG 9

File name: E:\OTT\OTT-23002538-B0_60_Execution\65 Drawings\23002538-B0_Ph-2_Oct-2024.dwg
Last Saved: Oct 9, 2024 9:36 AM
Last Plotted: Oct 9, 2024 3:51 PM
Plotted by: Severa

File: E:\OTT-23002538-B0_60_Execution\65 Drawings\23002538-B0_Ph-2_Oct-2024.dwg
 Last Saved: Oct 9, 2024 9:36 AM
 Plotted: Oct 9, 2024 3:52 PM
 Plotted by: Severa



BH-1	Depth (m bgs)	24-Oct-23																
		B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS1	0.9 to 1.5	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	0.16	<0.010	<0.019
DUP 1	0.9 to 1.5	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	0.27	<0.010	<0.019
SS3	1.7 to 2.3	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	0.90	<0.010	<0.019

BH-2	Depth (m bgs)	30-Oct-23																
		B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS1	0.2 to 0.8	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019
AS3	1.7 to 2.3	<0.0060	<0.010	<0.020	0.12	50	44	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019

BH-3	Depth (m bgs)	14-Dec-23																
		B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS1	0.1 to 1.2	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	1.7	<0.010	<0.019

BH-4	Depth (m bgs)	14-Dec-23																
		B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS2	1.2 to 1.5	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	0.89	<0.010	<0.019

BH-6	Depth (m bgs)	27-Oct-23																
		B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS1	0.1 to 0.7	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019
SS2	0.9 to 1.3	<0.0060	<0.010	<0.020	0.068	26	34	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019

BH-7	Depth (m bgs)	27-Oct-23																
		B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS2A	0.9 to 1.2	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019
SS2B	1.2 to 1.5	<0.0060	<0.020	<0.020	<0.020	32	<20	<95	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019

BH-8	Depth (m bgs)	27-Oct-23																
		B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
AS3	1.5 to 2.1	0.092	0.14	0.063	0.45	<10	<10	170	510	2500	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019

BH-9	Depth (m bgs)	24-Oct-23																
		B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
AS1	0.1 to 0.5	<0.0060	0.01	<0.020	<0.020	<10	<10	150	450	3100	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019
SS2	0.8 to 2.4	0.029	0.14	0.10	<0.020	13	26	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019

BH-10	Depth (m bgs)	26-Oct-23																
		B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
AS1	0.17 to 0.7	<0.0060	<0.010	<0.020	<0.020	<10	<10	110	430	2400	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019
SS2	0.9 to 1.5	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019
DUP 2	0.9 to 1.5	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019

BH-11	Depth (m bgs)	30-Oct-23																
		B	E	T	X	F1	F2	F3	F4	F4 G	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS1	0.1 to 0.7	<0.0060	<0.010	<0.020	<0.020	<10	<10	89	88	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019
SS2	0.8 to 1.4	<0.0060	<0.010	<0.020	<0.020	<10	<10	<50	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019
DUP 3	0.8 to 1.4	<0.0060	<0.010	<0.020	<0.020	<10	24	57	<50	-	<0.040	<0.049	<0.040	<0.040	<0.040	<0.040	<0.010	<0.019

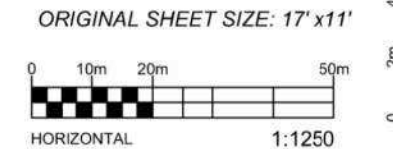
PARAMETERS	ABBREVIATION	REG 153/04 TABLE 7 SCS Residential
Benzene	B	0.21
Ethylbenzene	E	1.1
Toluene	T	2.3
Xylenes	X	3.1
PHC F1	PHC F1	55
PHC F2	PHC F2	98
PHC F3	PHC F3	300
PHC F4	PHC F4	2800
1,1-Dichloroethane	1,1-DCA	3.5
1,2-Dichloroethane	1,2-DCA	0.05
1,1-Dichloroethylene	1,1-DCE	0.05
Cis-1,2-Dichloroethylene	c-1,2-DCE	3.4
Trans-1,2-Dichloroethylene	t-1,2-DCE	0.084
Tetrachloroethylene	PCE	0.28
Trichloroethylene	TCE	0.061
Vinyl Chloride	VC	0.02

LEGEND

- FILL: SAND, GRAVEL, Etc.
- GLACIAL TILL
- HIGHLY WEATHERED SHALE
- SHALE BEDROCK
- PROPERTY BOUNDARY
- NEW PROPOSED MIXED USE AND RENTAL APARTMENTS TOWERS (24 - 40 STORIES)

LEGEND (GENERAL)

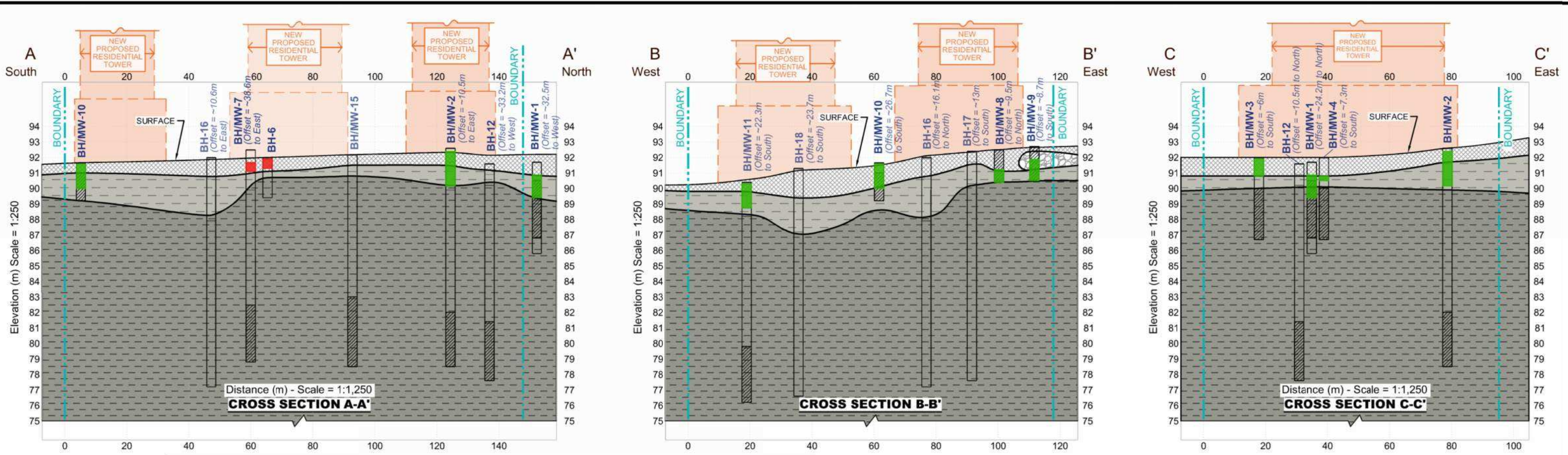
- SAMPLE MEETS TABLE 7 SCS REGULATIONS
- SAMPLE EXCEEDS TABLE 7 SCS REGULATIONS
- BORE-HOLE / MONITORING WELL
- SCREEN



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project no. OTT-23002538-B0
 scale H = 1:1,250 | V = 1:250
FIG 10

DATE: SEPTEMBER 2024	CLIENT: BGO	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
DESIGN: CK / MM	CHECKED: CK	TITLE: SOIL CROSS SECTIONS A-A', B-B' & C-C' - PHC & VOC
DRAWN BY: AS	WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO	



BH-1	Depth (mbgs)	24-Oct-23																
		Ace	AcI	An	B(a)A	B(a)P	B(b)jF	B(gh)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py
SS1	0.9 to 1.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	<0.0050	<0.0050	
DUP 1	0.9 to 1.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	<0.0050	<0.0050	
SS3	1.7 to 2.3	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	0.0069	<0.0050	

BH-2	Depth (mbgs)	30-Oct-23																
		Ace	AcI	An	B(a)A	B(a)P	B(b)jF	B(gh)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py
SS1	0.2 to 0.8	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.011	<0.0050	0.0071	<0.0050	
AS3	1.7 to 2.3	<0.0050	<0.0050	<0.0050	0.0070	0.0081	0.010	<0.0050	<0.0050	0.0064	<0.0050	0.015	<0.0050	<0.0050	<0.0071	<0.0050	0.0065	0.014

BH-3	Depth (mbgs)	14-Dec-23																
		Ace	AcI	An	B(a)A	B(a)P	B(b)jF	B(gh)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py
SS1	0.1 to 1.2	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	<0.0050	<0.0050	

BH-4	Depth (mbgs)	14-Dec-23																
		Ace	AcI	An	B(a)A	B(a)P	B(b)jF	B(gh)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py
SS2	1.2 to 1.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	<0.0050	<0.0050	

BH-6	Depth (mbgs)	27-Oct-23																
		Ace	AcI	An	B(a)A	B(a)P	B(b)jF	B(gh)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py
SS1	0.1 to 0.7	0.18	0.0073	0.64	0.91	0.66	0.87	0.24	0.31	0.73	0.099	2.1	0.29	0.29	0.075	0.035	2.1	1.6
SS2	0.9 to 1.3	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	0.011	<0.0050	

BH-7	Depth (mbgs)	27-Oct-23																
		Ace	AcI	An	B(a)A	B(a)P	B(b)jF	B(gh)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py
SS2A	0.9 to 1.2	0.012	<0.0050	0.16	0.45	0.38	0.52	0.17	0.20	0.37	0.061	0.86	0.024	0.19	0.043	0.0078	0.47	0.71
SS2B	1.2 to 1.5	0.069	<0.0050	0.22	0.58	0.58	0.78	0.27	0.30	0.46	0.093	0.99	0.048	0.31	0.053	0.016	0.40	0.82

BH-8	Depth (mbgs)	27-Oct-23																
		Ace	AcI	An	B(a)A	B(a)P	B(b)jF	B(gh)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py
AS3	1.5 to 2.1	<0.050	<0.050	0.091	0.24	0.21	0.30	0.10	0.12	0.19	<0.050	0.51	<0.050	0.12	<0.071	<0.050	0.38	0.38

BH-9	Depth (mbgs)	26-Oct-23																
		Ace	AcI	An	B(a)A	B(a)P	B(b)jF	B(gh)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py
AS1	0.1 to 0.5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.071	<0.050	<0.050	<0.050	
SS2	0.8 to 2.4	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	0.0056	0.010	<0.0050	

BH-10	Depth (mbgs)	24-Oct-23																
		Ace	AcI	An	B(a)A	B(a)P	B(b)jF	B(gh)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py
AS1	0.17 to 0.7	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.071	<0.050	<0.050	<0.050	
SS2	0.9 to 1.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	<0.0050	<0.0050	
DUP 2	0.9 to 1.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0071	<0.0050	<0.0050	<0.0050	

BH-11	Depth (mbgs)	30-Oct-23																
		Ace	AcI	An	B(a)A	B(a)P	B(b)jF	B(gh)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py
SS1	0.1 to 0.7	<0.0050	<0.0050	0.016	0.041	0.036	0.053	0.016	0.019	0.038	<0.0050	0.089	0.007	0.015	<0.0071	<0.0050	0.068	0.073
SS2	0.8 to 1.4	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0055	<0.0050	<0.0050	<0.0071	<0.0050	<0.0050	
DUP 3	0.8 to 1.4	<0.0050	<0.0050	<0.0050	0.0082	0.0070	0.011	<0.0050	<0.0050	0.0094	<0.0050	0.018	<0.0050	<0.0050	<0.0071	<0.0050	0.018	0.016

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 7 SCS Residential
Acenaphthene	Ace	7.9
Acenaphthylene	AcI	0.15
Anthracene	An	0.67
Benzo(a)anthracene	B(a)A	0.5
Benzo(a)pyrene	B(a)P	0.3
Benzo(b)fluoranthene	B(b)jF	0.78
Benzo(g,h,i)perylene	B(gh)P	6.6
Benzo(k)fluoranthene	B(k)F	0.78
Chrysene	C	7
Dibenzo(a,h)anthracene	DA	0.1
Fluoranthene	FI	0.69
Fluorene	F	62
Indeno(1,2,3-cd)pyrene	I(123)P	0.38
Methyl naphthalene, 2-(1-)	T-MN	0.99
Naphthalene	N	0.6
Phenanthrene	P	6.2
Pyrene	Py	78

LEGEND

- FILL: SAND, GRAVEL, Etc.
- GLACIAL TILL
- HIGHLY WEATHERED SHALE
- SHALE BEDROCK

LEGEND (GENERAL)

- PROPERTY BOUNDARY
- NEW PROPOSED MIXED USE AND RENTAL APARTMENTS TOWERS (24 - 40 STORIES)

LEGEND (WELL)

- SAMPLE MEETS TABLE 7 SCS REGULATIONS
- SAMPLE EXCEEDS TABLE 7 SCS REGULATIONS
- BORE-HOLE / MONITORING WELL
- SCREEN

ORIGINAL SHEET SIZE: 17' x 11'

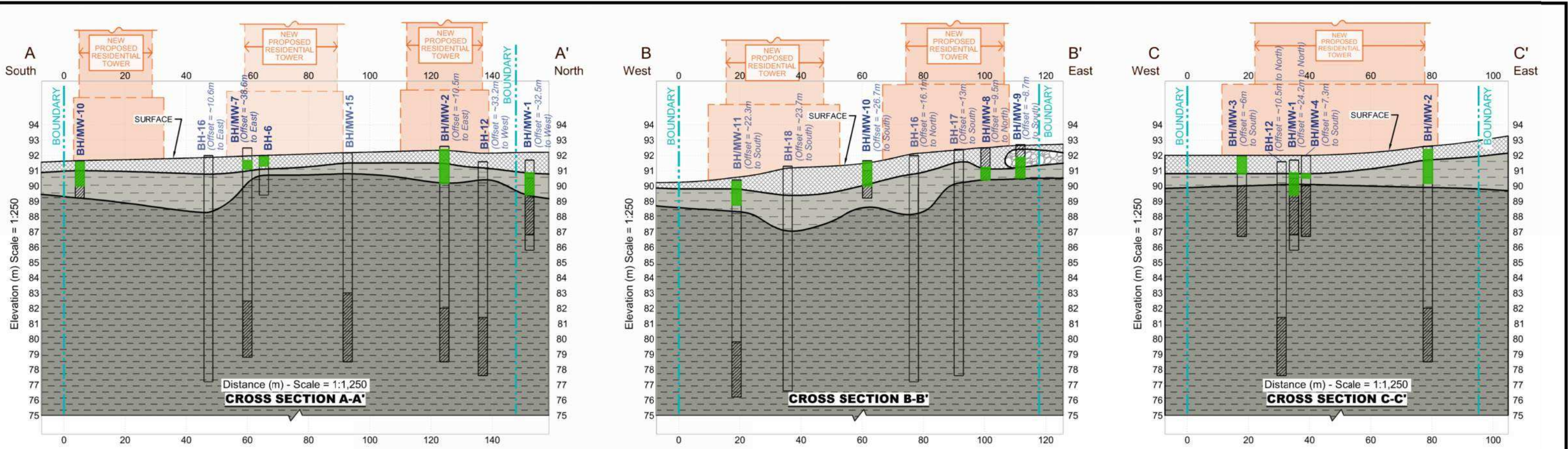
HORIZONTAL SCALE: 1:1,250

VERTICAL SCALE: 1:250

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DATE: SEPTEMBER 2024	CLIENT: BGO	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no.: OTT-23002538-B0
DESIGN: CK / MM	CHECKED: CK	TITLE: SOIL CROSS SECTIONS A-A', B-B' & C-C' - PAH	scale: H = 1:1,250 V = 1:250
DRAWN BY: AS	WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO		FIG 11

File name: E:\OTT-23002538-B0\60 Execution\65 Drawings\23002538-B0_Ph-2_Oct-2024.dwg
 Last Saved: Oct 9, 2024 9:36 AM
 Last Plotted: Oct 9, 2024 3:53 PM
 Plotted by: Severa



BH-1	Depth (mbgs)	Sb	As	Ba	Be	B	B (HWS)	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	U	V	Zn	EC	SAR
SS1	0.9 to 1.5	<0.20	4.4	66	0.77	<5.0	0.092	0.1	25	0.22	10	23	11	<0.050	<0.50	26	<0.50	<0.20	0.14	0.61	30	49	1.1	11
DUP 1	0.9 to 1.5	<0.20	5.0	71	0.88	5.2	0.11	0.12	28	0.23	11	27	13	<0.050	<0.50	31	<0.50	<0.20	0.16	0.77	34	55	0.65	13
SS3	1.7 to 2.3	0.20	7.6	100	1.0	6.5	0.16	0.13	32	<0.18	23	40	16	0.067	1.0	42	<0.50	<0.20	0.19	0.74	36	90	0.51	18

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 7 SCS Residential
Antimony	Sb	7.5
Arsenic	As	18
Barium	Ba	390
Beryllium	Be	4
Boron (Total)	B	120
Boron (Hot Water Soluble)	B (HWS)	1.5
Cadmium	Cd	1.2
Chromium (Total)	Cr	160
Chromium VI	Cr VI	8
Cobalt	Co	22
Copper	Cu	140
Lead	Pb	120
Mercury	Hg	0.27
Molybdenum	Mo	6.9
Nickel	Ni	100
Selenium	Se	2.4
Silver	Ag	20
Thallium	Tl	1
Uranium	U	23
Vanadium	V	86
Zinc	Zn	340

LEGEND

- FILL: SAND, GRAVEL, Etc.
- GLACIAL TILL
- HIGHLY WEATHERED SHALE
- SHALE BEDROCK
- PROPERTY BOUNDARY
- NEW PROPOSED MIXED USE AND RENTAL APARTMENTS TOWERS (24 - 40 STORIES)

LEGEND (GENERAL)

- SAMPLE MEETS TABLE 7 SCS REGULATIONS
- SAMPLE EXCEEDS TABLE 7 SCS REGULATIONS
- BORE-HOLE / MONITORING WELL
- SCREEN

ORIGINAL SHEET SIZE: 17' x 11'

HORIZONTAL: 1:1250

VERTICAL: 1:250

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 2650 Queensview Drive, Suite 100
 Ottawa, ON K2B 8H6, Canada

DATE: SEPTEMBER 2024
 CLIENT: BGO
 PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

DESIGN: CK / MM
 CHECKED: CK
 TITLE: SOIL CROSS SECTIONS A-A', B-B' & C-C' - METALS
 WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO

project no.: OTT-23002538-B0
 scale: H = 1:1,250 | V = 1:250
 FIG 12

File name: E:\OTT-23002538-B0_60_Execution\65 Drawings\23002538-B0_Ph-2_Oct-2024.dwg
 Last Saved: Oct 9, 2024 9:36 AM
 Last Plotted: Oct 9, 2024 3:53 PM
 Plotted by: Severa

Screen Interval 1.5 to 4.6 mbgs																	
BH/MW-1	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
30-Nov-23	<0.17	<0.20	<0.20	<0.20	<25	<100	<200	<200	1.7	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
25-Mar-24	<0.20	<0.20	<0.20	<0.20	-	-	-	-	0.34	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
20-Jun-24	<0.20	<0.20	<0.20	<0.20	-	-	-	-	0.34	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
24-Sep-24	<0.20	<0.20	<0.20	0.33	-	-	-	-	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20

Screen Interval 11.1 to 14.1 mbgs																	
BH/MW-2	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
20-Jun-24	4.6	<0.20	<0.20	<0.20	-	-	-	-	<0.20	<0.20	<0.49	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
24-Sep-24	1.6	<0.20	<0.20	<0.20	-	-	-	-	<0.20	<0.20	<0.49	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20

Screen Interval 2.6 to 5.6 mbgs																	
BH/MW-3	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
21-Dec-23	<0.20	<0.20	<0.20	<0.20	-	-	-	-	4.6	<0.20	<0.49	<0.20	<0.50	<0.50	3	<0.20	<0.20
15-Mar-24	<0.20	<0.20	<0.20	<0.20	-	-	-	-	<0.20	<0.20	<0.49	<0.20	<0.50	<0.50	0.47	<0.20	<0.20
20-Jun-24	<0.20	<0.20	<0.20	<0.20	-	-	-	-	<0.20	<0.20	<0.49	<0.20	<0.50	<0.50	0.47	<0.20	<0.20
24-Sep-24	<0.20	<0.20	<0.20	<0.20	-	-	-	-	<0.20	<0.20	<0.49	<0.20	<0.50	<0.50	3.8	<0.20	<0.20

Screen Interval 2.4 to 5.4 mbgs																	
BH/MW-4	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
21-Dec-23	0.34	2.1	<0.20	0.66	-	-	-	-	1.1	<0.20	<0.49	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
15-Mar-24	<0.20	1.4	0.26	1.7	-	-	-	-	<0.20	<0.20	<0.49	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
20-Jun-24	<0.20	<0.20	<0.20	<0.20	-	-	-	-	0.34	<0.20	<0.49	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
24-Sep-24	<0.20	<0.20	<0.20	<0.20	-	-	-	-	<0.20	<0.20	<0.49	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20

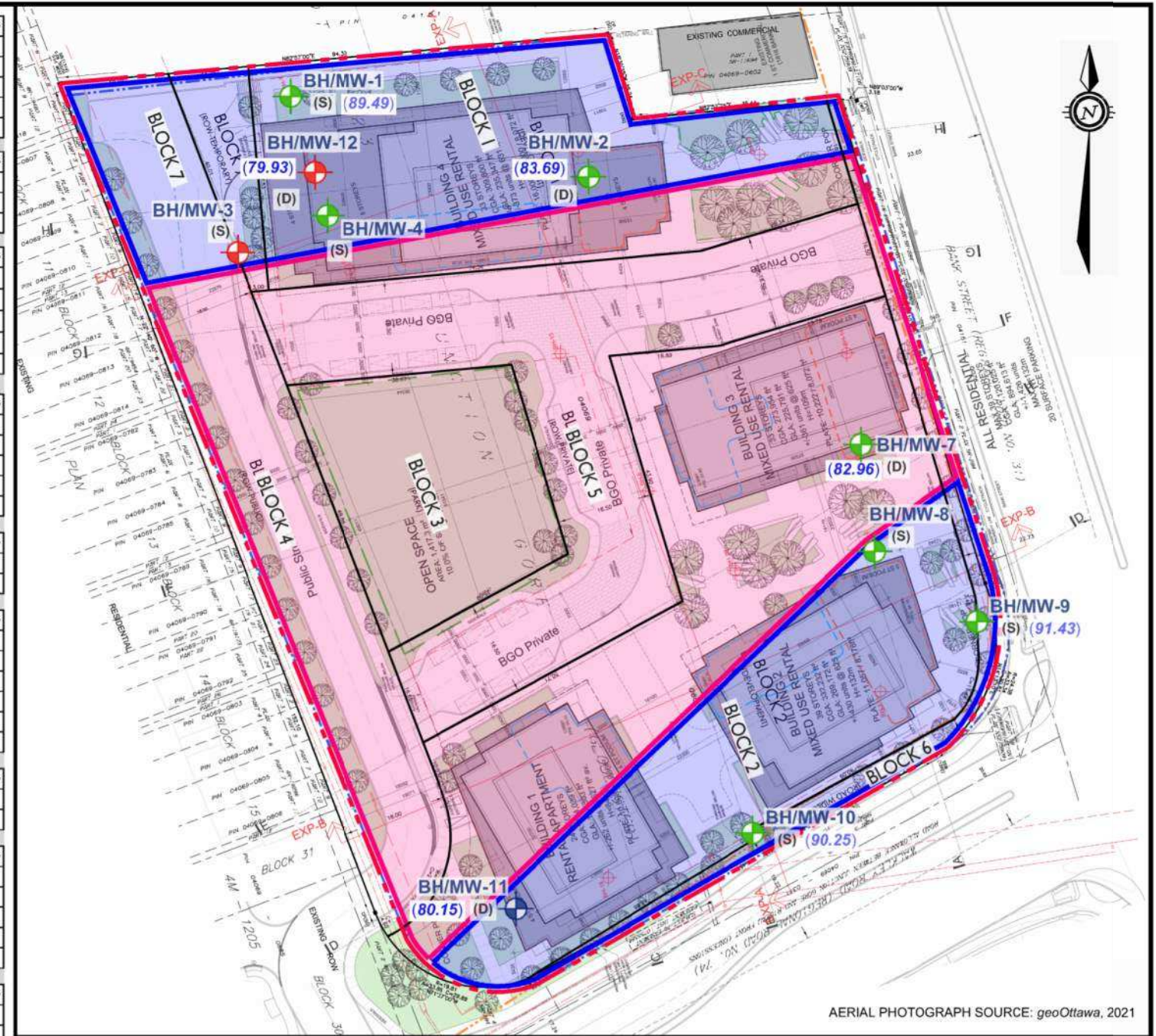
Screen Interval 10.3 to 13.7 mbgs																	
BH/MW-7	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
6-Dec-23	0.41	0.81	<0.20	0.28	<25	<100	<200	<200	2.3	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20

Screen Interval 0.7 to 2.0 mbgs																	
BH/MW-8	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
6-Dec-23	42	1.0	57	99	520	<100	<200	<200	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
15-Mar-24	0.7	<0.20	1.2	2.5	<25	<100	<200	<200	-	-	-	-	-	-	-	-	-
DUP	0.69	<0.20	1.2	2.3	<25	<100	<200	<200	-	-	-	-	-	-	-	-	-
20-Jun-24	4.2	0.3	6.5	3.1	72	<100	<200	<200	-	-	-	-	-	-	-	-	-
24-Sep-24	2.2	<0.20	0.69	<0.40	<25	<90	<200	<200	-	-	-	-	-	-	-	-	-

Screen Interval 0.9 to 2.2 mbgs																	
BH/MW-9	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
29-Nov-23	<0.17	<0.20	<0.20	<0.20	<25	<100	<200	<200	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20

Screen Interval 1.0 to 2.5 mbgs																	
BH/MW-10	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
29-Nov-23	0.54	<0.20	<0.20	<0.20	<25	<100	<200	<200	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
DUP	0.51	<0.20	<0.20	<0.20	<25	<100	<200	<200	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
20-Jun-24	<0.20	<0.20	<0.20	<0.40	-	-	-	-	-	-	-	-	-	-	-	-	-
24-Sep-24	<0.20	<0.20	<0.20	<0.40	-	-	-	-	-	-	-	-	-	-	-	-	-

Screen Interval 11.0 to 14.0 mbgs																	
BH/MW-12	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
6-Dec-23	0.91	1.5	<0.20	0.96	<25	<100	<200	<200	1.6	<0.20	<0.50	<0.20	<0.50	<0.50	0.73	<0.20	<0.20
25-Mar-23	12	1.9	0.94	13	<25	<100	<200	<200	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	5.3	0.48	<2.0
21-Jun-24	3.3	1.5	<0.20	0.96	<25	<100	<200	<200	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<2.0	1.9	<0.20



AERIAL PHOTOGRAPH SOURCE: geoOttawa, 2021

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 STANDARDS
Benzene	B	44
Toluene	I	18000
Ethylbenzene	E	2300
Total Xylenes	X	4200
F1	F1 (C6-C10)	750
F2	F2 (C10-C16)	150
F3	F3 (C16-C34)	500
F4	F4 (C34-C50)	500
Chloroform	CF	2.4
1,1-Dichloroethane	1,1-DCA	320
1,2-Dichloroethane	1,2-DCA	1.6
1,1-Dichloroethylene	1,1-DCE	1.6
Cis-1,2-Dichloroethylene	c-1,2-DCE	1.6
Trans-1,2-Dichloroethylene	t-1,2-DCE	1.6
Tetrachloroethylene	PCE	1.6
Trichloroethylene	TCE	1.6
Vinyl Chloride	VC	0.5

LEGEND

- PROPERTY BOUNDARY
- SAMPLE EXCEEDS TABLE 7 SCS REGULATIONS
- SAMPLE MEETS TABLE 7 SCS REGULATIONS
- BH/MW-1 2023 MONITORING WELL NUMBER & LOCATION
- (S) = SHALLOW | (D) = DEEP
- TABLE 3 (BEDROCK DEPTH > 2m)
- TABLE 7 (BEDROCK DEPTH < 2m)
- (89.49) SHALLOW GROUNDWATER LEVEL (mesl)
- (83.69) DEEP GROUNDWATER LEVEL (masl)

0 10m 20m 40m
HORIZONTAL 1:1000

exp. EXP Services Inc. www.exp.com
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 2650 Queensview Drive, Suite 100
 Ottawa, ON K2B 8H6, Canada

DATE: SEPTEMBER 2024	CLIENT: BGO	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	PROJECT NO.: OTT-23002538-B0
DESIGN: CK / MM	CHECKED: CK	TITLE: GROUNDWATER ANALYTICAL RESULTS - PHC & VOC WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO	SCALE: 1:1,000
DRAWN BY: AS			FIG 13

Screen Interval 1.5 to 4.6 mbgs																	
BH/MW-1	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
30-Nov-23	<0.17	<0.20	<0.20	<0.20	<25	<100	<200	<200	1.7	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
25-Mar-24	<0.20	<0.20	<0.20	<0.20	-	-	-	-	0.34	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
20-Jun-24	<0.20	<0.20	<0.20	<0.20	-	-	-	-	0.34	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
24-Sep-24	<0.20	<0.20	<0.20	0.33	-	-	-	-	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20

Screen Interval 11.1 to 14.1 mbgs																	
BH/MW-2	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
20-Jun-24	4.6	<0.20	<0.20	<0.20	-	-	-	-	<0.20	<0.20	<0.49	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
24-Sep-24	1.6	<0.20	<0.20	<0.20	-	-	-	-	<0.20	<0.20	<0.49	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20

Screen Interval 2.6 to 5.6 mbgs																	
BH/MW-3	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
21-Dec-23	<0.20	<0.20	<0.20	<0.20	-	-	-	-	4.6	<0.20	<0.49	<0.20	<0.50	<0.50	3	<0.20	<0.20
15-Mar-24	<0.20	<0.20	<0.20	<0.20	-	-	-	-	<0.20	<0.20	<0.49	<0.20	<0.50	<0.50	0.47	<0.20	<0.20
20-Jun-24	<0.20	<0.20	<0.20	<0.20	-	-	-	-	<0.20	<0.20	<0.49	<0.20	<0.50	<0.50	0.47	<0.20	<0.20
24-Sep-24	<0.20	<0.20	<0.20	<0.20	-	-	-	-	<0.20	<0.20	<0.49	<0.20	<0.50	<0.50	3.8	<0.20	<0.20

Screen Interval 2.4 to 5.4 mbgs																	
BH/MW-4	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
21-Dec-23	0.34	2.1	<0.20	0.66	-	-	-	-	1.1	<0.20	<0.49	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
15-Mar-24	<0.20	1.4	0.26	1.7	-	-	-	-	<0.20	<0.20	<0.49	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
20-Jun-24	<0.20	<0.20	<0.20	<0.20	-	-	-	-	0.34	<0.20	<0.49	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
24-Sep-24	<0.20	<0.20	<0.20	<0.20	-	-	-	-	<0.20	<0.20	<0.49	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20

Screen Interval 10.3 to 13.7 mbgs																	
BH/MW-7	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
6-Dec-23	0.41	0.81	<0.20	0.28	<25	<100	<200	<200	2.3	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20

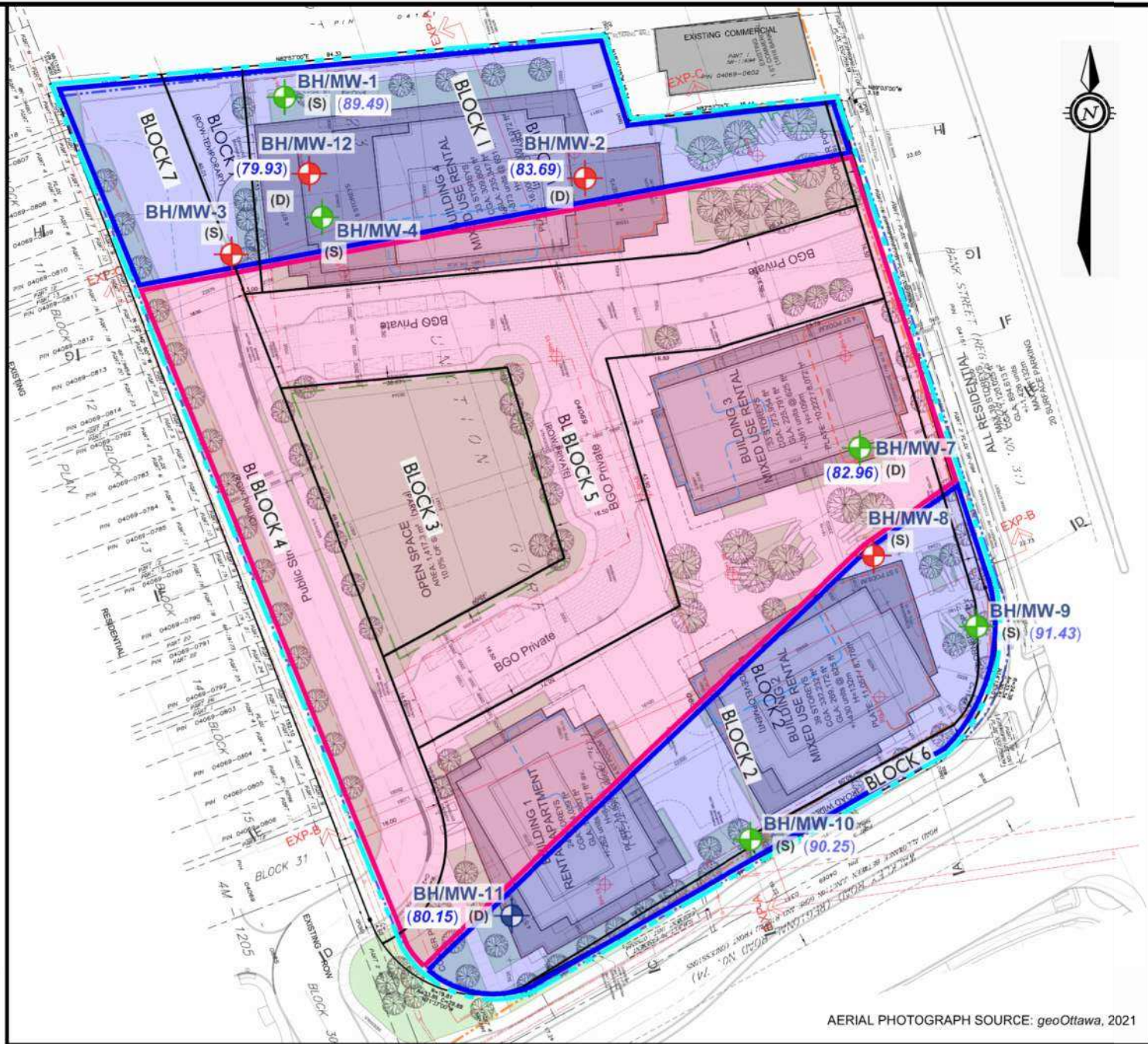
Screen Interval 0.7 to 2.0 mbgs																	
BH/MW-8	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
6-Dec-23	42	1.0	57	99	520	<100	<200	<200	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
15-Mar-24	0.7	<0.20	1.2	2.5	<25	<100	<200	<200	-	-	-	-	-	-	-	-	-
DUP	0.69	<0.20	1.2	2.3	<25	<100	<200	<200	-	-	-	-	-	-	-	-	-
20-Jun-24	4.3	0.3	6.5	3.1	72	<100	<200	<200	-	-	-	-	-	-	-	-	-
DUP	3.8	0.3	5.8	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-
24-Sep-24	2.2	<0.20	0.69	<0.40	<25	<90	<200	<200	-	-	-	-	-	-	-	-	-

Screen Interval 0.9 to 2.2 mbgs																	
BH/MW-9	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
29-Nov-23	<0.17	<0.20	<0.20	<0.20	<25	<100	<200	<200	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20

Screen Interval 1.0 to 2.5 mbgs																	
BH/MW-10	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
29-Nov-23	0.54	<0.20	<0.20	<0.20	<25	<100	<200	<200	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
DUP	0.51	<0.20	<0.20	<0.20	<25	<100	<200	<200	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
20-Jun-24	<0.20	<0.20	<0.20	<0.40	-	-	-	-	-	-	-	-	-	-	-	-	-
24-Sep-24	<0.20	<0.20	<0.20	<0.40	-	-	-	-	-	-	-	-	-	-	-	-	-

Screen Interval 11.0 to 14.0 mbgs																		
BH/MW-12	B	T	E	X	F1	F2	F3	F4	CF	H	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
6-Dec-23	0.91	1.5	<0.20	0.96	<25	<100	<200	<200	1.6	<1.0	<0.20	<0.50	<0.20	<0.50	<0.50	0.73	<0.20	<0.20
25-Mar-24	12	1.9	0.94	13	<25	<100	<200	<200	<0.20	5	<0.20	<0.50	<0.20	<0.50	<0.50	5.3	0.48	<0.20
21-Jun-24	3.3	5.1	0.56	7.3	-	-	-	-	<0.20	5.9	<0.20	<0.50	<0.20	<0.50	<0.50	<2.0	1.9	<0.20

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 7 STANDARDS
Benzene	B	0.5
Toluene	T	320
Ethylbenzene	E	54
Total Xylenes	X	72
F1	F1 (C6-C10)	420
F2	F2 (C10-C16)	150
F3	F3 (C16-C34)	500
F4	F4 (C34-C50)	500
Chloroform	CF	2
1,1-Dichloroethane	1,1-DCA	11
1,2-Dichloroethane	1,2-DCA	0.5
1,1-Dichloroethylene	1,1-DCE	0.5
Cis-1,2-Dichloroethylene	c-1,2-DCE	1.6
Trans-1,2-Dichloroethylene	t-1,2-DCE	1.6
Tetrachloroethylene	PCE	0.5
Trichloroethylene	TCE	0.5
Vinyl Chloride	VC	0.5



LEGEND

- PROPERTY BOUNDARY
- SAMPLE EXCEEDS TABLE 7 SCS REGULATIONS
- SAMPLE MEETS TABLE 7 SCS REGULATIONS
- BH/MW-1 2023 MONITORING WELL NUMBER & LOCATION
- (S) = SHALLOW | (D) = DEEP
- TABLE 3 (BEDROCK DEPTH > 2m)
- TABLE 7 (BEDROCK DEPTH < 2m)
- (89.49) SHALLOW GROUNDWATER LEVEL (mesl)
- (83.69) DEEP GROUNDWATER LEVEL (masl)

0 10m 20m 40m
HORIZONTAL 1:1000

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 2650 Queensview Drive, Suite 100
 Ottawa, ON K2B 8H6, Canada

DATE SEPTEMBER 2024	CLIENT: BGO	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no. OTT-23002538-B0
DESIGN CK / MM	CHECKED CK	TITLE: GROUNDWATER ANALYTICAL RESULTS - PHC & VOC WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO	scale 1:1,000
DRAWN BY AS			FIG 14

File name: E:\OTT-23002538-B0\60 Execution\65 Drawings\23002538-B0_Ph-2_Oct-2024.dwg
 Last Saved: Oct 9, 2024 9:36 AM
 Last Plotted: Oct 9, 2024 3:55 PM
 Plotted by: Severa

BH-1																		Screen Interval 1.5 to 4.6 mbgs																	
DATE	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Na	Tl	U	V	Zn																
30-Nov-23	1.4	1.1	1800	<0.40	520	<0.090	<5.0	2.5	2.5	<0.50	11	6.3	<2.0	<0.090	820000	0.059	2.9	<0.50	<5.0																

BH-7																		Screen Interval 10.3 to 13.7 mbgs																	
DATE	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Na	Tl	U	V	Zn																
6-Dec-23	1.7	1.8	1800	<0.40	380	<0.090	<5.0	<0.50	0.99	<0.50	14	1.7	<2.0	<0.090	2300000	<0.050	2.4	0.59	<5.0																

BH-8																		Screen Interval 0.7 to 2.0 mbgs																	
DATE	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Na	Tl	U	V	Zn																
6-Dec-23	<0.50	<1.0	95	<0.40	76	<0.090	<5.0	0.53	1.1	<0.50	10	1.4	<2.0	<0.090	1300000	<0.050	1.7	<0.50	<5.0																

BH-9																		Screen Interval 0.9 to 2.2 mbgs																	
DATE	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Na	Tl	U	V	Zn																
29-Nov-23	0.55	<1.0	89	<0.40	50	0.12	<5.0	2.4	2.3	<0.50	1.6	6.2	<2.0	<0.090	1100000	<0.050	1.8	0.53	<5.0																

BH-10																		Screen Interval 1.0 to 2.5 mbgs																	
DATE	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Na	Tl	U	V	Zn																
29-Nov-23	0.56	<1.0	150	<0.40	37	0.28	<5.0	5.9	4.5	<0.50	9.7	10	<2.0	0.093	890000	0.078	3.4	0.86	<5.0																
DUP	<0.50	<1.0	140	<0.40	36	0.26	<5.0	5.5	3.6	<0.50	9.0	9.8	<2.0	<0.090	880000	0.07	3.3	0.58	<5.0																

BH-12																		Screen Interval 11.0 to 14.0 mbgs																	
DATE	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Na	Tl	U	V	Zn																
6-Dec-23	1.5	1.5	220	<0.40	180	<0.090	<5.0	0.78	3.9	0.55	36	3.2	<2.0	<0.090	530000	<0.050	1.9	0.88	15																

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 7 STANDARDS
Antimony	Sb	16000
Arsenic	As	1500
Barium	Ba	23000
Boron	B	36000
Cadmium	Cd	2.1
Chromium	Cr	640
Cobalt	Co	52
Copper	Cu	69
Lead	Pb	20
Molybdenum	Mo	70
Nickel	Ni	390
Selenium	Se	50
Silver	Ag	1.2
Sodium	Na	1800000
Thallium	Tl	400
Uranium	U	330
Vanadium	V	200
Zinc	Zn	890



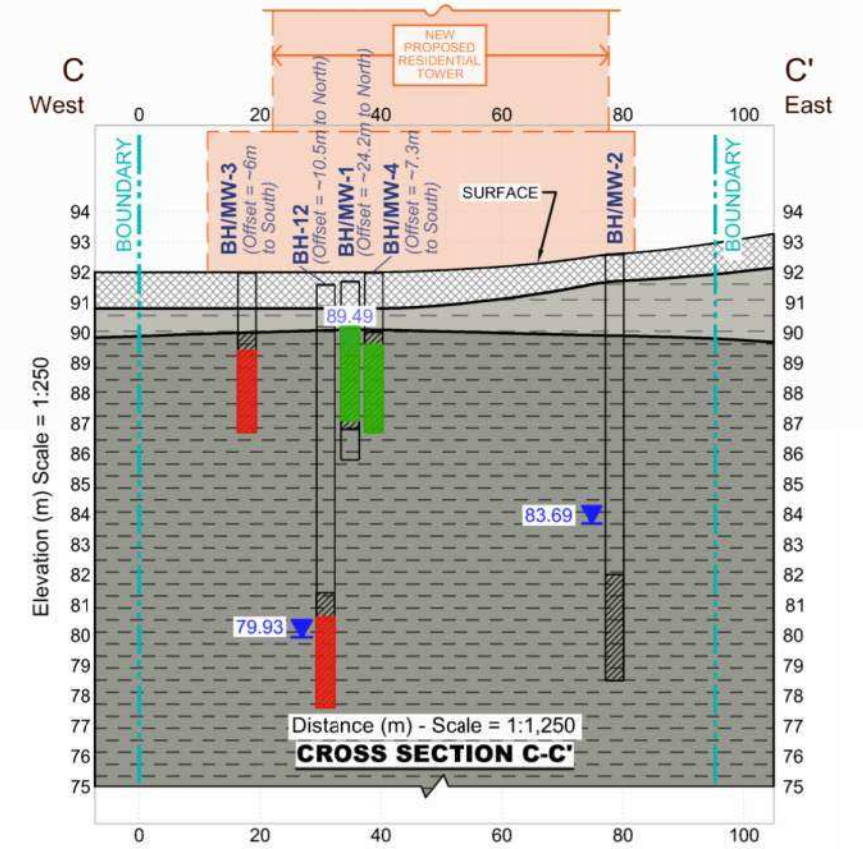
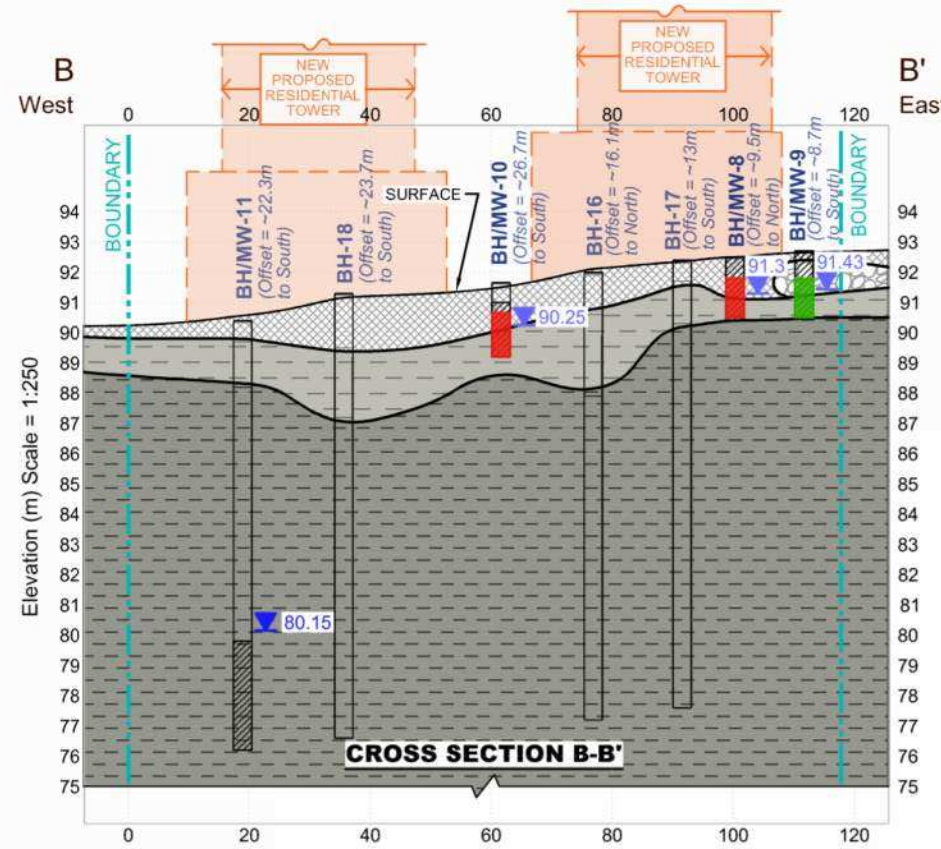
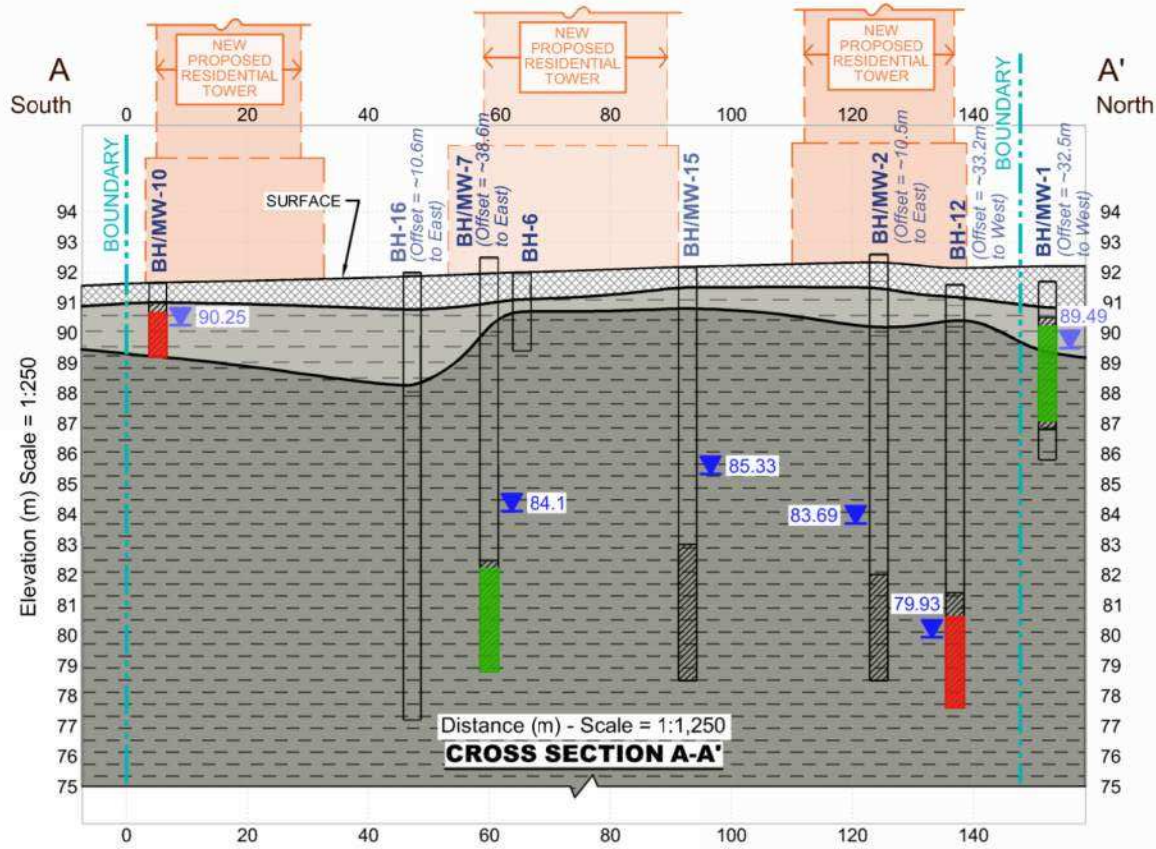
LEGEND

- PROPERTY BOUNDARY
- SAMPLE EXCEEDS TABLE 7 SCS REGULATIONS
- SAMPLE MEETS TABLE 7 SCS REGULATIONS
- NOT SAMPLED
- BH/MW-1 MONITORING WELL NAME & LOCATION (S) = SHALLOW | (D) = DEEP
- BH-5 BOREHOLE NAME & LOCATION
- (89.49) SHALLOW GROUNDWATER LEVEL (masl)
- (83.69) DEEP GROUNDWATER LEVEL (masl)

HORIZONTAL SCALE: 1:1000

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 t: +1.613.688.1899 | f: +1.613.225.7337
 2650 Queensview Drive, Suite 100
 Ottawa, ON K2B 8H6, Canada

DATE: SEPTEMBER 2024	CLIENT: BGO	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no.: OTT-23002538-B0
DESIGN: CK / MM	CHECKED: CK	TITLE: GROUNDWATER ANALYTICAL RESULTS - METALS	scale: 1:1,000
DRAWN BY: AS	WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO		FIG 15



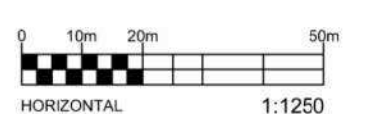
LEGEND

- FILL: SAND, GRAVEL, Etc.
- GLACIAL TILL
- HIGHLY WEATHERED SHALE
- SHALE BEDROCK
- BORE-HOLE / MONITORING WELL
- SHALLOW GROUNDWATER LEVEL (mas)
- SCREEN
- DEEP GROUNDWATER LEVEL (mast)
- SAMPLE EXCEEDS TABLE 7 SCS REGULATIONS
- SAMPLE MEETS TABLE 7 SCS REGULATIONS

LEGEND (GENERAL)

- PROPERTY BOUNDARY
- NEW PROPOSED MIXED USE AND RENTAL APARTMENTS TOWERS (24 - 40 STORIES)

ORIGINAL SHEET SIZE: 17' x 11'



BH-1		Screen Interval 1.5 to 4.6 mbgs															
DATE	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
30-Nov-23	<0.17	<0.20	<0.20	<0.20	<25	<100	<200	<200	1.7	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
BH-3		Screen Interval 2.6 to 5.6 mbgs															
DATE	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
21-Dec-23	<0.20	<0.20	<0.20	<0.20	-	-	-	-	4.6	<0.20	<0.49	<0.20	<0.50	<0.50	3	<0.20	<0.20
BH-4		Screen Interval 2.4 to 5.4 mbgs															
DATE	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
21-Dec-23	0.34	2.1	<0.20	0.66	-	-	-	-	1.1	<0.20	<0.49	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
BH-7		Screen Interval 10.3 to 13.7 mbgs															
DATE	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
6-Dec-23	0.41	0.81	<0.20	0.28	<25	<100	<200	<200	2.3	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
BH-8		Screen Interval 0.7 to 2.0 mbgs															
DATE	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
6-Dec-23	42	1.0	57	99	520	<100	<200	<200	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
BH-9		Screen Interval 0.9 to 2.2 mbgs															
DATE	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
29-Nov-23	<0.17	<0.20	<0.20	<0.20	<25	<100	<200	<200	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
BH-10		Screen Interval 1.0 to 2.5 mbgs															
DATE	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
29-Nov-23	0.54	<0.20	<0.20	<0.20	<25	<100	<200	<200	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
DUP	0.51	<0.20	<0.20	<0.20	<25	<100	<200	<200	<0.20	<0.20	<0.50	<0.20	<0.50	<0.50	<0.20	<0.20	<0.20
BH-12		Screen Interval 11.0 to 14.0 mbgs															
DATE	B	T	E	X	F1	F2	F3	F4	CF	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
6-Dec-23	0.91	1.5	<0.20	0.96	<25	<100	<200	<200	1.6	<0.20	<0.50	<0.20	<0.50	<0.50	0.73	<0.20	<0.20

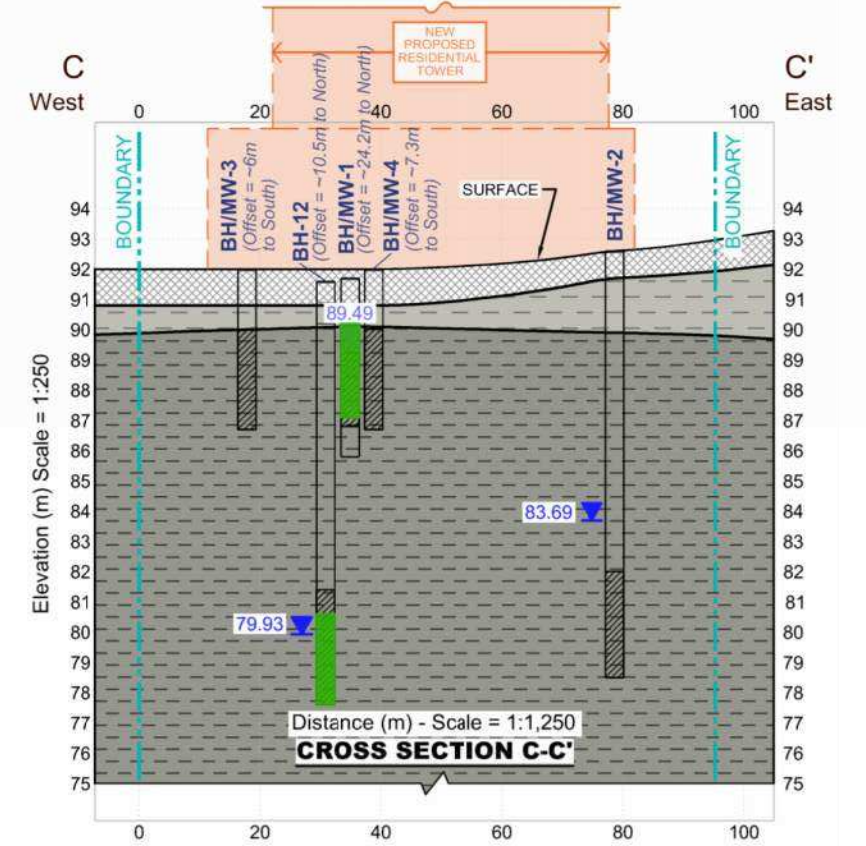
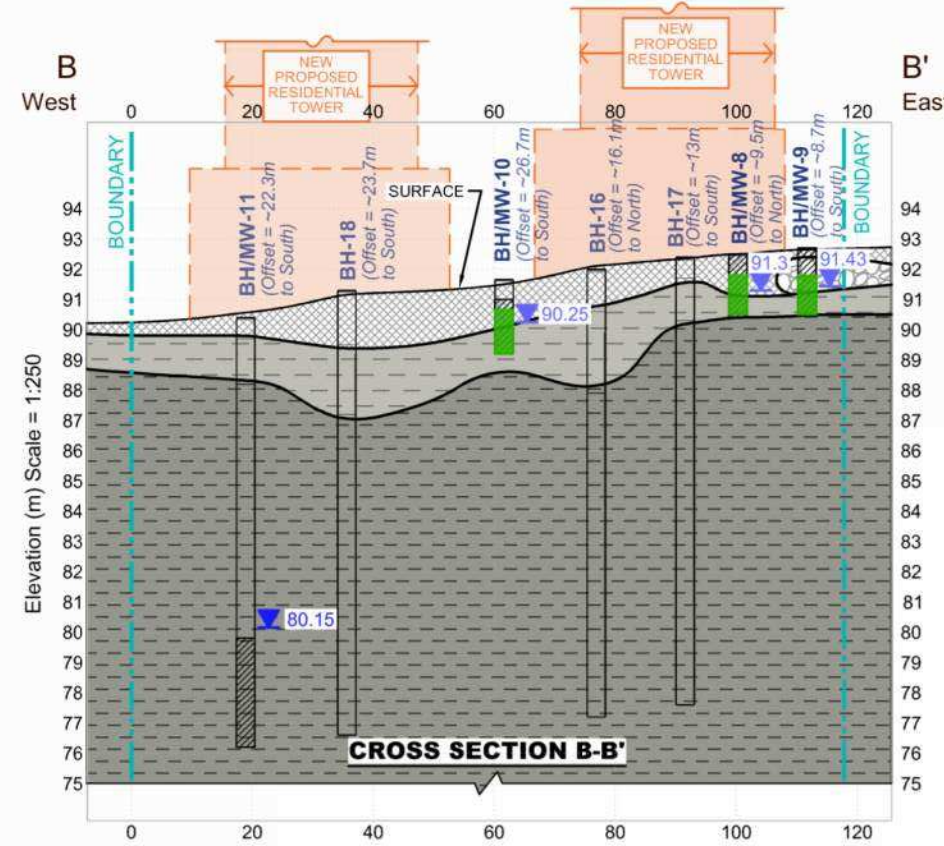
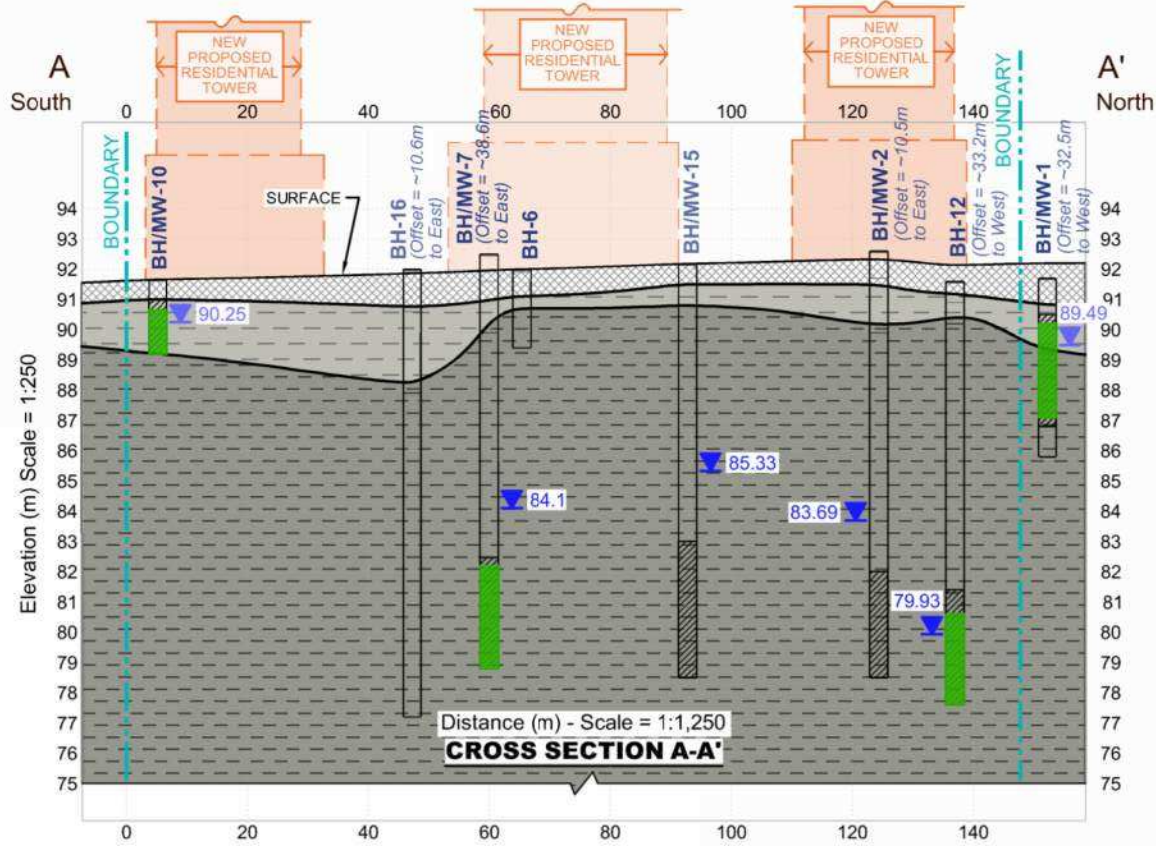
PARAMETERS	ABBREVIATION	REG 153/04 TABLE 7 STANDARDS
Benzene	B	0.5
Toluene	T	320
Ethy Ibenzene	E	54
Total Xylenes	X	72
F1	F1 (C6-C10)	420
F2	F2 (C10-C16)	150
F3	F3 (C16-C34)	500
F4	F4 (C34-C50)	500
Chloroform	CF	2
1,1-Dichloroethane	1,1-DCA	11
1,2-Dichloroethane	1,2-DCA	0.5
1,1-Dichloroethylene	1,1-DCE	0.5
Cis-1,2-Dichloroethylene	c-1,2-DCE	1.6
Trans-1,2-Dichloroethylene	t-1,2-DCE	1.6
Tetrachloroethylene	PCE	0.5
Trichloroethylene	TCE	0.5
Vinyl Chloride	VC	0.5



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2650 Queensview Drive, Suite 100
Ottawa, ON K2B 8H6, Canada

DATE SEPTEMBER 2024	CLIENT: BGO	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no. OTT-23002538-B0
DESIGN CK / MM	CHECKED CK	TITLE: GW CROSS SECTIONS A-A', B-B' & C-C' - PHC & VOC WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO	scale H = 1:1,250 V = 1:250
DRAWN BY AS			FIG 16



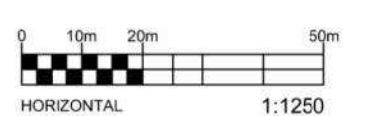
LEGEND

- FILL: SAND, GRAVEL, Etc.
- GLACIAL TILL
- HIGHLY WEATHERED SHALE
- SHALE BEDROCK
- BORE-HOLE / MONITORING WELL
- SHALLOW GROUNDWATER LEVEL (mas)
- SCREEN
- DEEP GROUNDWATER LEVEL (mast)
- SAMPLE EXCEEDS TABLE 7 SCS REGULATIONS
- SAMPLE MEETS TABLE 7 SCS REGULATIONS

LEGEND (GENERAL)

- PROPERTY BOUNDARY
- NEW PROPOSED MIXED USE AND RENTAL APARTMENTS TOWERS (24 - 40 STORIES)

ORIGINAL SHEET SIZE: 17' x 11'



BH-1														Screen Interval 1.5 to 4.6 mbgs									
DATE	Ace	AcI	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py						
30-Nov-23	<0.050	<0.050	<0.050	<0.050	<0.0090	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.071	<0.050	<0.030	<0.050						

BH-7														Screen Interval 10.3 to 13.7 mbgs									
DATE	Ace	AcI	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py						
6-Dec-23	<0.050	<0.050	<0.050	<0.050	0.026	<0.050	<0.050	<0.050	<0.050	<0.050	0.05	<0.050	<0.050	<0.071	<0.050	0.053	<0.050						

BH-8														Screen Interval 0.7 to 2.0 mbgs									
DATE	Ace	AcI	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py						
6-Dec-23	<0.050	<0.050	<0.050	<0.050	<0.0090	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	2.4	4.4	0.045	<0.050						

BH-9														Screen Interval 0.9 to 2.2 mbgs									
DATE	Ace	AcI	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py						
29-Nov-23	<0.050	<0.050	<0.050	<0.050	<0.0090	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.071	<0.050	<0.030	<0.050						

BH-10														Screen Interval 1.0 to 2.5 mbgs									
DATE	Ace	AcI	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py						
29-Nov-23	<0.050	<0.050	<0.050	<0.050	<0.0090	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.071	<0.050	<0.030	<0.050						
DUP	<0.050	<0.050	<0.050	<0.050	<0.0090	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.071	<0.050	<0.030	<0.050						

BH-12														Screen Interval 11.0 to 14.0 mbgs									
DATE	Ace	AcI	An	B(a)A	B(a)P	B(b)F	B(ghi)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py						
6-Dec-23	<0.050	<0.050	<0.050	<0.050	<0.0090	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.071	<0.050	0.11	<0.050						

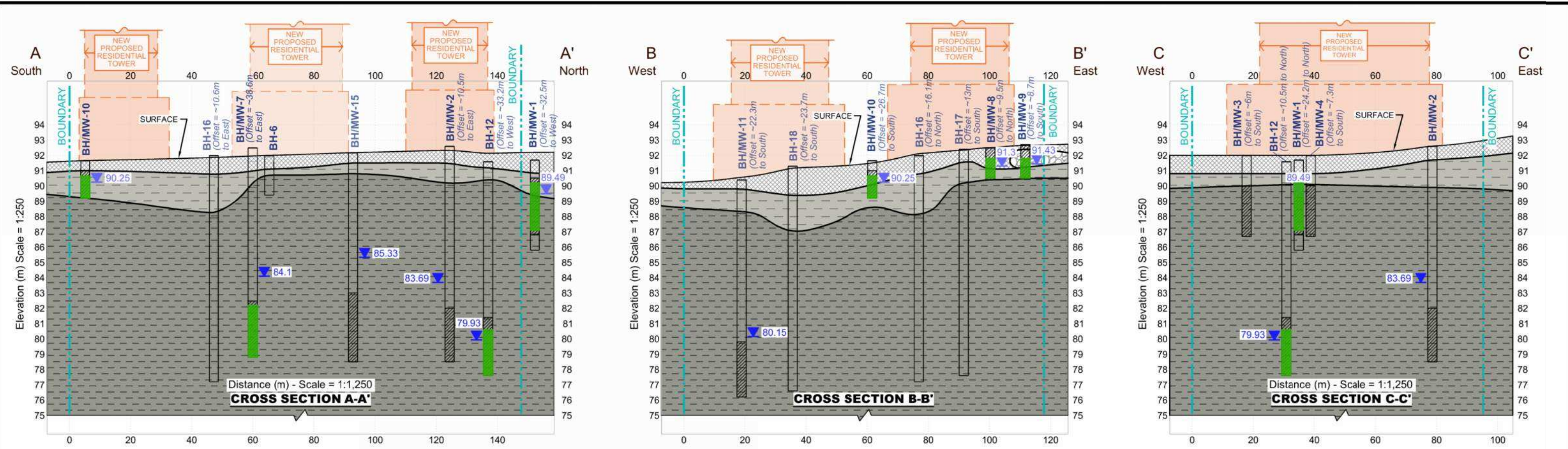
PARAMETERS	ABBREVIATION	REG 153/04 TABLE 7 STANDARDS
Acenaphthene	Ace	17
Acenaphthylene	AcI	1
Anthracene	An	1
Benzo(a)anthracene	B(a)A	1.8
Benzo(a)pyrene	B(a)P	0.81
Benzo(b)fluoranthene	B(b)F	0.75
Benzo(g,h,i)perylene	B(ghi)P	0.2
Benzo(k)fluoranthene	B(k)F	0.4
Chrysene	C	0.7
Dibenzo(a,h)anthracene	DA	0.4
Fluoranthene	FI	44
Fluorene	F	290
Indeno(1,2,3-cd)pyrene	I(123)P	0.2
Methylnaphthalene, 2-(1-)	T-MN	1500
Naphthalene	N	7
Phenanthrene	P	380
Pyrene	Py	5.7



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DATE SEPTEMBER 2024	CLIENT: BGO	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no. OTT-23002538-B0
DESIGN CK / MM	CHECKED CK	TITLE: GW CROSS SECTIONS A-A', B-B' & C-C' - PAH WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO	scale H = 1:1,250 V = 1:250
DRAWN BY AS			FIG 17

File name: E:\OTT\23002538-B0_60_Execution\65 Drawings\23002538-B0_Ph-2_Oct-2024.dwg
 Last Saved: Oct 9, 2024 9:36 AM
 Last Plotted: Oct 9, 2024 3:57 PM
 Plotted by: Severa



BH-1																	Screen Interval 1.5 to 4.6 mbgs			
DATE	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Na	Tl	U	V	Zn	
30-Nov-23	1.4	1.1	1800	<0.40	520	<0.090	<5.0	2.5	2.5	<0.50	11	6.3	<2.0	<0.090	820000	0.059	2.9	<0.50	<5.0	

BH-7																	Screen Interval 10.3 to 13.7 mbgs			
DATE	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Na	Tl	U	V	Zn	
6-Dec-23	1.7	1.8	1800	<0.40	380	<0.090	<5.0	<0.50	0.99	<0.50	14	1.7	<2.0	<0.090	2300000	<0.050	2.4	0.59	<5.0	

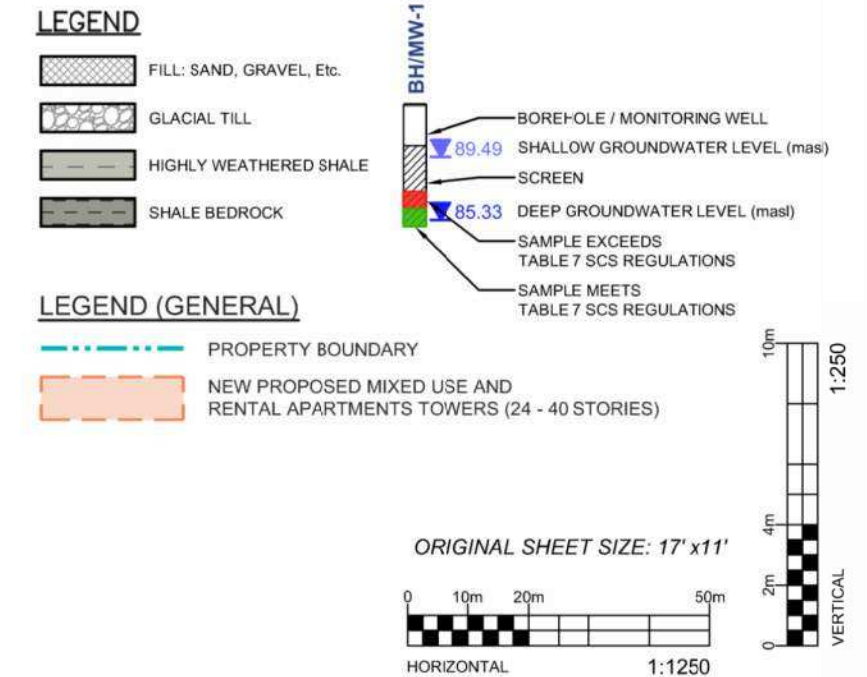
BH-8																	Screen Interval 0.7 to 2.0 mbgs			
DATE	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Na	Tl	U	V	Zn	
6-Dec-23	<0.50	<1.0	95	<0.40	76	<0.090	<5.0	0.53	1.1	<0.50	10	1.4	<2.0	<0.090	1300000	<0.050	1.7	<0.50	<5.0	

BH-9																	Screen Interval 0.9 to 2.2 mbgs			
DATE	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Na	Tl	U	V	Zn	
29-Nov-23	0.55	<1.0	89	<0.40	50	0.12	<5.0	2.4	2.3	<0.50	1.6	6.2	<2.0	<0.090	1100000	<0.050	1.8	0.53	<5.0	

BH-10																	Screen Interval 1.0 to 2.5 mbgs			
DATE	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Na	Tl	U	V	Zn	
29-Nov-23	0.56	<1.0	150	<0.40	37	0.28	<5.0	5.9	4.5	<0.50	9.7	10	<2.0	0.093	890000	0.078	3.4	0.86	<5.0	
DUP	<0.50	<1.0	140	<0.40	36	0.26	<5.0	5.5	3.6	<0.50	9.0	9.8	<2.0	<0.090	880000	0.07	3.3	0.58	<5.0	

BH-12																	Screen Interval 11.0 to 14.0 mbgs			
DATE	Sb	As	Ba	Be	B	Cd	Cr	Co	Cu	Pb	Mo	Ni	Se	Ag	Na	Tl	U	V	Zn	
6-Dec-23	1.5	1.5	220	<0.40	180	<0.090	<5.0	0.78	3.9	0.55	36	3.2	<2.0	<0.090	530000	<0.050	1.9	0.88	15	

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 7 STANDARDS
Antimony	Sb	16000
Arsenic	As	1500
Barium	Ba	230000
Boron	B	36000
Cadmium	Cd	2.1
Chromium	Cr	640
Cobalt	Co	52
Copper	Cu	69
Lead	Pb	20
Molybdenum	Mo	70
Nickel	Ni	390
Selenium	Se	50
Silver	Ag	1.2
Sodium	Na	1800000
Thallium	Tl	400
Uranium	U	330
Vanadium	V	200
Zinc	Zn	890



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DATE SEPTEMBER 2024	CLIENT: 	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	project no. OTT-23002538-B0
DESIGN CK / MM	CHECKED CK	TITLE: GW CROSS SECTIONS A-A', B-B' & C-C' - METALS WALKLEY CENTRE RE-DEVELOPMENT (1820-1846 BANK ST.), OTTAWA, ONTARIO	scale H = 1:1,250 V = 1:250
DRAWN BY AS			FIG 18

File: E:\OTT-23002538-B0_60_Execution\65_Drawings\23002538-B0_Ph-2_Oct-2024.dwg
Last Saved: Oct 9, 2024 9:36 AM
Last Plotted: Oct 9, 2024 3:57 PM
Plotted by: Severa

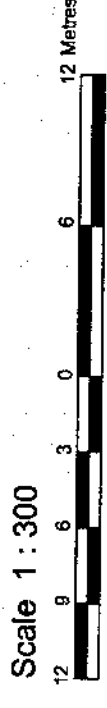
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*Sun Life Assurance Company of Canada c/o BentallGreenOak (Canada) LP
Phase Two Environmental Site Assessment
1820-1846 Bank Street, Ottawa, Ontario
OTT-22002538-B0
September 30, 2024*

Appendix B: Survey Plan

**PART OF LOT 23
JUNCTION GORE**
Geographic Township of Gloucester
CITY OF OTTAWA
Surveyed by Annis, O'Sullivan, Vollebek Ltd.

Scale 1 : 300



Metric
DIMENSIONS 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. My survey and plan are correct and in accordance with the Surveys Act and the Land Titles Act and the regulations made under them.
2. The survey was completed on the 14th day of December, 2017.

Date: 12/14/17
A. Andrew Sheip
Ontario Land Surveyor

PART 2
THIS PLAN MUST BE READ IN CONJUNCTION WITH
SURVEY REPORT DATED: December 20, 2017.

ANNIS, O'SULLIVAN, VOLLEBEK LTD. grants to the Applicant, the Applicant's heirs, assigns, mortgagees and other related parties, permission to use, copy, amend, extend and otherwise deal with the Survey Report in transactions involving The Client.

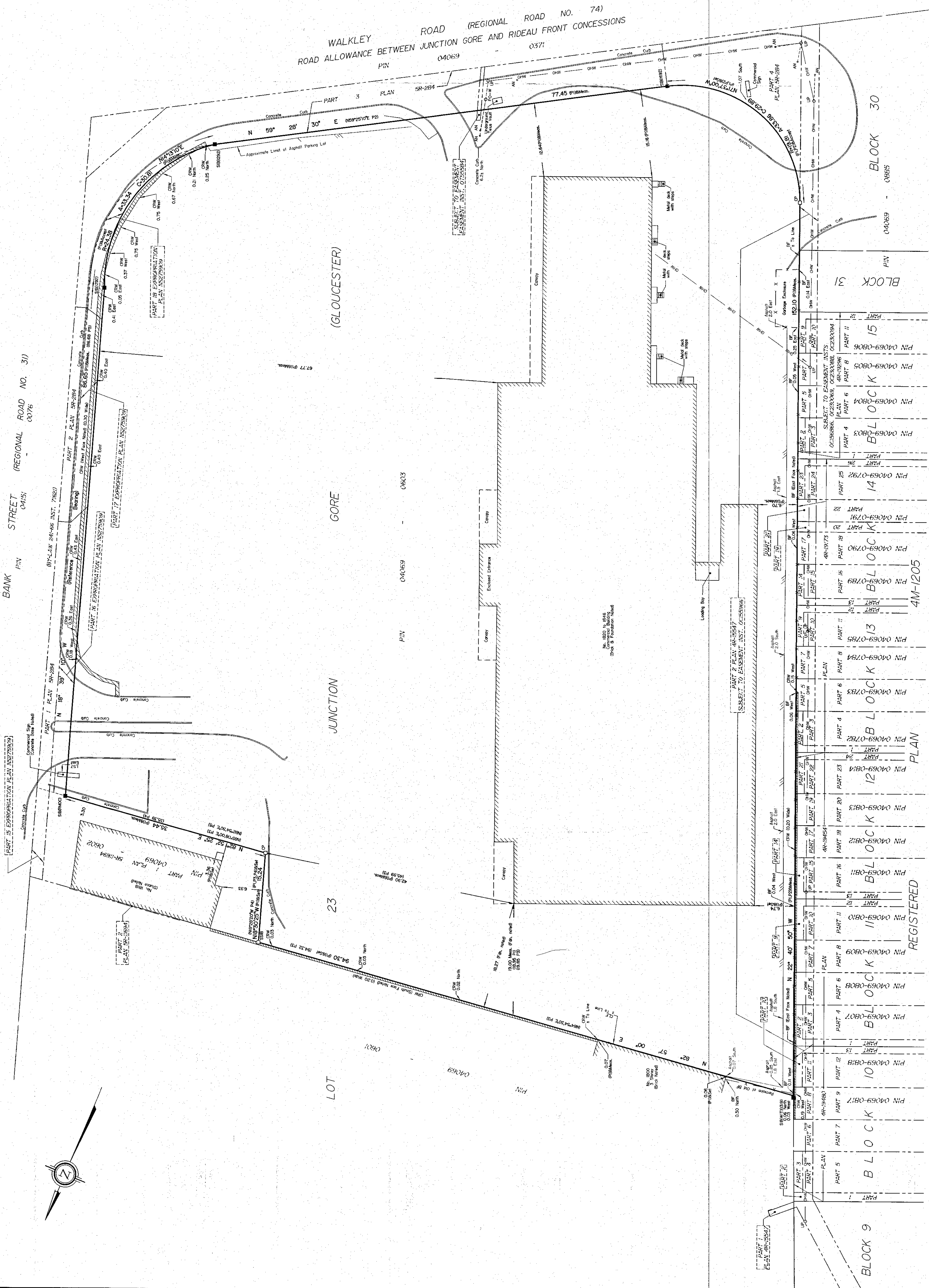
ASSOCIATION OF ONTARIO
LAND SURVEYORS
PLAN SUBMISSION FORM
2039531

Notes & Legend

- Dotted Survey Monument Platred
- Dashed Survey Monument Found
- Solid Standard Iron Bar
- Short Standard Iron Bar
- Iron Bar
- (AO3) Measured
- (AO3) Annis, O'Sullivan, Vollebek Ltd.
- (P1) (1952) Plan April 10, 2002
- (P2) (1952) Plan April 10, 2002
- (P3) (6477) Plan March 22, 1998
- (P4) (6477) Plan March 22, 1998
- (P5) Expropriation Plan N5275909
- Overhead Wire
- Concrete
- Wood Pole
- Concrete Retaining Wall
- Barbed Fence
- Foundation

Boundaries are pld. derived from The Western Limit of Bank Street, shown to be N18°39'07"W on (1892) Plan dated April 10, 2002.

ANNIS, O'SULLIVAN, VOLLEBEK LTD.
14 Concession Gate, Suite 500
Weyburn, Ont. K7E 7S9
Phone: (613) 739-7279
Fax: (613) 739-7279
www.annis-osullivan-vollebek.com



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Phase Two Environmental Site Assessment
1820-1846 Bank Street, Ottawa, Ontario
OTT-22002538-B0
September 30, 2024*

Appendix C: Sampling and Analysis Plan

OTT-23002538-B0
Walkley Centre Development, 1820-1846 Bank Street, Ottawa, ON

Objectives:

The objective of this component of the project is to support future re-development of the site by completing a combined Geotechnical and Environmental investigation. A Record of Site Condition will be required for the site.

Drilling:

A total of 18 BH will be drilled for geotechnical/environmental purposes, and MW will be installed in 10 of them.

Based on the results of the Phase One ESA, a summary of the proposed work plan is as follows:

Area of Potential Environmental Concern (APEC)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)	Addressed by BH/MW/sample #
#1. Former on-site dry-cleaner	VOC	Soil and groundwater	BH/MW-3, BH/MW-4, BH/MW-12
#2. Former on-site gas station	PHC, VOC, metals	Soil and groundwater	BH/MW-7, BH/MW-8
#3. Former on-site rail siding	PAH, metals	Soil	BH/MW-3, BH-6
#4. Fill material	PHC, PAH, metals	Soil	BH/MW-1, BH/MW-2, BH/MW-3, BH/MW-4, BH-6, BH/MW-7, BH/MW-8, BH/MW-9, BH/MW-10, BH/MW-11
#5. Former dry cleaner at 1800 Bank Street	VOC	Soil and Groundwater	BH/MW-1
#6. Former gas station at 1841 Bank Street	PHC, VOC	Soil and Groundwater	BH/MW-8, BH/MW-9
#7. Repair garage at 1841 Bank Street	PHC, VOC, metals	Soil and groundwater	BH/MW-8, BH/MW-9
#8. Gas station at 1847 Bank Street	PHC, VOC	Soil and groundwater	BH/MW-8, BH/MW-9
#9. Former car dealership at 1850 Bank Street	PHC, VOC, metals	Soil and groundwater	BH/MW-10, BH/MW-11
#10. Former USTs associated with car dealership at 1850 Bank Street	BTEX, PHC	Soil and groundwater	BH/MW-10, BH/MW-11
#11. Former rail line to the west of the site	PAH, metals	Soil	BH/MW-3, BH-5, BH/MW-11

- All monitoring wells to be screened across water table.
- Make sure that no screens straddle bedrock-soil interface. In other words, MW must be installed completely within bedrock or completely within overburden (most, if not all, will be in bedrock).
- As drilling progresses, log each sample, describing soil type, colour, staining, odour, petroleum vapour.

Soil Sampling:

- Two soil samples shall be submitted from BH/MW-1 to BH/MW-11 for analysis of PHC, VOC, PAH and metals and inorganics (sodium adsorption ratio, electrical conductivity, pH), to address preliminary excess soil requirements as wells as the APECs identified at the site.
- Three duplicate samples shall also be submitted for analysis.
- Samples should be submitted to Bureau Veritas.
- Results to be sent to chris.kimmerly@exp.com and leah.wells@exp.com

Low Flow Groundwater Sampling

- Monitor all 10 monitoring wells and record petroleum vapours, depth to water, and depth to LNAPL, if any.
- Groundwater samples shall be submitted from select monitoring wells for the parameters summarized in the table.
- One duplicate sample, a trip blank, and a field blank should be submitted for analysis.
- Samples should be submitted to Bureau Veritas.
- Results to be sent to chris.kimmerly@exp.com and leah.wells@exp.com
- Prior to sampling, ensure the following field parameters are stable (per the field measurement table): pH, conductivity, turbidity, DO, temperature and ORP
- EXP will survey ground elevations and top of pipe elevations, as well as UTM coordinates

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Phase Two Environmental Site Assessment
1820-1846 Bank Street, Ottawa, Ontario
OTT-22002538-B0
September 30, 2024*

Appendix D: Grain Size Analyses

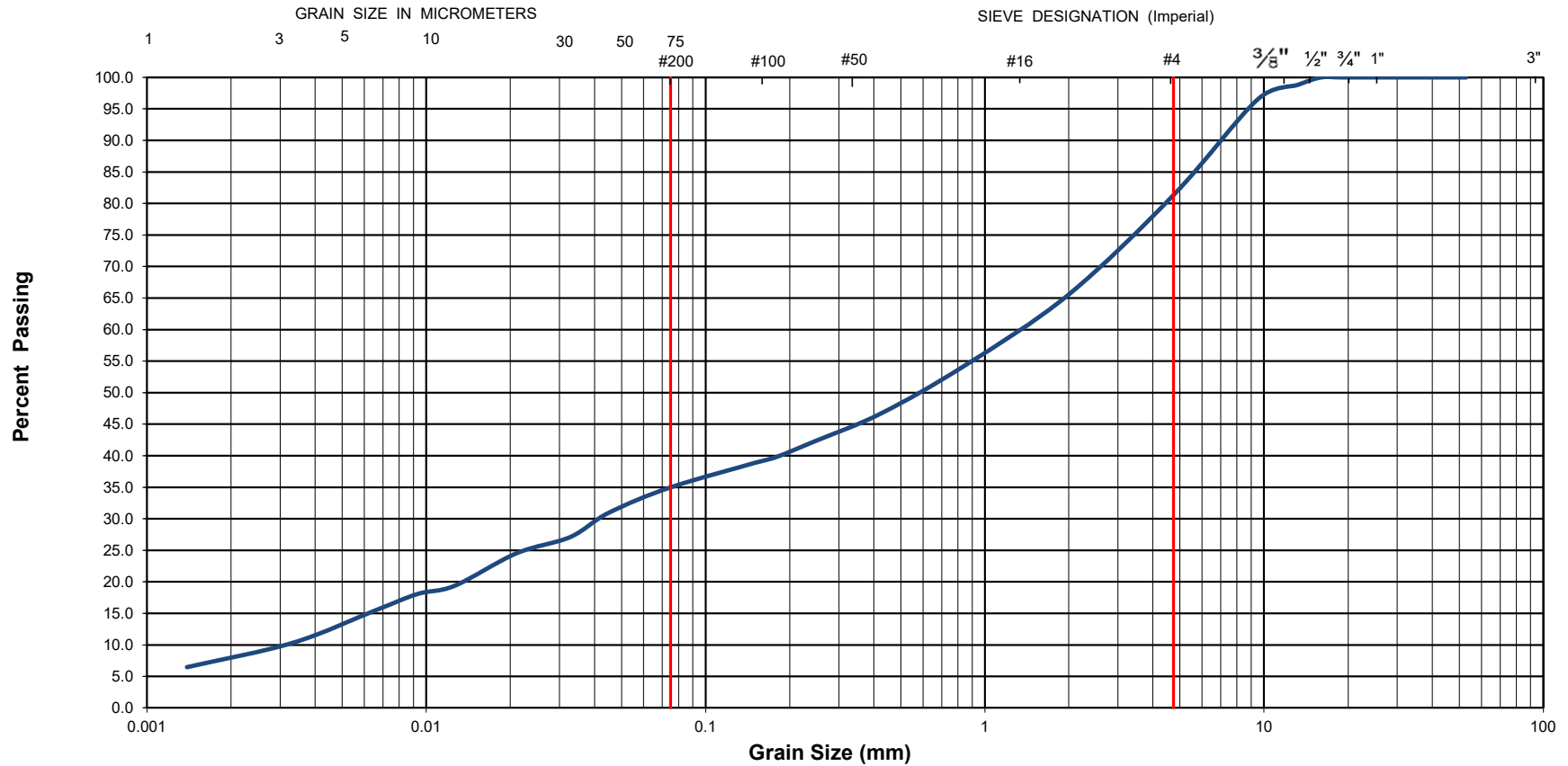


Grain-Size Distribution Curve Method of Test For Particle Size Analysis of Soil ASTM C-136/ASTM D422

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Unified Soil Classification System

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



EXP Project No.:	OTT-23002538-A0	Project Name :	Geotechnical Investigation - Walkley Centre Re-development			
Client :	Sun Life Assurance Company of Canada	Project Location :	1840-1846 Walkley Road, Ottawa			
Date Sampled :	October 26, 2023	Borehole No:	BH1	Sample No.: SS3		
Sample Description :	% Silt and Clay	35	% Sand	46		
Sample Description :	Silty Sand and Gravel (SM)			% Gravel	19	
Sample Description :				Figure :	D-1	
Sample Description :					Depth (m) :	1.5-2.1

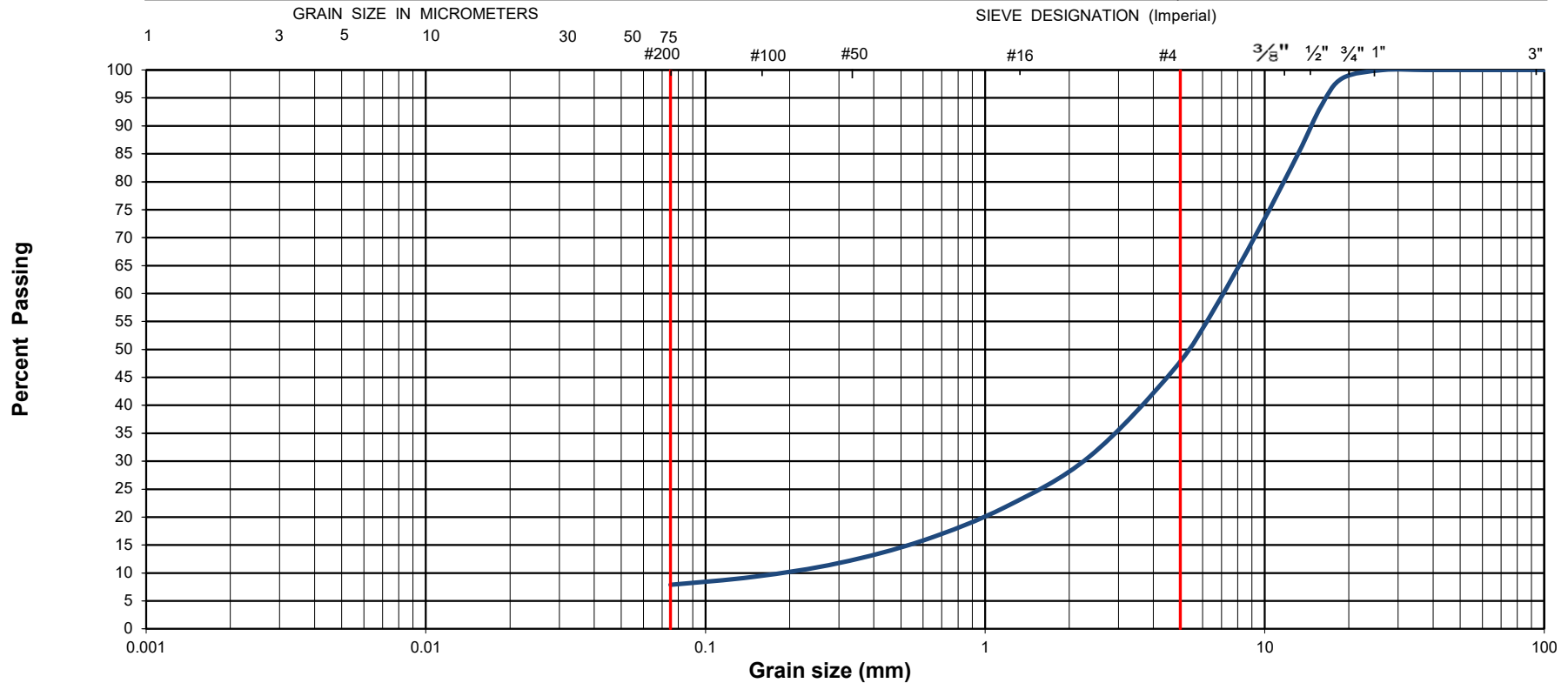


Grain-Size Distribution Curve Method of Test For Sieve Analysis of Aggregate ASTM C-136

EXP Services Inc.
100-2650 Queensview Drive
Ottawa, ON K2B 8H6

Unified Soil Classification System

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



EXP Project No.:	OTT-23002538-A0	Project Name :	Geotechnical Investigation - Walkey Centre Redevelopment		
Client :	Sun Life Assurance Company	Project Location :	1822-1846 Bank Street		
Date Sampled :	October 31, 2023	Borehole No:	BH17	Sample: GS1	
		Depth (m) :	0.1-0.2		
Sample Composition :	Gravel (%)	54	Sand (%)	38	
		Silt & Clay (%)	8		
Sample Description :	FILL: Poorly Graded Gravel with Silt and Sand (GP-GM)			Figure :	D-2



Grain-Size Distribution Curve

Method of Test For Sieve Analysis of Aggregate

ASTM C-136

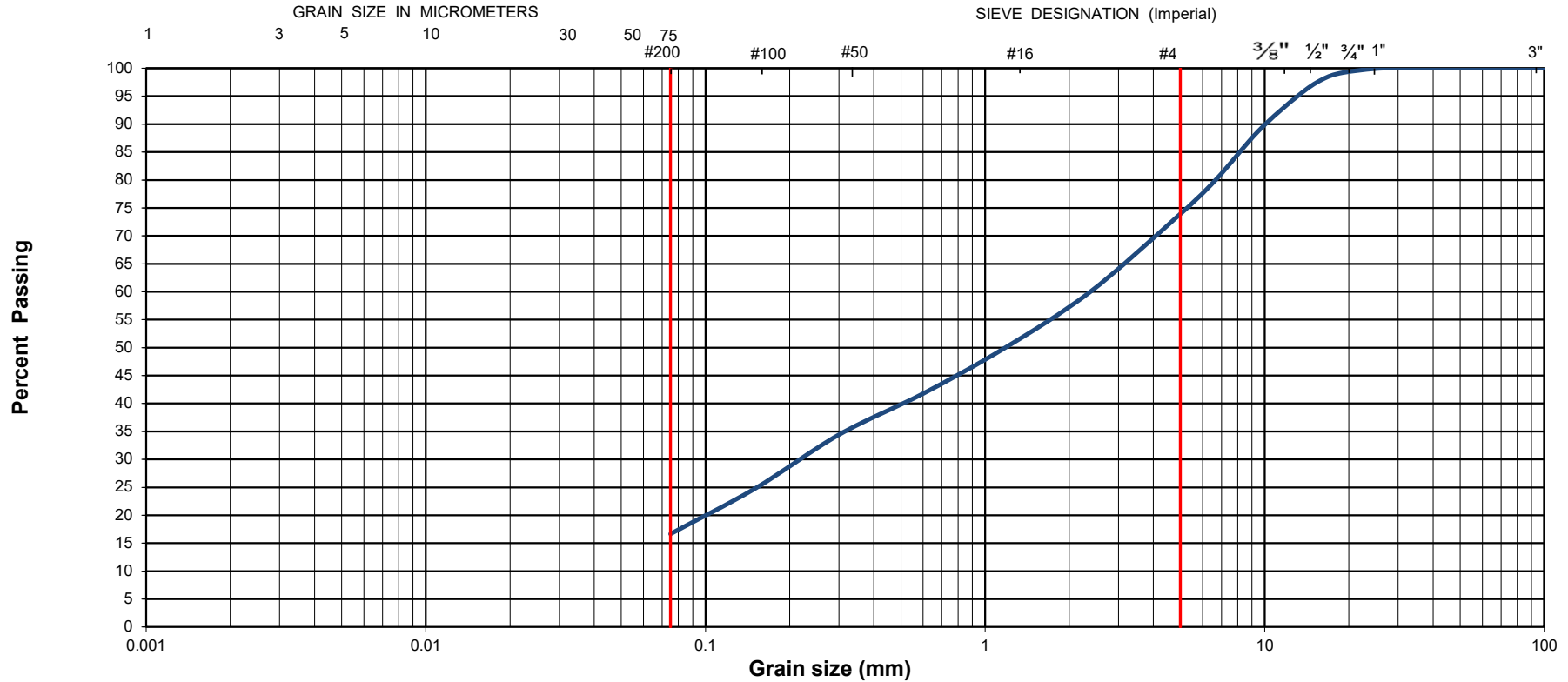
EXP Services Inc.

100-2650 Queensview Drive

Ottawa, ON K2B 8H6

Unified Soil Classification System

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



EXP Project No.:	OTT-23002538-A0	Project Name :	Geotechnical Investigation - Walkey Centre Redevelopment		
Client :	Sun Life Assurance Company	Project Location :	1822-1846 Bank Street		
Date Sampled :	November 2, 2023	Borehole No:	BH18	Sample: GS1	
		Depth (m) :	0.1-0.2		
Sample Composition :	Gravel (%)	27	Sand (%)	56	
		Silt & Clay (%)	17		
Sample Description :	FILL: Well Graded Sand with Silt and Gravel (GW-GM)			Figure :	D-3

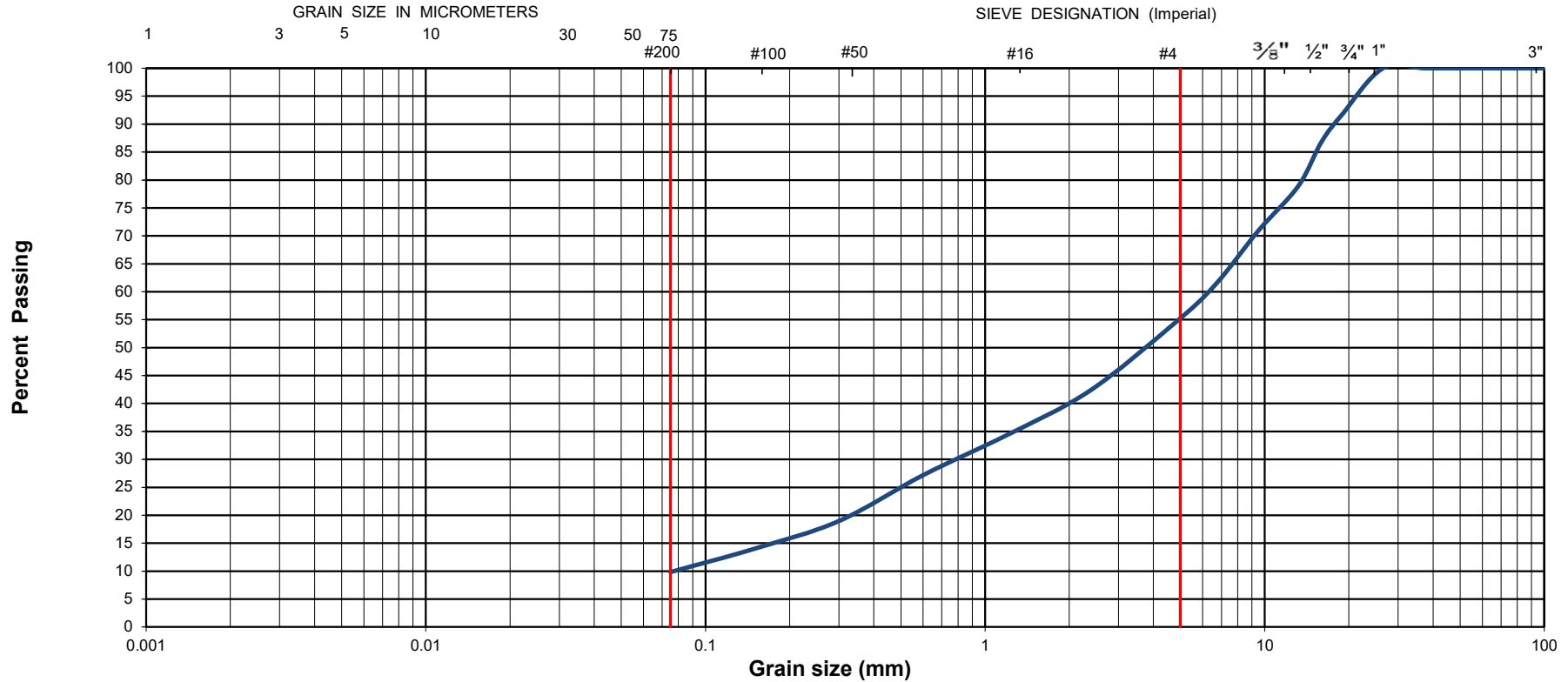


Grain-Size Distribution Curve Method of Test For Sieve Analysis of Aggregate ASTM C-136

EXP Services Inc.
100-2650 Queensview Drive
Ottawa, ON K2B 8H6

Unified Soil Classification System

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



EXP Project No.:	OTT-23002538-A0	Project Name :	Geotechnical Investigation - Walkey Centre Redevelopment		
Client :	Sun Life Assurance Company	Project Location :	1822-1846 Bank Street		
Date Sampled :	November 1, 2023	Borehole No:	BH12	Sample: GS1	
		Depth (m) :	0.1-0.2		
Sample Composition :	Gravel (%)	46	Sand (%)	44	
		Silt & Clay (%)	10		
Sample Description :	FILL: Well Graded Gravel with Silt & Sand (GW-GM)			Figure :	D-4

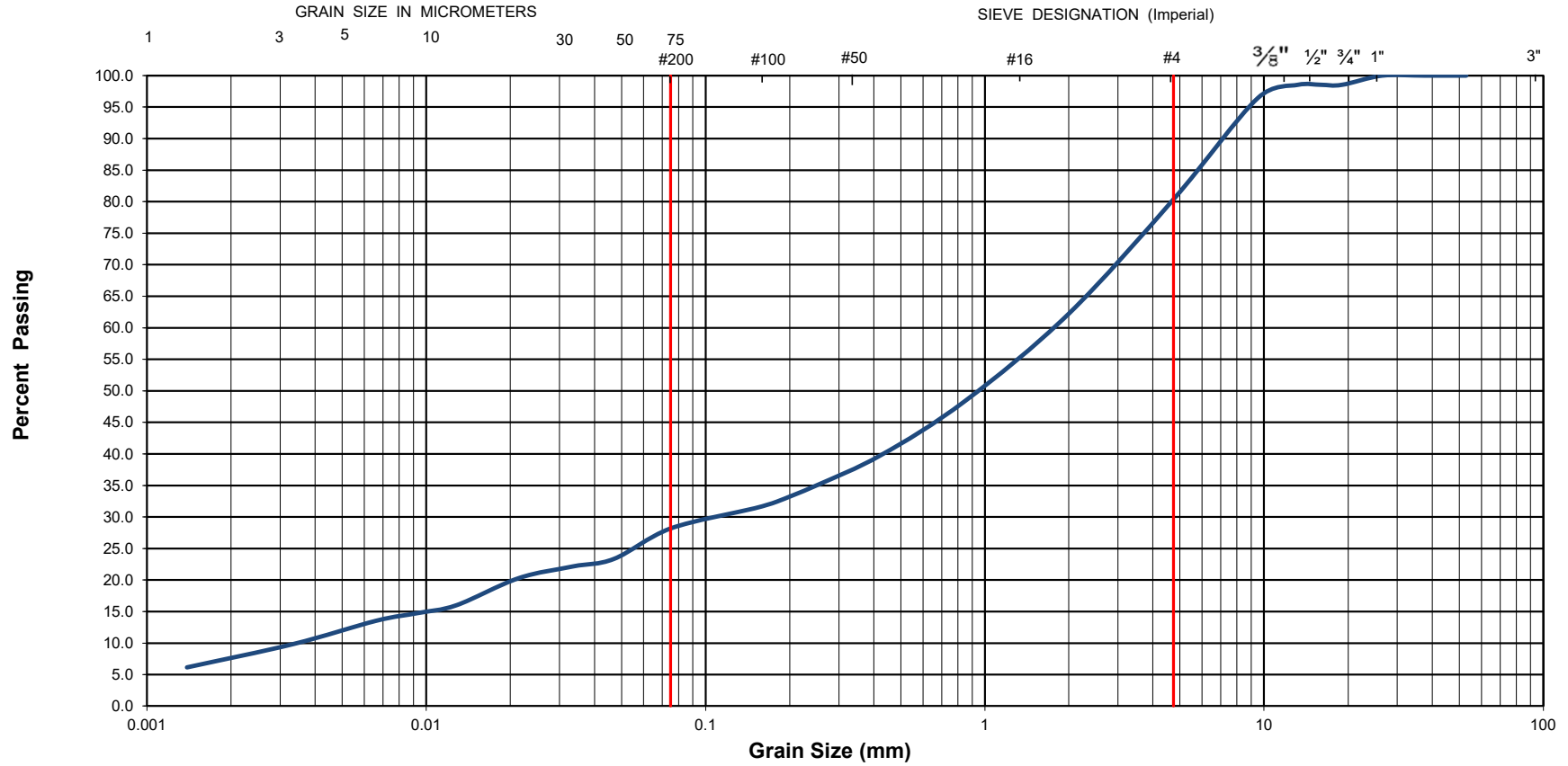


Grain-Size Distribution Curve Method of Test For Particle Size Analysis of Soil ASTM C-136/ASTM D422

EXP Services Inc.
100-2650 Queensview Drive
Ottawa, ON K2B 8H6

Unified Soil Classification System

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



EXP Project No.: OTT-23002538-A0	Project Name : Geotechnical Investigation - Walkley Centre Re-development					
Client : Sun Life Assurance Company of Canada	Project Location : 1840-1846 Walkley Road, Ottawa					
Date Sampled : October 26, 2023	Borehole No: BH10	Sample No.: SS3	Depth (m) : 1.5-2.1			
Sample Description :	% Silt and Clay	28	% Sand	52	% Gravel	20
Sample Description :	Silty Sand and Gravel (SM)				Figure :	D-5

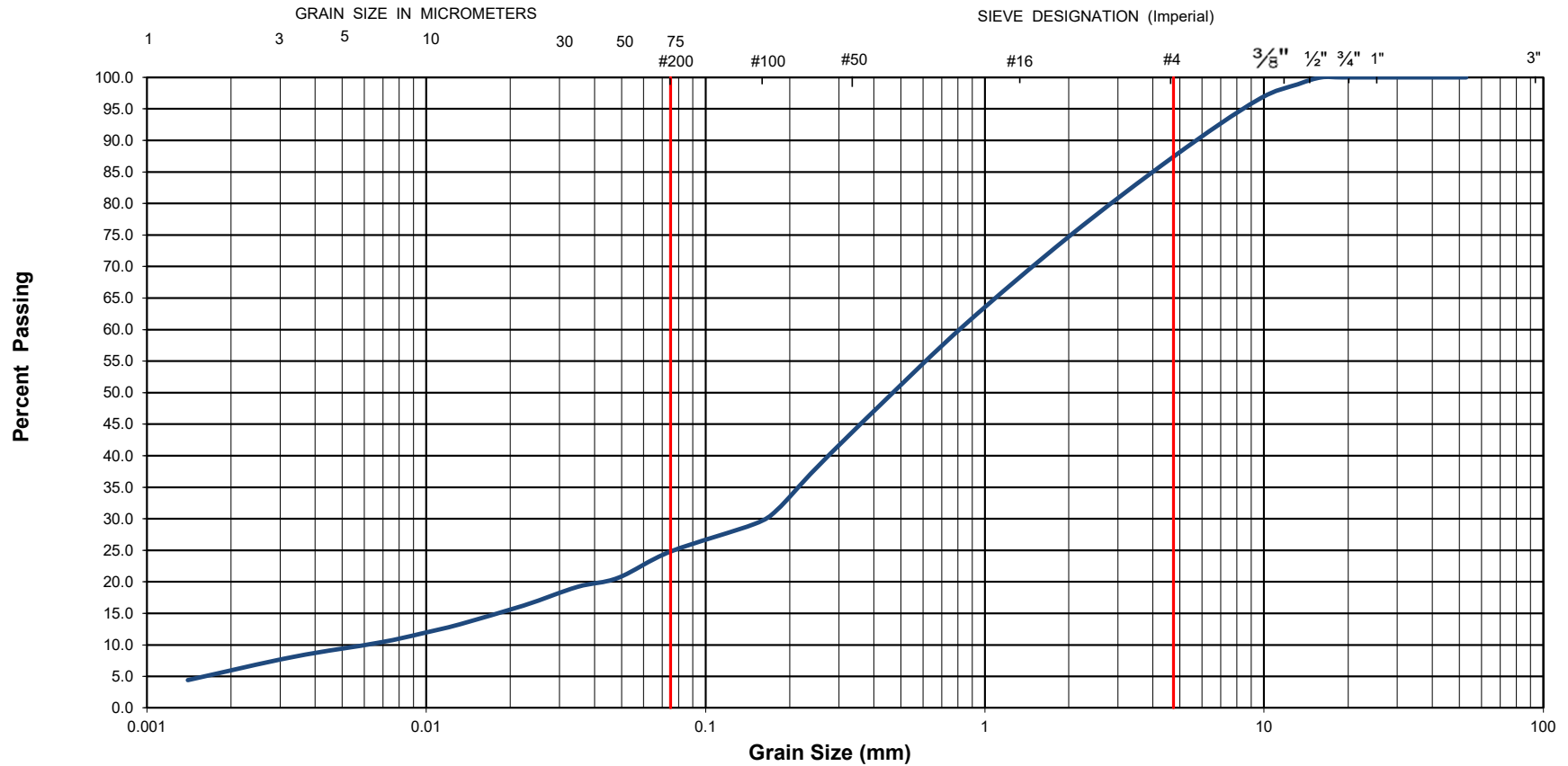


Grain-Size Distribution Curve Method of Test For Particle Size Analysis of Soil ASTM C-136/ASTM D422

EXP Services Inc.
100-2650 Queensview Drive
Ottawa, ON K2B 8H6

Unified Soil Classification System

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



EXP Project No.:	OTT-23002538-A0	Project Name :	Geotechnical Investigation - Walkley Centre Re-development		
Client :	Sun Life Assurance Company of Canada	Project Location :	1840-1846 Walkley Road, Ottawa		
Date Sampled :	November 1, 2023	Borehole No:	BH12	Sample No.: SS2	
		Depth (m) :	0.8-1.4		
Sample Description :	% Silt and Clay	25	% Sand	62	
		% Gravel	13		
Sample Description :	Silty Sand (SM)			Figure :	D-6

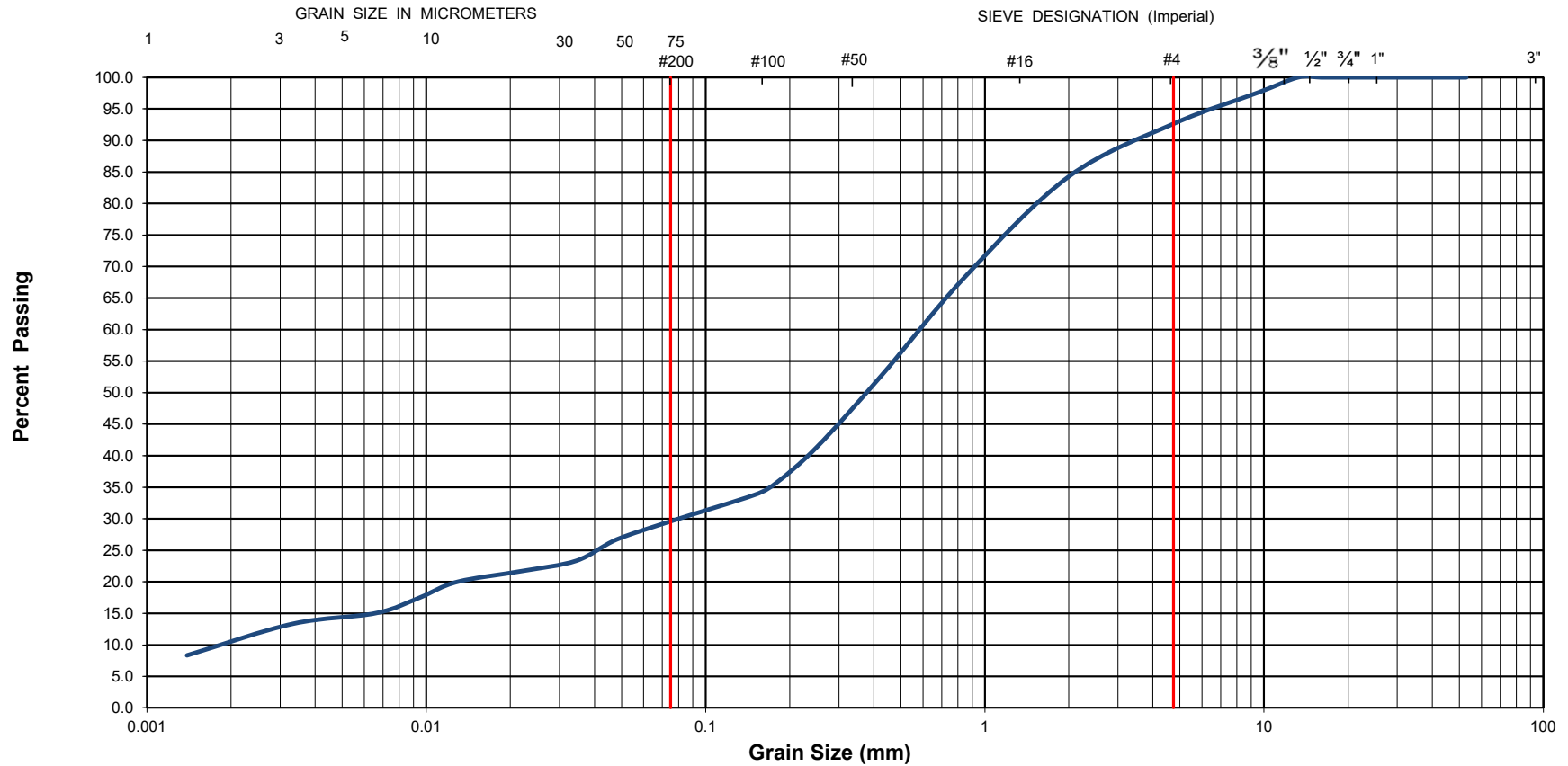


Grain-Size Distribution Curve Method of Test For Particle Size Analysis of Soil ASTM C-136/ASTM D422

EXP Services Inc.
100-2650 Queensview Drive
Ottawa, ON K2B 8H6

Unified Soil Classification System

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



EXP Project No.: OTT-23002538-A0	Project Name : Geotechnical Investigation - Walkley Centre Re-development			
Client : Sun Life Assurance Company of Canada	Project Location : 1840-1846 Walkley Road, Ottawa			
Date Sampled : November 3, 2023	Borehole No: BH13	Sample No.: SS2	Depth (m) : 0.8-1.4	
Sample Description :	% Silt and Clay	30	% Sand	63
Sample Description :			% Gravel	7
	Silty Sand (SM)			Figure : D-7

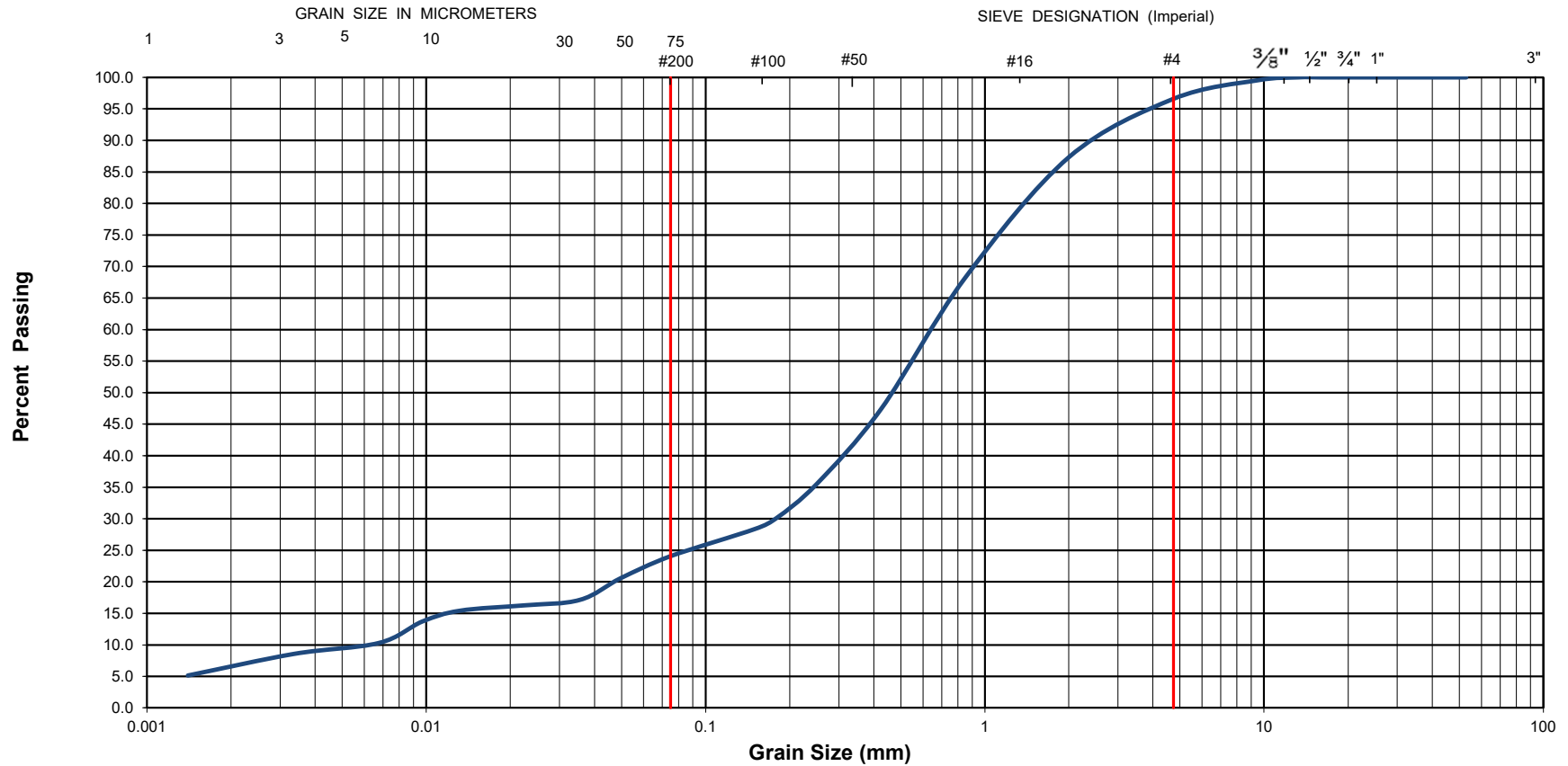


Grain-Size Distribution Curve Method of Test For Particle Size Analysis of Soil ASTM C-136/ASTM D422

EXP Services Inc.
100-2650 Queensview Drive
Ottawa, ON K2B 8H6

Unified Soil Classification System

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse



EXP Project No.:	OTT-23002538-A0	Project Name :	Geotechnical Investigation - Walkley Centre Re-development				
Client :	Sun Life Assurance Company of Canada	Project Location :	1840-1846 Walkley Road, Ottawa				
Date Sampled :	November 2, 2023	Borehole No:	BH18	Sample No.:	SS2	Depth (m) :	0.8-1.4
Sample Description :	% Silt and Clay	24	% Sand	73	% Gravel	3	Figure : D-8
Sample Description :	Silty Sand (SM)						

EXP Services Inc.

*Sun Life Assurance Company of Canada c/o BentallGreenOak (Canada) LP
Phase Two Environmental Site Assessment
1820-1846 Bank Street, Ottawa, Ontario
OTT-22002538-B0
September 30, 2024*

Appendix E: Borehole Logs

Log of Borehole BH01



Project No: OTT-23008400-B0

Project: Geotechnical Investigation - Walkley Centre Development

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: October 26, 2023

Drill Type: CME-55 Truck-Mounted Drill Rig

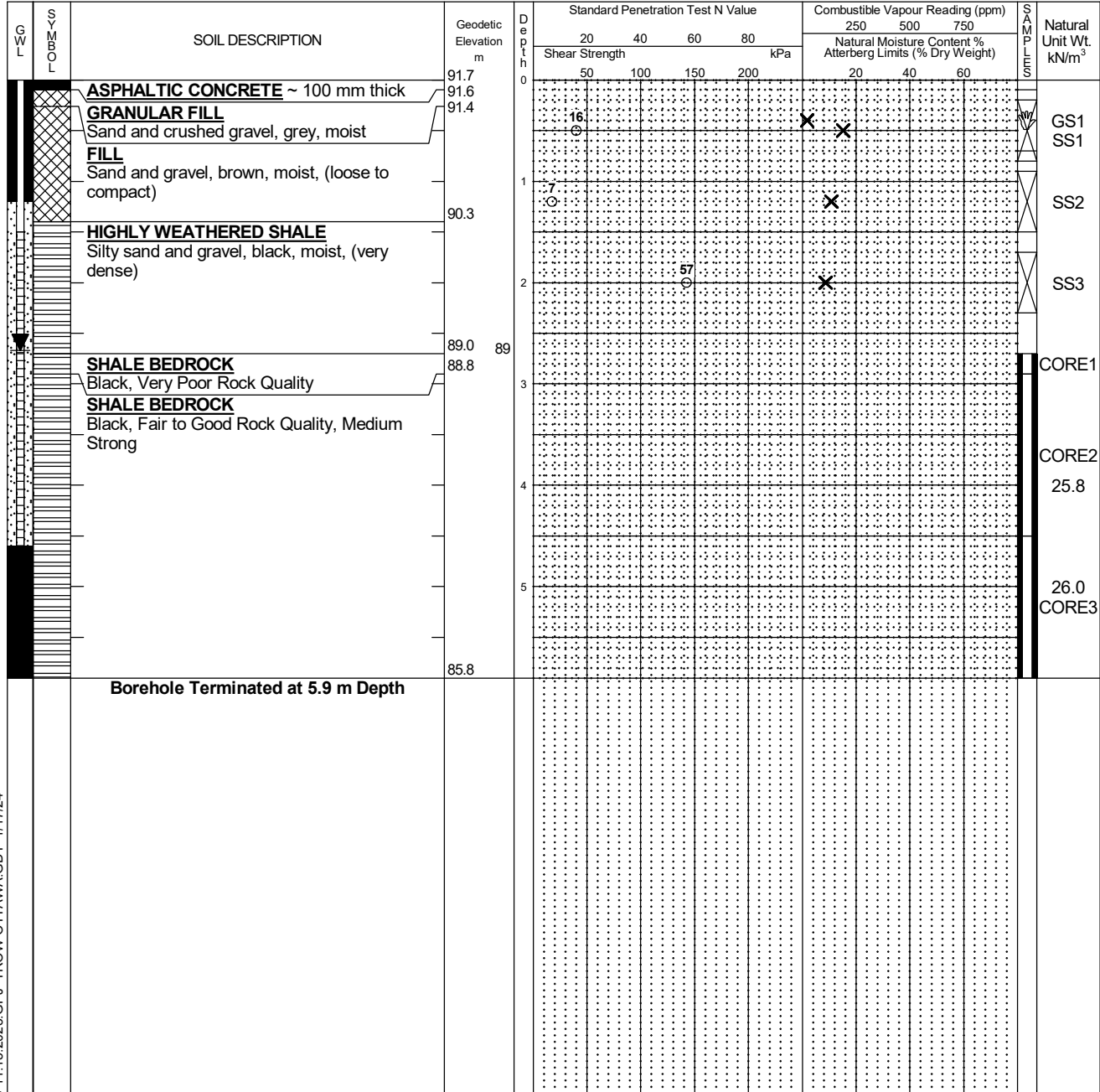
Datum: Geodetic Elevation

Logged by: M.Z. Checked by: D.W.

Figure No. E-1

Page. 1 of 1

- | | | | |
|-----------------------------|-------------------------------------|---|-------------------------------------|
| Split Spoon Sample | <input checked="" type="checkbox"/> | Combustible Vapour Reading | <input type="checkbox"/> |
| Auger Sample | <input type="checkbox"/> | Natural Moisture Content | <input checked="" type="checkbox"/> |
| SPT (N) Value | <input type="checkbox"/> | Atterberg Limits | <input type="checkbox"/> |
| Dynamic Cone Test | <input type="checkbox"/> | Undrained Triaxial at % Strain at Failure | <input type="checkbox"/> |
| Shelby Tube | <input type="checkbox"/> | Shear Strength by Penetrometer Test | <input type="checkbox"/> |
| Shear Strength by Vane Test | <input type="checkbox"/> | | |



LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - 50 mm monitoring well installed upon completion
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

Date	Water Level (m)	Hole Open To (m)
11/23/2023	1.7	
12/06/2023	2.7	

Run No.	Depth (m)	% Rec.	RQD %
1	2.7 - 2.9	60	0
2	2.9 - 4.5	97	69
3	4.5 - 5.9	100	82

Log of Borehole BH02



Project No: OTT-23008400-B0

Figure No. E-2

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 2

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: October 30, 2023

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME-55 Truck-Mounted Drill Rig

Auger Sample

Natural Moisture Content

Datum: Geodetic Elevation

SPT (N) Value

Atterberg Limits

Dynamic Cone Test

Undrained Triaxial at

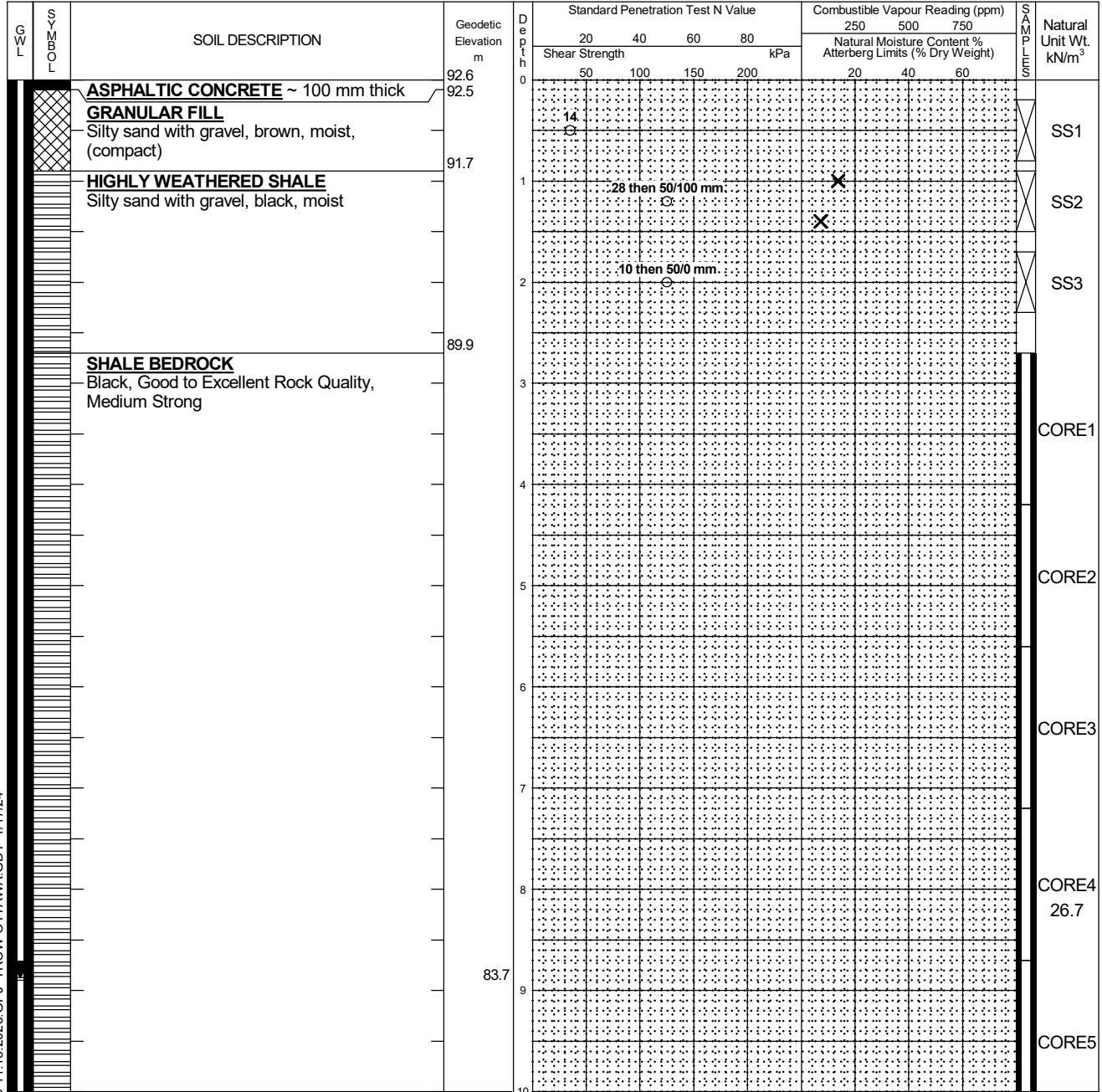
Shelby Tube

% Strain at Failure

Logged by: M.Z. Checked by: D.W.

Shear Strength by Vane Test

Shear Strength by Penetrometer Test



Continued Next Page

NOTES:

- Borehole data requires interpretation by EXP before use by others
- 31 mm monitoring well installed upon completion
- Field work was supervised by an EXP representative.
- See Notes on Sample Descriptions
- Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
11/23/2023	10.9	
12/06/2023	8.9	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	2.7 - 4.2	84	80
2	4.2 - 5.6	100	96
3	5.6 - 7.2	100	81
4	7.2 - 8.7	100	97
5	8.7 - 10.3	100	100
6	10.3 - 11.8	98	77
7	11.8 - 13.1	100	100
8	13.1 - 14.1	100	85

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 4/17/24

Log of Borehole BH02



Project No: OTT-23008400-B0

Figure No. E-2

Project: Geotechnical Investigation - Walkley Centre Development

Page. 2 of 2

L W G	S O I L D E S C R I P T I O N	Geodetic Elevation m	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			S O I L T E S T S	Natural Unit Wt. kN/m ³
			20	40	60	80	250	500	750		
			Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)				
			50	100	150	200	20	40	60		
	SHALE BEDROCK Black, Good to Excellent Rock Quality, Medium Strong (<i>continued</i>)	82.6									
										CORE6 25.8	
										CORE7	
										CORE8	
	Borehole Terminated at 14.1 m Depth	78.5									

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:**
- Borehole data requires interpretation by EXP before use by others
 - 31 mm monitoring well installed upon completion
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)
11/23/2023	10.9	
12/06/2023	8.9	

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %
1	2.7 - 4.2	84	80
2	4.2 - 5.6	100	96
3	5.6 - 7.2	100	81
4	7.2 - 8.7	100	97
5	8.7 - 10.3	100	100
6	10.3 - 11.8	98	77
7	11.8 - 13.1	100	100
8	13.1 - 14.1	100	85

Log of Borehole BH03



Project No: OTT-23008400-B0

Figure No. E-3

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 1

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: 12/14/23

Split Spoon Sample

Combustible Vapour Reading

Drill Type: Hilti / Geoprobe

Auger Sample

Natural Moisture Content

SPT (N) Value

Atterberg Limits

Datum: Geodetic Elevation

Dynamic Cone Test

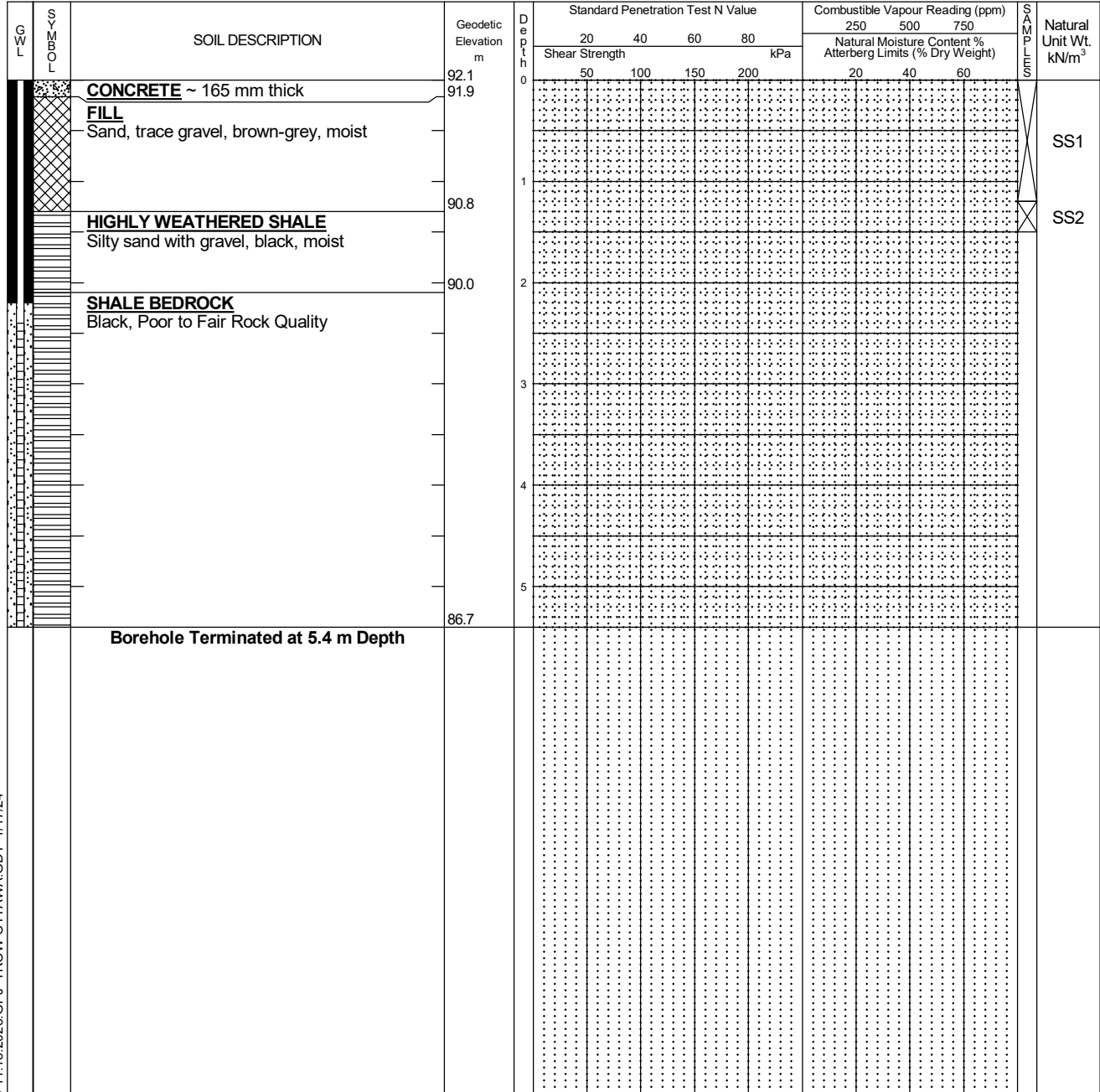
Undrained Triaxial at % Strain at Failure

Shelby Tube

Shear Strength by Penetrometer Test

Logged by: MR Checked by: LW

Shear Strength by Vane Test



LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:**
- Borehole data requires interpretation by EXP before use by others
 - A 38mm PVC monitoring well was installed upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)
12/21/2023	2.3	

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %
1	1.5 - 2.5	40	0
2	2.5 - 3.5	100	43
3	3.5 - 4.5	100	50
4	4.5 - 5.4	100	50

Log of Borehole BH04



Project No: OTT-23008400-B0

Figure No. E-4

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 1

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: 12/14/23

Split Spoon Sample

Combustible Vapour Reading

Drill Type: Hilti / Geoprobe

Auger Sample

Natural Moisture Content

SPT (N) Value

Atterberg Limits

Datum: Geodetic Elevation

Dynamic Cone Test

Undrained Triaxial at % Strain at Failure

Shelby Tube

Shear Strength by Penetrometer Test

Logged by: MR Checked by: LW

Shear Strength by Vane Test

G W L	S O B Y L	SOIL DESCRIPTION	Geodetic Elevation m	D e p t h	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³
					Shear Strength kPa				250	500	750	
					20	40	60	80	Natural Moisture Content % Atterberg Limits (% Dry Weight)			
		CONCRETE ~ 200 mm thick	92.1	0								
		FILL Sand, trace gravel, brown-grey, moist	91.9									SS1
		HIGHLY WEATHERED SHALE Silty sand with gravel, black, moist	90.8	1								SS2
		SHALE BEDROCK Black, Fair to Excellent Rock Quality	90.1	2								
				3								
				4								
				5								
		Borehole Terminated at 5.4 m Depth	86.7									

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - A 38mm PVC monitoring well was installed upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)
12/21/2023	1.8	

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %
1	1.5 - 2.4	42	0
2	2.4 - 3.4	43	65
3	3.4 - 4.5	100	95
4	4.5 - 5.4	100	100

Log of Borehole BH06



Project No: OTT-23008400-B0

Figure No. E-5

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 1

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: October 27, 2023

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME-55 Truck-Mounted Drill Rig

Auger Sample

Natural Moisture Content

SPT (N) Value

Atterberg Limits

Datum: Geodetic Elevation

Dynamic Cone Test

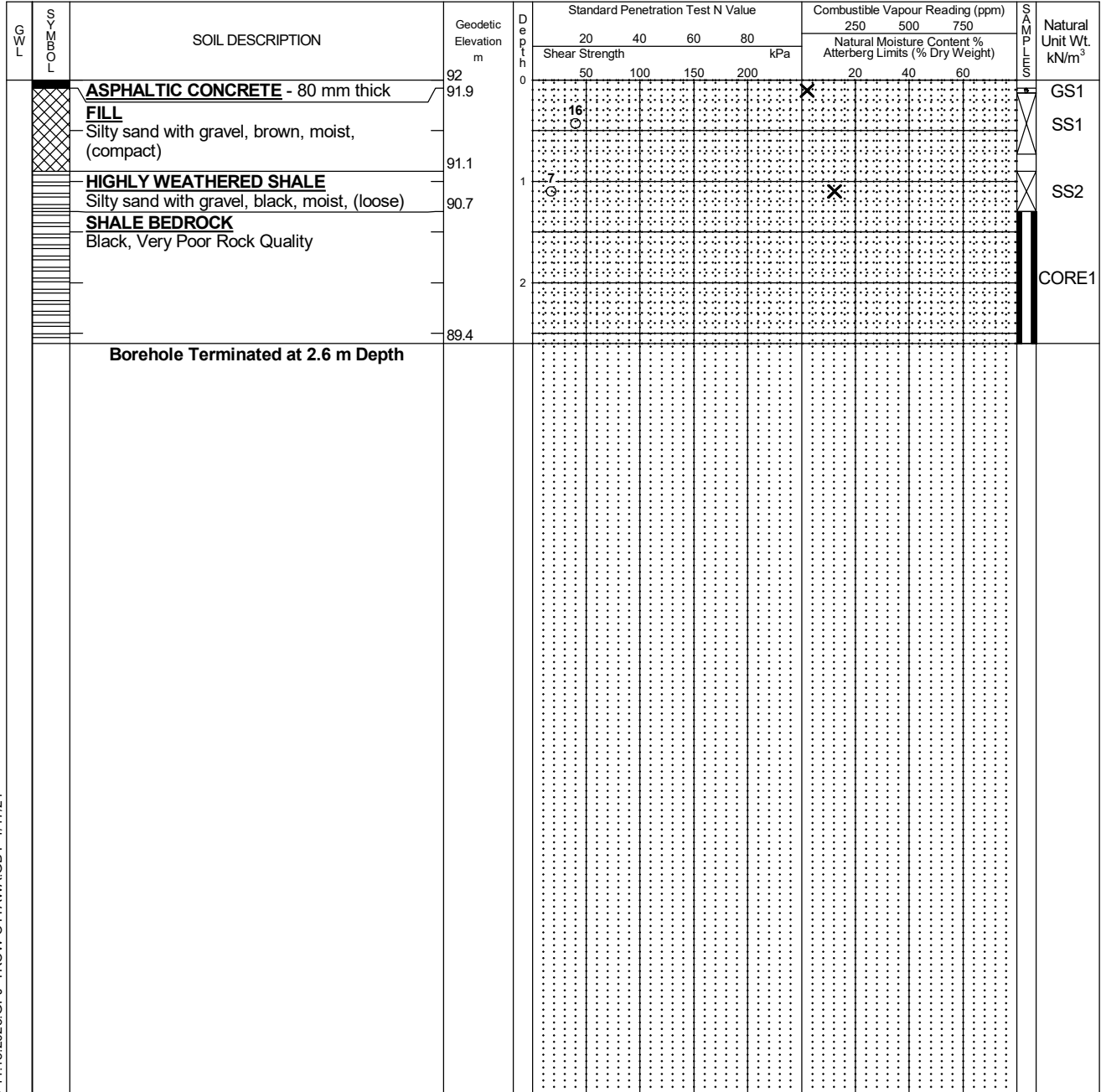
Undrained Triaxial at % Strain at Failure

Shelby Tube

Shear Strength by Penetrometer Test

Logged by: M.Z. Checked by: D.W.

Shear Strength by Vane Test



LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:**
- Borehole data requires interpretation by EXP before use by others
 - Borehole was backfilled with soil cuttings upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %
1	1.3 - 2.6	100	0

Log of Borehole BH07



Project No: OTT-23008400-B0

Figure No. E-6

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 2

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: October 27, 2023

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME-55 Truck-Mounted Drill Rig

Auger Sample

Natural Moisture Content

Datum: Geodetic Elevation

SPT (N) Value

Atterberg Limits

Dynamic Cone Test

Undrained Triaxial at

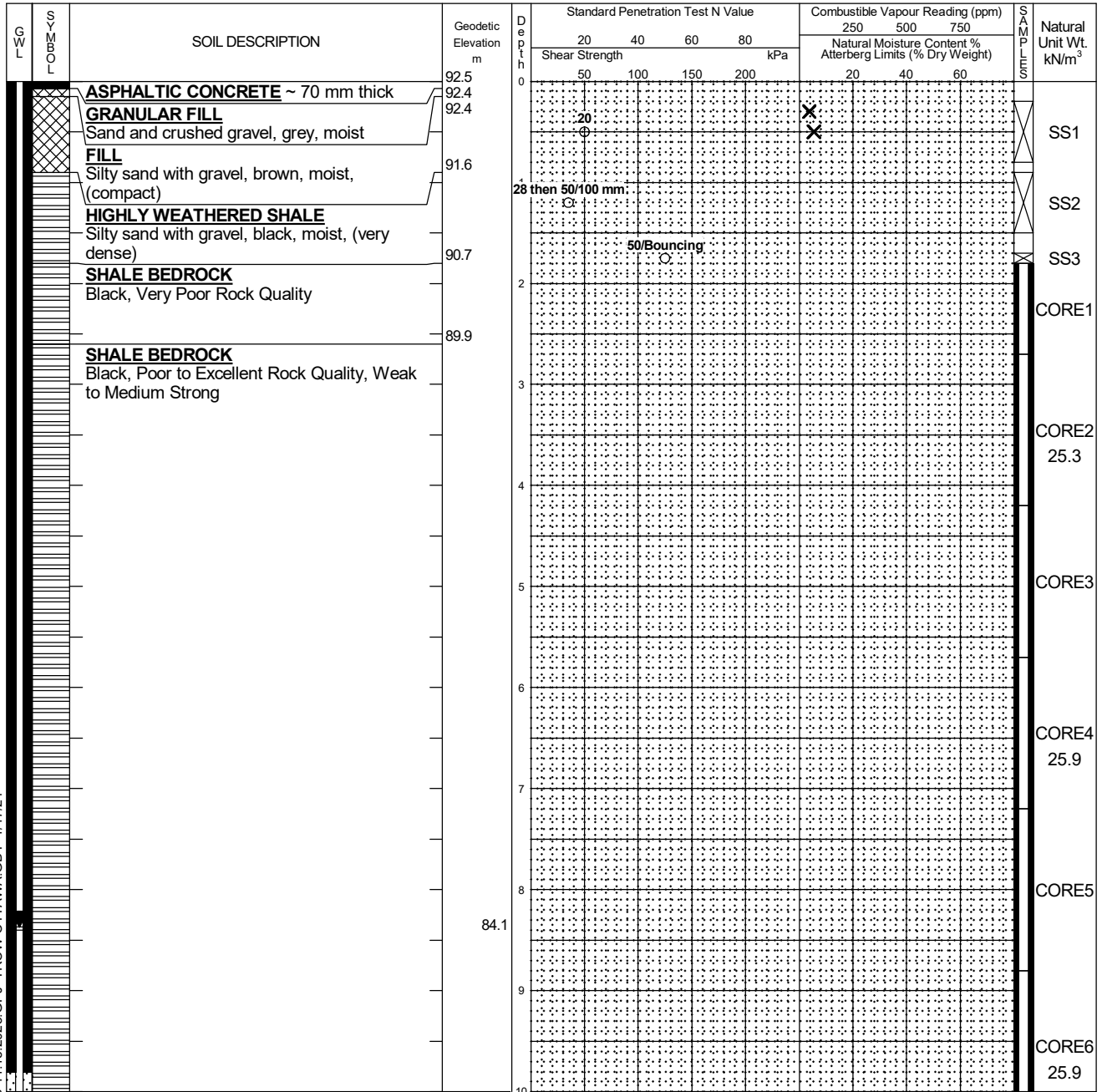
Shelby Tube

% Strain at Failure

Logged by: M.Z. Checked by: D.W.

Shear Strength by Vane Test

Shear Strength by Penetrometer Test



Continued Next Page

NOTES:

- Borehole data requires interpretation by EXP before use by others
- 31 mm monitoring well installed upon completion
- Field work was supervised by an EXP representative.
- See Notes on Sample Descriptions
- Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
11/23/2023	5.6	
12/06/2023	5.6	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	1.8 - 2.7	76	47
2	2.7 - 4.2	100	78
3	4.2 - 5.7	100	100
4	5.7 - 7.2	100	58
5	7.2 - 8.8	100	80
6	8.8 - 10.3	100	85
7	10.3 - 11.8	100	71
8	11.8 - 13.4	100	71

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

Log of Borehole BH07



Project No: OTT-23008400-B0

Figure No. E-6

Project: Geotechnical Investigation - Walkley Centre Development

Page. 2 of 2

SOIL LOG	SOIL DESCRIPTION	Geodetic Elevation m	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³	
			20	40	60	80	250	500	750		
			Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)				
	SHALE BEDROCK Black, Poor to Excellent Rock Quality, Weak to Medium Strong (<i>continued</i>)	82.5	10	100	150	200	20	40	60	CORE7	
			11								CORE8 25.6
			12								
			13							CORE9	
	Borehole Terminated at 13.7 m Depth	78.8									

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:**
- Borehole data requires interpretation by EXP before use by others
 - 31 mm monitoring well installed upon completion
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)
11/23/2023	5.6	
12/06/2023	5.6	

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %
1	1.8 - 2.7	76	47
2	2.7 - 4.2	100	78
3	4.2 - 5.7	100	100
4	5.7 - 7.2	100	58
5	7.2 - 8.8	100	80
6	8.8 - 10.3	100	85
7	10.3 - 11.8	100	71
8	11.8 - 13.4	100	71

Log of Borehole BH08



Project No: OTT-23008400-B0

Figure No. E-7

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 1

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: October 26, 2023

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME-55 Truck-Mounted Drill Rig

Auger Sample

Natural Moisture Content

SPT (N) Value

Atterberg Limits

Datum: Geodetic Elevation

Dynamic Cone Test

Undrained Triaxial at % Strain at Failure

Shelby Tube

Shear Strength by Penetrometer Test

Logged by: M.Z. Checked by: D.W.

Shear Strength by Vane Test

G W L	S O B Y L	SOIL DESCRIPTION	Geodetic Elevation m	D e p t h	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³
					Shear Strength				250	500	750	
					20	40	60	80	Natural Moisture Content % Atterberg Limits (% Dry Weight)			
		ASPHALTIC CONCRETE ~ 90 mm thick	92.5	0								
		FILL Sand with crushed gravel, with silt and asphaltic concrete debris, brown, moist, (compact)	92.4	0	10					X		SS1
				1						X		SS2
		HIGHLY WEATHERED SHALE Silty sand with gravel, black, moist	91.3	1						X		SS2
			91.1	1								
				2								SS3
			90.4	2								
		Auger Refusal at 2.1 m Depth										

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - 50 mm monitoring well installed upon completion
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)
11/23/2023	1.2	
12/06/2023	1.2	

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %

Log of Borehole BH09



Project No: OTT-23008400-B0

Figure No. E-8

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 1

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: October 26, 2023

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME-55 Truck-Mounted Drill Rig

Auger Sample

Natural Moisture Content

SPT (N) Value

Atterberg Limits

Datum: Geodetic Elevation

Dynamic Cone Test

Undrained Triaxial at % Strain at Failure

Shelby Tube

Shear Strength by Penetrometer Test

Logged by: M.Z. Checked by: D.W.

Shear Strength by Vane Test

G W L	S O B Y L	SOIL DESCRIPTION	Geodetic Elevation m	D e p t h	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³
					Shear Strength				250	500	750	
					kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)			
		ASPHALTIC CONCRETE ~ 100 mm thick	92.7	0								GS1
		GRANULAR FILL Sand and crushed gravel, grey, moist	92.6 92.4		17							SS1
		GLACIAL TILL Silty sand with gravel and shale fragments, brown, moist, (compact)	91.5	1								SS2
		HIGHLY WEATHERED SHALE Silty sand with gravel, black, moist	91.3									SS3
		Auger Refusal at 2.2 m Depth	90.5	2								

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - 50 mm monitoring well installed upon completion
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)
11/23/2023	1.3	
12/06/2023	1.2	

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %

Log of Borehole BH10



Project No: OTT-23008400-B0

Figure No. E-9

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 1

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: October 26, 2023

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME-55 Truck-Mounted Drill Rig

Auger Sample

Natural Moisture Content

SPT (N) Value

Atterberg Limits

Datum: Geodetic Elevation

Dynamic Cone Test

Undrained Triaxial at % Strain at Failure

Shelby Tube

Shear Strength by Penetrometer Test

Logged by: M.Z. Checked by: D.W.

Shear Strength by Vane Test

G W L	S O B Y L	SOIL DESCRIPTION	Geodetic Elevation m	D e p t h	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³
					Shear Strength				250	500	750	
					kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)			
		ASPHALTIC CONCRETE ~ 120 mm thick	91.7	0								
		RECYCLED ASPHALTIC CONCRETE ~ 50 mm thick	91.6									
		FILL Silty sand with gravel and asphalt fragments, brown, moist, (compact)	91.5		14				X			SS1
		HIGHLY WEATHERED SHALE Silty sand with gravel, black, moist, (compact to very dense)	91.0						X			SS2
			90.4	1	18				X			SS2
				2	12, 30 then 50/75 mm				X			SS3
			89.2		50/75 mm				X			SS4
		Auger Refusal at 2.5 m Depth										

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - 50 mm monitoring well installed upon completion
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)
11/23/2023	1.4	
12/06/2023	1.4	

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %

Log of Borehole BH11



Project No: OTT-23008400-B0

Figure No. E-10

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 2

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: October 30, 2023

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME-55 Truck-Mounted Drill Rig

Auger Sample

Natural Moisture Content

SPT (N) Value

Atterberg Limits

Datum: Geodetic Elevation

Dynamic Cone Test

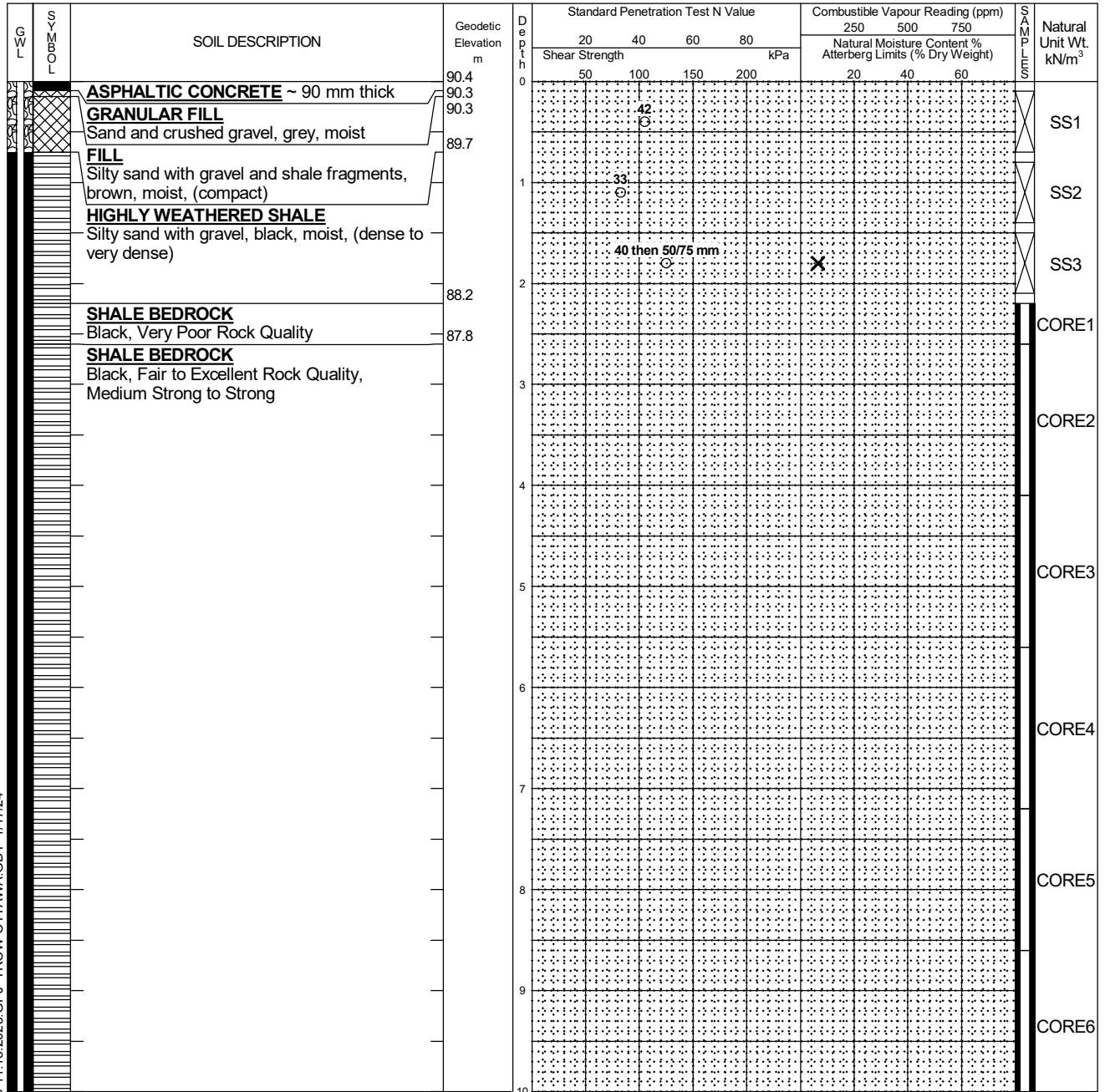
Undrained Triaxial at % Strain at Failure

Shelby Tube

Shear Strength by Penetrometer Test

Logged by: M.Z. Checked by: D.W.

Shear Strength by Vane Test



Continued Next Page

NOTES:

- Borehole data requires interpretation by EXP before use by others
- 31 mm monitoring well installed upon completion
- Field work was supervised by an EXP representative.
- See Notes on Sample Descriptions
- Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
11/23/2023	10.7	
12/06/2023	10.7	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	2.2 - 2.6	89	0
2	2.6 - 4.1	100	68
3	4.1 - 5.6	100	92
4	5.6 - 7.2	100	93
5	7.2 - 8.6	100	89
6	8.6 - 10.1	100	85
7	10.1 - 11.7	100	97
8	11.7 - 13.2	100	92

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 4/17/24

Log of Borehole BH11



Project No: OTT-23008400-B0

Figure No. E-10

Project: Geotechnical Investigation - Walkley Centre Development

Page. 2 of 2

SOIL DESCRIPTION	Geodetic Elevation m	Depth	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³	
			20	40	60	80	250	500	750		
			Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)				
			50	100	150	200	20	40	60		
SHALE BEDROCK Black, Fair to Excellent Rock Quality, Medium Strong to Strong (<i>continued</i>)	80.4	80.3								CORE7	
											CORE8
Borehole Terminated at 14.2 m Depth											

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:**
- Borehole data requires interpretation by EXP before use by others
 - 31 mm monitoring well installed upon completion
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)
11/23/2023	10.7	
12/06/2023	10.7	

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %
1	2.2 - 2.6	89	0
2	2.6 - 4.1	100	68
3	4.1 - 5.6	100	92
4	5.6 - 7.2	100	93
5	7.2 - 8.6	100	89
6	8.6 - 10.1	100	85
7	10.1 - 11.7	100	97
8	11.7 - 13.2	100	92

Log of Borehole BH12



Project No: OTT-23008400-B0

Figure No. E-11

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 2

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: November 1, 2023

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME-55 Truck-Mounted Drill Rig

Auger Sample

Natural Moisture Content

Datum: Geodetic Elevation

SPT (N) Value

Atterberg Limits

Dynamic Cone Test

Undrained Triaxial at

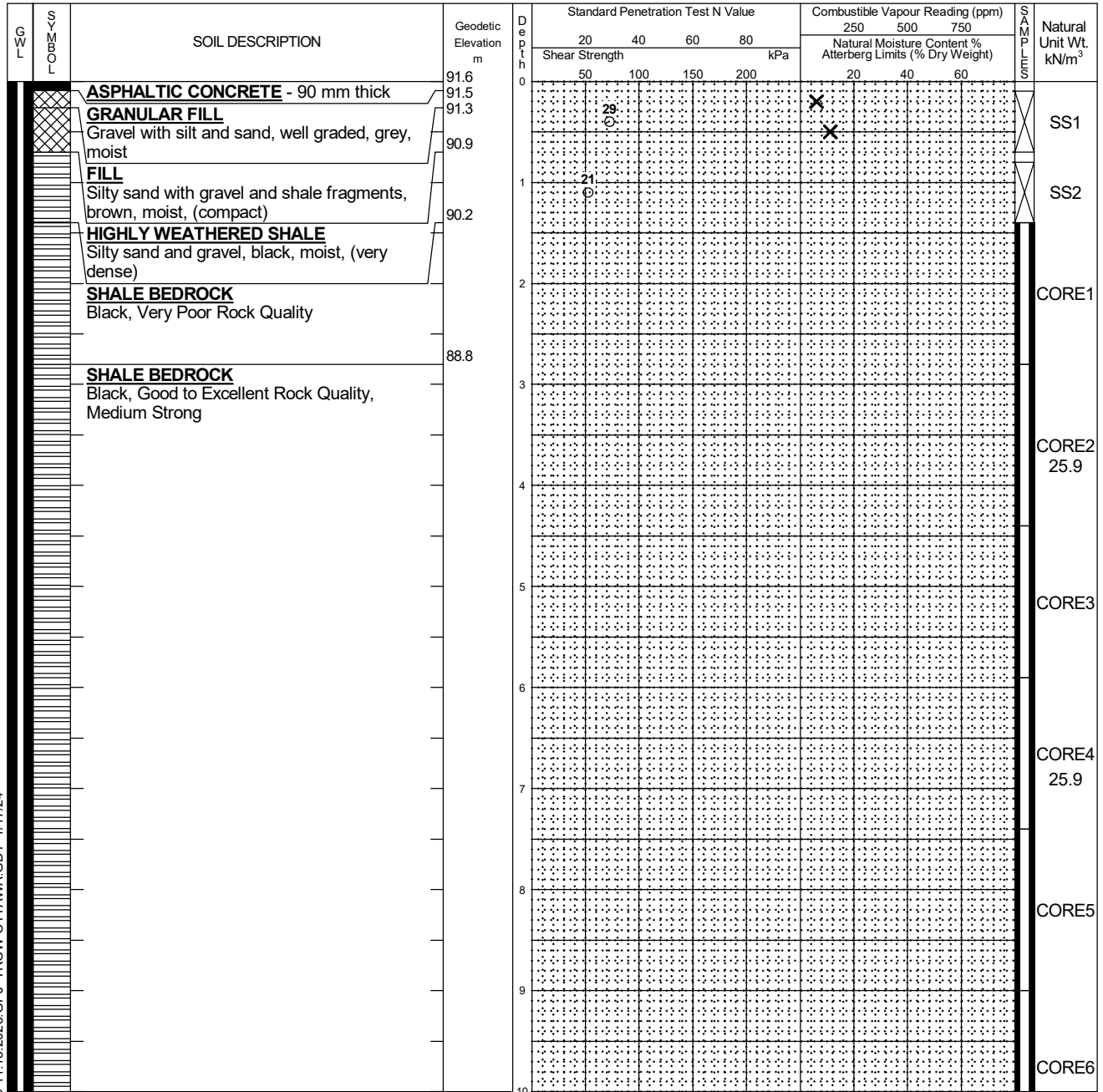
Shelby Tube

% Strain at Failure

Logged by: M.Z. Checked by: D.W.

Shear Strength by Vane Test

Shear Strength by Penetrometer Test



Continued Next Page

NOTES:

- Borehole data requires interpretation by EXP before use by others
- 31 mm monitoring well installed upon completion
- Field work was supervised by an EXP representative.
- See Notes on Sample Descriptions
- Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
12/06/2023	11.5	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	1.4 - 2.8	66	0
2	2.8 - 4.4	100	79
3	4.4 - 5.9	100	84
4	5.9 - 7.4	100	96
5	7.4 - 9	100	96
6	9 - 10.5	100	98
7	10.5 - 12	100	90
8	12 - 13.3	100	50

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

Log of Borehole BH12



Project No: OTT-23008400-B0

Figure No. E-11

Project: Geotechnical Investigation - Walkley Centre Development

Page. 2 of 2

SOIL DESCRIPTION	Geodetic Elevation m	Depth	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³
			Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)			
			20	40	60	80	250	500	750	
SHALE BEDROCK Black, Good to Excellent Rock Quality, Medium Strong (<i>continued</i>)	81.6	10								25.8
	80.1	11								CORE7
		12								
		13								
Borehole Terminated at 14 m Depth	77.6	14								CORE9

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:**
- Borehole data requires interpretation by EXP before use by others
 - 31 mm monitoring well installed upon completion
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)
12/06/2023	11.5	

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %
1	1.4 - 2.8	66	0
2	2.8 - 4.4	100	79
3	4.4 - 5.9	100	84
4	5.9 - 7.4	100	96
5	7.4 - 9	100	96
6	9 - 10.5	100	98
7	10.5 - 12	100	90
8	12 - 13.3	100	50

Log of Borehole BH13



Project No: OTT-23008400-B0

Figure No. E-12

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 2

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: November 3, 2023

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME-55 Truck-Mounted Drill Rig

Auger Sample

Natural Moisture Content

Datum: Geodetic Elevation

SPT (N) Value

Atterberg Limits

Dynamic Cone Test

Undrained Triaxial at

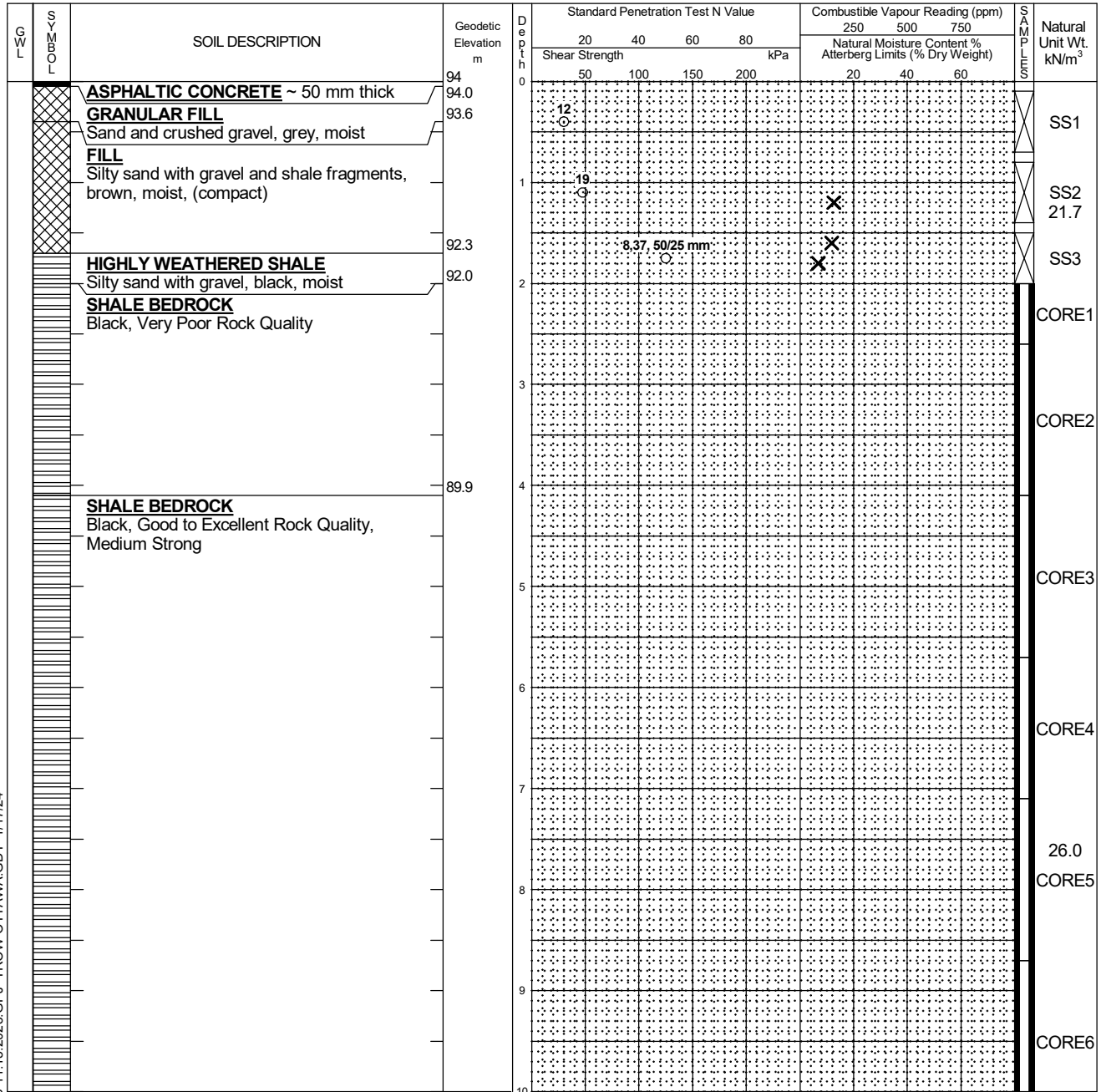
Shelby Tube

% Strain at Failure

Logged by: M.Z. Checked by: D.W.

Shear Strength by Vane Test

Shear Strength by Penetrometer Test



Continued Next Page

NOTES:

- Borehole data requires interpretation by EXP before use by others
- Borehole was backfilled with soil cuttings upon completion.
- Field work was supervised by an EXP representative.
- See Notes on Sample Descriptions
- Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	2 - 2.6	77	0
2	2.6 - 4.1	100	7
3	4.1 - 5.7	100	95
4	5.7 - 7.1	100	95
5	7.1 - 8.7	100	100
6	8.7 - 10.3	100	91
7	10.3 - 11.8	100	100
8	11.8 - 13.3	100	90

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

Log of Borehole BH13



Project No: OTT-23008400-B0

Figure No. E-12

Project: Geotechnical Investigation - Walkley Centre Development

Page. 2 of 2

SOIL TYPE	SOIL DESCRIPTION	Geodetic Elevation m	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³
			Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)			
			20	40	60	80	250	500	750	
SHALE BEDROCK Black, Good to Excellent Rock Quality, Medium Strong (continued)		84	10							
			11							CORE7 26.0
			12							CORE8
			13							
			14							CORE9 25.9
	Borehole Terminated at 14.2 m Depth		79.8							

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:**
- Borehole data requires interpretation by EXP before use by others
 - Borehole was backfilled with soil cuttings upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %
1	2 - 2.6	77	0
2	2.6 - 4.1	100	7
3	4.1 - 5.7	100	95
4	5.7 - 7.1	100	95
5	7.1 - 8.7	100	100
6	8.7 - 10.3	100	91
7	10.3 - 11.8	100	100
8	11.8 - 13.3	100	90

Log of Borehole BH14



Project No: OTT-23008400-B0

Figure No. E-13

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 2

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: October 31, 2023

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME-55 Truck-Mounted Drill Rig

Auger Sample

Natural Moisture Content

Datum: Geodetic Elevation

SPT (N) Value

Atterberg Limits

Dynamic Cone Test

Undrained Triaxial at \oplus

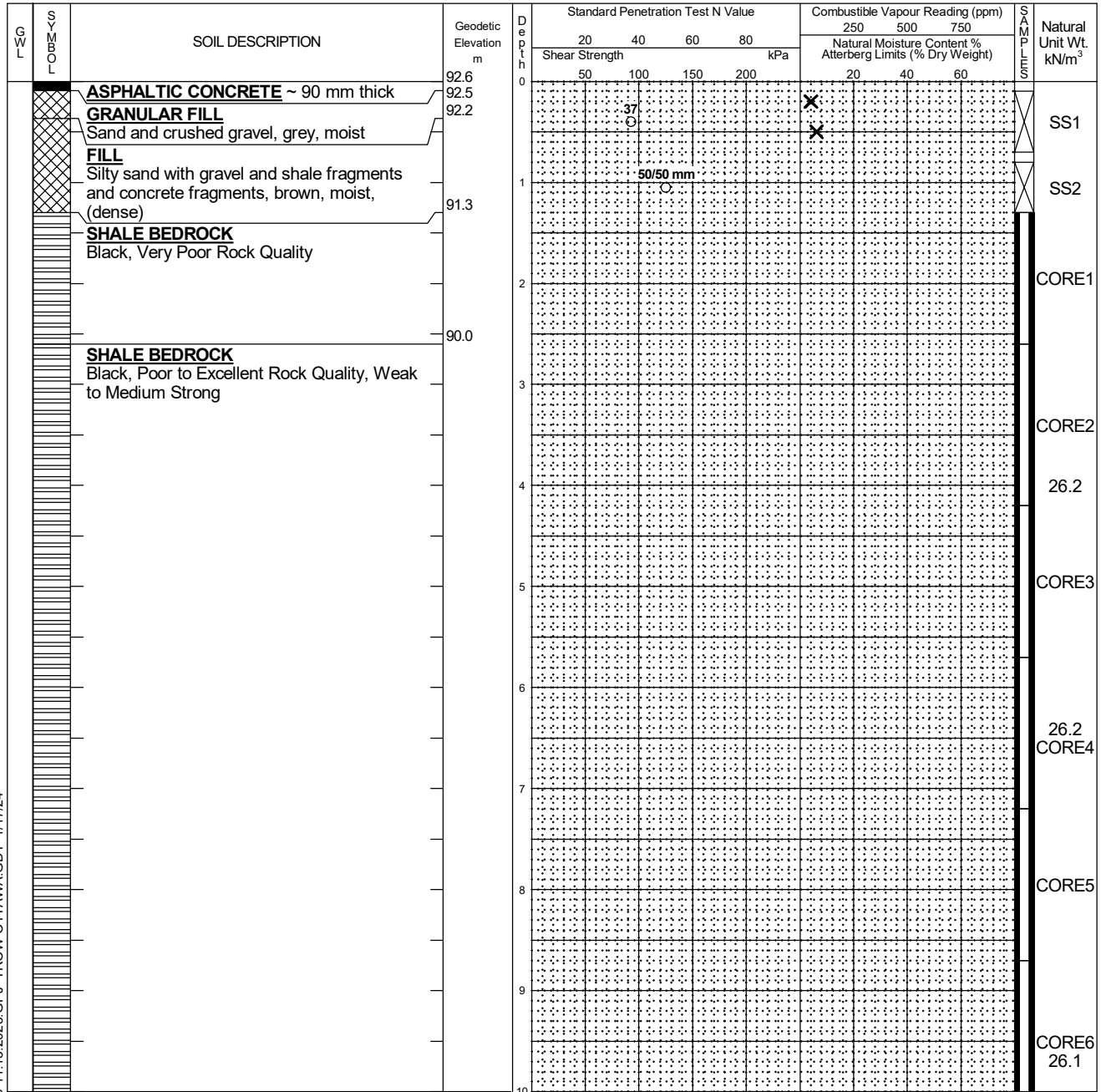
Shelby Tube

% Strain at Failure

Logged by: M.Z. Checked by: D.W.

Shear Strength by Vane Test

Shear Strength by Penetrometer Test



Continued Next Page

NOTES:

- Borehole data requires interpretation by EXP before use by others
- Borehole was backfilled with soil cuttings upon completion.
- Field work was supervised by an EXP representative.
- See Notes on Sample Descriptions
- Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	1.3 - 2.6	90	8
2	2.6 - 4.2	100	85
3	4.2 - 5.7	100	94
4	5.7 - 7.2	100	95
5	7.2 - 8.7	100	93
6	8.7 - 10.3	100	98
7	10.3 - 11.8	100	100
8	11.8 - 13.3	100	100

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

Log of Borehole BH14



Project No: OTT-23008400-B0

Figure No. E-13

Project: Geotechnical Investigation - Walkley Centre Development

Page. 2 of 2

SOIL LOG	SOIL DESCRIPTION	Geodetic Elevation m	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³		
			20	40	60	80	250	500	750			
			Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)					
			50	100	150	200	20	40	60			
	SHALE BEDROCK Black, Poor to Excellent Rock Quality, Weak to Medium Strong (<i>continued</i>)	82.6									CORE7 26.0 CORE8 CORE9	
	Borehole Terminated at 14.1 m Depth	78.5										

- NOTES:**
- Borehole data requires interpretation by EXP before use by others
 - Borehole was backfilled with soil cuttings upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %
1	1.3 - 2.6	90	8
2	2.6 - 4.2	100	85
3	4.2 - 5.7	100	94
4	5.7 - 7.2	100	95
5	7.2 - 8.7	100	93
6	8.7 - 10.3	100	98
7	10.3 - 11.8	100	100
8	11.8 - 13.3	100	100

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

Log of Borehole BH15



Project No: OTT-23008400-B0

Figure No. E-14

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 2

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: November 1, 2023

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME-55 Truck-Mounted Drill Rig

Auger Sample

Natural Moisture Content

SPT (N) Value

Atterberg Limits

Datum: Geodetic Elevation

Dynamic Cone Test

Undrained Triaxial at

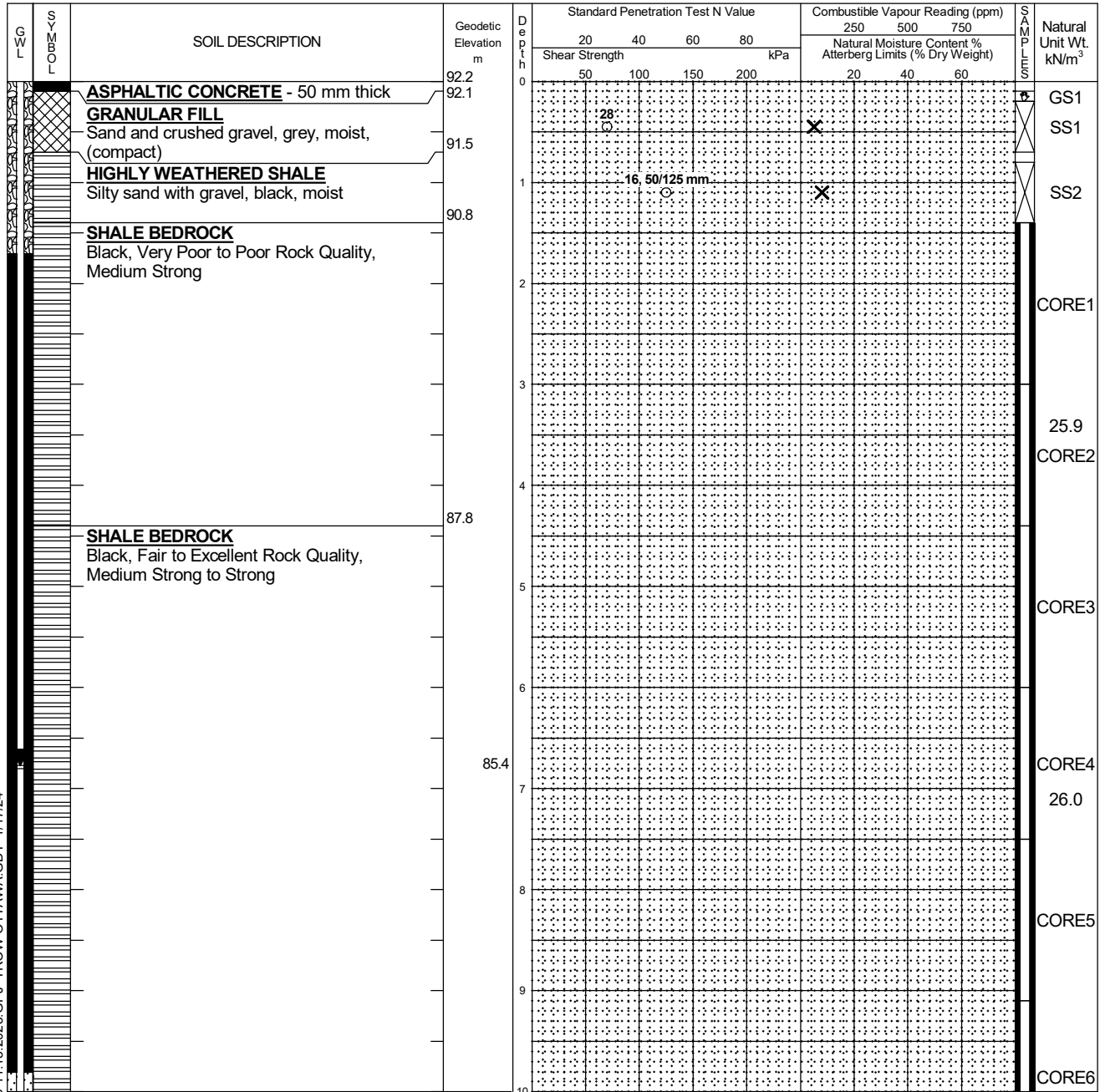
Shelby Tube

% Strain at Failure

Logged by: M.Z. Checked by: D.W.

Shear Strength by Vane Test

Shear Strength by Penetrometer Test



Continued Next Page

NOTES:

- Borehole data requires interpretation by EXP before use by others
- 31 mm monitoring well installed upon completion
- Field work was supervised by an EXP representative.
- See Notes on Sample Descriptions
- Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
11/23/2023	10.0	
12/06/2023	6.8	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	1.4 - 3	71	0
2	3 - 4.4	100	34
3	4.4 - 6	100	64
4	6 - 7.5	100	74
5	7.5 - 9.1	100	72
6	9.1 - 10.6	100	92
7	10.6 - 12.2	100	66
8	12.2 - 13.7	100	84

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 4/17/24

Log of Borehole BH15



Project No: OTT-23008400-B0

Figure No. E-14

Project: Geotechnical Investigation - Walkley Centre Development

Page. 2 of 2

SOIL LOG	SOIL DESCRIPTION	Geodetic Elevation m	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³
			20	40	60	80	250	500	750	
			Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)			
	SHALE BEDROCK Black, Fair to Excellent Rock Quality, Medium Strong to Strong (<i>continued</i>)	82.2								26.1
										CORE7
										26.1
										CORE8
	Borehole Terminated at 13.7 m Depth	78.5								

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:**
- Borehole data requires interpretation by EXP before use by others
 - 31 mm monitoring well installed upon completion
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)
11/23/2023	10.0	
12/06/2023	6.8	

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %
1	1.4 - 3	71	0
2	3 - 4.4	100	34
3	4.4 - 6	100	64
4	6 - 7.5	100	74
5	7.5 - 9.1	100	72
6	9.1 - 10.6	100	92
7	10.6 - 12.2	100	66
8	12.2 - 13.7	100	84

Log of Borehole BH16



Project No: OTT-23008400-B0

Figure No. E-15

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 2

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: November 2, 2023

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME-55 Truck-Mounted Drill Rig

Auger Sample

Natural Moisture Content

SPT (N) Value

Atterberg Limits

Datum: Geodetic Elevation

Dynamic Cone Test

Undrained Triaxial at

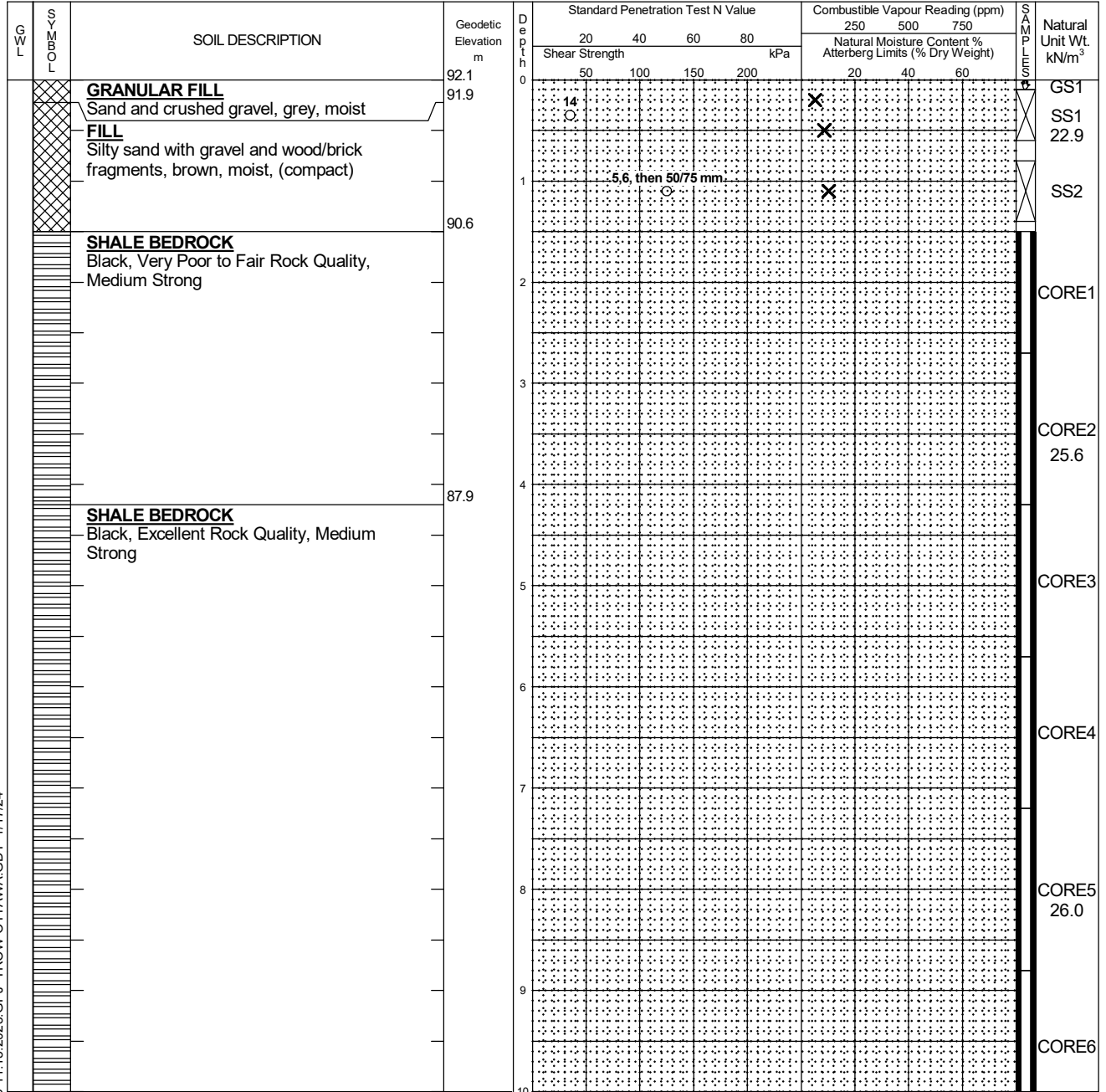
Shelby Tube

% Strain at Failure

Logged by: M.Z. Checked by: D.W.

Shear Strength by Vane Test

Shear Strength by Penetrometer Test



Continued Next Page

NOTES:

- Borehole data requires interpretation by EXP before use by others
- Borehole was backfilled with soil cuttings upon completion.
- Field work was supervised by an EXP representative.
- See Notes on Sample Descriptions
- Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	1.5 - 2.7	100	0
2	2.7 - 4.2	100	73
3	4.2 - 5.7	100	92
4	5.7 - 7.2	100	100
5	7.2 - 8.8	100	92
6	8.8 - 10.3	100	100
7	10.3 - 11.8	100	92
8	11.8 - 13.3	100	93

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

Log of Borehole BH16



Project No: OTT-23008400-B0

Figure No. E-15

Project: Geotechnical Investigation - Walkley Centre Development

Page. 2 of 2

SOIL DESCRIPTION	Geodetic Elevation m	Depth	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³
			20	40	60	80	250	500	750	
			Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)			
			50	100	150	200	20	40	60	
SHALE BEDROCK Black, Excellent Rock Quality, Medium Strong (<i>continued</i>)	82.1	10								CORE7 25.7 CORE8 CORE9 25.8
Borehole Terminated at 14.9 m Depth	77.2	14								

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:**
- Borehole data requires interpretation by EXP before use by others
 - Borehole was backfilled with soil cuttings upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

Date	Water Level (m)	Hole Open To (m)

Run No.	Depth (m)	% Rec.	RQD %
1	1.5 - 2.7	100	0
2	2.7 - 4.2	100	73
3	4.2 - 5.7	100	92
4	5.7 - 7.2	100	100
5	7.2 - 8.8	100	92
6	8.8 - 10.3	100	100
7	10.3 - 11.8	100	92
8	11.8 - 13.3	100	93

Log of Borehole BH17



Project No: OTT-23008400-B0

Figure No. E-16

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 2

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: October 31, 2023

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME-55 Truck-Mounted Drill Rig

Auger Sample

Natural Moisture Content

SPT (N) Value

Atterberg Limits

Datum: Geodetic Elevation

Dynamic Cone Test

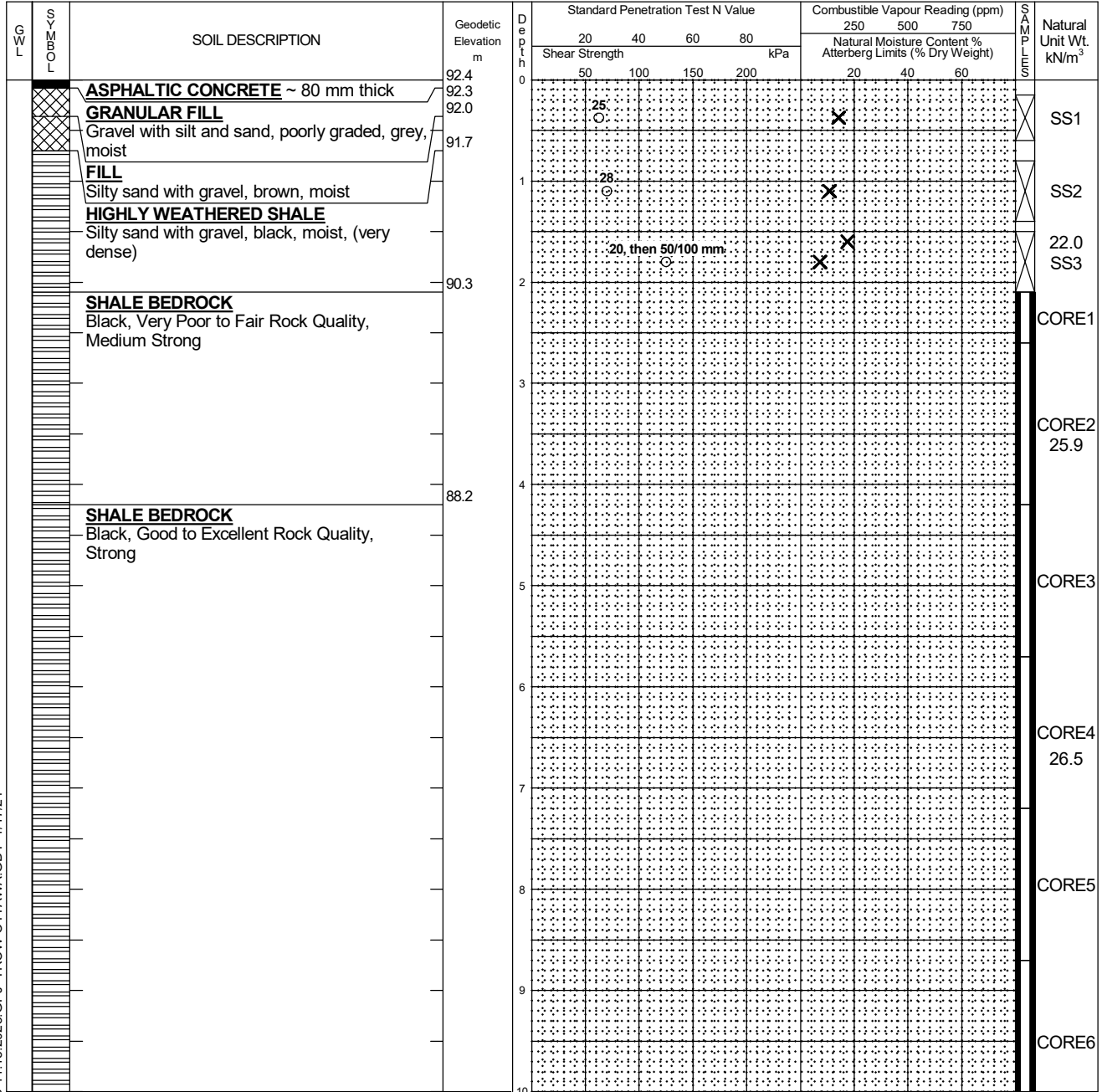
Undrained Triaxial at % Strain at Failure

Shelby Tube

Shear Strength by Vane Test

Shear Strength by Penetrometer Test

Logged by: M.Z. Checked by: D.W.



Continued Next Page

NOTES:

- Borehole data requires interpretation by EXP before use by others
- Borehole was backfilled with soil cuttings upon completion.
- Field work was supervised by an EXP representative.
- See Notes on Sample Descriptions
- Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	2.1 - 2.6	81	0
2	2.6 - 4.2	100	73
3	4.2 - 5.7	100	93
4	5.7 - 7.2	100	100
5	7.2 - 8.7	100	83
6	8.7 - 10.3	100	100
7	10.3 - 11.8	100	100
8	11.8 - 13.3	100	95

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

Log of Borehole BH17



Project No: OTT-23008400-B0

Figure No. E-16

Project: Geotechnical Investigation - Walkley Centre Development

Page. 2 of 2

SOIL TYPE	SOIL DESCRIPTION	Geodetic Elevation m	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³
			Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)			
			20	40	60	80	250	500	750	
	SHALE BEDROCK Black, Good to Excellent Rock Quality, Strong (<i>continued</i>)	82.4	10	10	10	10	10	10	10	CORE7
			11	11	11	11	11	11		
			12	12	12	12	12	12		
	SHALE BEDROCK Black, Poor Rock Quality	79.1	13	13	13	13	13	13	13	CORE8 26.1
			14	14	14	14	14	14		
	Borehole Terminated at 14.8 m Depth	77.6								CORE9

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:**
- Borehole data requires interpretation by EXP before use by others
 - Borehole was backfilled with soil cuttings upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %
1	2.1 - 2.6	81	0
2	2.6 - 4.2	100	73
3	4.2 - 5.7	100	93
4	5.7 - 7.2	100	100
5	7.2 - 8.7	100	83
6	8.7 - 10.3	100	100
7	10.3 - 11.8	100	100
8	11.8 - 13.3	100	95

Log of Borehole BH18



Project No: OTT-23008400-B0

Figure No. E-17

Project: Geotechnical Investigation - Walkley Centre Development

Page. 1 of 2

Location: 1822-1846 Bank Street, Ottawa, Ontario

Date Drilled: November 2, 2023

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME-55 Truck-Mounted Drill Rig

Auger Sample

Natural Moisture Content

Datum: Geodetic Elevation

SPT (N) Value

Atterberg Limits

Dynamic Cone Test

Undrained Triaxial at

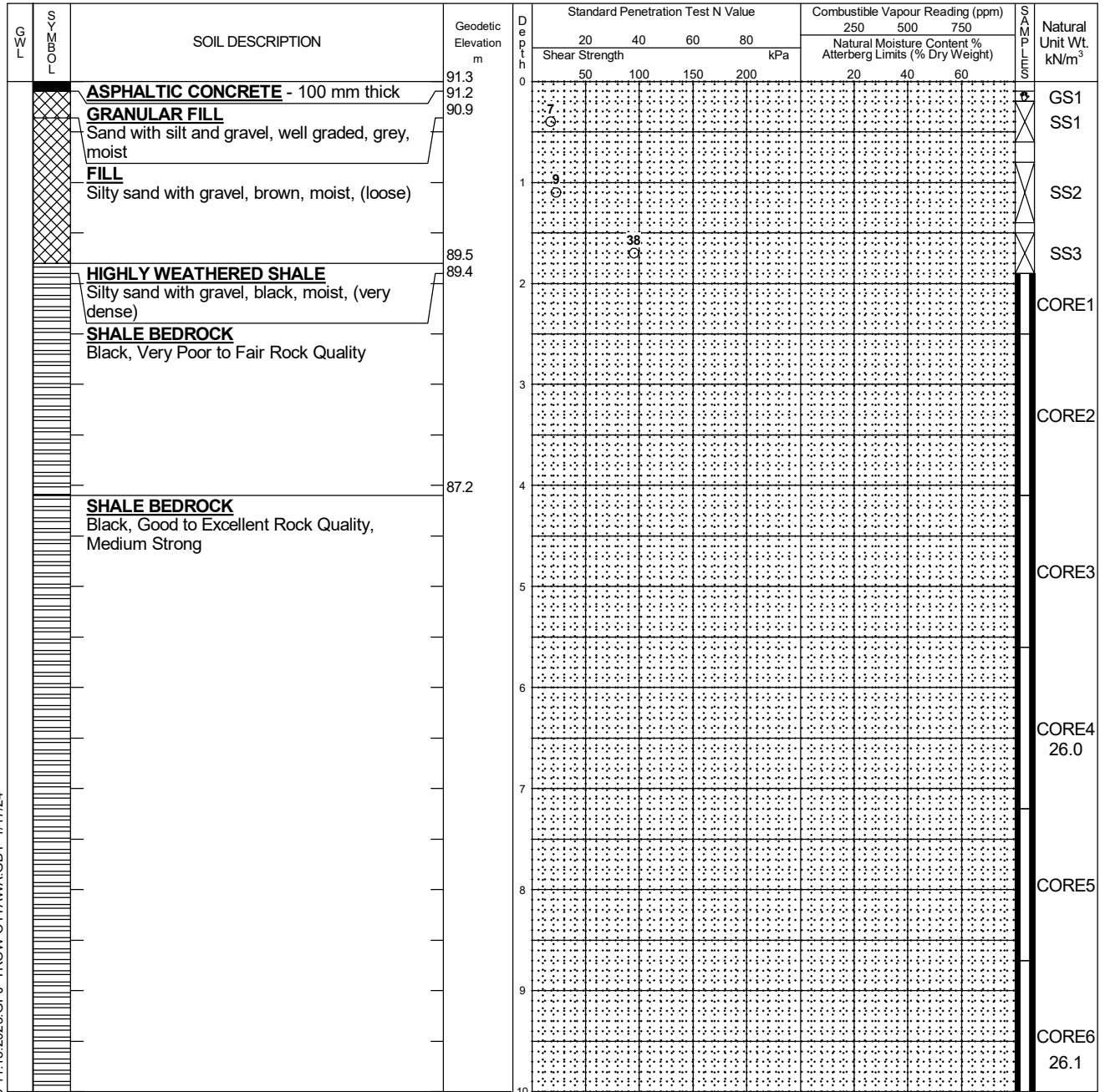
Shelby Tube

% Strain at Failure

Logged by: M.Z. Checked by: D.W.

Shear Strength by Vane Test

Shear Strength by Penetrometer Test



Continued Next Page

NOTES:

- Borehole data requires interpretation by EXP before use by others
- Borehole was backfilled with soil cuttings upon completion.
- Field work was supervised by an EXP representative.
- See Notes on Sample Descriptions
- Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	1.9 - 2.5	77	0
2	2.5 - 4.1	100	68
3	4.1 - 5.6	100	81
4	5.6 - 7.2	100	90
5	7.2 - 8.7	100	90
6	8.7 - 10.2	100	95
7	10.2 - 11.8	100	100
8	11.8 - 13.3	100	100

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

Log of Borehole BH18



Project No: OTT-23008400-B0

Figure No. E-17

Project: Geotechnical Investigation - Walkley Centre Development

Page. 2 of 2

SOIL DESCRIPTION	Geodetic Elevation m	Depth	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³
			20	40	60	80	250	500	750	
			Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)			
			50	100	150	200	20	40	60	
SHALE BEDROCK Black, Good to Excellent Rock Quality, Medium Strong (<i>continued</i>)	81.3	10								CORE7 CORE8 25.9 CORE9
Borehole Terminated at 14.7 m Depth	76.6	14								

LOG OF BOREHOLE GINT LOGS 11.15.2023.GPJ TROW OTTAWA.GDT 1/17/24

- NOTES:**
- Borehole data requires interpretation by EXP before use by others
 - Borehole was backfilled with soil cuttings upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23008400-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %
1	1.9 - 2.5	77	0
2	2.5 - 4.1	100	68
3	4.1 - 5.6	100	81
4	5.6 - 7.2	100	90
5	7.2 - 8.7	100	90
6	8.7 - 10.2	100	95
7	10.2 - 11.8	100	100
8	11.8 - 13.3	100	100

Log of Probehole PH-1



Project No: OTT-23002538-B0
 Project: Geotechnical Investigation - Walkley Centre Development
 Location: 1822-1846 Bank Street, Ottawa, Ontario
 Date Drilled: June 17, 2024
 Drill Type: CME-55 Truck-Mounted Drill Rig
 Datum: Geodetic Elevation
 Logged by: M.Z. Checked by: I.T.

Figure No. 21
 Page. 1 of 1

- Split Spoon Sample
- Auger Sample
- SPT (N) Value
- Dynamic Cone Test
- Shelby Tube
- Shear Strength by Vane Test
- Combustible Vapour Reading
- Natural Moisture Content
- Atterberg Limits
- Undrained Triaxial at % Strain at Failure
- Shear Strength by Penetrometer Test

G W L	S O I L D E S C R I P T I O N	Geodetic Elevation m	D e p t h m	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³
				Shear Strength kPa				Natural Moisture Content %			
				20	40	60	80	250	500	750	
	ASPHALTIC CONCRETE ~ 80 mm thick	92.19	0								
	GRANULAR FILL Sand and crushed gravel, grey, moist	92.1									
	OVERBURDEN Not Sampled	91.5	1								
	HIGHLY WEATHERED SHALE Black	90.1	2								
			3								
			4								
			5								
	Auger Refusal at 6.0 m Depth	86.2	6								

LOG OF BOREHOLE 1822 BANK GINT LOGS 06.21.2024.GPJ TROW OTTAWA.GDT 8/27/24

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - Borehole was backfilled upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23002538-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %

Log of Probehole PH-2



Project No: OTT-23002538-B0
 Project: Geotechnical Investigation - Walkley Centre Development
 Location: 1822-1846 Bank Street, Ottawa, Ontario

Figure No. 22
 Page. 1 of 1

Date Drilled: June 17, 2024
 Drill Type: CME-55 Truck-Mounted Drill Rig
 Datum: Geodetic Elevation
 Logged by: M.Z. Checked by: I.T.

Split Spoon Sample
 Auger Sample
 SPT (N) Value
 Dynamic Cone Test
 Shelby Tube
 Shear Strength by Vane Test
 Combustible Vapour Reading
 Natural Moisture Content
 Atterberg Limits
 Undrained Triaxial at % Strain at Failure
 Shear Strength by Penetrometer Test

GWL	SOIL LOG	SOIL DESCRIPTION	Geodetic Elevation m	Depth	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³
					Shear Strength kPa				Natural Moisture Content %			
					20	40	60	80	250	500	750	
		ASPHALTIC CONCRETE ~ 150 mm thick	93.59	0								
		GRANULAR FILL Sand and crushed gravel, grey, moist	93.4	0								
		OVERBURDEN Not Sampled	92.8	1								
		HIGHLY WEATHERED SHALE Black	91.5	2								
				3								
		Auger Refusal at 3.8 m Depth	89.8									

LOG OF BOREHOLE 1822 BANK GINT LOGS 06.21.2024.GPJ TROW OTTAWA.GDT 8/27/24

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - Borehole was backfilled upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23002538-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %

Log of Probehole PH-3



Project No: OTT-23002538-B0
 Project: Geotechnical Investigation - Walkley Centre Development
 Location: 1822-1846 Bank Street, Ottawa, Ontario

Figure No. 23
 Page. 1 of 1

Date Drilled: June 17, 2024
 Drill Type: CME-55 Truck-Mounted Drill Rig
 Datum: Geodetic Elevation
 Logged by: M.Z. Checked by: I.T.

Split Spoon Sample
 Auger Sample
 SPT (N) Value
 Dynamic Cone Test
 Shelby Tube
 Shear Strength by Vane Test
 Combustible Vapour Reading
 Natural Moisture Content
 Atterberg Limits
 Undrained Triaxial at % Strain at Failure
 Shear Strength by Penetrometer Test

G W L	S O B Y L	SOIL DESCRIPTION	Geodetic Elevation m	D e p t h	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³
					Shear Strength kPa				Natural Moisture Content %			
					20	40	60	80	250	500	750	
		ASPHALTIC CONCRETE ~ 120 mm thick	92.12	0								
		GRANULAR FILL Sand and crushed gravel, grey, moist	92.0									
		OVERBURDEN Not Sampled	91.4	1								
		HIGHLY WEATHERED SHALE Black	90.9									
				2								
				3								
				4								
				5								
		Auger Refusal at 5.2 m Depth	86.9									

LOG OF BOREHOLE 1822 BANK GINT LOGS 06.21.2024.GPJ TROW OTTAWA.GDT 8/27/24

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - Borehole was backfilled upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23002538-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %

Log of Probehole PH-4



Project No: OTT-23002538-B0
 Project: Geotechnical Investigation - Walkley Centre Development
 Location: 1822-1846 Bank Street, Ottawa, Ontario
 Date Drilled: June 17, 2024
 Drill Type: CME-55 Truck-Mounted Drill Rig
 Datum: Geodetic Elevation
 Logged by: M.Z. Checked by: I.T.

Figure No. 24
 Page. 1 of 1

- Split Spoon Sample
- Auger Sample
- SPT (N) Value
- Dynamic Cone Test
- Shelby Tube
- Shear Strength by Vane Test
- Combustible Vapour Reading
- Natural Moisture Content
- Atterberg Limits
- Undrained Triaxial at % Strain at Failure
- Shear Strength by Penetrometer Test

G W L	S O I L D E S C R I P T I O N	Geodetic Elevation m	D e p t h m	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³
				Shear Strength kPa				Natural Moisture Content %			
				20	40	60	80	250	500	750	
	ASPHALTIC CONCRETE ~ 90 mm thick	92.47	0								
	GRANULAR FILL Sand and crushed gravel, grey, moist	92.4									
	OVERBURDEN Not Sampled	91.7	1								
	HIGHLY WEATHERED SHALE Black	91.0	2								
			3								
			4								
	Auger Refusal at 4.9 m Depth	87.6									

LOG OF BOREHOLE 1822 BANK GINT LOGS 06.21.2024.GPJ TROW OTTAWA.GDT 8/27/24

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - Borehole was backfilled upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23002538-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %

Log of Probehole PH-5



Project No: OTT-23002538-B0
 Project: Geotechnical Investigation - Walkley Centre Development
 Location: 1822-1846 Bank Street, Ottawa, Ontario
 Date Drilled: June 17, 2024
 Drill Type: CME-55 Truck-Mounted Drill Rig
 Datum: Geodetic Elevation
 Logged by: M.Z. Checked by: I.T.

Figure No. 25
 Page. 1 of 1

- Split Spoon Sample
- Auger Sample
- SPT (N) Value
- Dynamic Cone Test
- Shelby Tube
- Shear Strength by Vane Test
- Combustible Vapour Reading
- Natural Moisture Content
- Atterberg Limits
- Undrained Triaxial at % Strain at Failure
- Shear Strength by Penetrometer Test

G W L	S O B Y L	SOIL DESCRIPTION	Geodetic Elevation m	D e p t h	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			S O I L T E S T S	Natural Unit Wt. kN/m ³	
					Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)					
					20	40	60	80	250	500	750			
		ASPHALTIC CONCRETE ~ 80 mm thick	92.49	0										
		GRANULAR FILL Sand and crushed gravel, grey, moist	92.4	0	16									GS1
		OVERBURDEN Not Sampled	91.8	1										SS1
				1	7									SS2
		Auger Refusal at 1.8 m Depth	90.7											CORE1

LOG OF BOREHOLE 1822 BANK GINT LOGS 06.21.2024.GPJ TROW OTTAWA.GDT 8/27/24

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - Borehole was backfilled upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23002538-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %
1	1.3 - 2.6	100	0

Log of Probehole PH-6



Project No: OTT-23002538-B0
 Project: Geotechnical Investigation - Walkley Centre Development
 Location: 1822-1846 Bank Street, Ottawa, Ontario
 Date Drilled: June 17, 2024
 Drill Type: CME-55 Truck-Mounted Drill Rig
 Datum: Geodetic Elevation
 Logged by: M.Z. Checked by: I.T.

Figure No. 26
 Page. 1 of 1

Split Spoon Sample Combustible Vapour Reading
 Auger Sample Natural Moisture Content
 SPT (N) Value Atterberg Limits
 Dynamic Cone Test Undrained Triaxial at
 Shelby Tube % Strain at Failure
 Shear Strength by Vane Test Shear Strength by Penetrometer Test

G W L	S O B Y L	SOIL DESCRIPTION	Geodetic Elevation m	D e p t h	Standard Penetration Test N Value				Combustible Vapour Reading (ppm)			Natural Unit Wt. kN/m ³
					Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)			
					20	40	60	80	250	500	750	
		ASPHALTIC CONCRETE ~ 90 mm thick	92.26	0								
		GRANULAR FILL	92.2									
		Sand and crushed gravel, grey, moist	92.0									
		OVERBURDEN		1								
		Not Sampled										
		Auger Refusal at 1.7 m Depth	90.6									

LOG OF BOREHOLE 1822 BANK GINT LOGS 06.21.2024.GPJ TROW OTTAWA.GDT 8/27/24

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - Borehole was backfilled upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-23002538-B0

WATER LEVEL RECORDS		
Date	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD			
Run No.	Depth (m)	% Rec.	RQD %

EXP Services Inc.

*Sun Life Assurance Company of Canada c/o BentallGreenOak (Canada) LP
Phase Two Environmental Site Assessment
1820-1846 Bank Street, Ottawa, Ontario
OTT-22002538-B0
September 30, 2024*

Appendix F: Analytical Summary Tables

Table 2 - Analytical Results in Soil - PAH
 1822-1846 Bank Street, Ottawa, Ontario
 OTT-23002538-80

Sample ID	UNITS	Provisional		Samples																						
		MECP Table 3 Residential ¹	MECP Table 7 Residential ²	BH/MW-1-SS2	DUP 2 (BH/MW-1-SS2)	BH/MW-1-SS3	BH/MW-2-SS1	BH/MW-2-SS1	BH/MW-2-SS2	BH/MW-2-SS2	BH-M-SS1	BH-M-SS2	BH/MW-7-SS2a	BH/MW-8-SS2b	BH-M-SS3	BH-M-SS4	BH-M-SS5	BH/MW-9-SS1	BH/MW-10-SS1	BH/MW-10-SS2	DUP 1 (BH/MW-10-SS2)	BH/MW-11-SS1	BH/MW-11-SS2	DUP 3 (BH/MW-11-SS2)		
		26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	26-000-23	
Polycyclic Aromatic Hydrocarbons																										
Acenaphthene	µg/g	7.9	7.9	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.18	<0.0050	0.012	0.069	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	µg/g	0.15	0.15	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0073	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	µg/g	0.67	0.67	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.64	<0.0050	0.16	0.91	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo[a]anthracene	µg/g	0.5	0.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0070	<0.0050	<0.0050	0.61	<0.0050	0.45	0.38	0.24	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.041	<0.0050	0.0082	
Benzo[a]pyrene	µg/g	0.1	0.1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.46	<0.0050	0.38	0.58	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.016	<0.0050	0.0070	
Benzo[b]fluoranthene	µg/g	0.78	0.78	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.02	<0.0050	0.12	0.78	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.013	<0.0050	0.011	
Benzo[k]fluoranthene	µg/g	6.6	6.6	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.24	<0.0050	0.17	0.27	0.10	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.016	<0.0050	<0.0050	<0.0050	
Benzo[e]fluoranthene	µg/g	0.78	0.78	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.11	<0.0050	0.20	0.16	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.019	<0.0050	<0.0050	<0.0050	
Chrysene	µg/g	7	7	<0.0050	<0.0050	<0.0050	<0.0050	0.0064	<0.0050	<0.0050	0.71	<0.0050	0.17	0.46	0.19	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.038	<0.0050	0.0094	<0.0050	
Dibenz[a,h]anthracene	µg/g	0.1	0.1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.009	<0.0050	0.001	0.003	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	µg/g	0.69	0.69	<0.0050	<0.0050	<0.0050	<0.0050	0.015	<0.0050	<0.0050	2.1	<0.0050	0.86	0.99	0.11	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.089	0.0015	0.018	
Fluorene	µg/g	62	62	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.29	<0.0050	0.024	0.048	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.007	<0.0050	<0.0050	<0.0050	
Indeno[1,2,3-cd]perylene	µg/g	0.38	0.38	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.29	<0.0050	0.29	0.12	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.015	<0.0050	<0.0050	<0.0050	
Methylanthracene,1	µg/g	0.99	0.99	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.04	<0.0050	0.021	0.027	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
Methylanthracene,2	µg/g	0.99	0.99	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.004	<0.0050	0.004	0.006	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Methylanthracene,2 (1:1)	µg/g	0.99	0.99	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	0.005	<0.0071	0.043	0.063	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071
Naphthalene	µg/g	0.6	0.6	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.035	<0.0050	0.0078	0.016	<0.0050	0.0056	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phenanthrene	µg/g	6.2	6.2	<0.0050	<0.0050	0.0089	0.0071	0.0065	<0.0050	<0.0050	2.1	0.011	0.27	0.40	0.26	<0.0050	0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.068	<0.0050	0.018	
Pyrene	µg/g	78	78	<0.0050	<0.0050	<0.0050	<0.0050	0.014	<0.0050	<0.0050	1.6	<0.0050	0.21	0.82	0.38	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.073	<0.0050	0.016		

NOTES:
 1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part IV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards (SCS) for Shallow Soils in a Non-Potable Ground Water Condition and Parkland/Residential/Institutional Property Use (Coarse textured soils)
 2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part IV.1 of the Environmental Protection Act, April 2011, Table 3 Site Condition Standards (SCS) in a Non-Potable Ground Water Condition and Parkland/Residential/Institutional Property Use (Coarse textured soils)
 < RDL Non-detectable results are shown as "<" (RDL) where RDL represents the reporting detection limit.
 NV No Value
 - Parameter not analysed
 m bgs Metres below ground surface
 Indicates soil exceedance of MECP Table 7 SCS
 Indicates soil exceedance of MECP Table 3 SCS

Table 3 - Analytical Results in Soil - Inorganic Parameters
 1822-1846 Bank Street, Ottawa, Ontario
 OTT-23002598-B0

Sample ID	UNITS	Provincial		Samples																				
		MECP Table 3 Residential ¹	MECP Table 7 Residential ²	BH/MW-1 S52	DUP 2 (BH/MW-1 S52)	BH/MW-1 S53	BH/MW-2 S51	BH/MW-2 A53	BH/MW-3 S5-1	BH/MW-4 S5-2	BH-6 S51	BH-6 S52	BH-7 S52A	BH-7 S52B	BH-8 A53	BH-9 A51	BH-4 S52	BH/MW-10 A51	BH/MW-10 S52	DUP 1 (BH/MW-10 S52)	BH/MW-11 S51	BH/MW-11 S52	DUP 1 (BH/MW-11 S52)	
		26-Oct-23	03-10-23	26-Oct-23	26-Oct-23	30-Oct-23	30-Oct-23	14-Oct-23	14-Oct-23	27-Oct-23	27-Oct-23	27-Oct-23	27-Oct-23	27-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	20-Oct-23	30-Oct-23	30-Oct-23	
Sample Depth (m bgs)		0.0 to 1.5	0.0 to 1.5	1.7 to 2.1	0.2 to 0.8	1.7 to 2.1	0.1 to 1.2	0.1 to 1.2	0.1 to 1.2	0.1 to 1.2	0.1 to 1.2	0.1 to 1.2	0.1 to 1.2	1.5 to 2.1	0.1 to 0.5	0.8 to 2.4	0.1 to 0.7	0.2 to 1.1	0.2 to 1.1	0.1 to 0.5	0.1 to 0.7	0.8 to 1.4	0.8 to 1.4	
Metals																								
Arsimony	µg/g	7.5	7.5	<0.20	<0.20	0.20	0.28	0.23	<0.20	<0.20	0.21	0.35	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.22
Azenc	µg/g	18	18	4.4	5.0	7.6	6.9	8.1	4.4	3.8	4.3	8.6	1.3	3.9	2.7	6.6	6.5	7.2	5.0	5.1	2.9	5.8	7.1	7.1
Barium	µg/g	390	390	66	71	100	170	110	64	50	73	290	31	140	290	6.7	140	27	45	55	32	51	65	65
Beryllium	µg/g	4	4	0.77	0.88	1.0	0.97	0.65	0.70	0.56	0.60	0.98	0.21	0.62	0.39	0.21	0.83	0.43	0.71	0.69	0.26	0.82	0.97	0.97
Boron (Total)	µg/g	120	120	<0.50	5.2	6.5	9.5	<0.50	6.7	7.6	5.6	7.8	<0.50	6.6	11	3.8	7.1	6.8	5.8	<0.50	5.4	5.9	8.1	8.1
Boron (Hot Water Soluble)	µg/g	1.5	1.5	0.092	0.11	0.16	0.45	0.096	0.10	0.20	0.21	0.14	0.26	0.56	0.23	0.14	0.19	0.16	0.11	0.10	0.11	0.10	0.21	0.21
Cadmium	µg/g	1.2	1.2	0.1	0.13	0.13	0.13	0.13	<0.10	<0.10	0.14	0.30	<0.10	0.13	<0.10	0.23	0.17	0.38	0.10	0.11	<0.10	<0.10	<0.10	<0.10
Chromium (Total)	µg/g	160	160	25	28	32	32	23	23	23	21	30	11	24	18	8.7	28	14	24	24	24	26	30	30
Chromium (VI)	µg/g	8	8	0.22	0.23	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	0.22
Cobalt	µg/g	22	22	10	11	28	18	11	11	12	14	20	4.8	15	8.5	5.6	19	7.7	13	15	5.7	18	18	18
Copper	µg/g	140	140	23	27	40	40	19	24	19	22	43	11	25	37	11	40	15	28	34	34	30	38	38
Lead	µg/g	120	120	11	13	18	20	19	12	12	23	26	5.8	21	18	48	18	35	16	14	7.5	18	25	25
Mercury	µg/g	0.27	0.27	<0.050	0.267	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Molybdenum	µg/g	6.9	6.9	<0.50	<0.50	1.0	1.2	1.6	0.51	<0.50	0.95	1.8	1.1	1.2	0.77	4.8	1.3	3.1	0.80	0.95	1.4	0.70	1.0	1.0
Nickel	µg/g	100	100	28	31	42	42	20	24	24	27	48	3.2	20	36	18	39	19	27	39	31	31	39	39
Selenium	µg/g	2.4	2.4	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Silver	µg/g	20	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	<0.20	<0.20	<0.20
Thallium	µg/g	1	1	0.14	0.18	0.20	0.26	0.16	0.16	0.12	0.17	0.20	0.12	0.14	0.18	0.12	0.16	0.22	0.22	0.22	0.22	0.18	0.25	0.25
Uranium	µg/g	23	23	0.61	0.77	0.74	0.98	0.66	0.61	0.77	0.6	0.74	0.49	1.1	0.41	0.57	0.68	0.61	0.63	0.71	0.58	0.66	0.65	0.65
Vanadium	µg/g	86	86	30	34	36	32	31	31	29	27	32	20	28	17	13	32	23	33	30	24	29	33	33
Zinc	µg/g	340	340	49	55	90	93	69	52	47	62	100	18	67	31	29	89	40	78	80	24	65	79	79
Inorganic Parameters																								
Sodium Adsorption Ratio	N/A	-	-	11	13	18	8.1	4.6	-	-	31	18	5.8	21	21	0.44	26	4.1	22	7.0	18	7.7	12	12
Sulfide	µg/g	0.051	0.051	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Conductivity	ms/cm	0.7	0.7	1.1	0.65	0.51	0.42	0.27	-	-	0.38	0.53	0.22	0.61	0.55	0.15	0.68	0.24	0.24	0.31	0.60	0.26	0.22	0.22
Notes	No units	5 to 9	5 to 9	6.45	4.99	6.61	7.37	7.49	-	-	7.56	7.57	7.71	8.78	7.65	8.01	7.88	7.76	7.98	7.22	7.42	7.43	7.65	7.65

NOTES:
 1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards (SCS) for Shallow Soils in a Non Potable Ground Water Condition and Parks/Residential/Institutional Property Use (coarse textured soils)
 2 Parks/Residential/Institutional Property Use (coarse textured soils)
 < RDL Non-detectable results are shown as '<' (RDL) where RDL represents the reporting detection limit.
 NV No Value
 - Parameter not analyzed
 m bgs Metres below ground surface
 Indicates soil exceedance of MECP Table 7 SCS
 Indicates soil exceedance of MECP Table 3 SCS

Table 4 - Analytical Results in Groundwater - PHC and VOC
 1812-1846 Bank Street, Ottawa, Ontario
 OTT-23002538-80

Sample ID	UNITS	MECP Table 3.4.1 Type of Property Use ¹	Chemical														Trip Blank	Field Blank
			MECP Table 7 Commodity ²	Bn(Bnw)-5				Bn(Bnw)-10				Bn(Bnw)-12						
				MEQ	Bn(Bnw)-5 25 Nov-23 1.0 to 2.5	DOF	Bn(Bnw)-10 25 Nov-23 1.0 to 2.5	Bn(Bnw)-10 25 Nov-23 1.0 to 2.5	Bn(Bnw)-10 25 Nov-23 1.0 to 2.5	Bn(Bnw)-12 25 Nov-23 1.0 to 24.0	Bn(Bnw)-12 25 Nov-23 1.0 to 24.0	Bn(Bnw)-12 25 Nov-23 1.0 to 24.0	Bn(Bnw)-12 25 Nov-23 1.0 to 24.0	Bn(Bnw)-12 25 Nov-23 1.0 to 24.0	Bn(Bnw)-12 25 Nov-23 1.0 to 24.0	Bn(Bnw)-12 25 Nov-23 1.0 to 24.0		
Polychlorinated Biphenyls																		
P1 PHC (B-12)	ug/L	420	420	<25	<25	<25						<25				<25	<25	
P2 PHC (B-12)	ug/L	500	500	<100	<100	<100						<100				<100	<100	
P3 PHC (C-14)	ug/L	500	500	<100	<100	<100						<100				<100	<100	
P4 PHC (C-14)	ug/L	500	500	<100	<100	<100						<100				<100	<100	
P5 PHC (C-14)	ug/L	500	500	<100	<100	<100						<100				<100	<100	
Other Organic Compounds																		
Aroclor	ug/L	10000	10000	<10	<10	<10						87	30	1000	<10	<10	<10	
Benzene	ug/L	8	8	<1.1	0.8	0.8	<0.20					0.8	0.8	0.8	<1.1	<1.1	<1.1	
Bromodichloromethane	ug/L	8000	8000	<0.50	<0.50	<0.50						<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Bromochloromethane	ug/L	200	200	<1.0	<1.0	<1.0						<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Bromonitromethane	ug/L	0.05	0.05	<0.50	<0.50	<0.50						<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Carbon Tetrachloride	ug/L	0.75	0.2	<0.20	<0.20	<0.20						<0.20	<0.19	<0.19	<0.20	<0.20	<0.20	
Chloroethane	ug/L	0.05	1.0	<0.20	<0.20	<0.20						<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Chloroform	ug/L	2.4	2	<0.20	<0.20	<0.20						1.6	<0.20	<0.20	<0.20	<0.20	<0.20	
Dibromochloromethane	ug/L	8000	8000	<0.50	<0.50	<0.50						<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Dichlorodifluoromethane	ug/L	4400	3500	<1.0	<1.0	<1.0						<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
1,1-Dichloroethane	ug/L	4000	200	<0.50	<0.50	<0.50						<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
1,1-Dichloroethene	ug/L	1000	1000	<0.50	<0.50	<0.50						<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
1,2-Dichloroethane	ug/L	8	0.5	<0.50	<0.50	<0.50						<0.50	<0.40	<0.40	<0.50	<0.50	<0.50	
1,2-Dichloroethene	ug/L	100	15	<0.20	<0.20	<0.20						<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
1,1,1-Trichloroethane	ug/L	1.6	0.5	<0.50	<0.50	<0.50						<0.50	<0.49	<0.49	<0.50	<0.50	<0.50	
1,1,2-Trichloroethane	ug/L	1.6	1.6	<0.50	<0.50	<0.50						<0.50	<0.50	1.6	<0.50	<0.50	<0.50	
1,1,2-Trichloroethene	ug/L	0.5	0.5	<0.20	<0.20	<0.20						<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
1,2-Dichloropropane	ug/L	10	0.5	<0.20	<0.20	<0.20						<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
1,1,1-Trichloropropane	ug/L	NV	NV	<0.30	<0.30	<0.30						<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	
1,1,2-Trichloropropane	ug/L	NV	NV	<0.40	<0.40	<0.40						<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	
1,1-Dichloropropane - Total	ug/L	3.2	0.5	<0.50	<0.50	<0.50						<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
1,1,2-Dichloropropane	ug/L	100	15	<0.20	<0.20	<0.20	<0.20					<0.20	1.9	1.9	<0.20	<0.20	<0.20	
1,2-Dichloropropane	ug/L	0.25	0.2	<0.20	<0.20	<0.20						<0.20	<0.19	<0.19	<0.20	<0.20	<0.20	
1,1,1-Trichloroethene	ug/L	5	5	<1.0	<1.0	<1.0						<1.0	5.0	5.0	<1.0	<1.0	<1.0	
Methyl Ethyl Ketone	ug/L	40000	2000	<10	<10	<10						31	6600	3300	<10	<10	<10	
Methyl Isobutyl Ketone	ug/L	140000	5000	<10	<10	<10						<10	<10	<10	<10	<10	<10	
Methyl Tertiary Butyl Ether	ug/L	100	10	<0.50	<0.50	<0.50						<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Methylene Chloride	ug/L	600	20	<2.0	<2.0	<2.0						<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Nitrobenzene	ug/L	1000	41	<0.50	<0.50	<0.50						<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
1,1,2,2-Tetrachloroethane	ug/L	3.2	1.1	<0.50	<0.50	<0.50						<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
1,1,2,2-Tetrafluoroethane	ug/L	3.2	0.5	<0.50	<0.50	<0.50						<0.50	<0.40	<0.40	<0.50	<0.50	<0.50	
Tetrahaloethene	ug/L	1.6	0.5	<0.20	<0.20	<0.20						0.9	0.9	0.9	<0.20	<0.20	<0.20	
1,1,1-Trifluoroethane	ug/L	10000	100	<0.20	<0.20	<0.20						0.5	10	5.1	<0.20	<0.20	<0.20	
1,1,2-Trifluoroethane	ug/L	640	23	<0.20	<0.20	<0.20						<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
1,1,2-Trifluoroethene	ug/L	4	0.5	<0.20	<0.20	<0.20						<0.20	0.4	0.4	<0.20	<0.20	<0.20	
Trichlorobenzene	ug/L	1.6	0.5	<0.20	<0.20	<0.20						<0.20	0.4	0.4	<0.20	<0.20	<0.20	
Trichlorobromomethane	ug/L	2000	2000	<0.50	<0.50	<0.50						<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Triethylamine	ug/L	0.5	0.5	<0.20	<0.20	<0.20						<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Triethylamine, n.p.	ug/L	NV	NV	<0.20	<0.20	<0.20						0.20	0.8	0.8	<0.20	<0.20	<0.20	
Triethylamine, w.p.	ug/L	NV	NV	<0.20	<0.20	<0.20						0.20	0.8	0.8	<0.20	<0.20	<0.20	
Triethylamine, w.p.	ug/L	4200	77	<0.20	<0.20	<0.20						0.8	1.1	1.1	<0.20	<0.20	<0.20	

- NOTE:
- 1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and 5
 - 2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and 5
 - ND (ND) Non-detectable results are shown as "ND (ND)" where ND represents the reporting date
 - NV No Value
 - Parameter not analyzed
 - m Below Means below ground surface
 - m SCS indicates soil exceedance of MECP Table 7/CS
 - m GCS indicates groundwater exceedance of MECP Table 3/CS

Table 5 - Analytical Results in Groundwater - PAH
 1822-1846 Bank Street, Ottawa, Ontario
 OTT-23002538-B0

Sample ID	UNITS	MECP Table 3 All Types of Property Use ²	Provincial MECP Table 7 Commercial ¹	Samples								
				BH/MW-1	BH/MW-7	BH/MW-8	BH/MW-9	BH/MW-10	DUP (BH/MW-10)	BH/MW-12	Trip Blank	Field Blank
Lab ID				BH-1	BH-7	BH-8	BH-9	BH-10	DUP	BH-12	Trip Blank	Field Blank
Sampling Date				30-Nov-23	6-Dec-23	6-Dec-23	29-Nov-23	29-Nov-23	29-Nov-23	6-Dec-23	29-Nov-23	30-Nov-23
Screen Depth (m bgs)				1.5 to 4.6	10.3 to 13.7	0.7 to 2.0	0.9 to 2.2	1.0 to 2.5	1.0 to 2.5	11.0 to 14.0	N/A	N/A
Polycyclic Aromatic Hydrocarbons												
Acenaphthene	µg/L	600	17	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	µg/L	1.8	1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	µg/L	2.4	1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)anthracene	µg/L	4.7	1.8	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene	µg/L	0.81	0.81	<0.0090	0.026	<0.0090	<0.0090	<0.0090	<0.0090	<0.0090	<0.0090	<0.0090
Benzo(b)fluoranthene	µg/L	0.75	0.75	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	µg/L	0.2	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	µg/L	0.4	0.4	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chrysene	µg/L	1	0.7	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenzo(a,h)anthracene	µg/L	0.52	0.4	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluoranthene	µg/L	130	44	<0.050	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	µg/L	400	290	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1-Methylnaphthalene	µg/L	1800	1500	<0.050	<0.050	1.4	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
2-Methylnaphthalene	µg/L	1800	1500	<0.050	<0.050	0.96	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methylnaphthalene, 2-(1-)	µg/L	1800	1500	<0.071	<0.071	2.4	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071
Naphthalene	µg/L	1400	7	<0.050	<0.050	4.4	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phenanthrene	µg/L	580	380	<0.030	0.053	0.045	<0.030	<0.030	<0.030	0.11	<0.030	<0.030
Pyrene	µg/L	68	5.7	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

NOTES:

1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards (SCS) for Shallow Soils in a Non-Potable Ground Water Condition and Parkland/Residential/Institutional Property Use (coarse textured soils)

2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Site Condition Standards (SCS) in a Non-Potable Ground Water Condition and Parkland/Residential/Institutional Property Use (coarse textured soils)

ND (RDL) Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

NV No Value

- Parameter not analyzed

m bgs Metres below ground surface

Indicates soil exceedance of MECP Table 7 SCS

Indicates groundwater exceedance of MECP Table 3 SCS

Table 6 - Analytical Results in Groundwater - Metals
 1822-1846 Bank Street, Ottawa, Ontario
 OTT-23002538-B0

Sample ID	UNITS	MECP Table 3 All Types of Property Use ²	Provincial MECP Table 7 Commercial ¹	Samples								
				BH/MW-1	BH/MW-7	BH/MW-8	BH/MW-9	BH/MW-10	DUP (BH/MW-10)	BH/MW-12	Trip Blank	Field Blank
Lab ID				BH-1	BH-7	BH-8	BH-9	BH-10	DUP	BH-12	Trip Blank	Field Blank
Sampling Date				30-Nov-23	6-Dec-23	6-Dec-23	29-Nov-23	29-Nov-23	29-Nov-23	6-Dec-23	29-Nov-23	30-Nov-23
Screen Depth (mbgs)				1.5 to 4.6	10.3 to 13.7	0.7 to 2.0	0.9 to 2.2	1.0 to 2.5	1.0 to 2.5	11.0 to 14.0	N/A	N/A
Metals												
Antimony	µg/L	20000	16000	1.4	1.7	<0.50	0.55	0.56	<0.50	1.5	<0.50	<0.50
Arsenic	µg/L	1900	1500	1.1	1.8	<1.0	<1.0	<1.0	<1.0	1.5	<1.0	<1.0
Barium	µg/L	29000	23000	1800	1800	95	89	150	140	220	<2.0	<2.0
Beryllium	µg/L	67	53	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Boron	µg/L	45000	36000	520	380	76	50	37	36	180	<10	<10
Cadmium	µg/L	2.7	2.1	<0.090	<0.090	<0.090	0.12	0.28	0.26	<0.090	<0.090	<0.090
Chromium	µg/L	810	640	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Cobalt	µg/L	140	52	2.5	<0.50	0.53	2.4	5.9	5.5	0.78	<0.50	<0.50
Copper	µg/L	66	69	2.5	0.99	1.1	2.3	4.5	3.6	3.9	<0.90	<0.90
Lead	µg/L	87	20	<0.50	<0.50	<0.50	<0.50	<0.50	0.55	<0.50	<0.50	<0.50
Molybdenum	µg/L	9200	7300	11	14	10	1.6	9.7	9.0	36	<0.50	<0.50
Nickel	µg/L	490	390	6.3	1.7	1.4	6.2	10	9.8	3.2	<1.0	<1.0
Selenium	µg/L	63	50	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Silver	µg/L	1.5	1.2	<0.090	<0.090	<0.090	<0.090	0.093	<0.090	<0.090	0.098	<0.090
Sodium	µg/L	2300000	1800000	820000	2300000	1300000	1100000	890000	880000	530000	<100	<100
Thallium	µg/L	510	400	0.059	<0.050	<0.050	<0.050	0.078	0.07	<0.050	<0.050	<0.050
Uranium	µg/L	420	320	2.9	2.4	1.7	1.8	3.4	3.3	1.9	<0.10	<0.10
Vanadium	µg/L	250	200	<0.50	0.59	<0.50	0.53	0.86	0.58	0.88	<0.50	<0.50
Zinc	µg/L	1100	890	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	15	<5.0	<5.0

NOTES:

1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards (SCS) for Shallow S

2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 3 Site Condition Standards (SCS) in a Non-Potable Gr

ND (RDL) Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

NV No Value

- Parameter not analyzed

m bgs Metres below ground surface

Indicates soil exceedance of MECP Table 7 SCS

Indicates groundwater exceedance of MECP Table 3 SCS

Table 7 - Relative Percent Differences - PHC and VOC in Soil
 1822-1846 Bank Street, Ottawa, Ontario
 OTT-23002538-B0

Parameter	Units	RDL	DUP 2	BH-1 S52	RPD (%)	Alert Limit (%)
			26-Oct-2023	26-Oct-2023		
Petroleum Hydrocarbons						
F1 PHC (C6 - C10) - BTEX	ug/g dry	10	<10	<10	#REF!	60
F2 PHC (C10-C16)	ug/g dry	10	<10	<10	#REF!	60
F3 PHC (C16-C34)	ug/g dry	50	<50	<50	#REF!	60
F4 PHC (C34-C50)	ug/g dry	50	<50	<50	#REF!	60
Volatiles						
Acetone	ug/g dry	0.49	<0.49	<0.49	nc	100
Benzene	ug/g dry	0.0060	<0.0060	<0.0060	nc	100
Bromodichloromethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Bromoform	ug/g dry	0.040	<0.040	<0.040	nc	100
Bromomethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Carbon Tetrachloride	ug/g dry	0.040	<0.040	<0.040	nc	100
Chlorobenzene	ug/g dry	0.040	<0.040	<0.040	nc	100
Chloroform	ug/g dry	0.040	<0.040	<0.040	nc	100
Dibromochloromethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Dichlorodifluoromethane	ug/g dry	0.040	<0.040	<0.040	nc	100
1,2-Dichlorobenzene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,3-Dichlorobenzene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,4-Dichlorobenzene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,1-Dichloroethane	ug/g dry	0.040	<0.040	<0.040	nc	100
1,2-Dichloroethane	ug/g dry	0.049	<0.049	<0.049	nc	100
1,1-Dichloroethylene	ug/g dry	0.040	<0.040	<0.040	nc	100
cis-1,2-Dichloroethylene	ug/g dry	0.040	<0.040	<0.040	nc	100
trans-1,2-Dichloroethylene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,2-Dichloropropane	ug/g dry	0.040	<0.040	<0.040	nc	100
cis-1,3-Dichloropropylene	ug/g dry	0.030	<0.030	<0.030	nc	100
trans-1,3-Dichloropropylene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,3-Dichloropropene, total	ug/g dry	0.050	<0.050	<0.050	nc	100
Ethylbenzene	ug/g dry	0.010	<0.010	<0.010	nc	100
Ethylene dibromide (dibromoethane, 1,2)	ug/g dry	0.040	<0.040	<0.040	nc	100
Hexane	ug/g dry	0.040	<0.040	<0.040	nc	100
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	0.40	<0.40	<0.40	nc	100
Methyl Isobutyl Ketone	ug/g dry	0.40	<0.40	<0.40	nc	100
Methyl tert-butyl ether	ug/g dry	0.04	<0.040	<0.040	nc	100
Methylene Chloride	ug/g dry	0.049	<0.049	<0.049	nc	100
Styrene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,1,1,2-Tetrachloroethane	ug/g dry	0.040	<0.040	<0.040	nc	100
1,1,2,2-Tetrachloroethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Tetrachloroethylene	ug/g dry	0.040	0.27	0.16	nc	100
Toluene	ug/g dry	0.020	<0.020	<0.020	nc	100
1,1,1-Trichloroethane	ug/g dry	0.040	<0.040	<0.040	nc	100
1,1,2-Trichloroethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Trichloroethylene	ug/g dry	0.010	<0.010	<0.010	nc	100
Trichlorofluoromethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Vinyl Chloride	ug/g dry	0.019	<0.019	<0.019	nc	100
Xylenes, total	ug/g dry	0.020	<0.020	<0.020	nc	100

NOTES:

Analysis by Bureau Veritas Laboratories
 All results on dry weight basis; Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.
 - means "not analysed"
 nc means "not calculable" - one (or both) of the results are <5x RDL
 Exceedances of alert limits are shown in **bold**

Table 7 - Relative Percent Differences - PHC and VOC in Soil
 1822-1846 Bank Street, Ottawa, Ontario
 OTT-23002538-B0

Parameter	Units	RDL	DUP 1	BH-10 SS2	RPD (%)	Alert Limit (%)
			26-Oct-2023	26-Oct-2023		
Petroleum Hydrocarbons						
F1 PHC (C6 - C10) - BTEX	ug/g dry	10	<10	<10	#REF!	60
F2 PHC (C10-C16)	ug/g dry	10	<10	<10	#REF!	60
F3 PHC (C16-C34)	ug/g dry	50	<50	<50	#REF!	60
F4 PHC (C34-C50)	ug/g dry	50	<50	<50	#REF!	60
Volatiles						
Acetone	ug/g dry	0.49	<0.49	<0.49	nc	100
Benzene	ug/g dry	0.0060	<0.0060	<0.0060	nc	100
Bromodichloromethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Bromoform	ug/g dry	0.040	<0.040	<0.040	nc	100
Bromomethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Carbon Tetrachloride	ug/g dry	0.040	<0.040	<0.040	nc	100
Chlorobenzene	ug/g dry	0.040	<0.040	<0.040	nc	100
Chloroform	ug/g dry	0.040	<0.040	<0.040	nc	100
Dibromochloromethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Dichlorodifluoromethane	ug/g dry	0.040	<0.040	<0.040	nc	100
1,2-Dichlorobenzene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,3-Dichlorobenzene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,4-Dichlorobenzene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,1-Dichloroethane	ug/g dry	0.040	<0.040	<0.040	nc	100
1,2-Dichloroethane	ug/g dry	0.049	<0.049	<0.049	nc	100
1,1-Dichloroethylene	ug/g dry	0.040	<0.040	<0.040	nc	100
cis-1,2-Dichloroethylene	ug/g dry	0.040	<0.040	<0.040	nc	100
trans-1,2-Dichloroethylene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,2-Dichloropropane	ug/g dry	0.040	<0.040	<0.040	nc	100
cis-1,3-Dichloropropylene	ug/g dry	0.030	<0.030	<0.030	nc	100
trans-1,3-Dichloropropylene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,3-Dichloropropene, total	ug/g dry	0.050	<0.050	<0.050	nc	100
Ethylbenzene	ug/g dry	0.010	<0.010	<0.010	nc	100
Ethylene dibromide (dibromoethane, 1,2)	ug/g dry	0.040	<0.040	<0.040	nc	100
Hexane	ug/g dry	0.040	<0.040	<0.040	nc	100
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	0.40	<0.40	<0.40	nc	100
Methyl Isobutyl Ketone	ug/g dry	0.40	<0.40	<0.40	nc	100
Methyl tert-butyl ether	ug/g dry	0.04	<0.040	<0.040	nc	100
Methylene Chloride	ug/g dry	0.049	<0.049	<0.049	nc	100
Styrene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,1,1,2-Tetrachloroethane	ug/g dry	0.040	<0.040	<0.040	nc	100
1,1,1,2-Tetrachloroethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Tetrachloroethylene	ug/g dry	0.040	<0.040	<0.040	nc	100
Toluene	ug/g dry	0.020	<0.020	<0.020	nc	100
1,1,1-Trichloroethane	ug/g dry	0.040	<0.040	<0.040	nc	100
1,1,2-Trichloroethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Trichloroethylene	ug/g dry	0.010	<0.010	<0.010	nc	100
Trichlorofluoromethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Vinyl Chloride	ug/g dry	0.019	<0.019	<0.019	nc	100
Xylenes, total	ug/g dry	0.020	<0.020	<0.020	nc	100

NOTES:

Analysis by Bureau Veritas Laboratories

All results on dry weight basis; Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 7 - Relative Percent Differences - PHC and VOC in Soil
 1822-1846 Bank Street, Ottawa, Ontario
 OTT-23002538-B0

Parameter	Units	RDL	DUP 3		RPD (%)	Alert Limit (%)
			30-Oct-2023	BH-11 SS2 30-Oct-2023		
Petroleum Hydrocarbons						
F1 PHC (C6 - C10) - BTEX	ug/g dry	10	<10	<10	#REF!	60
F2 PHC (C10-C16)	ug/g dry	10	24	<10	#REF!	60
F3 PHC (C16-C34)	ug/g dry	50	57	<50	#REF!	60
F4 PHC (C34-C50)	ug/g dry	50	<50	<50	#REF!	60
Volatiles						
Acetone	ug/g dry	0.49	<0.49	<0.49	nc	100
Benzene	ug/g dry	0.0060	<0.0060	<0.0060	nc	100
Bromodichloromethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Bromoform	ug/g dry	0.040	<0.040	<0.040	nc	100
Bromomethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Carbon Tetrachloride	ug/g dry	0.040	<0.040	<0.040	nc	100
Chlorobenzene	ug/g dry	0.040	<0.040	<0.040	nc	100
Chloroform	ug/g dry	0.040	<0.040	<0.040	nc	100
Dibromochloromethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Dichlorodifluoromethane	ug/g dry	0.040	<0.040	<0.040	nc	100
1,2-Dichlorobenzene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,3-Dichlorobenzene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,4-Dichlorobenzene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,1-Dichloroethane	ug/g dry	0.040	<0.040	<0.040	nc	100
1,2-Dichloroethane	ug/g dry	0.049	<0.049	<0.049	nc	100
1,1-Dichloroethylene	ug/g dry	0.040	<0.040	<0.040	nc	100
cis-1,2-Dichloroethylene	ug/g dry	0.040	<0.040	<0.040	nc	100
trans-1,2-Dichloroethylene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,2-Dichloropropane	ug/g dry	0.040	<0.040	<0.040	nc	100
cis-1,3-Dichloropropylene	ug/g dry	0.030	<0.030	<0.030	nc	100
trans-1,3-Dichloropropylene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,3-Dichloropropene, total	ug/g dry	0.050	<0.050	<0.050	nc	100
Ethylbenzene	ug/g dry	0.010	<0.010	<0.010	nc	100
Ethylene dibromide (dibromoethane, 1,2)	ug/g dry	0.040	<0.040	<0.040	nc	100
Hexane	ug/g dry	0.040	<0.040	<0.040	nc	100
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	0.40	<0.40	<0.40	nc	100
Methyl Isobutyl Ketone	ug/g dry	0.40	<0.40	<0.40	nc	100
Methyl tert-butyl ether	ug/g dry	0.04	<0.040	<0.040	nc	100
Methylene Chloride	ug/g dry	0.049	<0.049	<0.049	nc	100
Styrene	ug/g dry	0.040	<0.040	<0.040	nc	100
1,1,1,2-Tetrachloroethane	ug/g dry	0.040	<0.040	<0.040	nc	100
1,1,1,2-Tetrachloroethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Tetrachloroethylene	ug/g dry	0.040	<0.040	<0.040	nc	100
Toluene	ug/g dry	0.020	<0.020	<0.020	nc	100
1,1,1-Trichloroethane	ug/g dry	0.040	<0.040	<0.040	nc	100
1,1,2-Trichloroethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Trichloroethylene	ug/g dry	0.010	<0.010	<0.010	nc	100
Trichlorofluoromethane	ug/g dry	0.040	<0.040	<0.040	nc	100
Vinyl Chloride	ug/g dry	0.019	<0.019	<0.019	nc	100
Xylenes, total	ug/g dry	0.020	<0.020	<0.020	nc	100

NOTES:

Analysis by Bureau Veritas Laboratories

All results on dry weight basis; Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 8 - Relative Percent Differences - PAH in Soil
 1822-1846 Bank Street, Ottawa, Ontario
 OTT-23002538-B0

Parameter	Units	RDL	DUP 2	BH-1 SS2	RPD (%)	Alert Limit (%)
			26-Oct-2023	26-Oct-2023		
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Acenaphthylene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Anthracene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Benzo(a)anthracene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Benzo(a)pyrene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Benzo(b)fluoranthene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Benzo(g,h,i)perylene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Benzo(k)fluoranthene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Chrysene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Dibenzo(a,h)anthracene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Fluoranthene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Fluorene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Indeno(1,2,3-cd)pyrene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Methylnaphthalene,1-	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Methylnaphthalene,2-	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Methylnaphthalene 2-(1-)	ug/g dry	0.0071	<0.0071	<0.0071	#REF!	80
Naphthalene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Phenanthrene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Pyrene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80

Parameter	Units	RDL	DUP 1	BH-10 SS2	RPD (%)	Alert Limit (%)
			26-Oct-2023	26-Oct-2023		
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Acenaphthylene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Anthracene	ug/g dry	0.005	<0.0050	<0.0050	#REF!	80
Benzo(a)anthracene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Benzo(a)pyrene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Benzo(b)fluoranthene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Benzo(g,h,i)perylene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Benzo(k)fluoranthene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Chrysene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Dibenzo(a,h)anthracene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Fluoranthene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Fluorene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Indeno(1,2,3-cd)pyrene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Methylnaphthalene,1-	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Methylnaphthalene,2-	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Methylnaphthalene 2-(1-)	ug/g dry	0.0071	<0.0071	<0.0071	#REF!	80
Naphthalene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Phenanthrene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80
Pyrene	ug/g dry	0.0050	<0.0050	<0.0050	#REF!	80

NOTES:

Analysis by Bureau Veritas Laboratories
 All results on dry weight basis; Non-detectable results are shown as "<(RDL)" where RDL represents the reporting detection limit.
 - means "not analysed"
 nc means "not calculable" - one (or both) of the results are <5x RDL
 Exceedances of alert limits are shown in **bold**

Table 8 - Relative Percent Differences - PAH in Soil
 1822-1846 Bank Street, Ottawa, Ontario
 OTT-23002538-B0

Parameter	Units	RDL	DUP 3		BH-11 S52	RPD (%)	Alert Limit (%)
			30-Oct-2023	30-Oct-2023			
<i>Polycyclic Aromatic Hydrocarbons</i>							
Acenaphthene	ug/g dry	0.0050	<0.0050	<0.0050	<0.0050	#REF!	80
Acenaphthylene	ug/g dry	0.0050	<0.0050	<0.0050	<0.0050	#REF!	80
Anthracene	ug/g dry	0.005	<0.0050	<0.0050	<0.0050	#REF!	80
Benzo(a)anthracene	ug/g dry	0.0050	0.0082	<0.0050	<0.0050	#REF!	80
Benzo(a)pyrene	ug/g dry	0.0050	0.007	<0.0050	<0.0050	#REF!	80
Benzo(b)fluoranthene	ug/g dry	0.0050	0.011	<0.0050	<0.0050	#REF!	80
Benzo(g,h,i)perylene	ug/g dry	0.0050	<0.0050	<0.0050	<0.0050	#REF!	80
Benzo(k)fluoranthene	ug/g dry	0.0050	<0.0050	<0.0050	<0.0050	#REF!	80
Chrysene	ug/g dry	0.0050	0.0094	<0.0050	<0.0050	#REF!	80
Dibenzo(a,h)anthracene	ug/g dry	0.0050	<0.0050	<0.0050	<0.0050	#REF!	80
Fluoranthene	ug/g dry	0.0050	0.018	0.0055	<0.0050	#REF!	80
Fluorene	ug/g dry	0.0050	<0.0050	<0.0050	<0.0050	#REF!	80
Indeno(1,2,3-cd)pyrene	ug/g dry	0.0050	<0.0050	<0.0050	<0.0050	#REF!	80
Methylnaphthalene,1-	ug/g dry	0.0050	<0.0050	<0.0050	<0.0050	#REF!	80
Methylnaphthalene,2-	ug/g dry	0.0050	<0.0050	<0.0050	<0.0050	#REF!	80
Methylnaphthalene 2-(1-)	ug/g dry	0.0071	<0.0071	<0.0071	<0.0071	#REF!	80
Naphthalene	ug/g dry	0.0050	<0.0050	<0.0050	<0.0050	#REF!	80
Phenanthrene	ug/g dry	0.0050	0.018	<0.0050	<0.0050	#REF!	80
Pyrene	ug/g dry	0.0050	0.016	<0.0050	<0.0050	#REF!	80

NOTES:

Analysis by Bureau Veritas Laboratories

All results on dry weight basis; Non-detectable results are shown as "<" (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 9 - Relative Percent Differences - Inorganics in Soil
 1822-1846 Bank Street, Ottawa, Ontario
 OTT-23002538-B0

Parameter	Units	RDL	DUP 2		RPD (%)	Alert Limit (%)
			26-Oct-2023	26-Oct-2023		
Inorganic Parameters						
Antimony	ug/g dry	0.5	<0.20	<0.20	#REF!	60
Arsenic	ug/g dry	0.5	5	4.4	#REF!	60
Barium	ug/g dry	1	71	66	#REF!	60
Beryllium	ug/g dry	0.2	0.88	0.77	#REF!	60
Boron	ug/g dry	0.5	5.2	<5.0	#REF!	60
Boron (HWS)	ug/g dry	0.02	0.11	0.092	#REF!	60
Cadmium	ug/g dry	0.5	0.12	0.1	#REF!	60
Chromium	ug/g dry	1	28	25	#REF!	60
Chromium (VI)	ug/g dry	0.2	0.23	0.22	#REF!	60
Cobalt	ug/g dry	1	11	10	#REF!	60
Copper	ug/g dry	1	27	23	#REF!	60
Lead	ug/g dry	5	13	11	#REF!	60
Mercury	ug/g dry	0.005	<0.050	<0.050	#REF!	60
Molybdenum	ug/g dry	1	<0.50	<0.50	#REF!	60
Nickel	ug/g dry	1	31	28	#REF!	60
Selenium	ug/g dry	0.5	<0.50	<0.50	#REF!	60
Silver	ug/g dry	0.2	<0.20	<0.20	#REF!	60
Thallium	ug/g dry	0.1	0.16	0.14	#REF!	60
Vanadium	ug/g dry	1	0.77	0.61	#REF!	60
Zinc	ug/g dry	3	34	30	#REF!	60
Uranium	ug/g dry	0.1	55	49	#REF!	60

Parameter	Units	RDL	DUP 1		RPD (%)	Alert Limit (%)
			26-Oct-2023	26-Oct-2023		
Inorganic Parameters						
Antimony	ug/g dry	0.5	<0.20	<0.20	#REF!	60
Arsenic	ug/g dry	0.5	5.1	5	#REF!	60
Barium	ug/g dry	1	55	45	#REF!	60
Beryllium	ug/g dry	0.2	0.69	0.71	#REF!	60
Boron	ug/g dry	0.5	<5.0	5.8	#REF!	60
Boron (HWS)	ug/g dry	0.02	0.11	0.16	#REF!	60
Cadmium	ug/g dry	0.5	0.11	0.1	#REF!	60
Chromium	ug/g dry	1	24	24	#REF!	60
Chromium (VI)	ug/g dry	0.2	<0.18	<0.18	#REF!	60
Cobalt	ug/g dry	1	15	13	#REF!	60
Copper	ug/g dry	1	34	28	#REF!	60
Lead	ug/g dry	5	14	16	#REF!	60
Mercury	ug/g dry	0.005	<0.050	<0.050	#REF!	60
Molybdenum	ug/g dry	1	0.95	0.8	#REF!	60
Nickel	ug/g dry	1	30	27	#REF!	60
Selenium	ug/g dry	0.5	<0.50	<0.50	#REF!	60
Silver	ug/g dry	0.2	<0.20	<0.20	#REF!	60
Thallium	ug/g dry	0.1	0.12	0.12	#REF!	60
Vanadium	ug/g dry	1	0.71	0.83	#REF!	60
Zinc	ug/g dry	3	30	33	#REF!	60
Uranium	ug/g dry	0.1	80	78	#REF!	60

NOTES:

Analysis by Bureau Veritas Laboratories

All results on dry weight basis; Non-detectable results are shown as "<c (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 9 - Relative Percent Differences - Inorganics in Soil
 1822-1846 Bank Street, Ottawa, Ontario
 OTT-23002538-B0

Parameter	Units	RDL	DUP 3	BH-11 SS2	RPD (%)	Alert Limit (%)
			30-Oct-2023	30-Oct-2023		
Inorganic Parameters						
Antimony	ug/g dry	0.5	0.22	<0.20	#REF!	60
Arsenic	ug/g dry	0.5	7.1	5.6	#REF!	60
Barium	ug/g dry	1	65	51	#REF!	60
Beryllium	ug/g dry	0.2	0.97	0.82	#REF!	60
Boron	ug/g dry	0.5	8.3	5.6	#REF!	60
Boron (HWS)	ug/g dry	0.02	0.21	0.11	#REF!	60
Cadmium	ug/g dry	0.5	<0.10	<0.10	#REF!	60
Chromium	ug/g dry	1	30	26	#REF!	60
Chromium (VI)	ug/g dry	0.2	0.22	<0.18	#REF!	60
Cobalt	ug/g dry	1	18	16	#REF!	60
Copper	ug/g dry	1	38	30	#REF!	60
Lead	ug/g dry	5	25	18	#REF!	60
Mercury	ug/g dry	0.005	<0.050	<0.050	#REF!	60
Molybdenum	ug/g dry	1	1	0.7	#REF!	60
Nickel	ug/g dry	1	39	31	#REF!	60
Selenium	ug/g dry	0.5	<0.50	<0.50	#REF!	60
Silver	ug/g dry	0.2	<0.20	<0.20	#REF!	60
Thallium	ug/g dry	0.1	0.2	0.16	#REF!	60
Vanadium	ug/g dry	1	0.65	0.66	#REF!	60
Zinc	ug/g dry	3	33	29	#REF!	60
Uranium	ug/g dry	0.1	79	65	#REF!	60

NOTES:

Analysis by Bureau Veritas Laboratories

All results on dry weight basis; Non-detectable results are shown as "<" (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 10 - Relative Percent Differences - PHC and VOC in Groundwater
1822-1846 Bank Street, Ottawa, Ontario
OTT-23002538-B0

Parameter	Units	RDL	DUP		RPD (%)	Alert Limit (%)
			29-Nov-2023	BH-10 29-Nov-2023		
Petroleum Hydrocarbons						
F1 PHC (C6 - C10) - BTEX	µg/L	25	<25	<25	#REF!	60
F2 PHC (C10-C16)	µg/L	100	<100	<100	#REF!	60
F3 PHC (C16-C34)	µg/L	200	<200	<200	#REF!	60
F4 PHC (C34-C50)	µg/L	200	<200	<200	#REF!	60
Volatiles						
Acetone	µg/L	10	<10	<10	nc	60
Benzene	µg/L		0.51	0.54	nc	60
Bromodichloromethane	µg/L	0.50	<0.50	<0.50	nc	60
Bromoform	µg/L	1.0	<1.0	<1.0	nc	60
Bromomethane	µg/L	0.50	<0.50	<0.50	nc	60
Carbon Tetrachloride	µg/L	0.20	<0.20	<0.20	nc	60
Chlorobenzene	µg/L	0.20	<0.20	<0.20	nc	60
Chloroform	µg/L	0.20	<0.20	<0.20	nc	60
Dibromochloromethane	µg/L	0.50	<0.50	<0.50	nc	60
Dichlorodifluoromethane	µg/L	1.0	<1.0	<1.0	nc	60
1,2-Dichlorobenzene	µg/L	0.50	<0.50	<0.50	nc	60
1,3-Dichlorobenzene	µg/L	0.50	<0.50	<0.50	nc	60
1,4-Dichlorobenzene	µg/L	0.50	<0.50	<0.50	nc	60
1,1-Dichloroethane	µg/L	0.20	<0.20	<0.20	nc	60
1,2-Dichloroethane	µg/L	0.50	<0.50	<0.50	nc	60
1,1-Dichloroethylene	µg/L	0.20	<0.20	<0.20	nc	60
cis-1,2-Dichloroethylene	µg/L	0.50	<0.50	<0.50	nc	60
trans-1,2-Dichloroethylene	µg/L	0.50	<0.50	<0.50	nc	60
1,2-Dichloropropane	µg/L	0.20	<0.20	<0.20	nc	60
cis-1,3-Dichloropropylene	µg/L	0.30	<0.30	<0.30	nc	60
trans-1,3-Dichloropropylene	µg/L	0.40	<0.40	<0.40	nc	60
1,3-Dichloropropene, total	µg/L	0.50	<0.50	<0.50	nc	60
Ethylbenzene	µg/L	0.20	<0.20	<0.20	nc	60
Ethylene dibromide (dibromoethane, 1,2-)	µg/L	0.20	<0.20	<0.20	nc	60
Hexane	µg/L	1.0	<1.0	<1.0	nc	60
Methyl Ethyl Ketone (2-Butanone)	µg/L	10	<10	<10	nc	60
Methyl Isobutyl Ketone	µg/L	5.0	<5.0	<5.0	nc	60
Methyl tert-butyl ether	µg/L	0.50	<0.50	<0.50	nc	60
Methylene Chloride	µg/L	2.0	<2.0	<2.0	nc	60
Styrene	µg/L	0.50	<0.50	<0.50	nc	60
1,1,1,2-Tetrachloroethane	µg/L	0.50	<0.50	<0.50	nc	60
1,1,2,2-Tetrachloroethane	µg/L	0.50	<0.50	<0.50	nc	60
Tetrachloroethylene	µg/L	0.20	<0.20	<0.20	nc	60
Toluene	µg/L	0.20	<0.20	<0.20	nc	60
1,1,1-Trichloroethane	µg/L	0.20	<0.20	<0.20	nc	60
1,1,2-Trichloroethane	µg/L	0.50	<0.50	<0.50	nc	60
Trichloroethylene	µg/L	0.20	<0.20	<0.20	nc	60
Trichlorofluoromethane	µg/L	0.50	<0.50	<0.50	nc	60
Vinyl Chloride	µg/L	0.20	<0.20	<0.20	nc	60
Xylenes, total	µg/L	0.20	<0.20	<0.20	nc	60

NOTES:

Analysis by Bureau Veritas Laboratories

Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Parameter	Units	RDL	DUP		RPD (%)	Alert Limit (%)
			15-Mar-2024	BH-8/MW 15-Mar-2024		
Petroleum Hydrocarbons						
F1 PHC (C6 - C10) - BTEX	µg/L	25	<25	<25	#REF!	60
F2 PHC (C10-C16)	µg/L	100	<100	<100	#REF!	60
F3 PHC (C16-C34)	µg/L	200	<200	<200	#REF!	60
F4 PHC (C34-C50)	µg/L	200	<200	<200	#REF!	60
Volatiles						
Benzene	µg/L		0.69	0.70	nc	60
Ethylbenzene	µg/L	0.20	1.2	1.3	nc	60
Toluene	µg/L	0.20	<0.20	<0.20	nc	60
Xylenes, total	µg/L	0.20	2.3	2.5	nc	60

NOTES:

Table 10 - Relative Percent Differences - PHC and VOC in Groundwater
1822-1846 Bank Street, Ottawa, Ontario
OTT-23002538-B0

Analysis by Bureau Veritas Laboratories

Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 11 - Relative Percent Differences - PAH in Groundwater
 1822-1846 Bank Street, Ottawa, Ontario
 OTT-23002538-B0

Parameter	Units	RDL	DUP		RPD (%)	Alert Limit (%)
			29-Nov-2023	BH-10 29-Nov-2023		
<i>Polycyclic Aromatic Hydrocarbons</i>						
Acenaphthene	µg/L	0.050	<0.050	<0.050	#REF!	60
Acenaphthylene	µg/L	0.050	<0.050	<0.050	#REF!	60
Anthracene	µg/L	0.050	<0.050	<0.050	#REF!	60
Benzo(a)anthracene	µg/L	0.050	<0.050	<0.050	#REF!	60
Benzo(a)pyrene	µg/L	0.0090	<0.0090	<0.0090	#REF!	60
Benzo(b)fluoranthene	µg/L	0.050	<0.050	<0.050	#REF!	60
Benzo(g,h,i)perylene	µg/L	0.050	<0.050	<0.050	#REF!	60
Benzo(k)fluoranthene	µg/L	0.050	<0.050	<0.050	#REF!	60
Chrysene	µg/L	0.050	<0.050	<0.050	#REF!	60
Dibenzo(a,h)anthracene	µg/L	0.050	<0.050	<0.050	#REF!	60
Fluoranthene	µg/L	0.050	<0.050	<0.050	#REF!	60
Fluorene	µg/L	0.050	<0.050	<0.050	#REF!	60
Indeno(1,2,3,-cd)pyrene	µg/L	0.050	<0.050	<0.050	#REF!	60
Methylnaphthalene,1-	µg/L	0.050	<0.050	<0.050	#REF!	60
Methylnaphthalene,2-	µg/L	0.050	<0.050	<0.050	#REF!	60
Methylnaphthalene 2-(1-)	µg/L	0.071	<0.071	<0.071	#REF!	60
Naphthalene	µg/L	0.050	<0.050	<0.050	#REF!	60
Phenanthrene	µg/L	0.030	<0.030	<0.030	#REF!	60
Pyrene	µg/L	0.050	<0.050	<0.050	#REF!	60

NOTES:

Analysis by Bureau Veritas Laboratories

Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 12 - Relative Percent Differences - Inorganics in Groundwater
 1822-1846 Bank Street, Ottawa, Ontario
 OTT-23002538-B0

Parameter	Units	RDL	DUP		RPD (%)	Alert Limit (%)
			29-Nov-2023	BH-10 29-Nov-2023		
<i>Inorganic Parameters</i>						
Antimony	µg/L	0.50	<0.50	0.56	#REF!	40
Arsenic	µg/L	1.0	<1.0	<1.0	#REF!	40
Barium	µg/L	2.0	140	150	#REF!	40
Beryllium	µg/L	0.40	<0.40	<0.40	#REF!	40
Boron	µg/L	10	36	37	#REF!	40
Cadmium	µg/L	0.090	0.26	0.28	#REF!	40
Chromium	µg/L	5.0	<5.0	<5.0	#REF!	40
Cobalt	µg/L	0.50	5.5	5.9	#REF!	40
Copper	µg/L	0.90	3.6	4.5	#REF!	40
Lead	µg/L	0.50	<0.50	<0.50	#REF!	40
Molybdenum	µg/L	0.50	9	9.7	#REF!	40
Nickel	µg/L	1.0	9.8	10	#REF!	40
Selenium	µg/L	2.0	<2.0	<2.0	#REF!	40
Silver	µg/L	0.090	<0.090	0.093	#REF!	40
Sodium	µg/L	100	880000	890000	#REF!	40
Thallium	µg/L	0.050	0.07	0.078	#REF!	40
Uranium	µg/L	0.10	3.3	3.4	#REF!	40
Vanadium	µg/L	0.50	0.58	0.86	#REF!	40
Zinc	µg/L	5.0	<5.0	<5.0	#REF!	40

NOTES:

Analysis by Bureau Veritas Laboratories

Non-detectable results are shown as "< (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

EXP Services Inc.

*Sun Life Assurance Company of Canada c/o BentallGreenOak (Canada) LP
Phase Two Environmental Site Assessment
1820-1846 Bank Street, Ottawa, Ontario
OTT-22002538-B0
September 30, 2024*

Appendix G: Laboratory Certificates of Analysis



Your Project #: OTT-23002538-B0
 Site Location: 1822-1846 WALKELY
 Your C.O.C. #: 967688-01-01

Attention: Leah Wells

exp Services Inc
 Ottawa Branch
 100-2650 Queensview Drive
 Ottawa, ON
 CANADA K2B 8H6

Report Date: 2023/12/14
 Report #: R7955355
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3AZ816

Received: 2023/12/07, 11:01

Sample Matrix: Water
 # Samples Received: 3

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Methylnaphthalene Sum (1)	3	N/A	2023/12/12	CAM SOP-00301	EPA 8270D m
1,3-Dichloropropene Sum (1)	3	N/A	2023/12/14		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Water (1, 2)	2	2023/12/11	2023/12/12	CAM SOP-00316	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1, 2)	1	2023/12/11	2023/12/13	CAM SOP-00316	CCME PHC-CWS m
Dissolved Metals by ICPMS (1)	1	N/A	2023/12/12	CAM SOP-00447	EPA 6020B m
Dissolved Metals by ICPMS (1)	2	N/A	2023/12/13	CAM SOP-00447	EPA 6020B m
PAH Compounds in Water by GC/MS (SIM) (1)	3	2023/12/11	2023/12/11	CAM SOP-00318	EPA 8270E
Volatile Organic Compounds and F1 PHCs (1)	3	N/A	2023/12/14	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, MELCCFP, 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 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 #: OTT-23002538-B0
Site Location: 1822-1846 WALKELY
Your C.O.C. #: 967688-01-01

Attention: Leah Wells

exp Services Inc
Ottawa Branch
100-2650 Queensview Drive
Ottawa, ON
CANADA K2B 8H6

Report Date: 2023/12/14
Report #: R7955355
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3AZ816

Received: 2023/12/07, 11:01

Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key



Bureau Veritas
14 Dec 2023 16:51:13

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.



BUREAU
VERITAS

Bureau Veritas Job #: C3AZ816
Report Date: 2023/12/14

exp Services Inc
Client Project #: OTT-23002538-B0
Site Location: 1822-1846 WALKELY
Sampler Initials: SA

O.REG 153 DISSOLVED ICPMS METALS (WATER)

Bureau Veritas ID		XVI157	XVI158		XVI159		
Sampling Date		2023/12/06 14:15	2023/12/06 15:15		2023/12/06 13:15		
COC Number		967688-01-01	967688-01-01		967688-01-01		
	UNITS	BH-8	BH-7	RDL	BH-12	RDL	QC Batch
Metals							
Dissolved Antimony (Sb)	ug/L	<0.50	1.7	0.50	1.5	0.50	9106197
Dissolved Arsenic (As)	ug/L	<1.0	1.8	1.0	1.5	1.0	9106197
Dissolved Barium (Ba)	ug/L	95	1800	2.0	220	2.0	9106197
Dissolved Beryllium (Be)	ug/L	<0.40	<0.40	0.40	<0.40	0.40	9106197
Dissolved Boron (B)	ug/L	76	380	10	180	10	9106197
Dissolved Cadmium (Cd)	ug/L	<0.090	<0.090	0.090	<0.090	0.090	9106197
Dissolved Chromium (Cr)	ug/L	<5.0	<5.0	5.0	<5.0	5.0	9106197
Dissolved Cobalt (Co)	ug/L	0.53	<0.50	0.50	0.78	0.50	9106197
Dissolved Copper (Cu)	ug/L	1.1	0.99	0.90	3.9	0.90	9106197
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	0.50	0.55	0.50	9106197
Dissolved Molybdenum (Mo)	ug/L	10	14	0.50	36	0.50	9106197
Dissolved Nickel (Ni)	ug/L	1.4	1.7	1.0	3.2	1.0	9106197
Dissolved Selenium (Se)	ug/L	<2.0	<2.0	2.0	<2.0	2.0	9106197
Dissolved Silver (Ag)	ug/L	<0.090	<0.090	0.090	<0.090	0.090	9106197
Dissolved Sodium (Na)	ug/L	1300000	2300000	500	530000	100	9106197
Dissolved Thallium (Tl)	ug/L	<0.050	<0.050	0.050	<0.050	0.050	9106197
Dissolved Uranium (U)	ug/L	1.7	2.4	0.10	1.9	0.10	9106197
Dissolved Vanadium (V)	ug/L	<0.50	0.59	0.50	0.88	0.50	9106197
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	5.0	15	5.0	9106197
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							



BUREAU
VERITAS

Bureau Veritas Job #: C3AZ816
Report Date: 2023/12/14

exp Services Inc
Client Project #: OTT-23002538-B0
Site Location: 1822-1846 WALKELY
Sampler Initials: SA

O.REG 153 PAHS (WATER)

Bureau Veritas ID		XVI157	XVI158	XVI159		
Sampling Date		2023/12/06 14:15	2023/12/06 15:15	2023/12/06 13:15		
COC Number		967688-01-01	967688-01-01	967688-01-01		
	UNITS	BH-8	BH-7	BH-12	RDL	QC Batch
Calculated Parameters						
Methylnaphthalene, 2-(1-)	ug/L	2.4	<0.071	<0.071	0.071	9103410
Polyaromatic Hydrocarbons						
Acenaphthene	ug/L	<0.050	<0.050	<0.050	0.050	9104367
Acenaphthylene	ug/L	<0.050	<0.050	<0.050	0.050	9104367
Anthracene	ug/L	<0.050	<0.050	<0.050	0.050	9104367
Benzo(a)anthracene	ug/L	<0.050	<0.050	<0.050	0.050	9104367
Benzo(a)pyrene	ug/L	<0.0090	0.026	<0.0090	0.0090	9104367
Benzo(b,j)fluoranthene	ug/L	<0.050	<0.050	<0.050	0.050	9104367
Benzo(g,h,i)perylene	ug/L	<0.050	<0.050	<0.050	0.050	9104367
Benzo(k)fluoranthene	ug/L	<0.050	<0.050	<0.050	0.050	9104367
Chrysene	ug/L	<0.050	<0.050	<0.050	0.050	9104367
Dibenzo(a,h)anthracene	ug/L	<0.050	<0.050	<0.050	0.050	9104367
Fluoranthene	ug/L	<0.050	0.050	<0.050	0.050	9104367
Fluorene	ug/L	<0.050	<0.050	<0.050	0.050	9104367
Indeno(1,2,3-cd)pyrene	ug/L	<0.050	<0.050	<0.050	0.050	9104367
1-Methylnaphthalene	ug/L	1.4	<0.050	<0.050	0.050	9104367
2-Methylnaphthalene	ug/L	0.96	<0.050	<0.050	0.050	9104367
Naphthalene	ug/L	4.4	<0.050	<0.050	0.050	9104367
Phenanthrene	ug/L	0.045	0.053	0.11	0.030	9104367
Pyrene	ug/L	<0.050	<0.050	<0.050	0.050	9104367
Surrogate Recovery (%)						
D10-Anthracene	%	99	90	94		9104367
D14-Terphenyl (FS)	%	83	42 (1)	48 (1)		9104367
D8-Acenaphthylene	%	94	94	93		9104367
RDL = Reportable Detection Limit QC Batch = Quality Control Batch (1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.						



BUREAU
VERITAS

Bureau Veritas Job #: C3AZ816
Report Date: 2023/12/14

exp Services Inc
Client Project #: OTT-23002538-B0
Site Location: 1822-1846 WALKELY
Sampler Initials: SA

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

Bureau Veritas ID		XVI157		XVI158	XVI159		
Sampling Date		2023/12/06 14:15		2023/12/06 15:15	2023/12/06 13:15		
COC Number		967688-01-01		967688-01-01	967688-01-01		
	UNITS	BH-8	RDL	BH-7	BH-12	RDL	QC Batch
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9103411
Volatile Organics							
Acetone (2-Propanone)	ug/L	<16 (1)	16	<10	87	10	9106499
Benzene	ug/L	42	0.17	0.41	0.91	0.17	9106499
Bromodichloromethane	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9106499
Bromoform	ug/L	<1.0	1.0	<1.0	<1.0	1.0	9106499
Bromomethane	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9106499
Carbon Tetrachloride	ug/L	<0.20	0.20	<0.20	<0.20	0.20	9106499
Chlorobenzene	ug/L	<0.20	0.20	<0.20	<0.20	0.20	9106499
Chloroform	ug/L	<0.20	0.20	2.3	1.6	0.20	9106499
Dibromochloromethane	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9106499
1,2-Dichlorobenzene	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9106499
1,3-Dichlorobenzene	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9106499
1,4-Dichlorobenzene	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9106499
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	1.0	<1.0	<1.0	1.0	9106499
1,1-Dichloroethane	ug/L	<0.20	0.20	<0.20	<0.20	0.20	9106499
1,2-Dichloroethane	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9106499
1,1-Dichloroethylene	ug/L	<0.20	0.20	<0.20	<0.20	0.20	9106499
cis-1,2-Dichloroethylene	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9106499
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9106499
1,2-Dichloropropane	ug/L	<0.20	0.20	<0.20	<0.20	0.20	9106499
cis-1,3-Dichloropropene	ug/L	<0.30	0.30	<0.30	<0.30	0.30	9106499
trans-1,3-Dichloropropene	ug/L	<0.40	0.40	<0.40	<0.40	0.40	9106499
Ethylbenzene	ug/L	57	0.20	<0.20	<0.20	0.20	9106499
Ethylene Dibromide	ug/L	<0.20	0.20	<0.20	<0.20	0.20	9106499
Hexane	ug/L	21	1.0	<1.0	<1.0	1.0	9106499
Methylene Chloride(Dichloromethane)	ug/L	<2.0	2.0	2.4	<2.0	2.0	9106499
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	10	<10	31	10	9106499
Methyl Isobutyl Ketone	ug/L	<5.0	5.0	<5.0	<5.0	5.0	9106499
Methyl t-butyl ether (MTBE)	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9106499
Styrene	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9106499
1,1,1,2-Tetrachloroethane	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9106499
1,1,2,2-Tetrachloroethane	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9106499
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							
(1) Detection limit was raised due to matrix interference.							



BUREAU
VERITAS

Bureau Veritas Job #: C3AZ816
Report Date: 2023/12/14

exp Services Inc
Client Project #: OTT-23002538-B0
Site Location: 1822-1846 WALKELY
Sampler Initials: SA

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

Bureau Veritas ID		XVI157		XVI158	XVI159		
Sampling Date		2023/12/06 14:15		2023/12/06 15:15	2023/12/06 13:15		
COC Number		967688-01-01		967688-01-01	967688-01-01		
	UNITS	BH-8	RDL	BH-7	BH-12	RDL	QC Batch
Tetrachloroethylene	ug/L	<0.20	0.20	<0.20	0.73	0.20	9106499
Toluene	ug/L	1.0	0.20	0.81	1.5	0.20	9106499
1,1,1-Trichloroethane	ug/L	<0.20	0.20	<0.20	<0.20	0.20	9106499
1,1,2-Trichloroethane	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9106499
Trichloroethylene	ug/L	<0.20	0.20	<0.20	<0.20	0.20	9106499
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	0.50	<0.50	<0.50	0.50	9106499
Vinyl Chloride	ug/L	<0.20	0.20	<0.20	<0.20	0.20	9106499
p+m-Xylene	ug/L	97	0.20	0.28	0.65	0.20	9106499
o-Xylene	ug/L	2.2	0.20	<0.20	0.31	0.20	9106499
Total Xylenes	ug/L	99	0.20	0.28	0.96	0.20	9106499
F1 (C6-C10)	ug/L	720	25	<25	<25	25	9106499
F1 (C6-C10) - BTEX	ug/L	520	25	<25	<25	25	9106499
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/L	<100	100	<100	<100	100	9104370
F3 (C16-C34 Hydrocarbons)	ug/L	<200	200	<200	<200	200	9104370
F4 (C34-C50 Hydrocarbons)	ug/L	<200	200	<200	<200	200	9104370
Reached Baseline at C50	ug/L	Yes		Yes	Yes		9104370
Surrogate Recovery (%)							
o-Terphenyl	%	84		103	90		9104370
4-Bromofluorobenzene	%	98		97	96		9106499
D4-1,2-Dichloroethane	%	98		99	98		9106499
D8-Toluene	%	100		98	97		9106499
RDL = Reportable Detection Limit QC Batch = Quality Control Batch							



BUREAU
VERITAS

Bureau Veritas Job #: C3AZ816
Report Date: 2023/12/14

exp Services Inc
Client Project #: OTT-23002538-B0
Site Location: 1822-1846 WALKELY
Sampler Initials: SA

TEST SUMMARY

Bureau Veritas ID: XVI157
Sample ID: BH-8
Matrix: Water

Collected: 2023/12/06
Shipped:
Received: 2023/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9103410	N/A	2023/12/12	Automated Statchk
1,3-Dichloropropene Sum	CALC	9103411	N/A	2023/12/14	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9104370	2023/12/11	2023/12/12	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	9106197	N/A	2023/12/13	Nan Raykha
PAH Compounds in Water by GC/MS (SIM)	GC/MS	9104367	2023/12/11	2023/12/11	Jonghan Yoon
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9106499	N/A	2023/12/14	Anna Gabrielyan

Bureau Veritas ID: XVI158
Sample ID: BH-7
Matrix: Water

Collected: 2023/12/06
Shipped:
Received: 2023/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9103410	N/A	2023/12/12	Automated Statchk
1,3-Dichloropropene Sum	CALC	9103411	N/A	2023/12/14	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9104370	2023/12/11	2023/12/12	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	9106197	N/A	2023/12/13	Nan Raykha
PAH Compounds in Water by GC/MS (SIM)	GC/MS	9104367	2023/12/11	2023/12/11	Jonghan Yoon
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9106499	N/A	2023/12/14	Anna Gabrielyan

Bureau Veritas ID: XVI159
Sample ID: BH-12
Matrix: Water

Collected: 2023/12/06
Shipped:
Received: 2023/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9103410	N/A	2023/12/12	Automated Statchk
1,3-Dichloropropene Sum	CALC	9103411	N/A	2023/12/14	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9104370	2023/12/11	2023/12/13	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	9106197	N/A	2023/12/12	Nan Raykha
PAH Compounds in Water by GC/MS (SIM)	GC/MS	9104367	2023/12/11	2023/12/11	Jonghan Yoon
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9106499	N/A	2023/12/14	Anna Gabrielyan



BUREAU
VERITAS

Bureau Veritas Job #: C3AZ816
Report Date: 2023/12/14

exp Services Inc
Client Project #: OTT-23002538-B0
Site Location: 1822-1846 WALKELY
Sampler Initials: SA

GENERAL COMMENTS

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

Package 1	1.7°C
Package 2	1.3°C

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3AZ816

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT

exp Services Inc

Client Project #: OTT-23002538-B0

Site Location: 1822-1846 WALKELY

Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9104367	D10-Anthracene	2023/12/11	104	50 - 130	97	50 - 130	98	%		
9104367	D14-Terphenyl (FS)	2023/12/11	100	50 - 130	98	50 - 130	94	%		
9104367	D8-Acenaphthylene	2023/12/11	99	50 - 130	94	50 - 130	91	%		
9104370	o-Terphenyl	2023/12/12	91	60 - 130	105	60 - 130	89	%		
9106499	4-Bromofluorobenzene	2023/12/14	97	70 - 130	98	70 - 130	95	%		
9106499	D4-1,2-Dichloroethane	2023/12/14	100	70 - 130	98	70 - 130	98	%		
9106499	D8-Toluene	2023/12/14	101	70 - 130	102	70 - 130	99	%		
9104367	1-Methylnaphthalene	2023/12/11	101	50 - 130	96	50 - 130	<0.050	ug/L	4.7	30
9104367	2-Methylnaphthalene	2023/12/11	95	50 - 130	90	50 - 130	<0.050	ug/L	4.6	30
9104367	Acenaphthene	2023/12/11	100	50 - 130	93	50 - 130	<0.050	ug/L	4.9	30
9104367	Acenaphthylene	2023/12/11	100	50 - 130	92	50 - 130	<0.050	ug/L	4.3	30
9104367	Anthracene	2023/12/11	104	50 - 130	94	50 - 130	<0.050	ug/L	8.0	30
9104367	Benzo(a)anthracene	2023/12/11	105	50 - 130	95	50 - 130	<0.050	ug/L	NC	30
9104367	Benzo(a)pyrene	2023/12/11	98	50 - 130	89	50 - 130	<0.0090	ug/L	NC	30
9104367	Benzo(b,j)fluoranthene	2023/12/11	102	50 - 130	91	50 - 130	<0.050	ug/L	NC	30
9104367	Benzo(g,h,i)perylene	2023/12/11	103	50 - 130	93	50 - 130	<0.050	ug/L	NC	30
9104367	Benzo(k)fluoranthene	2023/12/11	96	50 - 130	93	50 - 130	<0.050	ug/L	NC	30
9104367	Chrysene	2023/12/11	101	50 - 130	93	50 - 130	<0.050	ug/L	NC	30
9104367	Dibenzo(a,h)anthracene	2023/12/11	94	50 - 130	84	50 - 130	<0.050	ug/L	NC	30
9104367	Fluoranthene	2023/12/11	104	50 - 130	96	50 - 130	<0.050	ug/L	4.4	30
9104367	Fluorene	2023/12/11	99	50 - 130	90	50 - 130	<0.050	ug/L	4.4	30
9104367	Indeno(1,2,3-cd)pyrene	2023/12/11	101	50 - 130	91	50 - 130	<0.050	ug/L	NC	30
9104367	Naphthalene	2023/12/11	95	50 - 130	90	50 - 130	<0.050	ug/L	3.4	30
9104367	Phenanthrene	2023/12/11	99	50 - 130	91	50 - 130	<0.030	ug/L	3.1	30
9104367	Pyrene	2023/12/11	106	50 - 130	97	50 - 130	<0.050	ug/L	5.2	30
9104370	F2 (C10-C16 Hydrocarbons)	2023/12/13	90	60 - 130	101	60 - 130	<100	ug/L	6.3	30
9104370	F3 (C16-C34 Hydrocarbons)	2023/12/13	91	60 - 130	106	60 - 130	<200	ug/L	NC	30
9104370	F4 (C34-C50 Hydrocarbons)	2023/12/13	90	60 - 130	104	60 - 130	<200	ug/L	NC	30
9106197	Dissolved Antimony (Sb)	2023/12/12	114	80 - 120	108	80 - 120	<0.50	ug/L	NC	20
9106197	Dissolved Arsenic (As)	2023/12/12	99	80 - 120	100	80 - 120	<1.0	ug/L	NC	20
9106197	Dissolved Barium (Ba)	2023/12/12	99	80 - 120	104	80 - 120	<2.0	ug/L	0.67	20
9106197	Dissolved Beryllium (Be)	2023/12/12	103	80 - 120	101	80 - 120	<0.40	ug/L	NC	20



BUREAU
VERITAS

Bureau Veritas Job #: C3AZ816

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-B0

Site Location: 1822-1846 WALKELY

Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9106197	Dissolved Boron (B)	2023/12/12	91	80 - 120	97	80 - 120	<10	ug/L	2.8	20
9106197	Dissolved Cadmium (Cd)	2023/12/12	103	80 - 120	104	80 - 120	<0.090	ug/L	2.2	20
9106197	Dissolved Chromium (Cr)	2023/12/12	100	80 - 120	98	80 - 120	<5.0	ug/L	NC	20
9106197	Dissolved Cobalt (Co)	2023/12/12	96	80 - 120	100	80 - 120	<0.50	ug/L	NC	20
9106197	Dissolved Copper (Cu)	2023/12/12	101	80 - 120	102	80 - 120	<0.90	ug/L	3.5	20
9106197	Dissolved Lead (Pb)	2023/12/12	91	80 - 120	101	80 - 120	<0.50	ug/L	NC	20
9106197	Dissolved Molybdenum (Mo)	2023/12/12	112	80 - 120	109	80 - 120	<0.50	ug/L	NC	20
9106197	Dissolved Nickel (Ni)	2023/12/12	90	80 - 120	96	80 - 120	<1.0	ug/L	NC	20
9106197	Dissolved Selenium (Se)	2023/12/12	96	80 - 120	99	80 - 120	<2.0	ug/L	NC	20
9106197	Dissolved Silver (Ag)	2023/12/12	99	80 - 120	105	80 - 120	<0.090	ug/L	NC	20
9106197	Dissolved Sodium (Na)	2023/12/12	NC	80 - 120	98	80 - 120	<100	ug/L	4.5	20
9106197	Dissolved Thallium (Tl)	2023/12/12	93	80 - 120	104	80 - 120	<0.050	ug/L	NC	20
9106197	Dissolved Uranium (U)	2023/12/12	92	80 - 120	100	80 - 120	<0.10	ug/L	3.8	20
9106197	Dissolved Vanadium (V)	2023/12/12	102	80 - 120	101	80 - 120	<0.50	ug/L	3.8	20
9106197	Dissolved Zinc (Zn)	2023/12/12	93	80 - 120	101	80 - 120	<5.0	ug/L	2.3	20
9106499	1,1,1,2-Tetrachloroethane	2023/12/14	98	70 - 130	98	70 - 130	<0.50	ug/L	NC	30
9106499	1,1,1-Trichloroethane	2023/12/14	99	70 - 130	99	70 - 130	<0.20	ug/L	NC	30
9106499	1,1,2,2-Tetrachloroethane	2023/12/14	105	70 - 130	103	70 - 130	<0.50	ug/L	NC	30
9106499	1,1,2-Trichloroethane	2023/12/14	91	70 - 130	90	70 - 130	<0.50	ug/L	NC	30
9106499	1,1-Dichloroethane	2023/12/14	107	70 - 130	105	70 - 130	<0.20	ug/L	NC	30
9106499	1,1-Dichloroethylene	2023/12/14	102	70 - 130	102	70 - 130	<0.20	ug/L	NC	30
9106499	1,2-Dichlorobenzene	2023/12/14	96	70 - 130	93	70 - 130	<0.50	ug/L	NC	30
9106499	1,2-Dichloroethane	2023/12/14	93	70 - 130	92	70 - 130	<0.50	ug/L	NC	30
9106499	1,2-Dichloropropane	2023/12/14	104	70 - 130	103	70 - 130	<0.20	ug/L	NC	30
9106499	1,3-Dichlorobenzene	2023/12/14	99	70 - 130	96	70 - 130	<0.50	ug/L	NC	30
9106499	1,4-Dichlorobenzene	2023/12/14	107	70 - 130	105	70 - 130	<0.50	ug/L	NC	30
9106499	Acetone (2-Propanone)	2023/12/14	102	60 - 140	103	60 - 140	<10	ug/L	NC (1)	30
9106499	Benzene	2023/12/14	95	70 - 130	95	70 - 130	<0.17	ug/L	4.6	30
9106499	Bromodichloromethane	2023/12/14	103	70 - 130	103	70 - 130	<0.50	ug/L	NC	30
9106499	Bromoform	2023/12/14	86	70 - 130	85	70 - 130	<1.0	ug/L	NC	30
9106499	Bromomethane	2023/12/14	96	60 - 140	105	60 - 140	<0.50	ug/L	NC	30
9106499	Carbon Tetrachloride	2023/12/14	95	70 - 130	94	70 - 130	<0.20	ug/L	NC	30



BUREAU
VERITAS

Bureau Veritas Job #: C3AZ816

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-B0

Site Location: 1822-1846 WALKELY

Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9106499	Chlorobenzene	2023/12/14	99	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
9106499	Chloroform	2023/12/14	101	70 - 130	102	70 - 130	<0.20	ug/L	2.9	30
9106499	cis-1,2-Dichloroethylene	2023/12/14	105	70 - 130	104	70 - 130	<0.50	ug/L	4.7	30
9106499	cis-1,3-Dichloropropene	2023/12/14	82	70 - 130	83	70 - 130	<0.30	ug/L	NC	30
9106499	Dibromochloromethane	2023/12/14	96	70 - 130	96	70 - 130	<0.50	ug/L	NC	30
9106499	Dichlorodifluoromethane (FREON 12)	2023/12/14	110	60 - 140	104	60 - 140	<1.0	ug/L	NC	30
9106499	Ethylbenzene	2023/12/14	90	70 - 130	91	70 - 130	<0.20	ug/L	0.48	30
9106499	Ethylene Dibromide	2023/12/14	101	70 - 130	101	70 - 130	<0.20	ug/L	NC	30
9106499	F1 (C6-C10) - BTEX	2023/12/14					<25	ug/L	9.9	30
9106499	F1 (C6-C10)	2023/12/14	96	60 - 140	97	60 - 140	<25	ug/L	6.2	30
9106499	Hexane	2023/12/14	99	70 - 130	97	70 - 130	<1.0	ug/L	NC	30
9106499	Methyl Ethyl Ketone (2-Butanone)	2023/12/14	103	60 - 140	101	60 - 140	<10	ug/L	NC	30
9106499	Methyl Isobutyl Ketone	2023/12/14	92	70 - 130	91	70 - 130	<5.0	ug/L	NC	30
9106499	Methyl t-butyl ether (MTBE)	2023/12/14	101	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
9106499	Methylene Chloride(Dichloromethane)	2023/12/14	107	70 - 130	107	70 - 130	<2.0	ug/L	NC	30
9106499	o-Xylene	2023/12/14	82	70 - 130	82	70 - 130	<0.20	ug/L	3.3	30
9106499	p+m-Xylene	2023/12/14	93	70 - 130	92	70 - 130	<0.20	ug/L	1.4	30
9106499	Styrene	2023/12/14	98	70 - 130	98	70 - 130	<0.50	ug/L	NC	30
9106499	Tetrachloroethylene	2023/12/14	99	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
9106499	Toluene	2023/12/14	91	70 - 130	92	70 - 130	<0.20	ug/L	0	30
9106499	Total Xylenes	2023/12/14					<0.20	ug/L	1.9	30
9106499	trans-1,2-Dichloroethylene	2023/12/14	100	70 - 130	99	70 - 130	<0.50	ug/L	NC	30
9106499	trans-1,3-Dichloropropene	2023/12/14	87	70 - 130	90	70 - 130	<0.40	ug/L	NC	30
9106499	Trichloroethylene	2023/12/14	100	70 - 130	100	70 - 130	<0.20	ug/L	NC	30
9106499	Trichlorofluoromethane (FREON 11)	2023/12/14	106	70 - 130	105	70 - 130	<0.50	ug/L	NC	30



BUREAU
VERITAS

Bureau Veritas Job #: C3AZ816

Report Date: 2023/12/14

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-B0

Site Location: 1822-1846 WALKELY

Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9106499	Vinyl Chloride	2023/12/14	114	70 - 130	111	70 - 130	<0.20	ug/L	15	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 detection limit was raised due to matrix interference.



BUREAU
VERITAS

Bureau Veritas Job #: C3AZ816
Report Date: 2023/12/14

exp Services Inc
Client Project #: OTT-23002538-B0
Site Location: 1822-1846 WALKELY
Sampler Initials: SA

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.

C3A2816

Presence of Visible Particulate/Sediment

Maxxam Analytics
CAM FCD-01013/5
Page 1 of 1

When there is >1cm of visible particulate/sediment, the amount will be recorded in the field below

Bottle Types

Sample ID	All	Inorganics					Organics										Hydrocarbons							Volatiles				Other										
		CrVI	CN	General	Hg	Metals (Diss.)	Organic 1 of 2	Organic 2 of 2	PCB 1 of 2	PCB 2 of 2	Pest/Herb 1 of 2	Pest/Herb 2 of 2	SVOC/ABN 1 of 2	SVOC/ABN 2 of 2	PAH 1 of 2	PAH 2 of 2	Dioxin/Furan	F1 Vial 1	F1 Vial 2	F1 Vial 3	F1 Vial 4	F2-F4 1 of 2	F2-F4 2 of 2	F4G	VOC Vial 1	VOC Vial 2	VOC Vial 3		VOC Vial 4									
1	BH-8	TS																																				
2	BH-7	TS																																				
3	BH-12	TS																																				
4																																						
5																																						
6																																						
7																																						
8																																						
9																																						
10																																						

Comments:

Except Dissolve Metals

Legend:	
P	Suspended Particulate
TS	Trace Settled Sediment (just covers bottom of container or less)
S	Sediment greater than (>) Trace, but less than (<) 1 cm

Recorded By: (signature/print) *Alan Alam*



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

Received in Ottawa

CHAIN OF CUSTODY



NONT-2023-12-452

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name: #17498 exp Services Inc	Company Name: Accounts Payable	Company Name: Leah Wells	Company Name: 2650 Queensview Drive	Quotation #: C20328	P.O. #: OTT-23002538-B0
Attention: 100-2650 Queensview Drive	Address: Ottawa ON K2B 8H6	Address: Ottawa ON	Address: leah.wells@exp.com	Project Name: 1822-1846 Wakeley	Site #: Shahnaz Abdulkader
Tel: (613) 688-1899	Fax: (613) 225-7337	Tel: AP@exp.com	Fax: Karen.Burke@exp.com	Sampled By:	

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY						ANALYSIS REQUESTED (PLEASE BE SPECIFIC)										Turnaround Time (TAT) Required: Please provide advance notice for rush projects	
Regulation 153 (2011)		Other Regulations		Special Instructions		Field Filtered (please circle): Metals / Hg / Cr VI O Reg 153 VOCs by HS & F.H.F. O Reg 153 PAHs Total Metals Analyte by CPMS BTEXF/VOCs FZYTE HPAHs Metals										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.	
Include Criteria on Certificate of Analysis (Y/N)?																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												# of Bottles	Comments
BH-8	BH-8	Dec 16/23	4:15pm	GW	✓											5	
BH-7	BH-7	↓	3:15pm	↓	↓											5	
BH-12	BH-12	↓	1:15pm	↓	↓											5	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# Jars used and not submitted	1 CE	Laboratory Use Only				
Shahnaz Abdulkader	23/12/23	6:15	Oshini Perem	2023/12/07	11:01			Time Sensitive	Temperature (°C) on Receipt	Custody Seal Present	Yes	No
			Shahnaz Abdulkader	2023/12/07	10:24				0,3,2/2,6,1	Intact		✓

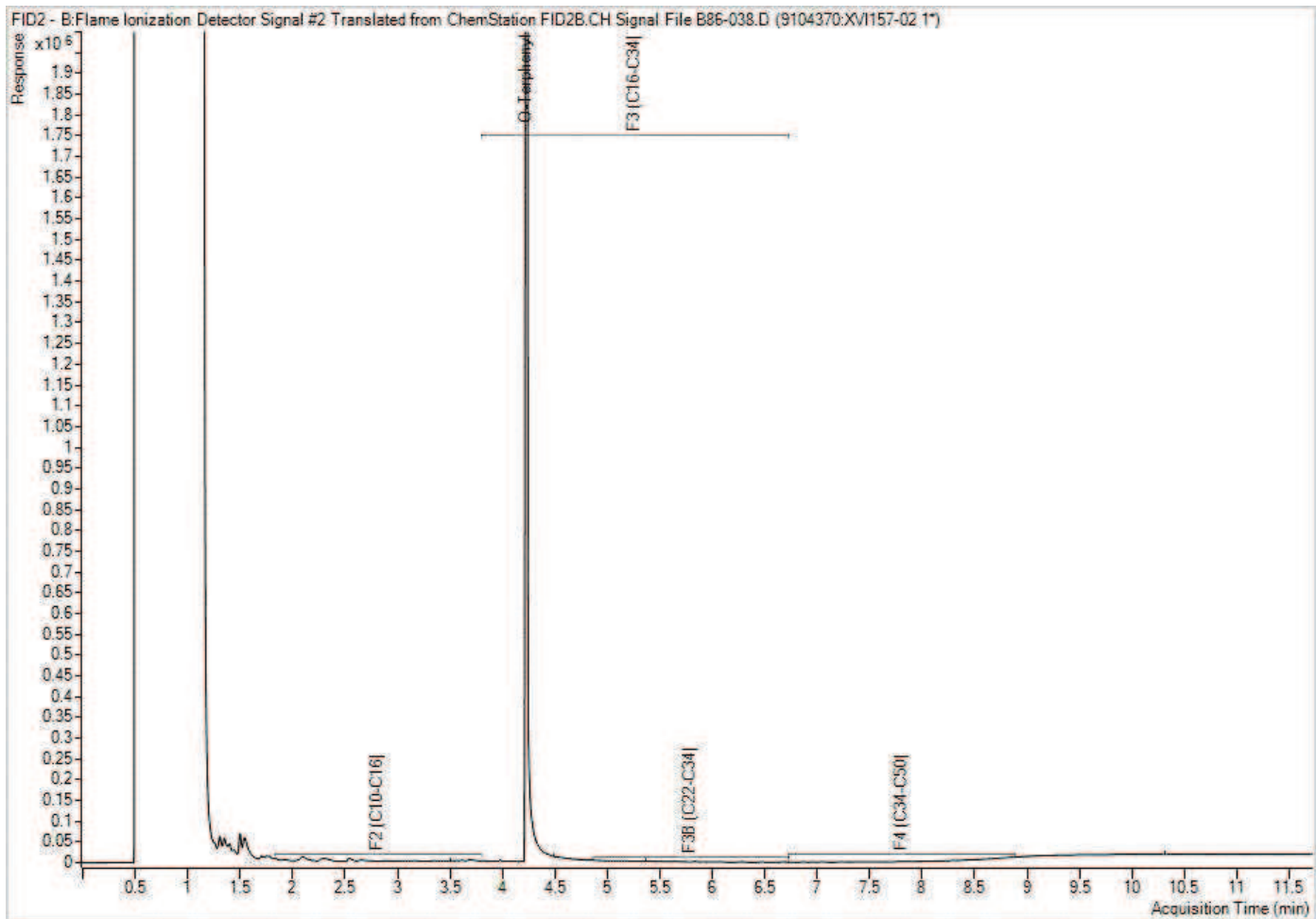
UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COCS-TERMS-AND-CONDITIONS.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

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

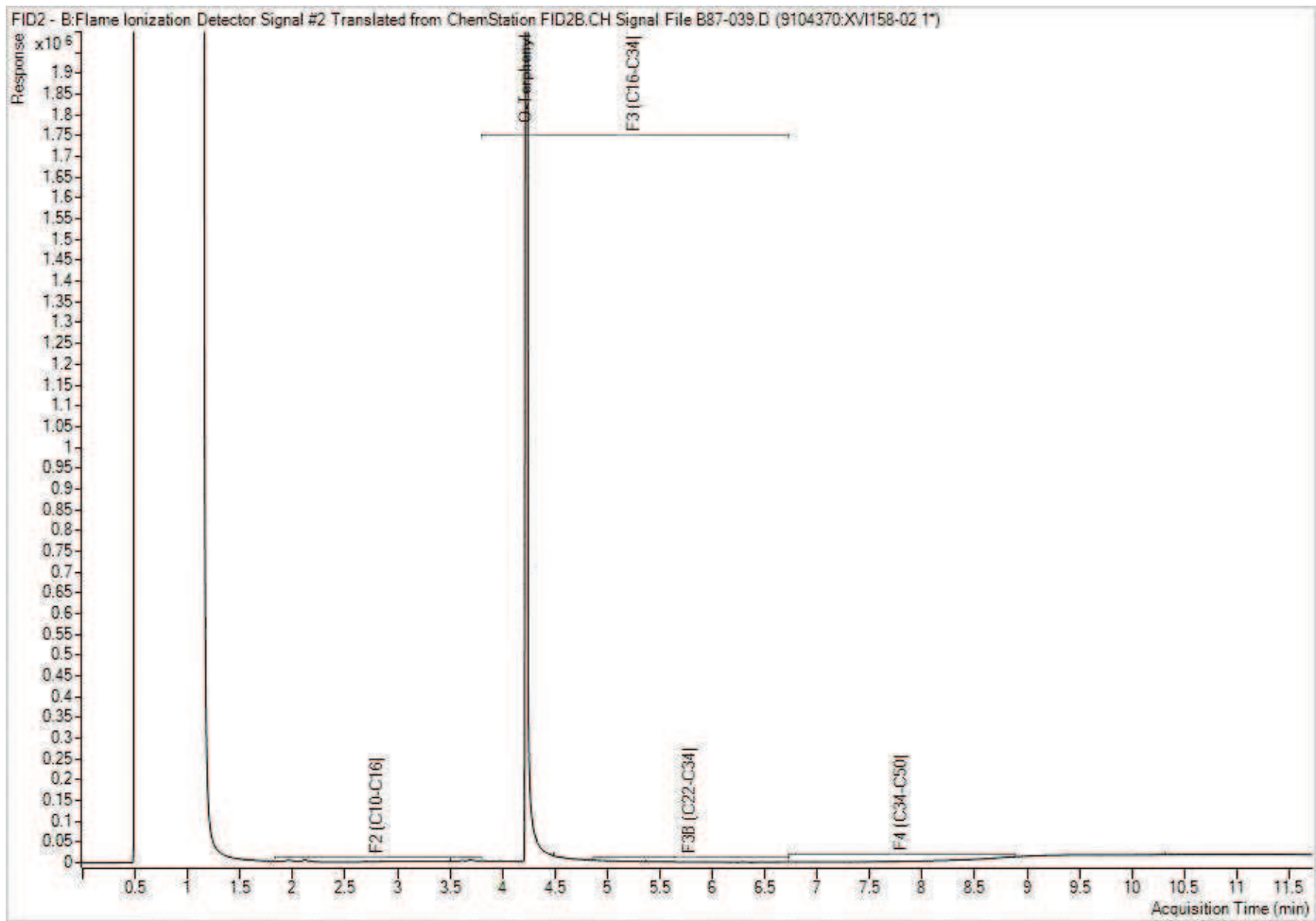
White: Bureau Veritas Yellow: Client
3/4/5
3/2/3

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



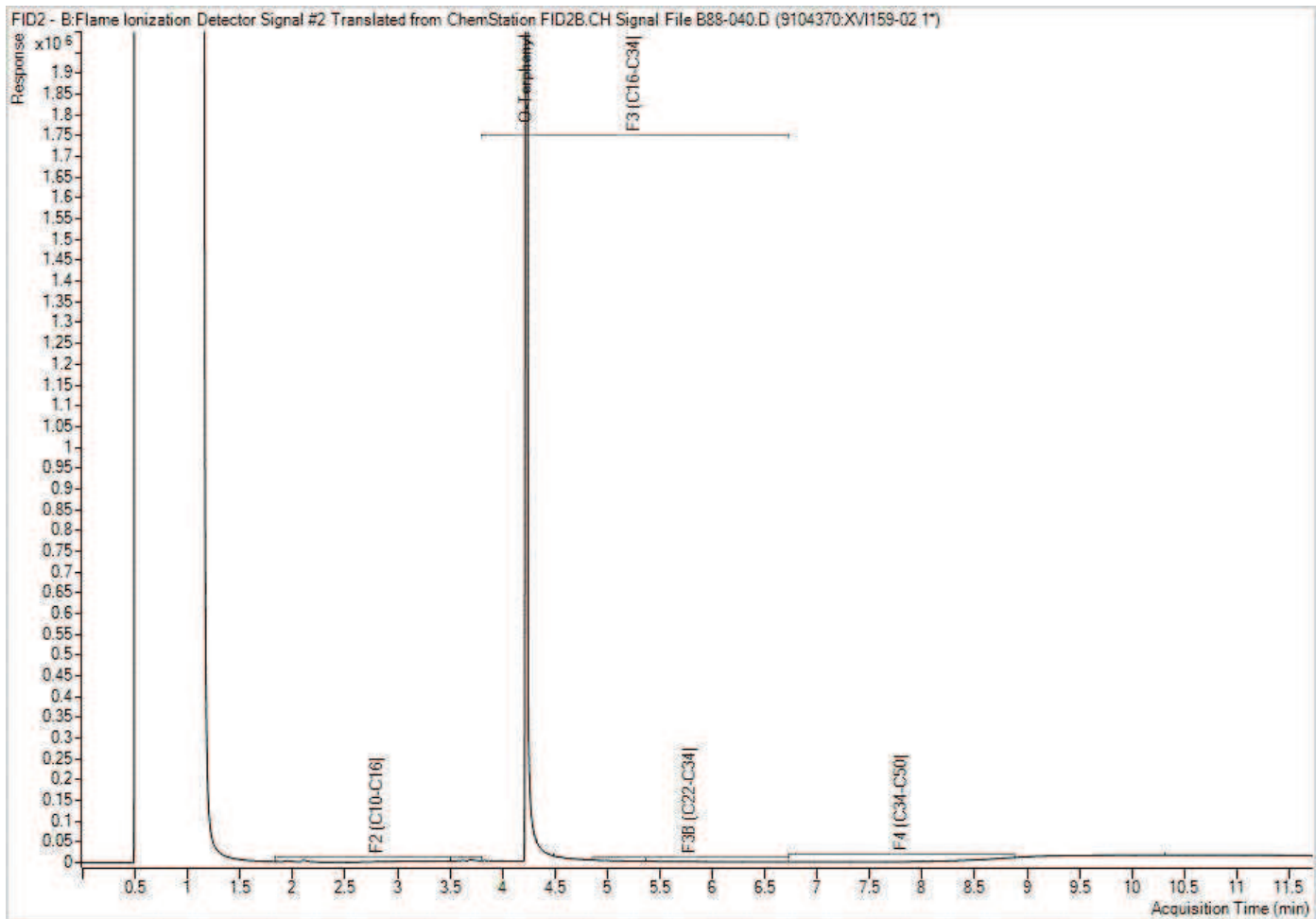
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

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.

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 #: OTT-23002538-B0
 Your C.O.C. #: 968694-01-01

Attention: Leah Wells

exp Services Inc
 Ottawa Branch
 100-2650 Queensview Drive
 Ottawa, ON
 CANADA K2B 8H6

Report Date: 2023/12/22
 Report #: R7966463
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3BJ388

Received: 2023/12/15, 08:42

Sample Matrix: Soil
 # Samples Received: 2

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
Methylnaphthalene Sum (1)	2	N/A	2023/12/20	CAM SOP-00301	EPA 8270D m
1,3-Dichloropropene Sum (1)	2	N/A	2023/12/20		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Soil (1, 2)	2	2023/12/20	2023/12/20	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS (1)	2	2023/12/21	2023/12/21	CAM SOP-00447	EPA 6020B m
Moisture (1)	2	N/A	2023/12/19	CAM SOP-00445	Carter 2nd ed 70.2 m
PAH Compounds in Soil by GC/MS (SIM) (1)	2	2023/12/19	2023/12/20	CAM SOP-00318	EPA 8270E
Volatile Organic Compounds and F1 PHCs (1)	2	N/A	2023/12/20	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, MELCCFP, 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 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



Your Project #: OTT-23002538-B0
Your C.O.C. #: 968694-01-01

Attention: Leah Wells

exp Services Inc
Ottawa Branch
100-2650 Queensview Drive
Ottawa, ON
CANADA K2B 8H6

Report Date: 2023/12/22
Report #: R7966463
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3BJ388

Received: 2023/12/15, 08:42

reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key



Bureau Veritas
22 Dec 2023 10:08:31

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 153 PAHS (SOIL)

Bureau Veritas ID			XXI341	XXI342		
Sampling Date			2023/12/14 10:15	2023/12/14 14:27		
COC Number			968694-01-01	968694-01-01		
	UNITS	Criteria	BH4-SS2	BH3-SS1	RDL	QC Batch
Calculated Parameters						
Methylnaphthalene, 2-(1-)	ug/g	76	<0.0071	<0.0071	0.0071	9117401
Polyaromatic Hydrocarbons						
Acenaphthene	ug/g	96	<0.0050	<0.0050	0.0050	9121354
Acenaphthylene	ug/g	0.15	<0.0050	<0.0050	0.0050	9121354
Anthracene	ug/g	0.67	<0.0050	<0.0050	0.0050	9121354
Benzo(a)anthracene	ug/g	0.96	<0.0050	<0.0050	0.0050	9121354
Benzo(a)pyrene	ug/g	0.3	<0.0050	<0.0050	0.0050	9121354
Benzo(b,j)fluoranthene	ug/g	0.96	<0.0050	<0.0050	0.0050	9121354
Benzo(g,h,i)perylene	ug/g	9.6	<0.0050	<0.0050	0.0050	9121354
Benzo(k)fluoranthene	ug/g	0.96	<0.0050	<0.0050	0.0050	9121354
Chrysene	ug/g	9.6	<0.0050	<0.0050	0.0050	9121354
Dibenzo(a,h)anthracene	ug/g	0.1	<0.0050	<0.0050	0.0050	9121354
Fluoranthene	ug/g	9.6	<0.0050	<0.0050	0.0050	9121354
Fluorene	ug/g	62	<0.0050	<0.0050	0.0050	9121354
Indeno(1,2,3-cd)pyrene	ug/g	0.76	<0.0050	<0.0050	0.0050	9121354
1-Methylnaphthalene	ug/g	76	<0.0050	<0.0050	0.0050	9121354
2-Methylnaphthalene	ug/g	76	<0.0050	<0.0050	0.0050	9121354
Naphthalene	ug/g	9.6	<0.0050	<0.0050	0.0050	9121354
Phenanthrene	ug/g	12	<0.0050	<0.0050	0.0050	9121354
Pyrene	ug/g	96	<0.0050	<0.0050	0.0050	9121354
Surrogate Recovery (%)						
D10-Anthracene	%	-	113	107		9121354
D14-Terphenyl (FS)	%	-	110	104		9121354
D8-Acenaphthylene	%	-	102	97		9121354
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)						
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition						
Soil - Industrial/Commercial/Community - Coarse Textured Soil						



BUREAU
VERITAS

Bureau Veritas Job #: C3BJ388
Report Date: 2023/12/22

exp Services Inc
Client Project #: OTT-23002538-B0
Sampler Initials: MR

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

Bureau Veritas ID			XXI341	XXI342		
Sampling Date			2023/12/14 10:15	2023/12/14 14:27		
COC Number			968694-01-01	968694-01-01		
	UNITS	Criteria	BH4-SS2	BH3-SS1	RDL	QC Batch
Calculated Parameters						
1,3-Dichloropropene (cis+trans)	ug/g	0.18	<0.050	<0.050	0.050	9117399
Volatile Organics						
Acetone (2-Propanone)	ug/g	16	<0.49	<0.49	0.49	9120188
Benzene	ug/g	0.32	<0.0060	<0.0060	0.0060	9120188
Bromodichloromethane	ug/g	18	<0.040	<0.040	0.040	9120188
Bromoform	ug/g	0.61	<0.040	<0.040	0.040	9120188
Bromomethane	ug/g	0.05	<0.040	<0.040	0.040	9120188
Carbon Tetrachloride	ug/g	0.21	<0.040	<0.040	0.040	9120188
Chlorobenzene	ug/g	2.4	<0.040	<0.040	0.040	9120188
Chloroform	ug/g	0.47	<0.040	<0.040	0.040	9120188
Dibromochloromethane	ug/g	13	<0.040	<0.040	0.040	9120188
1,2-Dichlorobenzene	ug/g	6.8	<0.040	<0.040	0.040	9120188
1,3-Dichlorobenzene	ug/g	9.6	<0.040	<0.040	0.040	9120188
1,4-Dichlorobenzene	ug/g	0.2	<0.040	<0.040	0.040	9120188
Dichlorodifluoromethane (FREON 12)	ug/g	16	<0.040	<0.040	0.040	9120188
1,1-Dichloroethane	ug/g	17	<0.040	<0.040	0.040	9120188
1,2-Dichloroethane	ug/g	0.05	<0.049	<0.049	0.049	9120188
1,1-Dichloroethylene	ug/g	0.064	<0.040	<0.040	0.040	9120188
cis-1,2-Dichloroethylene	ug/g	55	<0.040	<0.040	0.040	9120188
trans-1,2-Dichloroethylene	ug/g	1.3	<0.040	<0.040	0.040	9120188
1,2-Dichloropropane	ug/g	0.16	<0.040	<0.040	0.040	9120188
cis-1,3-Dichloropropene	ug/g	0.18	<0.030	<0.030	0.030	9120188
trans-1,3-Dichloropropene	ug/g	0.18	<0.040	<0.040	0.040	9120188
Ethylbenzene	ug/g	9.5	<0.010	<0.010	0.010	9120188
Ethylene Dibromide	ug/g	0.05	<0.040	<0.040	0.040	9120188
Hexane	ug/g	46	<0.040	<0.040	0.040	9120188
Methylene Chloride(Dichloromethane)	ug/g	1.6	<0.049	<0.049	0.049	9120188
Methyl Ethyl Ketone (2-Butanone)	ug/g	70	<0.40	<0.40	0.40	9120188
Methyl Isobutyl Ketone	ug/g	31	<0.40	<0.40	0.40	9120188
Methyl t-butyl ether (MTBE)	ug/g	11	<0.040	<0.040	0.040	9120188
Styrene	ug/g	34	<0.040	<0.040	0.040	9120188
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Criteria: Ontario Reg. 153/04 (Amended April 15, 2011) Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition Soil - Industrial/Commercial/Community - Coarse Textured Soil						



BUREAU
VERITAS

Bureau Veritas Job #: C3BJ388
Report Date: 2023/12/22

exp Services Inc
Client Project #: OTT-23002538-B0
Sampler Initials: MR

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

Bureau Veritas ID			XXI341	XXI342		
Sampling Date			2023/12/14 10:15	2023/12/14 14:27		
COC Number			968694-01-01	968694-01-01		
	UNITS	Criteria	BH4-SS2	BH3-SS1	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/g	0.087	<0.040	<0.040	0.040	9120188
1,1,2,2-Tetrachloroethane	ug/g	0.05	<0.040	<0.040	0.040	9120188
Tetrachloroethylene	ug/g	4.5	0.89	1.7	0.040	9120188
Toluene	ug/g	68	<0.020	<0.020	0.020	9120188
1,1,1-Trichloroethane	ug/g	6.1	<0.040	<0.040	0.040	9120188
1,1,2-Trichloroethane	ug/g	0.05	<0.040	<0.040	0.040	9120188
Trichloroethylene	ug/g	0.91	<0.010	<0.010	0.010	9120188
Trichlorofluoromethane (FREON 11)	ug/g	4	<0.040	<0.040	0.040	9120188
Vinyl Chloride	ug/g	0.032	<0.019	<0.019	0.019	9120188
p+m-Xylene	ug/g	-	<0.020	<0.020	0.020	9120188
o-Xylene	ug/g	-	<0.020	<0.020	0.020	9120188
Total Xylenes	ug/g	26	<0.020	<0.020	0.020	9120188
F1 (C6-C10)	ug/g	55	<10	<10	10	9120188
F1 (C6-C10) - BTEX	ug/g	55	<10	<10	10	9120188
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/g	230	<10	<10	10	9122763
F3 (C16-C34 Hydrocarbons)	ug/g	1700	<50	<50	50	9122763
F4 (C34-C50 Hydrocarbons)	ug/g	3300	<50	<50	50	9122763
Reached Baseline at C50	ug/g	-	Yes	Yes		9122763
Surrogate Recovery (%)						
o-Terphenyl	%	-	94	105		9122763
4-Bromofluorobenzene	%	-	98	99		9120188
D10-o-Xylene	%	-	99	89		9120188
D4-1,2-Dichloroethane	%	-	91	90		9120188
D8-Toluene	%	-	94	94		9120188
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Criteria: Ontario Reg. 153/04 (Amended April 15, 2011) Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition Soil - Industrial/Commercial/Community - Coarse Textured Soil						



BUREAU
VERITAS

Bureau Veritas Job #: C3BJ388
Report Date: 2023/12/22

exp Services Inc
Client Project #: OTT-23002538-B0
Sampler Initials: MR

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		XXI341	XXI342		
Sampling Date		2023/12/14 10:15	2023/12/14 14:27		
COC Number		968694-01-01	968694-01-01		
	UNITS	BH4-SS2	BH3-SS1	RDL	QC Batch
Inorganics					
Moisture	%	9.6	14	1.0	9121327
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					



BUREAU
VERITAS

Bureau Veritas Job #: C3BJ388
Report Date: 2023/12/22

exp Services Inc
Client Project #: OTT-23002538-B0
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ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID			XXI341	XXI342		
Sampling Date			2023/12/14 10:15	2023/12/14 14:27		
COC Number			968694-01-01	968694-01-01		
	UNITS	Criteria	BH4-SS2	BH3-SS1	RDL	QC Batch
Metals						
Acid Extractable Aluminum (Al)	ug/g	-	12000	15000	50	9125513
Acid Extractable Antimony (Sb)	ug/g	40	<0.20	<0.20	0.20	9125513
Acid Extractable Arsenic (As)	ug/g	18	3.6	4.4	1.0	9125513
Acid Extractable Barium (Ba)	ug/g	670	50	64	0.50	9125513
Acid Extractable Beryllium (Be)	ug/g	8	0.56	0.70	0.20	9125513
Acid Extractable Bismuth (Bi)	ug/g	-	<1.0	<1.0	1.0	9125513
Acid Extractable Boron (B)	ug/g	120	7.6	6.7	5.0	9125513
Acid Extractable Cadmium (Cd)	ug/g	1.9	<0.10	<0.10	0.10	9125513
Acid Extractable Calcium (Ca)	ug/g	-	27000	8400	50	9125513
Acid Extractable Chromium (Cr)	ug/g	160	23	23	1.0	9125513
Acid Extractable Cobalt (Co)	ug/g	80	12	11	0.10	9125513
Acid Extractable Copper (Cu)	ug/g	230	19	24	0.50	9125513
Acid Extractable Iron (Fe)	ug/g	-	23000	26000	50	9125513
Acid Extractable Lead (Pb)	ug/g	120	12	12	1.0	9125513
Acid Extractable Magnesium (Mg)	ug/g	-	6200	6100	50	9125513
Acid Extractable Manganese (Mn)	ug/g	-	460	480	1.0	9125513
Acid Extractable Molybdenum (Mo)	ug/g	40	<0.50	0.51	0.50	9125513
Acid Extractable Nickel (Ni)	ug/g	270	21	24	0.50	9125513
Acid Extractable Phosphorus (P)	ug/g	-	850	710	50	9125513
Acid Extractable Potassium (K)	ug/g	-	1600	1700	200	9125513
Acid Extractable Selenium (Se)	ug/g	5.5	<0.50	<0.50	0.50	9125513
Acid Extractable Silver (Ag)	ug/g	40	<0.20	<0.20	0.20	9125513
Acid Extractable Sodium (Na)	ug/g	-	920	190	50	9125513
Acid Extractable Strontium (Sr)	ug/g	-	70	28	1.0	9125513
Acid Extractable Thallium (Tl)	ug/g	3.3	0.12	0.15	0.050	9125513
Acid Extractable Tin (Sn)	ug/g	-	<1.0	1.3	1.0	9125513
Acid Extractable Uranium (U)	ug/g	33	0.77	0.61	0.050	9125513
Acid Extractable Vanadium (V)	ug/g	86	29	31	5.0	9125513
Acid Extractable Zinc (Zn)	ug/g	340	47	52	5.0	9125513
Acid Extractable Mercury (Hg)	ug/g	3.9	<0.050	<0.050	0.050	9125513
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)						
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition						
Soil - Industrial/Commercial/Community - Coarse Textured Soil						



BUREAU
VERITAS

Bureau Veritas Job #: C3BJ388
Report Date: 2023/12/22

exp Services Inc
Client Project #: OTT-23002538-B0
Sampler Initials: MR

TEST SUMMARY

Bureau Veritas ID: XXI341
Sample ID: BH4-SS2
Matrix: Soil

Collected: 2023/12/14
Shipped:
Received: 2023/12/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9117401	N/A	2023/12/20	Automated Statchk
1,3-Dichloropropene Sum	CALC	9117399	N/A	2023/12/20	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9122763	2023/12/20	2023/12/20	Anna Stuglik-Rolland
Acid Extractable Metals by ICPMS	ICP/MS	9125513	2023/12/21	2023/12/21	Thuy Linh Nguyen
Moisture	BAL	9121327	N/A	2023/12/19	Ibadat Preet
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9121354	2023/12/19	2023/12/20	Jonghan Yoon
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9120188	N/A	2023/12/20	Cheng-Yu Sha

Bureau Veritas ID: XXI342
Sample ID: BH3-SS1
Matrix: Soil

Collected: 2023/12/14
Shipped:
Received: 2023/12/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9117401	N/A	2023/12/20	Automated Statchk
1,3-Dichloropropene Sum	CALC	9117399	N/A	2023/12/20	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9122763	2023/12/20	2023/12/20	Anna Stuglik-Rolland
Acid Extractable Metals by ICPMS	ICP/MS	9125513	2023/12/21	2023/12/21	Thuy Linh Nguyen
Moisture	BAL	9121327	N/A	2023/12/19	Ibadat Preet
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9121354	2023/12/19	2023/12/20	Jonghan Yoon
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9120188	N/A	2023/12/20	Cheng-Yu Sha



BUREAU
VERITAS

Bureau Veritas Job #: C3BJ388
Report Date: 2023/12/22

exp Services Inc
Client Project #: OTT-23002538-B0
Sampler Initials: MR

GENERAL COMMENTS

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

Package 1	14.7°C
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Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3BJ388

Report Date: 2023/12/22

QUALITY ASSURANCE REPORT

exp Services Inc

Client Project #: OTT-23002538-B0

Sampler Initials: MR

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9120188	4-Bromofluorobenzene	2023/12/20	100	60 - 140	98	60 - 140	98	%		
9120188	D10-o-Xylene	2023/12/20	97	60 - 130	98	60 - 130	87	%		
9120188	D4-1,2-Dichloroethane	2023/12/20	86	60 - 140	83	60 - 140	89	%		
9120188	D8-Toluene	2023/12/20	99	60 - 140	101	60 - 140	95	%		
9121354	D10-Anthracene	2023/12/20	102	50 - 130	108	50 - 130	112	%		
9121354	D14-Terphenyl (FS)	2023/12/20	99	50 - 130	105	50 - 130	105	%		
9121354	D8-Acenaphthylene	2023/12/20	93	50 - 130	104	50 - 130	100	%		
9122763	o-Terphenyl	2023/12/20	101	60 - 130	93	60 - 130	99	%		
9120188	1,1,1,2-Tetrachloroethane	2023/12/20	98	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
9120188	1,1,1-Trichloroethane	2023/12/20	90	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
9120188	1,1,2,2-Tetrachloroethane	2023/12/20	98	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9120188	1,1,2-Trichloroethane	2023/12/20	83	60 - 140	82	60 - 130	<0.040	ug/g	NC	50
9120188	1,1-Dichloroethane	2023/12/20	101	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
9120188	1,1-Dichloroethylene	2023/12/20	92	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
9120188	1,2-Dichlorobenzene	2023/12/20	94	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9120188	1,2-Dichloroethane	2023/12/20	79	60 - 140	79	60 - 130	<0.049	ug/g	NC	50
9120188	1,2-Dichloropropane	2023/12/20	94	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
9120188	1,3-Dichlorobenzene	2023/12/20	98	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
9120188	1,4-Dichlorobenzene	2023/12/20	105	60 - 140	110	60 - 130	<0.040	ug/g	NC	50
9120188	Acetone (2-Propanone)	2023/12/20	89	60 - 140	77	60 - 140	<0.49	ug/g	NC	50
9120188	Benzene	2023/12/20	91	60 - 140	94	60 - 130	<0.0060	ug/g	NC	50
9120188	Bromodichloromethane	2023/12/20	97	60 - 140	105	60 - 130	<0.040	ug/g	NC	50
9120188	Bromoform	2023/12/20	91	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
9120188	Bromomethane	2023/12/20	100	60 - 140	97	60 - 140	<0.040	ug/g	NC	50
9120188	Carbon Tetrachloride	2023/12/20	89	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
9120188	Chlorobenzene	2023/12/20	97	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
9120188	Chloroform	2023/12/20	95	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
9120188	cis-1,2-Dichloroethylene	2023/12/20	99	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
9120188	cis-1,3-Dichloropropene	2023/12/20	98	60 - 140	96	60 - 130	<0.030	ug/g	NC	50
9120188	Dibromochloromethane	2023/12/20	95	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
9120188	Dichlorodifluoromethane (FREON 12)	2023/12/20	88	60 - 140	96	60 - 140	<0.040	ug/g	NC	50
9120188	Ethylbenzene	2023/12/20	84	60 - 140	88	60 - 130	<0.010	ug/g	NC	50



BUREAU
VERITAS

Bureau Veritas Job #: C3BJ388

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QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-B0

Sampler Initials: MR

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9120188	Ethylene Dibromide	2023/12/20	97	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9120188	F1 (C6-C10) - BTEX	2023/12/20					<10	ug/g	NC	30
9120188	F1 (C6-C10)	2023/12/20	92	60 - 140	97	80 - 120	<10	ug/g	NC	30
9120188	Hexane	2023/12/20	96	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
9120188	Methyl Ethyl Ketone (2-Butanone)	2023/12/20	87	60 - 140	79	60 - 140	<0.40	ug/g	NC	50
9120188	Methyl Isobutyl Ketone	2023/12/20	89	60 - 140	89	60 - 130	<0.40	ug/g	NC	50
9120188	Methyl t-butyl ether (MTBE)	2023/12/20	103	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
9120188	Methylene Chloride(Dichloromethane)	2023/12/20	102	60 - 140	97	60 - 130	<0.049	ug/g	NC	50
9120188	o-Xylene	2023/12/20	78	60 - 140	81	60 - 130	<0.020	ug/g	NC	50
9120188	p+m-Xylene	2023/12/20	86	60 - 140	90	60 - 130	<0.020	ug/g	NC	50
9120188	Styrene	2023/12/20	102	60 - 140	105	60 - 130	<0.040	ug/g	NC	50
9120188	Tetrachloroethylene	2023/12/20	95	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
9120188	Toluene	2023/12/20	82	60 - 140	88	60 - 130	<0.020	ug/g	NC	50
9120188	Total Xylenes	2023/12/20					<0.020	ug/g	NC	50
9120188	trans-1,2-Dichloroethylene	2023/12/20	101	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9120188	trans-1,3-Dichloropropene	2023/12/20	96	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
9120188	Trichloroethylene	2023/12/20	101	60 - 140	110	60 - 130	<0.010	ug/g	NC	50
9120188	Trichlorofluoromethane (FREON 11)	2023/12/20	90	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
9120188	Vinyl Chloride	2023/12/20	93	60 - 140	97	60 - 130	<0.019	ug/g	NC	50
9121327	Moisture	2023/12/19							0.63	20
9121354	1-Methylnaphthalene	2023/12/20	99	50 - 130	108	50 - 130	<0.0050	ug/g	NC	40
9121354	2-Methylnaphthalene	2023/12/20	94	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40
9121354	Acenaphthene	2023/12/20	97	50 - 130	105	50 - 130	<0.0050	ug/g	NC	40
9121354	Acenaphthylene	2023/12/20	94	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40
9121354	Anthracene	2023/12/20	97	50 - 130	105	50 - 130	<0.0050	ug/g	NC	40
9121354	Benzo(a)anthracene	2023/12/20	100	50 - 130	108	50 - 130	<0.0050	ug/g	NC	40
9121354	Benzo(a)pyrene	2023/12/20	92	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40
9121354	Benzo(b,j)fluoranthene	2023/12/20	95	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40
9121354	Benzo(g,h,i)perylene	2023/12/20	98	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40
9121354	Benzo(k)fluoranthene	2023/12/20	86	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40
9121354	Chrysene	2023/12/20	98	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40
9121354	Dibenzo(a,h)anthracene	2023/12/20	90	50 - 130	87	50 - 130	<0.0050	ug/g	NC	40



BUREAU
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Bureau Veritas Job #: C3BJ388

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QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-B0

Sampler Initials: MR

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9121354	Fluoranthene	2023/12/20	98	50 - 130	107	50 - 130	<0.0050	ug/g	NC	40
9121354	Fluorene	2023/12/20	93	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40
9121354	Indeno(1,2,3-cd)pyrene	2023/12/20	94	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40
9121354	Naphthalene	2023/12/20	91	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40
9121354	Phenanthrene	2023/12/20	95	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40
9121354	Pyrene	2023/12/20	100	50 - 130	108	50 - 130	<0.0050	ug/g	NC	40
9122763	F2 (C10-C16 Hydrocarbons)	2023/12/20	110	60 - 130	102	80 - 120	<10	ug/g	NC	30
9122763	F3 (C16-C34 Hydrocarbons)	2023/12/20	109	60 - 130	101	80 - 120	<50	ug/g	NC	30
9122763	F4 (C34-C50 Hydrocarbons)	2023/12/20	107	60 - 130	100	80 - 120	<50	ug/g	NC	30
9125513	Acid Extractable Aluminum (Al)	2023/12/21	NC	75 - 125	105	80 - 120	<50	ug/g		
9125513	Acid Extractable Antimony (Sb)	2023/12/21	86	75 - 125	94	80 - 120	<0.20	ug/g	NC	30
9125513	Acid Extractable Arsenic (As)	2023/12/21	87	75 - 125	96	80 - 120	<1.0	ug/g	9.2	30
9125513	Acid Extractable Barium (Ba)	2023/12/21	NC	75 - 125	96	80 - 120	<0.50	ug/g	1.3	30
9125513	Acid Extractable Beryllium (Be)	2023/12/21	89	75 - 125	93	80 - 120	<0.20	ug/g	NC	30
9125513	Acid Extractable Bismuth (Bi)	2023/12/21	90	75 - 125	99	80 - 120	<1.0	ug/g		
9125513	Acid Extractable Boron (B)	2023/12/21	84	75 - 125	90	80 - 120	<5.0	ug/g	NC	30
9125513	Acid Extractable Cadmium (Cd)	2023/12/21	88	75 - 125	93	80 - 120	<0.10	ug/g	NC	30
9125513	Acid Extractable Calcium (Ca)	2023/12/21	NC	75 - 125	116	80 - 120	<50	ug/g		
9125513	Acid Extractable Chromium (Cr)	2023/12/21	87	75 - 125	95	80 - 120	<1.0	ug/g	5.2	30
9125513	Acid Extractable Cobalt (Co)	2023/12/21	85	75 - 125	95	80 - 120	<0.10	ug/g	4.8	30
9125513	Acid Extractable Copper (Cu)	2023/12/21	86	75 - 125	95	80 - 120	<0.50	ug/g	6.6	30
9125513	Acid Extractable Iron (Fe)	2023/12/21	NC	75 - 125	99	80 - 120	<50	ug/g		
9125513	Acid Extractable Lead (Pb)	2023/12/21	92	75 - 125	100	80 - 120	<1.0	ug/g	5.3	30
9125513	Acid Extractable Magnesium (Mg)	2023/12/21	NC	75 - 125	100	80 - 120	<50	ug/g		
9125513	Acid Extractable Manganese (Mn)	2023/12/21	NC	75 - 125	99	80 - 120	<1.0	ug/g		
9125513	Acid Extractable Mercury (Hg)	2023/12/21	99	75 - 125	106	80 - 120	<0.050	ug/g		
9125513	Acid Extractable Molybdenum (Mo)	2023/12/21	86	75 - 125	90	80 - 120	<0.50	ug/g	NC	30
9125513	Acid Extractable Nickel (Ni)	2023/12/21	87	75 - 125	99	80 - 120	<0.50	ug/g	2.1	30
9125513	Acid Extractable Phosphorus (P)	2023/12/21	NC	75 - 125	104	80 - 120	<50	ug/g		
9125513	Acid Extractable Potassium (K)	2023/12/21	NC	75 - 125	102	80 - 120	<200	ug/g		
9125513	Acid Extractable Selenium (Se)	2023/12/21	91	75 - 125	99	80 - 120	<0.50	ug/g	NC	30
9125513	Acid Extractable Silver (Ag)	2023/12/21	88	75 - 125	94	80 - 120	<0.20	ug/g	NC	30



BUREAU
VERITAS

Bureau Veritas Job #: C3BJ388

Report Date: 2023/12/22

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-B0

Sampler Initials: MR

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9125513	Acid Extractable Sodium (Na)	2023/12/21	NC	75 - 125	103	80 - 120	<50	ug/g		
9125513	Acid Extractable Strontium (Sr)	2023/12/21	NC	75 - 125	95	80 - 120	<1.0	ug/g		
9125513	Acid Extractable Thallium (Tl)	2023/12/21	89	75 - 125	98	80 - 120	<0.050	ug/g	10	30
9125513	Acid Extractable Tin (Sn)	2023/12/21	88	75 - 125	94	80 - 120	<1.0	ug/g		
9125513	Acid Extractable Uranium (U)	2023/12/21	95	75 - 125	103	80 - 120	<0.050	ug/g	25	30
9125513	Acid Extractable Vanadium (V)	2023/12/21	88	75 - 125	98	80 - 120	<5.0	ug/g	2.5	30
9125513	Acid Extractable Zinc (Zn)	2023/12/21	93	75 - 125	127 (1)	80 - 120	<5.0	ug/g	5.1	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) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.



BUREAU
VERITAS

Bureau Veritas Job #: C3BJ388
Report Date: 2023/12/22

exp Services Inc
Client Project #: OTT-23002538-B0
Sampler Initials: MR

VALIDATION SIGNATURE PAGE

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

A handwritten signature in black ink, appearing to read 'Anastassia Hamanov', written over a horizontal line.

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.



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

Received in Ottawa

CHAIN

Page 1 of 1

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name: #17498 exp Services Inc	Company Name: Leah Wells	Quotation #: C20328	Order #: JONT-2023-12-1319		
Attention: Accounts Payable	Attention: Leah Wells	P.O. #: OTT-23002538-B0	Project Manager: Katherine Szozda		
Address: 100-2650 Queensview Drive Ottawa ON K2B 8H6	Address:	Project Name:	Site #		
Tel: (613) 688-1899 Fax: (613) 225-7337	Tel:	Sampled By: Mackenzie Russell	Barcode: C#968694-01-01		
Email: AP@exp.com; Karen.Burke@exp.com	Email: leah.wells@exp.com				

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY					ANALYSIS REQUESTED (PLEASE BE SPECIFIC)			Turnaround Time (TAT) Required: Please provide advance notice for rush projects	
Regulation 153 (2011)		Other Regulations		Special Instructions	Field Filtered (please circle): Metals / Hg / Cr / VI	0 Reg 153 VOCs by HS & F 1-F4 (Soil)	0 Reg 153 PAHs (Soil)	Acid Extractable Metals by CPMS	Regular (Standard) TAT: (will be applied if Rush TAT is not specified): Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Medium/Fine	<input type="checkbox"/> CCME	<input type="checkbox"/> Sanitary Sewer Bylaw					<input checked="" type="checkbox"/>
<input type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> Reg 558	<input type="checkbox"/> Storm Sewer Bylaw					
<input checked="" type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other	<input type="checkbox"/> For RSC	<input type="checkbox"/> MISA	Municipality _____					
<input type="checkbox"/> Table _____			<input type="checkbox"/> PWQO	Reg 406 Table _____					
			<input type="checkbox"/> Other _____						
include Criteria on Certificate of Analysis (Y/N)? <input checked="" type="checkbox"/>									
Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix					# of Bottles
BH4-SS2		12/14/23	10:15	S		✓	✓	✓	3
BH3-SS1		↓	14:27	S		✓	✓	✓	3

* RELINQUISHED BY: (Signature/Print) Mackenzie Russell	Date: (YY/MM/DD) 23/12/15	Time 8:40	RECEIVED BY: (Signature/Print) Samuel Burand	Date: (YY/MM/DD) 2023/12/15	Time 08:42	# jars used and not submitted None	Laboratory Use Only Temperature (°C) on Receiving 13.15.16	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.

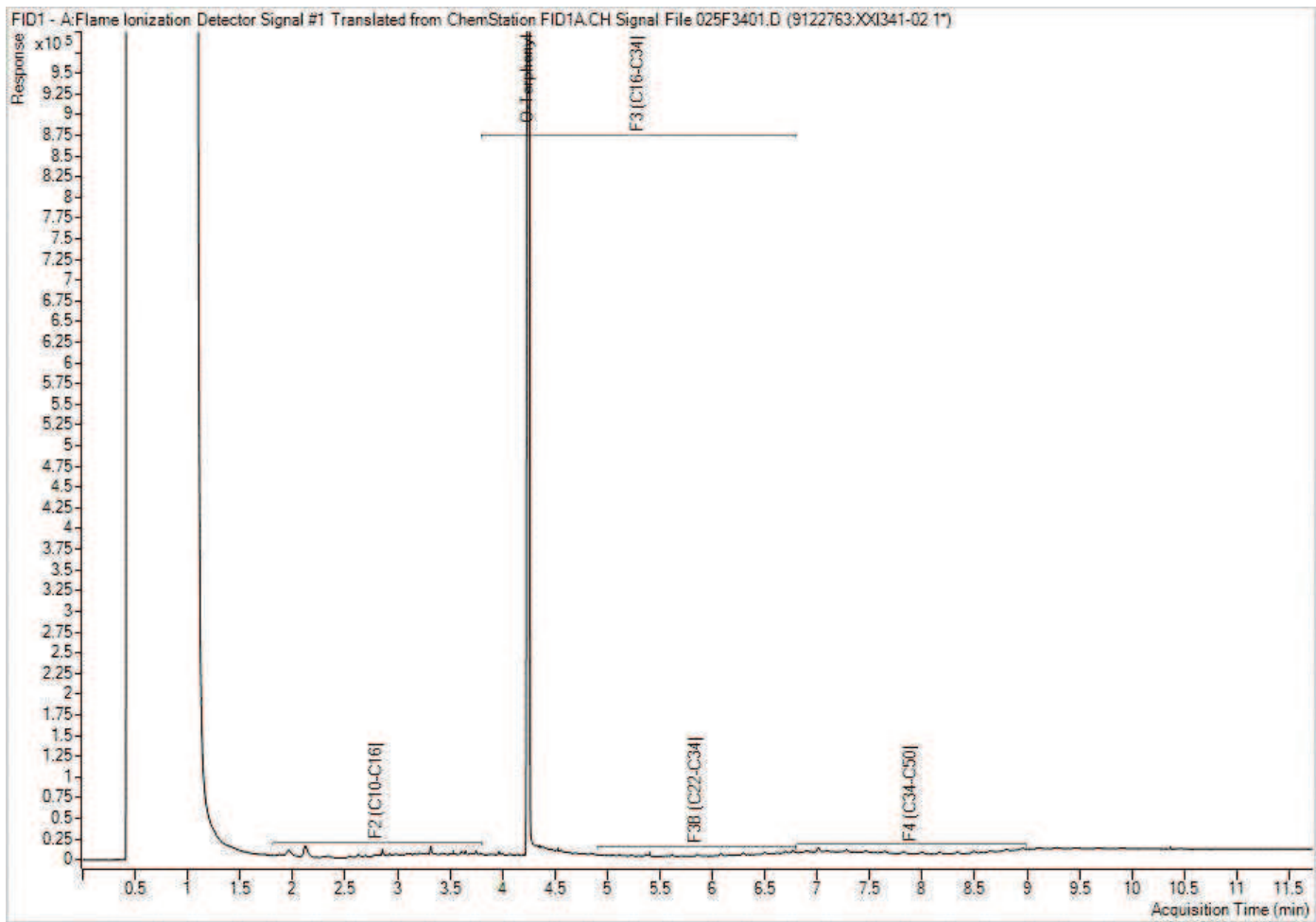
** IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** 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

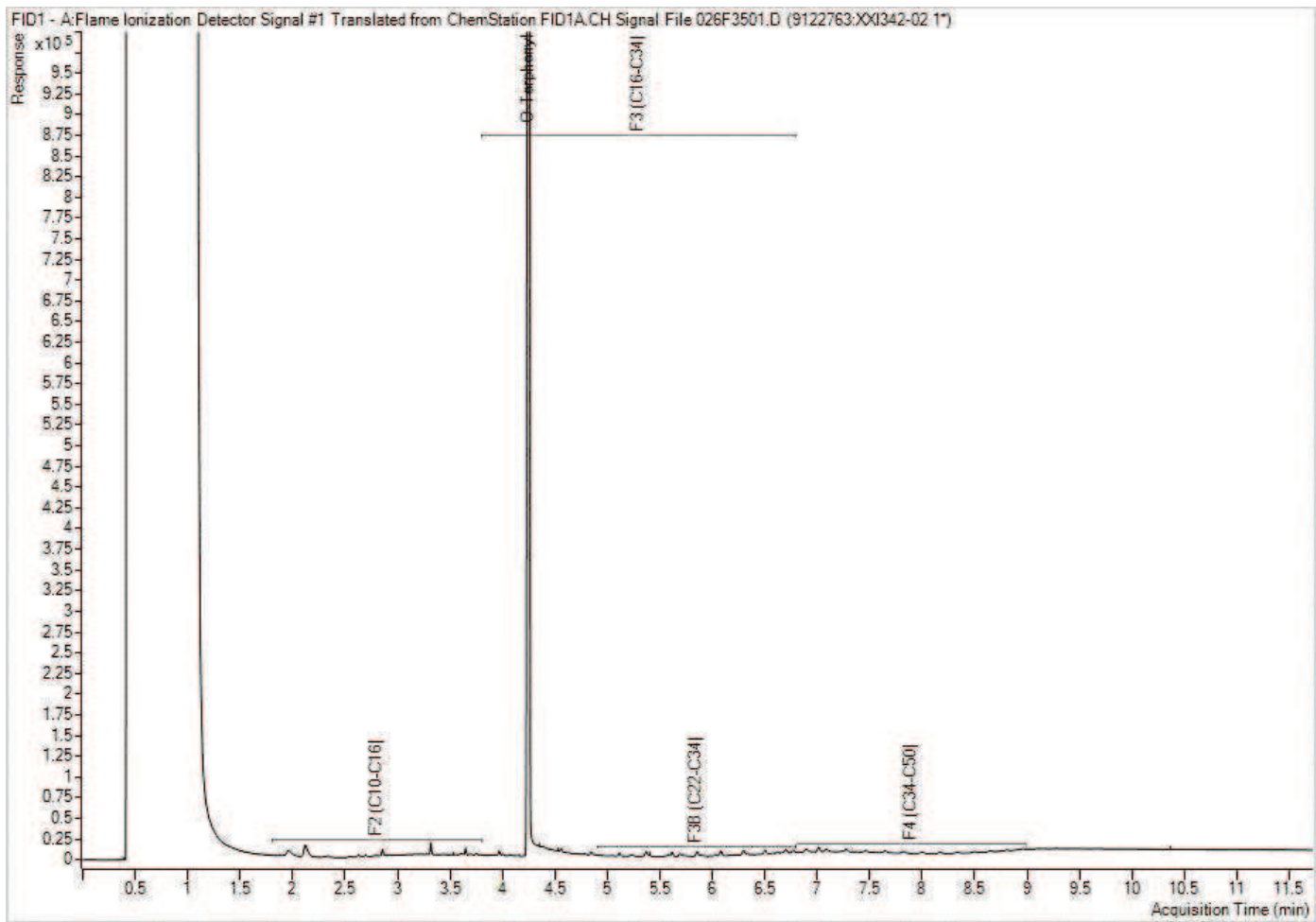
White: Bureau Veritas Yellow: Client
4/0/0

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.

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 #: OTT-23002538-B0
Your C.O.C. #: 968693-01-01

Attention: Leah Wells

exp Services Inc
Ottawa Branch
100-2650 Queensview Drive
Ottawa, ON
CANADA K2B 8H6

Report Date: 2023/12/29
Report #: R7972653
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3BQ489

Received: 2023/12/21, 11:11

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
1,3-Dichloropropene Sum (1)	2	N/A	2023/12/29		EPA 8260C m
Volatile Organic Compounds in Water (1)	2	N/A	2023/12/28	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, MELCCFP, 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



Your Project #: OTT-23002538-B0
Your C.O.C. #: 968693-01-01

Attention: Leah Wells

exp Services Inc
Ottawa Branch
100-2650 Queensview Drive
Ottawa, ON
CANADA K2B 8H6

Report Date: 2023/12/29
Report #: R7972653
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3BQ489

Received: 2023/12/21, 11:11

Encryption Key



**AUTHORIZED REPORT
RAPPORT AUTORISÉ**

Bureau Veritas

29 Dec 2023 13:23:21

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.

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BUREAU
VERITAS

Bureau Veritas Job #: C3BQ489

Report Date: 2023/12/29

exp Services Inc

Client Project #: OTT-23002538-B0

Sampler Initials: MR

O.REG 153 VOCs BY HS (WATER)

Bureau Veritas ID		XYW153	XYW154		
Sampling Date		2023/12/21 09:40	2023/12/21 10:44		
COC Number		968693-01-01	968693-01-01		
	UNITS	BH3	BH4	RDL	QC Batch
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	0.50	9129824
Volatile Organics					
Acetone (2-Propanone)	ug/L	<10	<10	10	9132256
Benzene	ug/L	<0.20	0.34	0.20	9132256
Bromodichloromethane	ug/L	<0.50	<0.50	0.50	9132256
Bromoform	ug/L	<1.0	<1.0	1.0	9132256
Bromomethane	ug/L	<0.50	<0.50	0.50	9132256
Carbon Tetrachloride	ug/L	<0.19	<0.19	0.19	9132256
Chlorobenzene	ug/L	<0.20	<0.20	0.20	9132256
Chloroform	ug/L	4.6	1.1	0.20	9132256
Dibromochloromethane	ug/L	<0.50	<0.50	0.50	9132256
1,2-Dichlorobenzene	ug/L	<0.40	<0.40	0.40	9132256
1,3-Dichlorobenzene	ug/L	<0.40	<0.40	0.40	9132256
1,4-Dichlorobenzene	ug/L	<0.40	<0.40	0.40	9132256
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	1.0	9132256
1,1-Dichloroethane	ug/L	<0.20	<0.20	0.20	9132256
1,2-Dichloroethane	ug/L	<0.49	<0.49	0.49	9132256
1,1-Dichloroethylene	ug/L	<0.20	<0.20	0.20	9132256
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	9132256
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	9132256
1,2-Dichloropropane	ug/L	<0.20	<0.20	0.20	9132256
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	0.30	9132256
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	0.40	9132256
Ethylbenzene	ug/L	<0.20	<0.20	0.20	9132256
Ethylene Dibromide	ug/L	<0.19	<0.19	0.19	9132256
Hexane	ug/L	<1.0	<1.0	1.0	9132256
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	2.0	9132256
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	10	9132256
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	5.0	9132256
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	0.50	9132256
Styrene	ug/L	<0.40	<0.40	0.40	9132256
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	9132256
1,1,2,2-Tetrachloroethane	ug/L	<0.40	<0.40	0.40	9132256
Tetrachloroethylene	ug/L	3.0	<0.20	0.20	9132256
Toluene	ug/L	<0.20	2.1	0.20	9132256
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					



BUREAU
VERITAS

Bureau Veritas Job #: C3BQ489
Report Date: 2023/12/29

exp Services Inc
Client Project #: OTT-23002538-B0
Sampler Initials: MR

O.REG 153 VOCs BY HS (WATER)

Bureau Veritas ID		XYW153	XYW154		
Sampling Date		2023/12/21 09:40	2023/12/21 10:44		
COC Number		968693-01-01	968693-01-01		
	UNITS	BH3	BH4	RDL	QC Batch
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	0.20	9132256
1,1,2-Trichloroethane	ug/L	<0.40	<0.40	0.40	9132256
Trichloroethylene	ug/L	<0.20	<0.20	0.20	9132256
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	0.50	9132256
Vinyl Chloride	ug/L	<0.20	<0.20	0.20	9132256
p+m-Xylene	ug/L	<0.20	0.44	0.20	9132256
o-Xylene	ug/L	<0.20	0.21	0.20	9132256
Total Xylenes	ug/L	<0.20	0.66	0.20	9132256
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	101	101		9132256
D4-1,2-Dichloroethane	%	105	106		9132256
D8-Toluene	%	89	89		9132256
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					



BUREAU
VERITAS

Bureau Veritas Job #: C3BQ489
Report Date: 2023/12/29

exp Services Inc
Client Project #: OTT-23002538-B0
Sampler Initials: MR

TEST SUMMARY

Bureau Veritas ID: XYW153
Sample ID: BH3
Matrix: Water

Collected: 2023/12/21
Shipped:
Received: 2023/12/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9129824	N/A	2023/12/29	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	9132256	N/A	2023/12/28	Gabriella Morrone

Bureau Veritas ID: XYW154
Sample ID: BH4
Matrix: Water

Collected: 2023/12/21
Shipped:
Received: 2023/12/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9129824	N/A	2023/12/29	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	9132256	N/A	2023/12/28	Gabriella Morrone



BUREAU
VERITAS

Bureau Veritas Job #: C3BQ489
Report Date: 2023/12/29

exp Services Inc
Client Project #: OTT-23002538-B0
Sampler Initials: MR

GENERAL COMMENTS

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

Package 1	10.3°C
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Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3BQ489

Report Date: 2023/12/29

QUALITY ASSURANCE REPORT

exp Services Inc

Client Project #: OTT-23002538-B0

Sampler Initials: MR

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9132256	4-Bromofluorobenzene	2023/12/28	103	70 - 130	103	70 - 130	105	%		
9132256	D4-1,2-Dichloroethane	2023/12/28	100	70 - 130	97	70 - 130	103	%		
9132256	D8-Toluene	2023/12/28	105	70 - 130	104	70 - 130	89	%		
9132256	1,1,1,2-Tetrachloroethane	2023/12/28	105	70 - 130	96	70 - 130	<0.50	ug/L		
9132256	1,1,1-Trichloroethane	2023/12/28	103	70 - 130	95	70 - 130	<0.20	ug/L		
9132256	1,1,2,2-Tetrachloroethane	2023/12/28	110	70 - 130	99	70 - 130	<0.40	ug/L	NC	30
9132256	1,1,2-Trichloroethane	2023/12/28	104	70 - 130	93	70 - 130	<0.40	ug/L		
9132256	1,1-Dichloroethane	2023/12/28	103	70 - 130	94	70 - 130	<0.20	ug/L		
9132256	1,1-Dichloroethylene	2023/12/28	99	70 - 130	91	70 - 130	<0.20	ug/L		
9132256	1,2-Dichlorobenzene	2023/12/28	99	70 - 130	93	70 - 130	<0.40	ug/L	NC	30
9132256	1,2-Dichloroethane	2023/12/28	95	70 - 130	85	70 - 130	<0.49	ug/L		
9132256	1,2-Dichloropropane	2023/12/28	103	70 - 130	93	70 - 130	<0.20	ug/L		
9132256	1,3-Dichlorobenzene	2023/12/28	99	70 - 130	94	70 - 130	<0.40	ug/L		
9132256	1,4-Dichlorobenzene	2023/12/28	110	70 - 130	103	70 - 130	<0.40	ug/L	NC	30
9132256	Acetone (2-Propanone)	2023/12/28	102	60 - 140	89	60 - 140	<10	ug/L		
9132256	Benzene	2023/12/28	95	70 - 130	87	70 - 130	<0.20	ug/L	NC	30
9132256	Bromodichloromethane	2023/12/28	109	70 - 130	98	70 - 130	<0.50	ug/L		
9132256	Bromoform	2023/12/28	98	70 - 130	88	70 - 130	<1.0	ug/L		
9132256	Bromomethane	2023/12/28	98	60 - 140	86	60 - 140	<0.50	ug/L		
9132256	Carbon Tetrachloride	2023/12/28	99	70 - 130	91	70 - 130	<0.19	ug/L		
9132256	Chlorobenzene	2023/12/28	106	70 - 130	99	70 - 130	<0.20	ug/L		
9132256	Chloroform	2023/12/28	106	70 - 130	97	70 - 130	<0.20	ug/L		
9132256	cis-1,2-Dichloroethylene	2023/12/28	105	70 - 130	95	70 - 130	<0.50	ug/L		
9132256	cis-1,3-Dichloropropene	2023/12/28	97	70 - 130	88	70 - 130	<0.30	ug/L		
9132256	Dibromochloromethane	2023/12/28	102	70 - 130	92	70 - 130	<0.50	ug/L		
9132256	Dichlorodifluoromethane (FREON 12)	2023/12/28	104	60 - 140	78	60 - 140	<1.0	ug/L		
9132256	Ethylbenzene	2023/12/28	92	70 - 130	86	70 - 130	<0.20	ug/L	NC	30
9132256	Ethylene Dibromide	2023/12/28	106	70 - 130	95	70 - 130	<0.19	ug/L		
9132256	Hexane	2023/12/28	97	70 - 130	88	70 - 130	<1.0	ug/L		
9132256	Methyl Ethyl Ketone (2-Butanone)	2023/12/28	110	60 - 140	97	60 - 140	<10	ug/L		
9132256	Methyl Isobutyl Ketone	2023/12/28	109	70 - 130	97	70 - 130	<5.0	ug/L		
9132256	Methyl t-butyl ether (MTBE)	2023/12/28	106	70 - 130	96	70 - 130	<0.50	ug/L		



BUREAU
VERITAS

Bureau Veritas Job #: C3BQ489

Report Date: 2023/12/29

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-B0

Sampler Initials: MR

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9132256	Methylene Chloride(Dichloromethane)	2023/12/28	105	70 - 130	95	70 - 130	<2.0	ug/L	NC	30
9132256	o-Xylene	2023/12/28	83	70 - 130	82	70 - 130	<0.20	ug/L	NC	30
9132256	p+m-Xylene	2023/12/28	99	70 - 130	93	70 - 130	<0.20	ug/L	NC	30
9132256	Styrene	2023/12/28	108	70 - 130	104	70 - 130	<0.40	ug/L		
9132256	Tetrachloroethylene	2023/12/28	100	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
9132256	Toluene	2023/12/28	97	70 - 130	91	70 - 130	<0.20	ug/L	NC	30
9132256	Total Xylenes	2023/12/28					<0.20	ug/L	NC	30
9132256	trans-1,2-Dichloroethylene	2023/12/28	103	70 - 130	95	70 - 130	<0.50	ug/L		
9132256	trans-1,3-Dichloropropene	2023/12/28	100	70 - 130	90	70 - 130	<0.40	ug/L		
9132256	Trichloroethylene	2023/12/28	102	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
9132256	Trichlorofluoromethane (FREON 11)	2023/12/28	97	70 - 130	88	70 - 130	<0.50	ug/L		
9132256	Vinyl Chloride	2023/12/28	99	70 - 130	87	70 - 130	<0.20	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.

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).



BUREAU
VERITAS

Bureau Veritas Job #: C3BQ489

Report Date: 2023/12/29

exp Services Inc

Client Project #: OTT-23002538-B0

Sampler Initials: MR

VALIDATION SIGNATURE PAGE

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

A handwritten signature in black ink, appearing to read 'A. Hamanov', written over a horizontal line.

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.

C3B8489

Affix Job Label Here

Presence of Visible Particulate/Sediment

Maxxam Analytics
CAM FCD-01013/5
Page 1 of 1

When there is >1cm of visible particulate/sediment, the amount will be recorded in the field below

Bottle Types

Sample ID	All	Inorganics						Organics								Hydrocarbons						Volatiles				Other									
		CrVI	CN	General	Hg	Metals (Diss.)	Organic 1 of 2	Organic 2 of 2	PCB 1 of 2	PCB 2 of 2	Pest/Herb 1 of 2	Pest/Herb 2 of 2	SVOC/ABN 1 of 2	SVOC/ABN 2 of 2	PAH 1 of 2	PAH 2 of 2	Dioxin /furan	F1 Vial 1	F1 Vial 2	F1 Vial 3	F1 Vial 4	F2-F4 1 of 2	F2-F4 2 of 2	F4G	VOC Vial 1		VOC Vial 2	VOC Vial 3	VOC Vial 4						
1	BH3	TS																																	
2	BH4	TS																																	
3																																			
4																																			
5																																			
6																																			
7																																			
8																																			
9																																			
10																																			

Comments:

Legend:

P	Suspended Particulate
TS	Trace Settled Sediment (just covers bottom of container or less)
S	Sediment greater than (>) Trace, but less than (<) 1 cm

Recorded By: (signature/print)

[Handwritten Signature]



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

Received in Ottawa

C



Page | of |

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name: #17498 exp Services Inc	Company Name: Leah Wells	Quotation #: C20328	PROJECT-2023-12-1806		
Attention: Accounts Payable	Attention: Leah Wells	P.O. #:	Order #:		
Address: 100-2650 Queensview Drive	Address:	Project: OTT-23002538-B0	968693		
Ottawa ON K2B 8H6		Project Name:	COC #:		
Tel: (613) 688-1899 Fax: (613) 225-7337	Tel: Fax:	Site #:			
Email: AP@exp.com; Karen.Burke@exp.com	Email: leah.wells@exp.com	Sampled By: Mackenzie Russell	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						ANALYSIS REQUESTED (PLEASE BE SPECIFIC)										Turnaround Time (TAT) Required: Please provide advance notice for rush projects						
Regulation 153 (2011)			Other Regulations			Special Instructions	Field Filtered (please circle): Metals / Hg / Cr-VI	O Reg 153 VOCs by HS & PF4	O Reg 153 PAHs	Dissolved Metals by ICPMS												
<input type="checkbox"/> Table 1	<input checked="" type="checkbox"/> Res/Park	<input type="checkbox"/> Medium/Fine	<input type="checkbox"/> CCME	<input type="checkbox"/> Sanitary Sewer Bylaw																		
<input type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> Reg 558	<input type="checkbox"/> Storm Sewer Bylaw																		
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other	<input type="checkbox"/> For RSC	<input type="checkbox"/> MISA	Municipality _____																		
<input checked="" type="checkbox"/> Table F			<input type="checkbox"/> PWQO	<input type="checkbox"/> Reg 406 Table _____																		
Include Criteria on Certificate of Analysis (Y/N)?																						
Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix																		
BH3		12/21/2023	9:40	GW			✓														2	
BH4		↓	10:44	↓			✓														2	

RELINQUISHED BY: (Signature/Print) <i>Mackenzie Russell</i>	Date: (YY/MM/DD) 25/12/21	Time 11:10	RECEIVED BY: (Signature/Print) <i>Oshini Perera</i>	Date: (YY/MM/DD) 2023/12/21	Time 11:11	# jars used and not submitted 1 Co packs	Laboratory Use Only (one ice pack only)	Temperature (°C) on Receipt 10, 10, 11	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/COCS-TERMS-AND-CONDITIONS.

** 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

5/8/21



Your Project #: OTT-23002538-AO
 Your C.O.C. #: 961363-03-01

Attention: Leah Wells

exp Services Inc
 Ottawa Branch
 100-2650 Queensview Drive
 Ottawa, ON
 CANADA K2B 8H6

Report Date: 2023/11/09
 Report #: R7904008
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3Y3431

Received: 2023/11/01, 15:49

Sample Matrix: Soil
 # Samples Received: 18

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum (1)	18	N/A	2023/11/07	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron (1)	13	2023/11/03	2023/11/06	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron (1)	5	2023/11/06	2023/11/06	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum (1)	8	N/A	2023/11/06		EPA 8260C m
1,3-Dichloropropene Sum (1)	10	N/A	2023/11/07		EPA 8260C m
Free (WAD) Cyanide (1)	17	2023/11/06	2023/11/06	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide (1)	1	2023/11/07	2023/11/07	CAM SOP-00457	OMOE E3015 m
Conductivity (1)	18	2023/11/06	2023/11/06	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1, 2)	18	2023/11/06	2023/11/07	CAM SOP-00436	EPA 3060A/7199 m
Petroleum Hydrocarbons F2-F4 in Soil (1, 3)	6	2023/11/06	2023/11/06	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (1, 3)	12	2023/11/06	2023/11/07	CAM SOP-00316	CCME CWS m
F4G (CCME Hydrocarbons Gravimetric) (1)	3	2023/11/09	2023/11/09	CAM SOP-00316	CCME PHC-CWS m
Acid Extractable Metals by ICPMS (1)	5	2023/11/03	2023/11/07	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS (1)	3	2023/11/04	2023/11/06	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS (1)	10	2023/11/04	2023/11/07	CAM SOP-00447	EPA 6020B m
Moisture (1)	18	N/A	2023/11/03	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM) (1)	18	2023/11/05	2023/11/05	CAM SOP-00318	EPA 8270E
pH CaCl2 EXTRACT (1)	18	2023/11/06	2023/11/06	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR) (1)	18	N/A	2023/11/07	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs (1)	8	N/A	2023/11/04	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds and F1 PHCs (1)	6	N/A	2023/11/06	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds and F1 PHCs (1)	4	N/A	2023/11/07	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, MELCCFP, 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.



Your Project #: OTT-23002538-AO
Your C.O.C. #: 961363-03-01

Attention: Leah Wells

exp Services Inc
Ottawa Branch
100-2650 Queensview Drive
Ottawa, ON
CANADA K2B 8H6

Report Date: 2023/11/09
Report #: R7904008
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3Y3431
Received: 2023/11/01, 15:49

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) 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 conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key



Bureau Veritas
09 Nov 2023 15:55:14

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.



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		XMH375		XMH376		XMH377		
Sampling Date		2023/10/26 14:00		2023/10/26 14:00		2023/10/26 14:00		
COC Number		961363-03-01		961363-03-01		961363-03-01		
	UNITS	BH-1 SS2	QC Batch	DUP 2	QC Batch	BH-1 SS3	RDL	QC Batch

Calculated Parameters								
Sodium Adsorption Ratio	N/A	11	9024979	13	9024979	18		9024979
Inorganics								
Conductivity	mS/cm	1.1	9031089	0.65	9031062	0.51	0.002	9031089
Available (CaCl2) pH	pH	6.45	9030865	4.99	9030865	6.63		9030865
WAD Cyanide (Free)	ug/g	<0.01	9032757	<0.01	9030462	<0.01	0.01	9030462
Chromium (VI)	ug/g	0.22	9031125	0.23	9031125	<0.18	0.18	9031125
Metals								
Hot Water Ext. Boron (B)	ug/g	0.092	9027882	0.11	9027893	0.16	0.050	9027882
Acid Extractable Antimony (Sb)	ug/g	<0.20	9027668	<0.20	9029430	0.20	0.20	9027668
Acid Extractable Arsenic (As)	ug/g	4.4	9027668	5.0	9029430	7.6	1.0	9027668
Acid Extractable Barium (Ba)	ug/g	66	9027668	71	9029430	100	0.50	9027668
Acid Extractable Beryllium (Be)	ug/g	0.77	9027668	0.88	9029430	1.0	0.20	9027668
Acid Extractable Boron (B)	ug/g	<5.0	9027668	5.2	9029430	6.5	5.0	9027668
Acid Extractable Cadmium (Cd)	ug/g	0.10	9027668	0.12	9029430	0.13	0.10	9027668
Acid Extractable Chromium (Cr)	ug/g	25	9027668	28	9029430	32	1.0	9027668
Acid Extractable Cobalt (Co)	ug/g	10	9027668	11	9029430	23	0.10	9027668
Acid Extractable Copper (Cu)	ug/g	23	9027668	27	9029430	40	0.50	9027668
Acid Extractable Lead (Pb)	ug/g	11	9027668	13	9029430	18	1.0	9027668
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	9027668	<0.50	9029430	1.0	0.50	9027668
Acid Extractable Nickel (Ni)	ug/g	28	9027668	31	9029430	42	0.50	9027668
Acid Extractable Selenium (Se)	ug/g	<0.50	9027668	<0.50	9029430	<0.50	0.50	9027668
Acid Extractable Silver (Ag)	ug/g	<0.20	9027668	<0.20	9029430	<0.20	0.20	9027668
Acid Extractable Thallium (Tl)	ug/g	0.14	9027668	0.16	9029430	0.19	0.050	9027668
Acid Extractable Uranium (U)	ug/g	0.61	9027668	0.77	9029430	0.74	0.050	9027668
Acid Extractable Vanadium (V)	ug/g	30	9027668	34	9029430	36	5.0	9027668
Acid Extractable Zinc (Zn)	ug/g	49	9027668	55	9029430	90	5.0	9027668
Acid Extractable Mercury (Hg)	ug/g	<0.050	9027668	<0.050	9029430	0.067	0.050	9027668
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		XMH378		XMH379	XMH380			XMH380		
Sampling Date		2023/10/30 10:00		2023/10/30 10:00	2023/10/27 15:00			2023/10/27 15:00		
COC Number		961363-03-01		961363-03-01	961363-03-01			961363-03-01		
	UNITS	BH-2 AS3	QC Batch	BH-2 SS1	BH-6 SS1	RDL	QC Batch	BH-6 SS1 Lab-Dup	RDL	QC Batch

Calculated Parameters

Sodium Adsorption Ratio	N/A	8.1	9024979	4.6	11		9024979			
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Inorganics

Conductivity	mS/cm	0.42	9031270	0.27	0.38	0.002	9031062			
Available (CaCl2) pH	pH	7.37	9030312	7.49	7.56		9030312			
WAD Cyanide (Free)	ug/g	<0.01	9030480	<0.01	<0.01	0.01	9030480	<0.01	0.01	9030480
Chromium (VI)	ug/g	<0.18	9030577	<0.18	<0.18	0.18	9030577	<0.18	0.18	9030577

Metals

Hot Water Ext. Boron (B)	ug/g	0.45	9027893	0.096	0.20	0.050	9027893			
Acid Extractable Antimony (Sb)	ug/g	0.28	9029430	0.23	0.21	0.20	9029430			
Acid Extractable Arsenic (As)	ug/g	6.9	9029430	8.1	4.3	1.0	9029430			
Acid Extractable Barium (Ba)	ug/g	170	9029430	110	73	0.50	9029430			
Acid Extractable Beryllium (Be)	ug/g	0.97	9029430	0.65	0.60	0.20	9029430			
Acid Extractable Boron (B)	ug/g	9.5	9029430	<5.0	5.6	5.0	9029430			
Acid Extractable Cadmium (Cd)	ug/g	0.12	9029430	0.23	0.14	0.10	9029430			
Acid Extractable Chromium (Cr)	ug/g	32	9029430	23	21	1.0	9029430			
Acid Extractable Cobalt (Co)	ug/g	18	9029430	11	14	0.10	9029430			
Acid Extractable Copper (Cu)	ug/g	40	9029430	19	22	0.50	9029430			
Acid Extractable Lead (Pb)	ug/g	20	9029430	19	23	1.0	9029430			
Acid Extractable Molybdenum (Mo)	ug/g	1.2	9029430	1.6	0.95	0.50	9029430			
Acid Extractable Nickel (Ni)	ug/g	42	9029430	25	27	0.50	9029430			
Acid Extractable Selenium (Se)	ug/g	<0.50	9029430	<0.50	<0.50	0.50	9029430			
Acid Extractable Silver (Ag)	ug/g	<0.20	9029430	<0.20	<0.20	0.20	9029430			
Acid Extractable Thallium (Tl)	ug/g	0.16	9029430	0.16	0.17	0.050	9029430			
Acid Extractable Uranium (U)	ug/g	0.98	9029430	0.66	0.60	0.050	9029430			
Acid Extractable Vanadium (V)	ug/g	32	9029430	31	27	5.0	9029430			
Acid Extractable Zinc (Zn)	ug/g	93	9029430	69	62	5.0	9029430			
Acid Extractable Mercury (Hg)	ug/g	<0.050	9029430	<0.050	<0.050	0.050	9029430			

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



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		XMH381		XMH382	XMH383		XMH384		
Sampling Date		2023/10/27 15:00		2023/10/27 09:30	2023/10/27 09:30		2023/10/27 09:00		
COC Number		961363-03-01		961363-03-01	961363-03-01		961363-03-01		
	UNITS	BH-6 SS2	QC Batch	BH-7 SS2A	BH-7 SS2B	QC Batch	BH-8 AS3	RDL	QC Batch

Calculated Parameters									
Sodium Adsorption Ratio	N/A	18	9024979	5.8	21	9024979	7.1		9024979
Inorganics									
Conductivity	mS/cm	0.53	9031089	0.22	0.61	9031062	0.55	0.002	9031062
Available (CaCl2) pH	pH	7.57	9030865	7.71	8.78	9030312	7.65		9030312
WAD Cyanide (Free)	ug/g	<0.01	9030462	<0.01	<0.01	9030480	<0.01	0.01	9030480
Chromium (VI)	ug/g	<0.18	9031125	<0.18	<0.18	9030577	<0.18	0.18	9030577
Metals									
Hot Water Ext. Boron (B)	ug/g	0.21	9027882	0.14	0.26	9027893	0.56	0.050	9030355
Acid Extractable Antimony (Sb)	ug/g	0.35	9027668	<0.20	<0.20	9029430	<0.20	0.20	9029430
Acid Extractable Arsenic (As)	ug/g	6.8	9027668	1.3	3.4	9029430	2.7	1.0	9029430
Acid Extractable Barium (Ba)	ug/g	290	9027668	31	140	9029430	290	0.50	9029430
Acid Extractable Beryllium (Be)	ug/g	0.98	9027668	0.21	0.62	9029430	0.36	0.20	9029430
Acid Extractable Boron (B)	ug/g	7.6	9027668	<5.0	6.6	9029430	11	5.0	9029430
Acid Extractable Cadmium (Cd)	ug/g	0.30	9027668	<0.10	0.12	9029430	<0.10	0.10	9029430
Acid Extractable Chromium (Cr)	ug/g	30	9027668	11	24	9029430	18	1.0	9029430
Acid Extractable Cobalt (Co)	ug/g	20	9027668	4.9	15	9029430	8.5	0.10	9029430
Acid Extractable Copper (Cu)	ug/g	43	9027668	11	25	9029430	17	0.50	9029430
Acid Extractable Lead (Pb)	ug/g	26	9027668	5.6	21	9029430	18	1.0	9029430
Acid Extractable Molybdenum (Mo)	ug/g	1.8	9027668	1.1	1.2	9029430	0.77	0.50	9029430
Acid Extractable Nickel (Ni)	ug/g	48	9027668	9.2	30	9029430	16	0.50	9029430
Acid Extractable Selenium (Se)	ug/g	<0.50	9027668	<0.50	<0.50	9029430	<0.50	0.50	9029430
Acid Extractable Silver (Ag)	ug/g	<0.20	9027668	<0.20	<0.20	9029430	<0.20	0.20	9029430
Acid Extractable Thallium (Tl)	ug/g	0.20	9027668	0.12	0.14	9029430	0.18	0.050	9029430
Acid Extractable Uranium (U)	ug/g	0.74	9027668	0.49	1.1	9029430	0.41	0.050	9029430
Acid Extractable Vanadium (V)	ug/g	32	9027668	20	28	9029430	17	5.0	9029430
Acid Extractable Zinc (Zn)	ug/g	100	9027668	18	67	9029430	32	5.0	9029430
Acid Extractable Mercury (Hg)	ug/g	<0.050	9027668	<0.050	<0.050	9029430	<0.050	0.050	9029430
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		XMH385		XMH386		XMH387		
Sampling Date		2023/10/26 11:00		2023/10/26 11:00		2023/10/26 12:00		
COC Number		961363-03-01		961363-03-01		961363-03-01		
	UNITS	BH-9 AS1	QC Batch	BH-9 SS2	QC Batch	BH-10 AS1	RDL	QC Batch

Calculated Parameters

Sodium Adsorption Ratio	N/A	0.44	9024979	26	9024979	4.1		9024979
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Inorganics

Conductivity	mS/cm	0.15	9031089	0.68	9031062	0.24	0.002	9031270
Available (CaCl2) pH	pH	8.01	9030865	7.58	9030312	7.76		9030901
WAD Cyanide (Free)	ug/g	<0.01	9030462	<0.01	9030480	<0.01	0.01	9030480
Chromium (VI)	ug/g	0.18	9031125	<0.18	9030577	<0.18	0.18	9030577

Metals

Hot Water Ext. Boron (B)	ug/g	0.23	9030355	0.14	9027893	0.19	0.050	9030355
Acid Extractable Antimony (Sb)	ug/g	<0.20	9027668	<0.20	9029430	<0.20	0.20	9029438
Acid Extractable Arsenic (As)	ug/g	6.8	9027668	6.5	9029430	7.2	1.0	9029438
Acid Extractable Barium (Ba)	ug/g	6.7	9027668	140	9029430	27	0.50	9029438
Acid Extractable Beryllium (Be)	ug/g	0.21	9027668	0.83	9029430	0.43	0.20	9029438
Acid Extractable Boron (B)	ug/g	5.8	9027668	7.1	9029430	6.8	5.0	9029438
Acid Extractable Cadmium (Cd)	ug/g	0.23	9027668	0.17	9029430	0.36	0.10	9029438
Acid Extractable Chromium (Cr)	ug/g	8.7	9027668	28	9029430	14	1.0	9029438
Acid Extractable Cobalt (Co)	ug/g	5.6	9027668	19	9029430	7.7	0.10	9029438
Acid Extractable Copper (Cu)	ug/g	11	9027668	40	9029430	15	0.50	9029438
Acid Extractable Lead (Pb)	ug/g	49	9027668	16	9029430	35	1.0	9029438
Acid Extractable Molybdenum (Mo)	ug/g	4.8	9027668	1.3	9029430	3.1	0.50	9029438
Acid Extractable Nickel (Ni)	ug/g	13	9027668	39	9029430	19	0.50	9029438
Acid Extractable Selenium (Se)	ug/g	<0.50	9027668	<0.50	9029430	<0.50	0.50	9029438
Acid Extractable Silver (Ag)	ug/g	<0.20	9027668	<0.20	9029430	<0.20	0.20	9029438
Acid Extractable Thallium (Tl)	ug/g	0.15	9027668	0.16	9029430	0.22	0.050	9029438
Acid Extractable Uranium (U)	ug/g	0.57	9027668	0.68	9029430	0.61	0.050	9029438
Acid Extractable Vanadium (V)	ug/g	13	9027668	32	9029430	23	5.0	9029438
Acid Extractable Zinc (Zn)	ug/g	29	9027668	99	9029430	40	5.0	9029438
Acid Extractable Mercury (Hg)	ug/g	<0.050	9027668	<0.050	9029430	<0.050	0.050	9029438

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		XMH388			XMH388			XMH389		
Sampling Date		2023/10/26 12:00			2023/10/26 12:00			2023/10/30 14:00		
COC Number		961363-03-01			961363-03-01			961363-03-01		
	UNITS	BH-10 SS2	RDL	QC Batch	BH-10 SS2 Lab-Dup	RDL	QC Batch	BH-11 SS1	RDL	QC Batch

Calculated Parameters

Sodium Adsorption Ratio	N/A	7.2		9024979				18		9024979
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Inorganics

Conductivity	mS/cm	0.24	0.002	9031270				0.60	0.002	9031062
Available (CaCl2) pH	pH	7.39		9030901				7.42		9030312
WAD Cyanide (Free)	ug/g	<0.01	0.01	9030480				<0.01	0.01	9030480
Chromium (VI)	ug/g	<0.18	0.18	9030577				<0.18	0.18	9030577

Metals

Hot Water Ext. Boron (B)	ug/g	0.16	0.050	9030369	0.15	0.050	9030369	0.10	0.050	9027893
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	9029438				<0.20	0.20	9029430
Acid Extractable Arsenic (As)	ug/g	5.0	1.0	9029438				2.9	1.0	9029430
Acid Extractable Barium (Ba)	ug/g	45	0.50	9029438				32	0.50	9029430
Acid Extractable Beryllium (Be)	ug/g	0.71	0.20	9029438				0.26	0.20	9029430
Acid Extractable Boron (B)	ug/g	5.8	5.0	9029438				5.4	5.0	9029430
Acid Extractable Cadmium (Cd)	ug/g	0.10	0.10	9029438				<0.10	0.10	9029430
Acid Extractable Chromium (Cr)	ug/g	24	1.0	9029438				12	1.0	9029430
Acid Extractable Cobalt (Co)	ug/g	13	0.10	9029438				5.7	0.10	9029430
Acid Extractable Copper (Cu)	ug/g	28	0.50	9029438				14	0.50	9029430
Acid Extractable Lead (Pb)	ug/g	16	1.0	9029438				7.5	1.0	9029430
Acid Extractable Molybdenum (Mo)	ug/g	0.80	0.50	9029438				1.4	0.50	9029430
Acid Extractable Nickel (Ni)	ug/g	27	0.50	9029438				11	0.50	9029430
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	9029438				<0.50	0.50	9029430
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	9029438				<0.20	0.20	9029430
Acid Extractable Thallium (Tl)	ug/g	0.12	0.050	9029438				0.18	0.050	9029430
Acid Extractable Uranium (U)	ug/g	0.83	0.050	9029438				0.58	0.050	9029430
Acid Extractable Vanadium (V)	ug/g	33	5.0	9029438				24	5.0	9029430
Acid Extractable Zinc (Zn)	ug/g	78	5.0	9029438				24	5.0	9029430
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	9029438				<0.050	0.050	9029430

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



BUREAU
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Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		XMH390		XMH391		XMH392		
Sampling Date		2023/10/30 14:00		2023/10/26 12:00		2023/10/30 14:00		
COC Number		961363-03-01		961363-03-01		961363-03-01		
	UNITS	BH-11 SS2	QC Batch	DUP 1	QC Batch	DUP 3	RDL	QC Batch

Calculated Parameters

Sodium Adsorption Ratio	N/A	7.7	9024979	7.0	9024979	12		9024979
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Inorganics

Conductivity	mS/cm	0.26	9031062	0.31	9031089	0.33	0.002	9031270
Available (CaCl2) pH	pH	7.43	9030312	7.22	9030865	7.65		9030901
WAD Cyanide (Free)	ug/g	<0.01	9030480	<0.01	9030462	<0.01	0.01	9030480
Chromium (VI)	ug/g	<0.18	9030577	<0.18	9031125	0.22	0.18	9030577

Metals

Hot Water Ext. Boron (B)	ug/g	0.11	9027893	0.11	9027882	0.21	0.050	9030355
Acid Extractable Antimony (Sb)	ug/g	<0.20	9029430	<0.20	9027668	0.22	0.20	9029438
Acid Extractable Arsenic (As)	ug/g	5.6	9029430	5.1	9027668	7.1	1.0	9029438
Acid Extractable Barium (Ba)	ug/g	51	9029430	55	9027668	65	0.50	9029438
Acid Extractable Beryllium (Be)	ug/g	0.82	9029430	0.69	9027668	0.97	0.20	9029438
Acid Extractable Boron (B)	ug/g	5.6	9029430	<5.0	9027668	8.3	5.0	9029438
Acid Extractable Cadmium (Cd)	ug/g	<0.10	9029430	0.11	9027668	<0.10	0.10	9029438
Acid Extractable Chromium (Cr)	ug/g	26	9029430	24	9027668	30	1.0	9029438
Acid Extractable Cobalt (Co)	ug/g	16	9029430	15	9027668	18	0.10	9029438
Acid Extractable Copper (Cu)	ug/g	30	9029430	34	9027668	38	0.50	9029438
Acid Extractable Lead (Pb)	ug/g	18	9029430	14	9027668	25	1.0	9029438
Acid Extractable Molybdenum (Mo)	ug/g	0.70	9029430	0.95	9027668	1.0	0.50	9029438
Acid Extractable Nickel (Ni)	ug/g	31	9029430	30	9027668	39	0.50	9029438
Acid Extractable Selenium (Se)	ug/g	<0.50	9029430	<0.50	9027668	<0.50	0.50	9029438
Acid Extractable Silver (Ag)	ug/g	<0.20	9029430	<0.20	9027668	<0.20	0.20	9029438
Acid Extractable Thallium (Tl)	ug/g	0.16	9029430	0.12	9027668	0.20	0.050	9029438
Acid Extractable Uranium (U)	ug/g	0.66	9029430	0.71	9027668	0.65	0.050	9029438
Acid Extractable Vanadium (V)	ug/g	29	9029430	30	9027668	33	5.0	9029438
Acid Extractable Zinc (Zn)	ug/g	65	9029430	80	9027668	79	5.0	9029438
Acid Extractable Mercury (Hg)	ug/g	<0.050	9029430	<0.050	9027668	<0.050	0.050	9029438

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

O.REG 153 PAHS (SOIL)

Bureau Veritas ID		XMH375			XMH375			XMH376		
Sampling Date		2023/10/26 14:00			2023/10/26 14:00			2023/10/26 14:00		
COC Number		961363-03-01			961363-03-01			961363-03-01		
	UNITS	BH-1 SS2	RDL	QC Batch	BH-1 SS2 Lab-Dup	RDL	QC Batch	DUP 2	RDL	QC Batch

Calculated Parameters

Methylnaphthalene, 2-(1-)	ug/g	<0.0071	0.0071	9024160				<0.0071	0.0071	9024160
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Polyaromatic Hydrocarbons

Acenaphthene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
Acenaphthylene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
Anthracene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
Benzo(a)anthracene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
Benzo(a)pyrene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
Benzo(b/j)fluoranthene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
Chrysene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
Fluoranthene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
Fluorene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
1-Methylnaphthalene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
2-Methylnaphthalene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
Naphthalene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
Phenanthrene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886
Pyrene	ug/g	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886	<0.0050	0.0050	9029886

Surrogate Recovery (%)

D10-Anthracene	%	118		9029886	107		9029886	84		9029886
D14-Terphenyl (FS)	%	105		9029886	100		9029886	66		9029886
D8-Acenaphthylene	%	86		9029886	84		9029886	54		9029886

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



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

O.REG 153 PAHS (SOIL)

Bureau Veritas ID		XMH377		XMH378		XMH379		XMH380		XMH381	
Sampling Date		2023/10/26 14:00		2023/10/30 10:00		2023/10/30 10:00		2023/10/27 15:00		2023/10/27 15:00	
COC Number		961363-03-01		961363-03-01		961363-03-01		961363-03-01		961363-03-01	
	UNITS	BH-1 SS3	RDL	BH-2 AS3	RDL	BH-2 SS1	BH-6 SS1	BH-6 SS2	RDL	QC Batch	

Calculated Parameters

Methylnaphthalene, 2-(1-)	ug/g	<0.0071	0.0071	<0.011	0.011	<0.0071	0.075	<0.0071	0.0071	9024160
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Polyaromatic Hydrocarbons

Acenaphthene	ug/g	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.18	<0.0050	0.0050	9029886
Acenaphthylene	ug/g	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.0073	<0.0050	0.0050	9029886
Anthracene	ug/g	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.64	<0.0050	0.0050	9029886
Benzo(a)anthracene	ug/g	<0.0050	0.0050	<0.0050	0.0050	0.0070	0.91	<0.0050	0.0050	9029886
Benzo(a)pyrene	ug/g	<0.0050	0.0050	<0.0050	0.0050	0.0061	0.66	<0.0050	0.0050	9029886
Benzo(b/j)fluoranthene	ug/g	<0.0050	0.0050	<0.0050	0.0050	0.010	0.87	<0.0050	0.0050	9029886
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.24	<0.0050	0.0050	9029886
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.31	<0.0050	0.0050	9029886
Chrysene	ug/g	<0.0050	0.0050	<0.0050	0.0050	0.0064	0.73	<0.0050	0.0050	9029886
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.099	<0.0050	0.0050	9029886
Fluoranthene	ug/g	<0.0050	0.0050	<0.0050	0.0050	0.015	2.1	<0.0050	0.0050	9029886
Fluorene	ug/g	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.29	<0.0050	0.0050	9029886
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.29	<0.0050	0.0050	9029886
1-Methylnaphthalene	ug/g	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.040	<0.0050	0.0050	9029886
2-Methylnaphthalene	ug/g	<0.0050	0.0050	<0.010 (1)	0.010	<0.0050	0.034	<0.0050	0.0050	9029886
Naphthalene	ug/g	<0.0050	0.0050	<0.0050	0.0050	<0.0050	0.035	<0.0050	0.0050	9029886
Phenanthrene	ug/g	0.0069	0.0050	0.0071	0.0050	0.0065	2.1	0.011	0.0050	9029886
Pyrene	ug/g	<0.0050	0.0050	<0.0050	0.0050	0.014	1.6	<0.0050	0.0050	9029886

Surrogate Recovery (%)

D10-Anthracene	%	99		101		109	92	96		9029886
D14-Terphenyl (FS)	%	95		102		100	102	94		9029886
D8-Acenaphthylene	%	89		93		85	90	82		9029886

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch
 (1) Detection Limit was raised due to matrix interferences.



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

O.REG 153 PAHS (SOIL)

Bureau Veritas ID		XMH382	XMH383		XMH384	XMH385		XMH386		
Sampling Date		2023/10/27 09:30	2023/10/27 09:30		2023/10/27 09:00	2023/10/26 11:00		2023/10/26 11:00		
COC Number		961363-03-01	961363-03-01		961363-03-01	961363-03-01		961363-03-01		
	UNITS	BH-7 SS2A	BH-7 SS2B	RDL	BH-8 AS3	BH-9 AS1	RDL	BH-9 SS2	RDL	QC Batch

Calculated Parameters

Methylnaphthalene, 2-(1-)	ug/g	0.043	0.053	0.0071	<0.071	<0.071	0.071	<0.0071	0.0071	9024160
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Polyaromatic Hydrocarbons

Acenaphthene	ug/g	0.012	0.069	0.0050	<0.050	<0.050	0.050	<0.0050	0.0050	9029886
Acenaphthylene	ug/g	<0.0050	<0.0050	0.0050	<0.050	<0.050	0.050	<0.0050	0.0050	9029886
Anthracene	ug/g	0.16	0.22	0.0050	0.091	<0.050	0.050	<0.0050	0.0050	9029886
Benzo(a)anthracene	ug/g	0.45	0.58	0.0050	0.24	<0.050	0.050	<0.0050	0.0050	9029886
Benzo(a)pyrene	ug/g	0.38	0.58	0.0050	0.21	<0.050	0.050	<0.0050	0.0050	9029886
Benzo(b/j)fluoranthene	ug/g	0.52	0.78	0.0050	0.30	<0.050	0.050	<0.0050	0.0050	9029886
Benzo(g,h,i)perylene	ug/g	0.17	0.27	0.0050	0.10	<0.050	0.050	<0.0050	0.0050	9029886
Benzo(k)fluoranthene	ug/g	0.20	0.30	0.0050	0.12	<0.050	0.050	<0.0050	0.0050	9029886
Chrysene	ug/g	0.37	0.46	0.0050	0.19	<0.050	0.050	<0.0050	0.0050	9029886
Dibenzo(a,h)anthracene	ug/g	0.061	0.093	0.0050	<0.050	<0.050	0.050	<0.0050	0.0050	9029886
Fluoranthene	ug/g	0.86	0.99	0.0050	0.51	<0.050	0.050	<0.0050	0.0050	9029886
Fluorene	ug/g	0.024	0.048	0.0050	<0.050	<0.050	0.050	<0.0050	0.0050	9029886
Indeno(1,2,3-cd)pyrene	ug/g	0.19	0.31	0.0050	0.12	<0.050	0.050	<0.0050	0.0050	9029886
1-Methylnaphthalene	ug/g	0.021	0.027	0.0050	<0.050	<0.050	0.050	<0.0050	0.0050	9029886
2-Methylnaphthalene	ug/g	0.022	0.026	0.0050	<0.050	<0.050	0.050	<0.0050	0.0050	9029886
Naphthalene	ug/g	0.0078	0.016	0.0050	<0.050	<0.050	0.050	0.0056	0.0050	9029886
Phenanthrene	ug/g	0.47	0.40	0.0050	0.36	<0.050	0.050	0.010	0.0050	9029886
Pyrene	ug/g	0.71	0.82	0.0050	0.38	<0.050	0.050	<0.0050	0.0050	9029886

Surrogate Recovery (%)

D10-Anthracene	%	95	95		99	106		100		9029886
D14-Terphenyl (FS)	%	111	102		102	98		105		9029886
D8-Acenaphthylene	%	81	85		88	85		89		9029886

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

O.REG 153 PAHS (SOIL)

Bureau Veritas ID		XMH387			XMH388	XMH389	XMH390	XMH391		
Sampling Date		2023/10/26 12:00			2023/10/26 12:00	2023/10/30 14:00	2023/10/30 14:00	2023/10/26 12:00		
COC Number		961363-03-01			961363-03-01	961363-03-01	961363-03-01	961363-03-01		
	UNITS	BH-10 AS1	RDL	QC Batch	BH-10 SS2	BH-11 SS1	BH-11 SS2	DUP 1	RDL	QC Batch

Calculated Parameters

Methylnaphthalene, 2-(1-)	ug/g	<0.071	0.071	9024160	<0.0071	<0.0071	<0.0071	<0.0071	0.0071	9025209
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Polyaromatic Hydrocarbons

Acenaphthene	ug/g	<0.050	0.050	9029886	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	9029886
Acenaphthylene	ug/g	<0.050	0.050	9029886	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	9029886
Anthracene	ug/g	<0.050	0.050	9029886	<0.0050	0.016	<0.0050	<0.0050	0.0050	9029886
Benzo(a)anthracene	ug/g	<0.050	0.050	9029886	<0.0050	0.041	<0.0050	<0.0050	0.0050	9029886
Benzo(a)pyrene	ug/g	<0.050	0.050	9029886	<0.0050	0.036	<0.0050	<0.0050	0.0050	9029886
Benzo(b,j)fluoranthene	ug/g	<0.050	0.050	9029886	<0.0050	0.053	<0.0050	<0.0050	0.0050	9029886
Benzo(g,h,i)perylene	ug/g	<0.050	0.050	9029886	<0.0050	0.016	<0.0050	<0.0050	0.0050	9029886
Benzo(k)fluoranthene	ug/g	<0.050	0.050	9029886	<0.0050	0.019	<0.0050	<0.0050	0.0050	9029886
Chrysene	ug/g	<0.050	0.050	9029886	<0.0050	0.038	<0.0050	<0.0050	0.0050	9029886
Dibenzo(a,h)anthracene	ug/g	<0.050	0.050	9029886	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	9029886
Fluoranthene	ug/g	<0.050	0.050	9029886	<0.0050	0.089	0.0055	<0.0050	0.0050	9029886
Fluorene	ug/g	<0.050	0.050	9029886	<0.0050	0.0070	<0.0050	<0.0050	0.0050	9029886
Indeno(1,2,3-cd)pyrene	ug/g	<0.050	0.050	9029886	<0.0050	0.015	<0.0050	<0.0050	0.0050	9029886
1-Methylnaphthalene	ug/g	<0.050	0.050	9029886	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	9029886
2-Methylnaphthalene	ug/g	<0.050	0.050	9029886	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	9029886
Naphthalene	ug/g	<0.050	0.050	9029886	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	9029886
Phenanthrene	ug/g	<0.050	0.050	9029886	<0.0050	0.068	<0.0050	<0.0050	0.0050	9029886
Pyrene	ug/g	<0.050	0.050	9029886	<0.0050	0.073	<0.0050	<0.0050	0.0050	9029886

Surrogate Recovery (%)

D10-Anthracene	%	118		9029886	97	102	98	91		9029886
D14-Terphenyl (FS)	%	97		9029886	100	104	103	91		9029886
D8-Acenaphthylene	%	84		9029886	82	91	84	74		9029886

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

O.REG 153 PAHS (SOIL)

Bureau Veritas ID		XMH392		
Sampling Date		2023/10/30 14:00		
COC Number		961363-03-01		
	UNITS	DUP 3	RDL	QC Batch
Calculated Parameters				
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	0.0071	9025209
Polyaromatic Hydrocarbons				
Acenaphthene	ug/g	<0.0050	0.0050	9029886
Acenaphthylene	ug/g	<0.0050	0.0050	9029886
Anthracene	ug/g	<0.0050	0.0050	9029886
Benzo(a)anthracene	ug/g	0.0082	0.0050	9029886
Benzo(a)pyrene	ug/g	0.0070	0.0050	9029886
Benzo(b/j)fluoranthene	ug/g	0.011	0.0050	9029886
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	9029886
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	9029886
Chrysene	ug/g	0.0094	0.0050	9029886
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	9029886
Fluoranthene	ug/g	0.018	0.0050	9029886
Fluorene	ug/g	<0.0050	0.0050	9029886
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	9029886
1-Methylnaphthalene	ug/g	<0.0050	0.0050	9029886
2-Methylnaphthalene	ug/g	<0.0050	0.0050	9029886
Naphthalene	ug/g	<0.0050	0.0050	9029886
Phenanthrene	ug/g	0.018	0.0050	9029886
Pyrene	ug/g	0.016	0.0050	9029886
Surrogate Recovery (%)				
D10-Anthracene	%	99		9029886
D14-Terphenyl (FS)	%	104		9029886
D8-Acenaphthylene	%	86		9029886
RDL = Reportable Detection Limit QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

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

Bureau Veritas ID		XMH375			XMH375			XMH376		
Sampling Date		2023/10/26 14:00			2023/10/26 14:00			2023/10/26 14:00		
COC Number		961363-03-01			961363-03-01			961363-03-01		
	UNITS	BH-1 SS2	RDL	QC Batch	BH-1 SS2 Lab-Dup	RDL	QC Batch	DUP 2	RDL	QC Batch

Calculated Parameters										
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	9023519				<0.050	0.050	9023519
Volatile Organics										
Acetone (2-Propanone)	ug/g	<0.49	0.49	9029936				<0.49	0.49	9029936
Benzene	ug/g	<0.0060	0.0060	9029936				<0.0060	0.0060	9029936
Bromodichloromethane	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
Bromoform	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
Bromomethane	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
Carbon Tetrachloride	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
Chlorobenzene	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
Chloroform	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
Dibromochloromethane	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
1,2-Dichlorobenzene	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
1,3-Dichlorobenzene	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
1,4-Dichlorobenzene	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
1,1-Dichloroethane	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
1,2-Dichloroethane	ug/g	<0.049	0.049	9029936				<0.049	0.049	9029936
1,1-Dichloroethylene	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
1,2-Dichloropropane	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	9029936				<0.030	0.030	9029936
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
Ethylbenzene	ug/g	<0.010	0.010	9029936				<0.010	0.010	9029936
Ethylene Dibromide	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
Hexane	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	9029936				<0.049	0.049	9029936
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	9029936				<0.40	0.40	9029936
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	9029936				<0.40	0.40	9029936
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
Styrene	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936

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



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

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

Bureau Veritas ID		XMH375			XMH375			XMH376		
Sampling Date		2023/10/26 14:00			2023/10/26 14:00			2023/10/26 14:00		
COC Number		961363-03-01			961363-03-01			961363-03-01		
	UNITS	BH-1 SS2	RDL	QC Batch	BH-1 SS2 Lab-Dup	RDL	QC Batch	DUP 2	RDL	QC Batch
Tetrachloroethylene	ug/g	0.16	0.040	9029936				0.27	0.040	9029936
Toluene	ug/g	<0.020	0.020	9029936				<0.020	0.020	9029936
1,1,1-Trichloroethane	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
1,1,2-Trichloroethane	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
Trichloroethylene	ug/g	<0.010	0.010	9029936				<0.010	0.010	9029936
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	9029936				<0.040	0.040	9029936
Vinyl Chloride	ug/g	<0.019	0.019	9029936				<0.019	0.019	9029936
p+m-Xylene	ug/g	<0.020	0.020	9029936				<0.020	0.020	9029936
o-Xylene	ug/g	<0.020	0.020	9029936				<0.020	0.020	9029936
Total Xylenes	ug/g	<0.020	0.020	9029936				<0.020	0.020	9029936
F1 (C6-C10)	ug/g	<10	10	9029936				<10	10	9029936
F1 (C6-C10) - BTEX	ug/g	<10	10	9029936				<10	10	9029936
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	9030166	<10	10	9030166	<10	10	9030166
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	9030166	<50	50	9030166	<50	50	9030166
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	9030166	<50	50	9030166	<50	50	9030166
Reached Baseline at C50	ug/g	Yes		9030166	Yes		9030166	Yes		9030166
Surrogate Recovery (%)										
o-Terphenyl	%	93		9030166	95		9030166	91		9030166
4-Bromofluorobenzene	%	99		9029936				99		9029936
D10-o-Xylene	%	108		9029936				112		9029936
D4-1,2-Dichloroethane	%	88		9029936				89		9029936
D8-Toluene	%	102		9029936				101		9029936
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate										



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431

Report Date: 2023/11/09

exp Services Inc

Client Project #: OTT-23002538-A0

Sampler Initials: LW

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

Bureau Veritas ID		XMH377		XMH378	XMH379		
Sampling Date		2023/10/26 14:00		2023/10/30 10:00	2023/10/30 10:00		
COC Number		961363-03-01		961363-03-01	961363-03-01		
	UNITS	BH-1 SS3	QC Batch	BH-2 AS3	BH-2 SS1	RDL	QC Batch

Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	9023519	<0.050	<0.050	0.050	9025211
Volatile Organics							
Acetone (2-Propanone)	ug/g	<0.49	9029936	<0.49	<0.49	0.49	9029936
Benzene	ug/g	<0.0060	9029936	<0.0060	<0.0060	0.0060	9029936
Bromodichloromethane	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
Bromoform	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
Bromomethane	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
Carbon Tetrachloride	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
Chlorobenzene	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
Chloroform	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
Dibromochloromethane	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
1,2-Dichlorobenzene	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
1,3-Dichlorobenzene	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
1,4-Dichlorobenzene	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
1,1-Dichloroethane	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
1,2-Dichloroethane	ug/g	<0.049	9029936	<0.049	<0.049	0.049	9029936
1,1-Dichloroethylene	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
cis-1,2-Dichloroethylene	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
trans-1,2-Dichloroethylene	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
1,2-Dichloropropane	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
cis-1,3-Dichloropropene	ug/g	<0.030	9029936	<0.030	<0.030	0.030	9029936
trans-1,3-Dichloropropene	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
Ethylbenzene	ug/g	<0.010	9029936	<0.010	<0.010	0.010	9029936
Ethylene Dibromide	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
Hexane	ug/g	<0.040	9029936	0.90	<0.040	0.040	9029936
Methylene Chloride(Dichloromethane)	ug/g	<0.049	9029936	<0.049	<0.049	0.049	9029936
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	9029936	<0.40	<0.40	0.40	9029936
Methyl Isobutyl Ketone	ug/g	<0.40	9029936	<0.40	<0.40	0.40	9029936
Methyl t-butyl ether (MTBE)	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
Styrene	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
1,1,1,2-Tetrachloroethane	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
1,1,2,2-Tetrachloroethane	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
Tetrachloroethylene	ug/g	0.90	9029936	<0.040	<0.040	0.040	9029936
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

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

Bureau Veritas ID		XMH377		XMH378	XMH379		
Sampling Date		2023/10/26 14:00		2023/10/30 10:00	2023/10/30 10:00		
COC Number		961363-03-01		961363-03-01	961363-03-01		
	UNITS	BH-1 SS3	QC Batch	BH-2 AS3	BH-2 SS1	RDL	QC Batch
Toluene	ug/g	<0.020	9029936	<0.020	<0.020	0.020	9029936
1,1,1-Trichloroethane	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
1,1,2-Trichloroethane	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
Trichloroethylene	ug/g	<0.010	9029936	<0.010	<0.010	0.010	9029936
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	9029936	<0.040	<0.040	0.040	9029936
Vinyl Chloride	ug/g	<0.019	9029936	<0.019	<0.019	0.019	9029936
p+m-Xylene	ug/g	<0.020	9029936	0.099	<0.020	0.020	9029936
o-Xylene	ug/g	<0.020	9029936	0.023	<0.020	0.020	9029936
Total Xylenes	ug/g	<0.020	9029936	0.12	<0.020	0.020	9029936
F1 (C6-C10)	ug/g	<10	9029936	50	<10	10	9029936
F1 (C6-C10) - BTEX	ug/g	<10	9029936	50	<10	10	9029936
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	19	9030166	44	<10	10	9030166
F3 (C16-C34 Hydrocarbons)	ug/g	<50	9030166	<50	<50	50	9030166
F4 (C34-C50 Hydrocarbons)	ug/g	<50	9030166	<50	<50	50	9030166
Reached Baseline at C50	ug/g	Yes	9030166	Yes	Yes		9030166
Surrogate Recovery (%)							
o-Terphenyl	%	92	9030166	94	93		9030166
4-Bromofluorobenzene	%	100	9029936	96	100		9029936
D10-o-Xylene	%	105	9029936	108	103		9029936
D4-1,2-Dichloroethane	%	90	9029936	93	98		9029936
D8-Toluene	%	101	9029936	101	98		9029936
RDL = Reportable Detection Limit QC Batch = Quality Control Batch							



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

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

Bureau Veritas ID		XMH380		XMH381		XMH382		XMH383		
Sampling Date		2023/10/27 15:00		2023/10/27 15:00		2023/10/27 09:30		2023/10/27 09:30		
COC Number		961363-03-01		961363-03-01		961363-03-01		961363-03-01		
	UNITS	BH-6 SS1	RDL	BH-6 SS2	RDL	BH-7 SS2A	RDL	BH-7 SS2B	RDL	QC Batch

Calculated Parameters										
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	<0.050	0.050	<0.050	0.050	<0.050	0.050	9025211
Volatile Organics										
Acetone (2-Propanone)	ug/g	<0.49	0.49	<0.49	0.49	<0.49	0.49	<0.49	0.49	9029156
Benzene	ug/g	<0.0060	0.0060	<0.0060	0.0060	<0.0060	0.0060	<0.0060	0.0060	9029156
Bromodichloromethane	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
Bromoform	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
Bromomethane	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
Carbon Tetrachloride	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
Chlorobenzene	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
Chloroform	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
Dibromochloromethane	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
1,2-Dichlorobenzene	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
1,3-Dichlorobenzene	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
1,4-Dichlorobenzene	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
1,1-Dichloroethane	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
1,2-Dichloroethane	ug/g	<0.049	0.049	<0.049	0.049	<0.049	0.049	<0.049	0.049	9029156
1,1-Dichloroethylene	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
1,2-Dichloropropane	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	<0.030	0.030	<0.030	0.030	<0.030	0.030	9029156
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
Ethylbenzene	ug/g	<0.010	0.010	<0.010	0.010	<0.010	0.010	<0.020 (1)	0.020	9029156
Ethylene Dibromide	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
Hexane	ug/g	<0.040	0.040	0.14	0.040	<0.040	0.040	<0.040	0.040	9029156
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	<0.58 (1)	0.58	<0.049	0.049	<0.049	0.049	9029156
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	<0.40	0.40	<0.40	0.40	<0.40	0.40	9029156
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	<0.40	0.40	<0.40	0.40	<0.40	0.40	9029156
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
Styrene	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch
 (1) The detection limit was raised due to matrix interference.



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

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

Bureau Veritas ID		XMH380		XMH381		XMH382		XMH383		
Sampling Date		2023/10/27 15:00		2023/10/27 15:00		2023/10/27 09:30		2023/10/27 09:30		
COC Number		961363-03-01		961363-03-01		961363-03-01		961363-03-01		
	UNITS	BH-6 SS1	RDL	BH-6 SS2	RDL	BH-7 SS2A	RDL	BH-7 SS2B	RDL	QC Batch
Tetrachloroethylene	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
Toluene	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	9029156
1,1,1-Trichloroethane	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
1,1,2-Trichloroethane	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
Trichloroethylene	ug/g	<0.010	0.010	<0.010	0.010	<0.010	0.010	<0.010	0.010	9029156
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	<0.040	0.040	<0.040	0.040	<0.040	0.040	9029156
Vinyl Chloride	ug/g	<0.019	0.019	<0.019	0.019	<0.019	0.019	<0.019	0.019	9029156
p+m-Xylene	ug/g	<0.020	0.020	0.066	0.020	<0.020	0.020	<0.020	0.020	9029156
o-Xylene	ug/g	<0.020	0.020	<0.020	0.020	<0.020	0.020	<0.020	0.020	9029156
Total Xylenes	ug/g	<0.020	0.020	0.066	0.020	<0.020	0.020	<0.020	0.020	9029156
F1 (C6-C10)	ug/g	<10	10	26	10	<10	10	32	10	9029156
F1 (C6-C10) - BTEX	ug/g	<10	10	26	10	<10	10	32	10	9029156
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<15	15	34	10	<10	10	<20	20	9030166
F3 (C16-C34 Hydrocarbons)	ug/g	<60	60	<50	50	<50	50	<95	95	9030166
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	<50	50	<50	50	<50	50	9030166
Reached Baseline at C50	ug/g	Yes		Yes		Yes		Yes		9030166
Surrogate Recovery (%)										
o-Terphenyl	%	93		92		94		97		9030166
4-Bromofluorobenzene	%	121		101		96		94		9029156
D10-o-Xylene	%	99		108		89		98		9029156
D4-1,2-Dichloroethane	%	93		99		93		95		9029156
D8-Toluene	%	89		93		98		99		9029156
RDL = Reportable Detection Limit QC Batch = Quality Control Batch										



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

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

Bureau Veritas ID		XMH384	XMH385	XMH386	XMH387	XMH388		
Sampling Date		2023/10/27 09:00	2023/10/26 11:00	2023/10/26 11:00	2023/10/26 12:00	2023/10/26 12:00		
COC Number		961363-03-01	961363-03-01	961363-03-01	961363-03-01	961363-03-01		
	UNITS	BH-8 AS3	BH-9 AS1	BH-9 SS2	BH-10 AS1	BH-10 SS2	RDL	QC Batch

Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9025211
Volatile Organics								
Acetone (2-Propanone)	ug/g	<0.49	<0.49	<0.49	<0.49	<0.49	0.49	9029156
Benzene	ug/g	0.092	<0.0060	0.029	<0.0060	<0.0060	0.0060	9029156
Bromodichloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Bromoform	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Bromomethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Carbon Tetrachloride	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Chlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Chloroform	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Dibromochloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,1-Dichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,2-Dichloroethane	ug/g	<0.049	<0.049	<0.049	<0.049	<0.049	0.049	9029156
1,1-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,2-Dichloropropane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	9029156
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Ethylbenzene	ug/g	0.14	0.010	0.14	<0.010	<0.010	0.010	9029156
Ethylene Dibromide	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Hexane	ug/g	0.26	<0.040	0.32	<0.040	<0.040	0.040	9029156
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	<0.049	<0.049	<0.049	0.049	9029156
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	9029156
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	9029156
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Styrene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Tetrachloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

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

Bureau Veritas ID		XMH384	XMH385	XMH386	XMH387	XMH388		
Sampling Date		2023/10/27 09:00	2023/10/26 11:00	2023/10/26 11:00	2023/10/26 12:00	2023/10/26 12:00		
COC Number		961363-03-01	961363-03-01	961363-03-01	961363-03-01	961363-03-01		
	UNITS	BH-8 AS3	BH-9 AS1	BH-9 SS2	BH-10 AS1	BH-10 SS2	RDL	QC Batch
Toluene	ug/g	0.063	<0.020	0.10	<0.020	<0.020	0.020	9029156
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Trichloroethylene	ug/g	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	9029156
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Vinyl Chloride	ug/g	<0.019	<0.019	<0.019	<0.019	<0.019	0.019	9029156
p+m-Xylene	ug/g	0.38	0.039	0.40	<0.020	<0.020	0.020	9029156
o-Xylene	ug/g	0.067	<0.020	0.12	<0.020	<0.020	0.020	9029156
Total Xylenes	ug/g	0.45	0.039	0.52	<0.020	<0.020	0.020	9029156
F1 (C6-C10)	ug/g	<10	<10	14	<10	<10	10	9029156
F1 (C6-C10) - BTEX	ug/g	<10	<10	13	<10	<10	10	9029156
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	26	<10	<10	10	9030166
F3 (C16-C34 Hydrocarbons)	ug/g	170	150	<50	110	<50	50	9030166
F4 (C34-C50 Hydrocarbons)	ug/g	510	450	<50	430	<50	50	9030166
Reached Baseline at C50	ug/g	No	No	Yes	No	Yes		9030166
Surrogate Recovery (%)								
o-Terphenyl	%	89	94	91	90	89		9030166
4-Bromofluorobenzene	%	94	92	126	95	94		9029156
D10-o-Xylene	%	91	81	117	90	86		9029156
D4-1,2-Dichloroethane	%	104	92	100	94	92		9029156
D8-Toluene	%	98	97	97	97	96		9029156
RDL = Reportable Detection Limit QC Batch = Quality Control Batch								



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

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

Bureau Veritas ID		XMH389	XMH390	XMH391	XMH392		
Sampling Date		2023/10/30 14:00	2023/10/30 14:00	2023/10/26 12:00	2023/10/30 14:00		
COC Number		961363-03-01	961363-03-01	961363-03-01	961363-03-01		
	UNITS	BH-11 SS1	BH-11 SS2	DUP 1	DUP 3	RDL	QC Batch
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	<0.050	<0.050	0.050	9025211
Volatile Organics							
Acetone (2-Propanone)	ug/g	<0.49	<0.49	<0.49	<0.49	0.49	9029156
Benzene	ug/g	<0.0060	<0.0060	<0.0060	<0.0060	0.0060	9029156
Bromodichloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Bromoform	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Bromomethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Carbon Tetrachloride	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Chlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Chloroform	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Dibromochloromethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,1-Dichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,2-Dichloroethane	ug/g	<0.049	<0.049	<0.049	<0.049	0.049	9029156
1,1-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,2-Dichloropropane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	<0.030	<0.030	0.030	9029156
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Ethylbenzene	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	9029156
Ethylene Dibromide	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Hexane	ug/g	0.044	<0.040	<0.040	<0.040	0.040	9029156
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	<0.049	<0.049	0.049	9029156
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	<0.40	<0.40	0.40	9029156
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	<0.40	<0.40	0.40	9029156
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Styrene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Tetrachloroethylene	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

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

Bureau Veritas ID		XMH389	XMH390	XMH391	XMH392		
Sampling Date		2023/10/30 14:00	2023/10/30 14:00	2023/10/26 12:00	2023/10/30 14:00		
COC Number		961363-03-01	961363-03-01	961363-03-01	961363-03-01		
	UNITS	BH-11 SS1	BH-11 SS2	DUP 1	DUP 3	RDL	QC Batch
Toluene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	9029156
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Trichloroethylene	ug/g	<0.010	<0.010	<0.010	<0.010	0.010	9029156
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	<0.040	<0.040	0.040	9029156
Vinyl Chloride	ug/g	<0.019	<0.019	<0.019	<0.019	0.019	9029156
p+m-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	9029156
o-Xylene	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	9029156
Total Xylenes	ug/g	<0.020	<0.020	<0.020	<0.020	0.020	9029156
F1 (C6-C10)	ug/g	<10	<10	<10	<10	10	9029156
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	<10	10	9029156
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	24	10	9030166
F3 (C16-C34 Hydrocarbons)	ug/g	69	<50	<50	57	50	9030166
F4 (C34-C50 Hydrocarbons)	ug/g	88	<50	<50	<50	50	9030166
Reached Baseline at C50	ug/g	Yes	Yes	Yes	Yes		9030166
Surrogate Recovery (%)							
o-Terphenyl	%	80	95	96	97		9030166
4-Bromofluorobenzene	%	129	95	95	94		9029156
D10-o-Xylene	%	115	84	83	83		9029156
D4-1,2-Dichloroethane	%	101	91	91	94		9029156
D8-Toluene	%	92	95	95	96		9029156
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		XMH375	XMH376	XMH377		XMH378	XMH379		
Sampling Date		2023/10/26 14:00	2023/10/26 14:00	2023/10/26 14:00		2023/10/30 10:00	2023/10/30 10:00		
COC Number		961363-03-01	961363-03-01	961363-03-01		961363-03-01	961363-03-01		
	UNITS	BH-1 SS2	DUP 2	BH-1 SS3	QC Batch	BH-2 AS3	BH-2 SS1	RDL	QC Batch

Inorganics

Moisture	%	9.5	19	8.0	9026404	4.1	9.8	1.0	9026369
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RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Bureau Veritas ID		XMH380		XMH381		XMH382	XMH383	XMH384		
Sampling Date		2023/10/27 15:00		2023/10/27 15:00		2023/10/27 09:30	2023/10/27 09:30	2023/10/27 09:00		
COC Number		961363-03-01		961363-03-01		961363-03-01	961363-03-01	961363-03-01		
	UNITS	BH-6 SS1	QC Batch	BH-6 SS2	QC Batch	BH-7 SS2A	BH-7 SS2B	BH-8 AS3	RDL	QC Batch

Inorganics

Moisture	%	8.6	9026369	20	9026404	12	11	3.6	1.0	9026369
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RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Bureau Veritas ID		XMH385		XMH386	XMH387	XMH388	XMH389		
Sampling Date		2023/10/26 11:00		2023/10/26 11:00	2023/10/26 12:00	2023/10/26 12:00	2023/10/30 14:00		
COC Number		961363-03-01		961363-03-01	961363-03-01	961363-03-01	961363-03-01		
	UNITS	BH-9 AS1	QC Batch	BH-9 SS2	BH-10 AS1	BH-10 SS2	BH-11 SS1	RDL	QC Batch

Inorganics

Moisture	%	4.3	9026404	7.8	7.7	16	5.5	1.0	9026369
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RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Bureau Veritas ID		XMH390		XMH391		XMH392		
Sampling Date		2023/10/30 14:00		2023/10/26 12:00		2023/10/30 14:00		
COC Number		961363-03-01		961363-03-01		961363-03-01		
	UNITS	BH-11 SS2	QC Batch	DUP 1	QC Batch	DUP 3	RDL	QC Batch

Inorganics

Moisture	%	11	9026369	18	9026404	8.6	1.0	9026369
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RDL = Reportable Detection Limit

QC Batch = Quality Control Batch



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
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exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		XMH384	XMH385	XMH387		
Sampling Date		2023/10/27 09:00	2023/10/26 11:00	2023/10/26 12:00		
COC Number		961363-03-01	961363-03-01	961363-03-01		
	UNITS	BH-8 AS3	BH-9 AS1	BH-10 AS1	RDL	QC Batch
F2-F4 Hydrocarbons						
F4G-sg (Grav. Heavy Hydrocarbons)	ug/g	2500	3100	2400	100	9038445
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

TEST SUMMARY

Bureau Veritas ID: XMH375
Sample ID: BH-1 SS2
Matrix: Soil

Collected: 2023/10/26
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9024160	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9027882	2023/11/03	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9023519	N/A	2023/11/07	Automated Statchk
Free (WAD) Cyanide	TECH	9032757	2023/11/07	2023/11/07	Prgya Panchal
Conductivity	AT	9031089	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9031125	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/06	Agnieszka Brzuzy-Snopko
Acid Extractable Metals by ICPMS	ICP/MS	9027668	2023/11/03	2023/11/07	Daniel Teclu
Moisture	BAL	9026404	N/A	2023/11/03	Ibadat Preet
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030865	2023/11/06	2023/11/06	Gurpartee KAUER
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029936	N/A	2023/11/06	Blair Gannon

Bureau Veritas ID: XMH375 Dup
Sample ID: BH-1 SS2
Matrix: Soil

Collected: 2023/10/26
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/06	Agnieszka Brzuzy-Snopko
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin

Bureau Veritas ID: XMH376
Sample ID: DUP 2
Matrix: Soil

Collected: 2023/10/26
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9024160	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9027893	2023/11/03	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9023519	N/A	2023/11/07	Automated Statchk
Free (WAD) Cyanide	TECH	9030462	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031062	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9031125	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/06	Agnieszka Brzuzy-Snopko
Acid Extractable Metals by ICPMS	ICP/MS	9029430	2023/11/04	2023/11/07	Daniel Teclu
Moisture	BAL	9026404	N/A	2023/11/03	Ibadat Preet
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030865	2023/11/06	2023/11/06	Gurpartee KAUER
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029936	N/A	2023/11/07	Blair Gannon



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

TEST SUMMARY

Bureau Veritas ID: XMH377
Sample ID: BH-1 SS3
Matrix: Soil

Collected: 2023/10/26
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9024160	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9027882	2023/11/03	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9023519	N/A	2023/11/07	Automated Statchk
Free (WAD) Cyanide	TECH	9030462	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031089	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9031125	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/07	Agnieszka Brzuzy-Snopko
Acid Extractable Metals by ICPMS	ICP/MS	9027668	2023/11/03	2023/11/07	Daniel Teclu
Moisture	BAL	9026404	N/A	2023/11/03	Ibadat Preet
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030865	2023/11/06	2023/11/06	Gurpartee K AUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029936	N/A	2023/11/07	Blair Gannon

Bureau Veritas ID: XMH378
Sample ID: BH-2 AS3
Matrix: Soil

Collected: 2023/10/30
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9024160	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9027893	2023/11/03	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9025211	N/A	2023/11/07	Automated Statchk
Free (WAD) Cyanide	TECH	9030480	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031270	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9030577	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/07	Agnieszka Brzuzy-Snopko
Acid Extractable Metals by ICPMS	ICP/MS	9029430	2023/11/04	2023/11/07	Daniel Teclu
Moisture	BAL	9026369	N/A	2023/11/03	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030312	2023/11/06	2023/11/06	Gurpartee K AUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029936	N/A	2023/11/07	Blair Gannon

Bureau Veritas ID: XMH379
Sample ID: BH-2 SS1
Matrix: Soil

Collected: 2023/10/30
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9024160	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9027893	2023/11/03	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9025211	N/A	2023/11/07	Automated Statchk
Free (WAD) Cyanide	TECH	9030480	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031062	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9030577	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/06	Agnieszka Brzuzy-Snopko
Acid Extractable Metals by ICPMS	ICP/MS	9029430	2023/11/04	2023/11/07	Daniel Teclu



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

TEST SUMMARY

Bureau Veritas ID: XMH379
Sample ID: BH-2 SS1
Matrix: Soil

Collected: 2023/10/30
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9026369	N/A	2023/11/03	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030312	2023/11/06	2023/11/06	Gurpartee K AUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029936	N/A	2023/11/07	Blair Gannon

Bureau Veritas ID: XMH380
Sample ID: BH-6 SS1
Matrix: Soil

Collected: 2023/10/27
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9024160	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9027893	2023/11/03	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9025211	N/A	2023/11/06	Automated Statchk
Free (WAD) Cyanide	TECH	9030480	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031062	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9030577	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/07	Agnieszka Brzuzy-Snopko
Acid Extractable Metals by ICPMS	ICP/MS	9029430	2023/11/04	2023/11/07	Daniel Teclu
Moisture	BAL	9026369	N/A	2023/11/03	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030312	2023/11/06	2023/11/06	Gurpartee K AUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029156	N/A	2023/11/04	Anna Gabrielyan

Bureau Veritas ID: XMH380 Dup
Sample ID: BH-6 SS1
Matrix: Soil

Collected: 2023/10/27
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	9030480	2023/11/06	2023/11/06	Jency Sara Johnson
Hexavalent Chromium in Soil by IC	IC/SPEC	9030577	2023/11/06	2023/11/07	Lusine Khachatryan

Bureau Veritas ID: XMH381
Sample ID: BH-6 SS2
Matrix: Soil

Collected: 2023/10/27
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9024160	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9027882	2023/11/03	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9025211	N/A	2023/11/06	Automated Statchk
Free (WAD) Cyanide	TECH	9030462	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031089	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9031125	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/07	Agnieszka Brzuzy-Snopko
Acid Extractable Metals by ICPMS	ICP/MS	9027668	2023/11/03	2023/11/07	Daniel Teclu



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

TEST SUMMARY

Bureau Veritas ID: XMH381
Sample ID: BH-6 SS2
Matrix: Soil

Collected: 2023/10/27
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	9026404	N/A	2023/11/03	Ibadat Preet
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030865	2023/11/06	2023/11/06	Gurpartee K AUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029156	N/A	2023/11/04	Anna Gabrielyan

Bureau Veritas ID: XMH382
Sample ID: BH-7 SS2A
Matrix: Soil

Collected: 2023/10/27
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9024160	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9027893	2023/11/03	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9025211	N/A	2023/11/06	Automated Statchk
Free (WAD) Cyanide	TECH	9030480	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031062	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9030577	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/06	Agnieszka Brzuzy-Snopko
Acid Extractable Metals by ICPMS	ICP/MS	9029430	2023/11/04	2023/11/07	Daniel Teclu
Moisture	BAL	9026369	N/A	2023/11/03	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030312	2023/11/06	2023/11/06	Gurpartee K AUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029156	N/A	2023/11/04	Anna Gabrielyan

Bureau Veritas ID: XMH383
Sample ID: BH-7 SS2B
Matrix: Soil

Collected: 2023/10/27
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9024160	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9027893	2023/11/03	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9025211	N/A	2023/11/06	Automated Statchk
Free (WAD) Cyanide	TECH	9030480	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031062	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9030577	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/07	Agnieszka Brzuzy-Snopko
Acid Extractable Metals by ICPMS	ICP/MS	9029430	2023/11/04	2023/11/07	Daniel Teclu
Moisture	BAL	9026369	N/A	2023/11/03	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030312	2023/11/06	2023/11/06	Gurpartee K AUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029156	N/A	2023/11/04	Anna Gabrielyan



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

TEST SUMMARY

Bureau Veritas ID: XMH384
Sample ID: BH-8 AS3
Matrix: Soil

Collected: 2023/10/27
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9024160	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9030355	2023/11/06	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9025211	N/A	2023/11/06	Automated Statchk
Free (WAD) Cyanide	TECH	9030480	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031062	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9030577	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/07	Agnieszka Brzuzy-Snopko
F4G (CCME Hydrocarbons Gravimetric)	BAL	9038445	2023/11/09	2023/11/09	Rashmi Dubey
Acid Extractable Metals by ICPMS	ICP/MS	9029430	2023/11/04	2023/11/07	Daniel Teclu
Moisture	BAL	9026369	N/A	2023/11/03	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030312	2023/11/06	2023/11/06	Gurpartee K AUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029156	N/A	2023/11/04	Anna Gabrielyan

Bureau Veritas ID: XMH385
Sample ID: BH-9 AS1
Matrix: Soil

Collected: 2023/10/26
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9024160	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9030355	2023/11/06	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9025211	N/A	2023/11/07	Automated Statchk
Free (WAD) Cyanide	TECH	9030462	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031089	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9031125	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/06	Agnieszka Brzuzy-Snopko
F4G (CCME Hydrocarbons Gravimetric)	BAL	9038445	2023/11/09	2023/11/09	Rashmi Dubey
Acid Extractable Metals by ICPMS	ICP/MS	9027668	2023/11/03	2023/11/07	Daniel Teclu
Moisture	BAL	9026404	N/A	2023/11/03	Ibadat Preet
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030865	2023/11/06	2023/11/06	Gurpartee K AUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029156	N/A	2023/11/06	Anna Gabrielyan

Bureau Veritas ID: XMH386
Sample ID: BH-9 SS2
Matrix: Soil

Collected: 2023/10/26
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9024160	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9027893	2023/11/03	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9025211	N/A	2023/11/06	Automated Statchk
Free (WAD) Cyanide	TECH	9030480	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031062	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9030577	2023/11/06	2023/11/07	Lusine Khachatryan



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431

Report Date: 2023/11/09

exp Services Inc

Client Project #: OTT-23002538-A0

Sampler Initials: LW

TEST SUMMARY

Bureau Veritas ID: XMH386
Sample ID: BH-9 SS2
Matrix: Soil

Collected: 2023/10/26
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/06	Agnieszka Brzuzy-Snopko
Acid Extractable Metals by ICPMS	ICP/MS	9029430	2023/11/04	2023/11/07	Daniel Teclu
Moisture	BAL	9026369	N/A	2023/11/03	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030312	2023/11/06	2023/11/06	Gurpartee K AUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029156	N/A	2023/11/04	Anna Gabrielyan

Bureau Veritas ID: XMH387
Sample ID: BH-10 AS1
Matrix: Soil

Collected: 2023/10/26
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9024160	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9030355	2023/11/06	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9025211	N/A	2023/11/06	Automated Statchk
Free (WAD) Cyanide	TECH	9030480	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031270	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9030577	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/07	Agnieszka Brzuzy-Snopko
F4G (CCME Hydrocarbons Gravimetric)	BAL	9038445	2023/11/09	2023/11/09	Rashmi Dubey
Acid Extractable Metals by ICPMS	ICP/MS	9029438	2023/11/04	2023/11/06	Japneet Gill
Moisture	BAL	9026369	N/A	2023/11/03	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030901	2023/11/06	2023/11/06	Gurpartee K AUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029156	N/A	2023/11/04	Anna Gabrielyan

Bureau Veritas ID: XMH388
Sample ID: BH-10 SS2
Matrix: Soil

Collected: 2023/10/26
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9025209	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9030369	2023/11/06	2023/11/06	Medhat Nasr
1,3-Dichloropropene Sum	CALC	9025211	N/A	2023/11/07	Automated Statchk
Free (WAD) Cyanide	TECH	9030480	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031270	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9030577	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/07	Agnieszka Brzuzy-Snopko
Acid Extractable Metals by ICPMS	ICP/MS	9029438	2023/11/04	2023/11/06	Japneet Gill
Moisture	BAL	9026369	N/A	2023/11/03	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030901	2023/11/06	2023/11/06	Gurpartee K AUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029156	N/A	2023/11/06	Anna Gabrielyan



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

TEST SUMMARY

Bureau Veritas ID: XMH388 Dup
Sample ID: BH-10 SS2
Matrix: Soil

Collected: 2023/10/26
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	9030369	2023/11/06	2023/11/06	Medhat Nasr

Bureau Veritas ID: XMH389
Sample ID: BH-11 SS1
Matrix: Soil

Collected: 2023/10/30
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9025209	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9027893	2023/11/03	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9025211	N/A	2023/11/06	Automated Statchk
Free (WAD) Cyanide	TECH	9030480	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031062	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9030577	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/07	Agnieszka Brzuzy-Snopko
Acid Extractable Metals by ICPMS	ICP/MS	9029430	2023/11/04	2023/11/07	Daniel Teclu
Moisture	BAL	9026369	N/A	2023/11/03	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030312	2023/11/06	2023/11/06	Gurpartee K AUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029156	N/A	2023/11/04	Anna Gabrielyan

Bureau Veritas ID: XMH390
Sample ID: BH-11 SS2
Matrix: Soil

Collected: 2023/10/30
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9025209	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9027893	2023/11/03	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9025211	N/A	2023/11/07	Automated Statchk
Free (WAD) Cyanide	TECH	9030480	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031062	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9030577	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/07	Agnieszka Brzuzy-Snopko
Acid Extractable Metals by ICPMS	ICP/MS	9029430	2023/11/04	2023/11/07	Daniel Teclu
Moisture	BAL	9026369	N/A	2023/11/03	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030312	2023/11/06	2023/11/06	Gurpartee K AUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029156	N/A	2023/11/06	Anna Gabrielyan

Bureau Veritas ID: XMH391
Sample ID: DUP 1
Matrix: Soil

Collected: 2023/10/26
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9025209	N/A	2023/11/07	Automated Statchk



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431
Report Date: 2023/11/09

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: LW

TEST SUMMARY

Bureau Veritas ID: XMH391
Sample ID: DUP 1
Matrix: Soil

Collected: 2023/10/26
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	9027882	2023/11/03	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9025211	N/A	2023/11/07	Automated Statchk
Free (WAD) Cyanide	TECH	9030462	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031089	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9031125	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/07	Agnieszka Brzuzy-Snopko
Acid Extractable Metals by ICPMS	ICP/MS	9027668	2023/11/03	2023/11/07	Daniel Teclu
Moisture	BAL	9026404	N/A	2023/11/03	Ibadat Preet
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030865	2023/11/06	2023/11/06	Gurparteek KAUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029156	N/A	2023/11/06	Anna Gabrielyan

Bureau Veritas ID: XMH392
Sample ID: DUP 3
Matrix: Soil

Collected: 2023/10/30
Shipped:
Received: 2023/11/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9025209	N/A	2023/11/07	Automated Statchk
Hot Water Extractable Boron	ICP	9030355	2023/11/06	2023/11/06	Jaswinder Kaur
1,3-Dichloropropene Sum	CALC	9025211	N/A	2023/11/07	Automated Statchk
Free (WAD) Cyanide	TECH	9030480	2023/11/06	2023/11/06	Jency Sara Johnson
Conductivity	AT	9031270	2023/11/06	2023/11/06	Kien Tran
Hexavalent Chromium in Soil by IC	IC/SPEC	9030577	2023/11/06	2023/11/07	Lusine Khachatryan
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	9030166	2023/11/06	2023/11/07	Agnieszka Brzuzy-Snopko
Acid Extractable Metals by ICPMS	ICP/MS	9029438	2023/11/04	2023/11/06	Japneet Gill
Moisture	BAL	9026369	N/A	2023/11/03	Joe Thomas
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	9029886	2023/11/05	2023/11/05	Joan Jin
pH CaCl2 EXTRACT	AT	9030901	2023/11/06	2023/11/06	Gurparteek KAUR
Sodium Adsorption Ratio (SAR)	CALC/MET	9024979	N/A	2023/11/07	Automated Statchk
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9029156	N/A	2023/11/06	Anna Gabrielyan



GENERAL COMMENTS

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

Package 1	14.0°C
Package 2	10.0°C

Sample XMH380 [BH-6 SS1] : F2-F4 Analysis: Detection limit was raised due to background interference.

Sample XMH383 [BH-7 SS2B] : F2-F4 Analysis: Detection limit was raised due to background interference.

Sample XMH384 [BH-8 AS3] : PAH Analysis: Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Sample XMH385 [BH-9 AS1] : PAH Analysis: Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Sample XMH387 [BH-10 AS1] : PAH Analysis: Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431

Report Date: 2023/11/09

QUALITY ASSURANCE REPORT

exp Services Inc

Client Project #: OTT-23002538-A0

Sampler Initials: LW

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9029156	4-Bromofluorobenzene	2023/11/04	95	60 - 140	71	60 - 140	131	%		
9029156	D10-o-Xylene	2023/11/04	96	60 - 130	91	60 - 130	121	%		
9029156	D4-1,2-Dichloroethane	2023/11/04	100	60 - 140	98	60 - 140	99	%		
9029156	D8-Toluene	2023/11/04	101	60 - 140	103	60 - 140	97	%		
9029886	D10-Anthracene	2023/11/05	98	50 - 130	101	50 - 130	122	%		
9029886	D14-Terphenyl (FS)	2023/11/05	97	50 - 130	100	50 - 130	106	%		
9029886	D8-Acenaphthylene	2023/11/05	89	50 - 130	89	50 - 130	86	%		
9029936	4-Bromofluorobenzene	2023/11/06	100	60 - 140	100	60 - 140	99	%		
9029936	D10-o-Xylene	2023/11/06	95	60 - 130	99	60 - 130	103	%		
9029936	D4-1,2-Dichloroethane	2023/11/06	94	60 - 140	96	60 - 140	97	%		
9029936	D8-Toluene	2023/11/06	101	60 - 140	100	60 - 140	99	%		
9030166	o-Terphenyl	2023/11/06	89	60 - 130	93	60 - 130	98	%		
9026369	Moisture	2023/11/03							1.8	20
9026404	Moisture	2023/11/03							1.1	20
9027668	Acid Extractable Antimony (Sb)	2023/11/07	94	75 - 125	101	80 - 120	<0.20	ug/g	8.3	30
9027668	Acid Extractable Arsenic (As)	2023/11/07	96	75 - 125	99	80 - 120	<1.0	ug/g	1.2	30
9027668	Acid Extractable Barium (Ba)	2023/11/07	NC	75 - 125	95	80 - 120	<0.50	ug/g	1.8	30
9027668	Acid Extractable Beryllium (Be)	2023/11/07	93	75 - 125	96	80 - 120	<0.20	ug/g	15	30
9027668	Acid Extractable Boron (B)	2023/11/07	88	75 - 125	94	80 - 120	<5.0	ug/g	NC	30
9027668	Acid Extractable Cadmium (Cd)	2023/11/07	96	75 - 125	99	80 - 120	<0.10	ug/g	7.0	30
9027668	Acid Extractable Chromium (Cr)	2023/11/07	98	75 - 125	97	80 - 120	<1.0	ug/g	4.9	30
9027668	Acid Extractable Cobalt (Co)	2023/11/07	94	75 - 125	99	80 - 120	<0.10	ug/g	4.7	30
9027668	Acid Extractable Copper (Cu)	2023/11/07	92	75 - 125	97	80 - 120	<0.50	ug/g	4.5	30
9027668	Acid Extractable Lead (Pb)	2023/11/07	NC	75 - 125	99	80 - 120	<1.0	ug/g	1.0	30
9027668	Acid Extractable Mercury (Hg)	2023/11/07	96	75 - 125	100	80 - 120	<0.050	ug/g	12	30
9027668	Acid Extractable Molybdenum (Mo)	2023/11/07	94	75 - 125	98	80 - 120	<0.50	ug/g	2.3	30
9027668	Acid Extractable Nickel (Ni)	2023/11/07	97	75 - 125	99	80 - 120	<0.50	ug/g	4.1	30
9027668	Acid Extractable Selenium (Se)	2023/11/07	96	75 - 125	101	80 - 120	<0.50	ug/g	NC	30
9027668	Acid Extractable Silver (Ag)	2023/11/07	97	75 - 125	101	80 - 120	<0.20	ug/g	0.42	30
9027668	Acid Extractable Thallium (Tl)	2023/11/07	96	75 - 125	101	80 - 120	<0.050	ug/g	0.34	30
9027668	Acid Extractable Uranium (U)	2023/11/07	99	75 - 125	102	80 - 120	<0.050	ug/g	0.0027	30
9027668	Acid Extractable Vanadium (V)	2023/11/07	96	75 - 125	95	80 - 120	<5.0	ug/g	4.1	30



BUREAU
VERITAS

Bureau Veritas Job #: C3Y3431

Report Date: 2023/11/09

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-A0

Sampler Initials: LW

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9027668	Acid Extractable Zinc (Zn)	2023/11/07	NC	75 - 125	99	80 - 120	<5.0	ug/g	4.3	30
9027882	Hot Water Ext. Boron (B)	2023/11/06	118	75 - 125	101	75 - 125	<0.050	ug/g	3.1	40
9027893	Hot Water Ext. Boron (B)	2023/11/06	112	75 - 125	104	75 - 125	<0.050	ug/g	30	40
9029156	1,1,1,2-Tetrachloroethane	2023/11/04	99	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
9029156	1,1,1-Trichloroethane	2023/11/04	103	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
9029156	1,1,2,2-Tetrachloroethane	2023/11/04	96	60 - 140	71	60 - 130	<0.040	ug/g	NC	50
9029156	1,1,2-Trichloroethane	2023/11/04	98	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
9029156	1,1-Dichloroethane	2023/11/04	105	60 - 140	106	60 - 130	<0.040	ug/g	NC	50
9029156	1,1-Dichloroethylene	2023/11/04	110	60 - 140	114	60 - 130	<0.040	ug/g	NC	50
9029156	1,2-Dichlorobenzene	2023/11/04	100	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9029156	1,2-Dichloroethane	2023/11/04	92	60 - 140	89	60 - 130	<0.049	ug/g	NC	50
9029156	1,2-Dichloropropane	2023/11/04	98	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
9029156	1,3-Dichlorobenzene	2023/11/04	105	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
9029156	1,4-Dichlorobenzene	2023/11/04	111	60 - 140	109	60 - 130	<0.040	ug/g	NC	50
9029156	Acetone (2-Propanone)	2023/11/04	95	60 - 140	98	60 - 140	<0.49	ug/g	NC	50
9029156	Benzene	2023/11/04	93	60 - 140	92	60 - 130	<0.0060	ug/g	NC	50
9029156	Bromodichloromethane	2023/11/04	103	60 - 140	118	60 - 130	<0.040	ug/g	NC	50
9029156	Bromoform	2023/11/04	82	60 - 140	60	60 - 130	<0.040	ug/g	NC	50
9029156	Bromomethane	2023/11/04	105	60 - 140	102	60 - 140	<0.040	ug/g	NC	50
9029156	Carbon Tetrachloride	2023/11/04	101	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
9029156	Chlorobenzene	2023/11/04	99	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
9029156	Chloroform	2023/11/04	105	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
9029156	cis-1,2-Dichloroethylene	2023/11/04	101	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9029156	cis-1,3-Dichloropropene	2023/11/04	93	60 - 140	109	60 - 130	<0.030	ug/g	NC	50
9029156	Dibromochloromethane	2023/11/04	93	60 - 140	84	60 - 130	<0.040	ug/g	NC	50
9029156	Dichlorodifluoromethane (FREON 12)	2023/11/04	116	60 - 140	114	60 - 140	<0.040	ug/g	NC	50
9029156	Ethylbenzene	2023/11/04	92	60 - 140	84	60 - 130	<0.010	ug/g	NC	50
9029156	Ethylene Dibromide	2023/11/04	94	60 - 140	88	60 - 130	<0.040	ug/g	NC	50
9029156	F1 (C6-C10) - BTEX	2023/11/04					<10	ug/g	NC	30
9029156	F1 (C6-C10)	2023/11/04	95	60 - 140	95	80 - 120	<10	ug/g	NC	30
9029156	Hexane	2023/11/04	101	60 - 140	108	60 - 130	<0.040	ug/g	NC	50
9029156	Methyl Ethyl Ketone (2-Butanone)	2023/11/04	92	60 - 140	90	60 - 140	<0.40	ug/g	NC	50



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Bureau Veritas Job #: C3Y3431

Report Date: 2023/11/09

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-A0

Sampler Initials: LW

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9029156	Methyl Isobutyl Ketone	2023/11/04	88	60 - 140	109	60 - 130	<0.40	ug/g	NC	50
9029156	Methyl t-butyl ether (MTBE)	2023/11/04	96	60 - 140	110	60 - 130	<0.040	ug/g	NC	50
9029156	Methylene Chloride(Dichloromethane)	2023/11/04	103	60 - 140	112	60 - 130	<0.049	ug/g	NC	50
9029156	o-Xylene	2023/11/04	86	60 - 140	70	60 - 130	<0.020	ug/g	NC	50
9029156	p+m-Xylene	2023/11/04	97	60 - 140	89	60 - 130	<0.020	ug/g	NC	50
9029156	Styrene	2023/11/04	99	60 - 140	80	60 - 130	<0.040	ug/g	NC	50
9029156	Tetrachloroethylene	2023/11/04	99	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
9029156	Toluene	2023/11/04	94	60 - 140	86	60 - 130	<0.020	ug/g	NC	50
9029156	Total Xylenes	2023/11/04					<0.020	ug/g	NC	50
9029156	trans-1,2-Dichloroethylene	2023/11/04	102	60 - 140	114	60 - 130	<0.040	ug/g	NC	50
9029156	trans-1,3-Dichloropropene	2023/11/04	94	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
9029156	Trichloroethylene	2023/11/04	100	60 - 140	100	60 - 130	<0.010	ug/g	NC	50
9029156	Trichlorofluoromethane (FREON 11)	2023/11/04	109	60 - 140	109	60 - 130	<0.040	ug/g	NC	50
9029156	Vinyl Chloride	2023/11/04	110	60 - 140	109	60 - 130	<0.019	ug/g	NC	50
9029430	Acid Extractable Antimony (Sb)	2023/11/07	88	75 - 125	100	80 - 120	<0.20	ug/g	3.9	30
9029430	Acid Extractable Arsenic (As)	2023/11/07	92	75 - 125	97	80 - 120	<1.0	ug/g	0.16	30
9029430	Acid Extractable Barium (Ba)	2023/11/07	NC	75 - 125	101	80 - 120	<0.50	ug/g	2.9	30
9029430	Acid Extractable Beryllium (Be)	2023/11/07	88	75 - 125	94	80 - 120	<0.20	ug/g	3.6	30
9029430	Acid Extractable Boron (B)	2023/11/07	80	75 - 125	90	80 - 120	<5.0	ug/g	0.59	30
9029430	Acid Extractable Cadmium (Cd)	2023/11/07	94	75 - 125	97	80 - 120	<0.10	ug/g	6.2	30
9029430	Acid Extractable Chromium (Cr)	2023/11/07	NC	75 - 125	97	80 - 120	<1.0	ug/g	0.13	30
9029430	Acid Extractable Cobalt (Co)	2023/11/07	88	75 - 125	97	80 - 120	<0.10	ug/g	2.4	30
9029430	Acid Extractable Copper (Cu)	2023/11/07	NC	75 - 125	96	80 - 120	<0.50	ug/g	6.5	30
9029430	Acid Extractable Lead (Pb)	2023/11/07	NC	75 - 125	98	80 - 120	<1.0	ug/g	0.73	30
9029430	Acid Extractable Mercury (Hg)	2023/11/07	90	75 - 125	99	80 - 120	<0.050	ug/g	5.6	30
9029430	Acid Extractable Molybdenum (Mo)	2023/11/07	93	75 - 125	96	80 - 120	<0.50	ug/g	2.4	30
9029430	Acid Extractable Nickel (Ni)	2023/11/07	87	75 - 125	98	80 - 120	<0.50	ug/g	5.8	30
9029430	Acid Extractable Selenium (Se)	2023/11/07	90	75 - 125	99	80 - 120	<0.50	ug/g	NC	30
9029430	Acid Extractable Silver (Ag)	2023/11/07	94	75 - 125	101	80 - 120	<0.20	ug/g	1.0	30
9029430	Acid Extractable Thallium (Tl)	2023/11/07	90	75 - 125	99	80 - 120	<0.050	ug/g	3.3	30
9029430	Acid Extractable Uranium (U)	2023/11/07	93	75 - 125	100	80 - 120	<0.050	ug/g	0.21	30
9029430	Acid Extractable Vanadium (V)	2023/11/07	NC	75 - 125	96	80 - 120	<5.0	ug/g	1.5	30



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Bureau Veritas Job #: C3Y3431

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QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-A0

Sampler Initials: LW

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9029430	Acid Extractable Zinc (Zn)	2023/11/07	NC	75 - 125	99	80 - 120	<5.0	ug/g	1.3	30
9029438	Acid Extractable Antimony (Sb)	2023/11/06	102	75 - 125	99	80 - 120	<0.20	ug/g	NC	30
9029438	Acid Extractable Arsenic (As)	2023/11/06	103	75 - 125	100	80 - 120	<1.0	ug/g	0.75	30
9029438	Acid Extractable Barium (Ba)	2023/11/06	102	75 - 125	102	80 - 120	<0.50	ug/g	1.6	30
9029438	Acid Extractable Beryllium (Be)	2023/11/06	106	75 - 125	103	80 - 120	<0.20	ug/g	NC	30
9029438	Acid Extractable Boron (B)	2023/11/06	104	75 - 125	106	80 - 120	<5.0	ug/g	13	30
9029438	Acid Extractable Cadmium (Cd)	2023/11/06	102	75 - 125	98	80 - 120	<0.10	ug/g	NC	30
9029438	Acid Extractable Chromium (Cr)	2023/11/06	95	75 - 125	95	80 - 120	<1.0	ug/g	4.5	30
9029438	Acid Extractable Cobalt (Co)	2023/11/06	96	75 - 125	94	80 - 120	<0.10	ug/g	3.4	30
9029438	Acid Extractable Copper (Cu)	2023/11/06	99	75 - 125	99	80 - 120	<0.50	ug/g	3.1	30
9029438	Acid Extractable Lead (Pb)	2023/11/06	97	75 - 125	97	80 - 120	<1.0	ug/g	3.3	30
9029438	Acid Extractable Mercury (Hg)	2023/11/06	98	75 - 125	99	80 - 120	<0.050	ug/g	NC	30
9029438	Acid Extractable Molybdenum (Mo)	2023/11/06	99	75 - 125	94	80 - 120	<0.50	ug/g	NC	30
9029438	Acid Extractable Nickel (Ni)	2023/11/06	100	75 - 125	99	80 - 120	<0.50	ug/g	5.4	30
9029438	Acid Extractable Selenium (Se)	2023/11/06	104	75 - 125	100	80 - 120	<0.50	ug/g	NC	30
9029438	Acid Extractable Silver (Ag)	2023/11/06	99	75 - 125	96	80 - 120	<0.20	ug/g	NC	30
9029438	Acid Extractable Thallium (Tl)	2023/11/06	101	75 - 125	100	80 - 120	<0.050	ug/g	18	30
9029438	Acid Extractable Uranium (U)	2023/11/06	97	75 - 125	95	80 - 120	<0.050	ug/g	1.5	30
9029438	Acid Extractable Vanadium (V)	2023/11/06	97	75 - 125	95	80 - 120	<5.0	ug/g	3.9	30
9029438	Acid Extractable Zinc (Zn)	2023/11/06	98	75 - 125	98	80 - 120	<5.0	ug/g	4.2	30
9029886	1-Methylnaphthalene	2023/11/05	101	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40
9029886	2-Methylnaphthalene	2023/11/05	87	50 - 130	84	50 - 130	<0.0050	ug/g	NC	40
9029886	Acenaphthene	2023/11/05	101	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40
9029886	Acenaphthylene	2023/11/05	96	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
9029886	Anthracene	2023/11/05	107	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40
9029886	Benzo(a)anthracene	2023/11/05	100	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40
9029886	Benzo(a)pyrene	2023/11/05	87	50 - 130	90	50 - 130	<0.0050	ug/g	NC	40
9029886	Benzo(b,j)fluoranthene	2023/11/05	104	50 - 130	106	50 - 130	<0.0050	ug/g	NC	40
9029886	Benzo(g,h,i)perylene	2023/11/05	80	50 - 130	87	50 - 130	<0.0050	ug/g	NC	40
9029886	Benzo(k)fluoranthene	2023/11/05	105	50 - 130	109	50 - 130	<0.0050	ug/g	NC	40
9029886	Chrysene	2023/11/05	101	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40
9029886	Dibenzo(a,h)anthracene	2023/11/05	83	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40



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QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-A0

Sampler Initials: LW

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9029886	Fluoranthene	2023/11/05	104	50 - 130	107	50 - 130	<0.0050	ug/g	NC	40
9029886	Fluorene	2023/11/05	102	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40
9029886	Indeno(1,2,3-cd)pyrene	2023/11/05	83	50 - 130	91	50 - 130	<0.0050	ug/g	NC	40
9029886	Naphthalene	2023/11/05	92	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
9029886	Phenanthrene	2023/11/05	96	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40
9029886	Pyrene	2023/11/05	110	50 - 130	113	50 - 130	<0.0050	ug/g	NC	40
9029936	1,1,1,2-Tetrachloroethane	2023/11/06	97	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9029936	1,1,1-Trichloroethane	2023/11/06	96	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9029936	1,1,2,2-Tetrachloroethane	2023/11/06	97	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
9029936	1,1,2-Trichloroethane	2023/11/06	92	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
9029936	1,1-Dichloroethane	2023/11/06	97	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
9029936	1,1-Dichloroethylene	2023/11/06	96	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9029936	1,2-Dichlorobenzene	2023/11/06	94	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
9029936	1,2-Dichloroethane	2023/11/06	87	60 - 140	90	60 - 130	<0.049	ug/g	NC	50
9029936	1,2-Dichloropropane	2023/11/06	92	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9029936	1,3-Dichlorobenzene	2023/11/06	99	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9029936	1,4-Dichlorobenzene	2023/11/06	106	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
9029936	Acetone (2-Propanone)	2023/11/06	85	60 - 140	88	60 - 140	<0.49	ug/g	NC	50
9029936	Benzene	2023/11/06	88	60 - 140	92	60 - 130	<0.0060	ug/g	NC	50
9029936	Bromodichloromethane	2023/11/06	99	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
9029936	Bromoform	2023/11/06	82	60 - 140	85	60 - 130	<0.040	ug/g	NC	50
9029936	Bromomethane	2023/11/06	91	60 - 140	95	60 - 140	<0.040	ug/g	NC	50
9029936	Carbon Tetrachloride	2023/11/06	93	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
9029936	Chlorobenzene	2023/11/06	98	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9029936	Chloroform	2023/11/06	99	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
9029936	cis-1,2-Dichloroethylene	2023/11/06	96	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
9029936	cis-1,3-Dichloropropene	2023/11/06	78	60 - 140	83	60 - 130	<0.030	ug/g	NC	50
9029936	Dibromochloromethane	2023/11/06	92	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
9029936	Dichlorodifluoromethane (FREON 12)	2023/11/06	82	60 - 140	86	60 - 140	<0.040	ug/g	NC	50
9029936	Ethylbenzene	2023/11/06	90	60 - 140	90	60 - 130	<0.010	ug/g	NC	50
9029936	Ethylene Dibromide	2023/11/06	93	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
9029936	F1 (C6-C10) - BTEX	2023/11/06					<10	ug/g	NC	30



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QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

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Sampler Initials: LW

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9029936	F1 (C6-C10)	2023/11/06	96	60 - 140	93	80 - 120	<10	ug/g	NC	30
9029936	Hexane	2023/11/06	84	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
9029936	Methyl Ethyl Ketone (2-Butanone)	2023/11/06	87	60 - 140	90	60 - 140	<0.40	ug/g	NC	50
9029936	Methyl Isobutyl Ketone	2023/11/06	82	60 - 140	85	60 - 130	<0.40	ug/g	NC	50
9029936	Methyl t-butyl ether (MTBE)	2023/11/06	92	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
9029936	Methylene Chloride(Dichloromethane)	2023/11/06	93	60 - 140	97	60 - 130	<0.049	ug/g	NC	50
9029936	o-Xylene	2023/11/06	80	60 - 140	81	60 - 130	<0.020	ug/g	NC	50
9029936	p+m-Xylene	2023/11/06	91	60 - 140	90	60 - 130	<0.020	ug/g	NC	50
9029936	Styrene	2023/11/06	96	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
9029936	Tetrachloroethylene	2023/11/06	99	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
9029936	Toluene	2023/11/06	90	60 - 140	92	60 - 130	<0.020	ug/g	NC	50
9029936	Total Xylenes	2023/11/06					<0.020	ug/g	NC	50
9029936	trans-1,2-Dichloroethylene	2023/11/06	96	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
9029936	trans-1,3-Dichloropropene	2023/11/06	80	60 - 140	83	60 - 130	<0.040	ug/g	NC	50
9029936	Trichloroethylene	2023/11/06	97	60 - 140	98	60 - 130	<0.010	ug/g	NC	50
9029936	Trichlorofluoromethane (FREON 11)	2023/11/06	96	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
9029936	Vinyl Chloride	2023/11/06	93	60 - 140	95	60 - 130	<0.019	ug/g	NC	50
9030166	F2 (C10-C16 Hydrocarbons)	2023/11/06	92	60 - 130	95	80 - 120	<10	ug/g	NC	30
9030166	F3 (C16-C34 Hydrocarbons)	2023/11/06	92	60 - 130	96	80 - 120	<50	ug/g	NC	30
9030166	F4 (C34-C50 Hydrocarbons)	2023/11/06	94	60 - 130	98	80 - 120	<50	ug/g	NC	30
9030312	Available (CaCl2) pH	2023/11/06			100	97 - 103			0.24	N/A
9030355	Hot Water Ext. Boron (B)	2023/11/06	112	75 - 125	101	75 - 125	<0.050	ug/g	19	40
9030369	Hot Water Ext. Boron (B)	2023/11/06	104	75 - 125	102	75 - 125	<0.050	ug/g	6.2	40
9030462	WAD Cyanide (Free)	2023/11/06	100	75 - 125	101	80 - 120	<0.01	ug/g	NC	35
9030480	WAD Cyanide (Free)	2023/11/06	99	75 - 125	104	80 - 120	<0.01	ug/g	NC	35
9030577	Chromium (VI)	2023/11/07	91	70 - 130	94	80 - 120	<0.18	ug/g	NC	35
9030865	Available (CaCl2) pH	2023/11/06			101	97 - 103			1.4	N/A
9030901	Available (CaCl2) pH	2023/11/06			100	97 - 103			0.96	N/A
9031062	Conductivity	2023/11/06			104	90 - 110	<0.002	mS/cm	2.5	10
9031089	Conductivity	2023/11/06			103	90 - 110	<0.002	mS/cm	1.1	10
9031125	Chromium (VI)	2023/11/07	92	70 - 130	92	80 - 120	<0.18	ug/g	NC	35
9031270	Conductivity	2023/11/06			103	90 - 110	<0.002	mS/cm	0.39	10



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QUALITY ASSURANCE REPORT(CONT'D)

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Client Project #: OTT-23002538-A0

Sampler Initials: LW

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9032757	WAD Cyanide (Free)	2023/11/07	91	75 - 125	102	80 - 120	<0.01	ug/g	NC	35
9038445	F4G-sg (Grav. Heavy Hydrocarbons)	2023/11/09	95	65 - 135	102	65 - 135	<100	ug/g	11	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).



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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.



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

Received in Ottawa

CHAIN OF CUSTODY RECORD

01-Nov-23 15:49

INVOICE TO: Company Name: #17498 exp Services Inc Attention: Accounts Payable Address: 100-2650 Queensview Drive Ottawa ON K2B 8H6 Tel: (613) 688-1899 Fax: (613) 225-7337 Email: accounting.ottawa@exp.com; Karen.Burke@exp.com;		REPORT TO: Company Name: Accounts Payable Attention: Address: Tel: Email: karen.wells@exp.com		PROJECT INFORMATION: Quotation #: <u>584210 Stream</u> P.O. #: Project: <u>OTT-23002538-A0</u> Project Name: Site #: Sampled By:	
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01-Nov-23 15:49
Katherine Szozda
C3Y3431
RUK ENV-1151
Katherine Szozda

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) <input type="checkbox"/> Table 1 <input checked="" type="checkbox"/> Res/Park <input type="checkbox"/> Medium/Fine <input type="checkbox"/> Table 2 <input type="checkbox"/> Ind/Comm <input type="checkbox"/> Coarse <input checked="" type="checkbox"/> Table 3 <input type="checkbox"/> Agri/Other <input checked="" type="checkbox"/> For RSC <input type="checkbox"/> Table	Other Regulations <input type="checkbox"/> CCME <input type="checkbox"/> Sanitary Sewer Bylaw <input type="checkbox"/> Reg 558 <input type="checkbox"/> Storm Sewer Bylaw <input type="checkbox"/> MISA Municipality _____ <input type="checkbox"/> PWGO <input type="checkbox"/> Reg 406 Table _____ <input type="checkbox"/> Other: _____	Special Instructions
---	---	-----------------------------

Sample Barcodes Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)				
						IO-Reg 153 PH/CK, BTEX/F1-F4	Other Metals	VOCs	PAHs	Other
1	BH-1 SS2	Oct 26/23	2:00	S	X	X	X	X		
2	DUP 2	Oct 26/23	2:00							
3	BH-1 SS3	Oct 26/23	2:00							
4	BH-2 AS3	Oct 30/23	10:00							
5	BH-2 SS1	Oct 30/23	10:00							
6	BH-6 SS1	Oct 27/23	3:00							
7	BH-6 SS2	Oct 27/23	3:00							
8	BH-7 SS2A	Oct 27/23	9:30							
9	BH-7 SS2B	Oct 27/23	9:30							
10	BH-8 AS3	Oct 26/23	9:00	✓						

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: _____

# of Bottles	Comments
2	limited sample volume, no metals jar filled
2	
2	
3	
3	
3	
2	
3	
3	
3	
3	

RELINQUISHED BY: (Signature/Print) <i>[Signature]</i> Date: (YY/MM/DD) <u>23/11/01</u> Time: _____	RECEIVED BY: (Signature/Print) <i>[Signature]</i> Date: (YY/MM/DD) <u>23/11/02</u> Time: <u>08:48</u>	# jars used and not submitted: _____	Laboratory Use Only Time Sensitive: _____ Temperature (°C) on Receipt: <u>14, 14, 14 / 10, 10, 10</u>	Custody Seal Present: _____ Intact: _____	Yes: _____ No: _____
---	--	--------------------------------------	--	--	----------------------

* 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.

White: BV Labs Yellow: Client
6/9/10, 3/3/4



Received in Ottawa

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name: #17498 exp Services Inc	Company Name: Mark McCailla	Quotation #: B91718	Bureau Veritas Job #:	Bottle Order #:			
Attention: Accounts Payable	Attention: Mark McCailla	P.O. #:					
Address: 100-2650 Queensview Drive	Address:	Project: OTT-21010268-C0					
Ottawa ON K2B 8H6		Project Name: OTT-23002538-40					
Tel: (613) 688-1899 Fax: (613) 225-7337	Tel:	Site #:			COC #:		Project Manager:
Email: AP@exp.com; Karen.Burke@exp.com	Email: mark.mccailla@exp.com Leah.wells@exp.com	Sampled By:			C#857512-04-01		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)		Other Regulations		Special Instructions	Field Filtered (please circle) Metals / Hg / Cr / VI	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)					# of Bottles	Comments	
Table 1	Res/Park	Medium/Inu	CCME			Sanitary Sewer Bylaw							
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>									
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>									
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>									

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals	Hg	Cr	VI	Other	Turnaround Time (TAT) Required
1	BH-9 ASI	Oct 26/23	11:00	S	X	X	X	X		2
2	BH-9 SS2	Oct 26/23	11:00							3
3	BH-10 ASI	Oct 26/23	12:00							2
4	BH-10 SS2	Oct 26/23	12:00							2
5	BH-11 SS1	Oct 30/23	2:00							3
6	BH-11 SS2	Oct 30/23	2:00							3
7	Dup 1	Oct 26/23	12:00							2
8	Dup 3	Oct 30/23	2:00	↓	↓	↓	↓	↓		2
9										2
10										

RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only		
<i>Leah Wells</i>	23/11/01		<i>see pg 1</i>				Time Sensitive	Temperature (°C) on Reccr	Custody Seal
								<i>see pg 1</i>	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.BVLABS.COM/TERMS-AND-CONDITIONS.

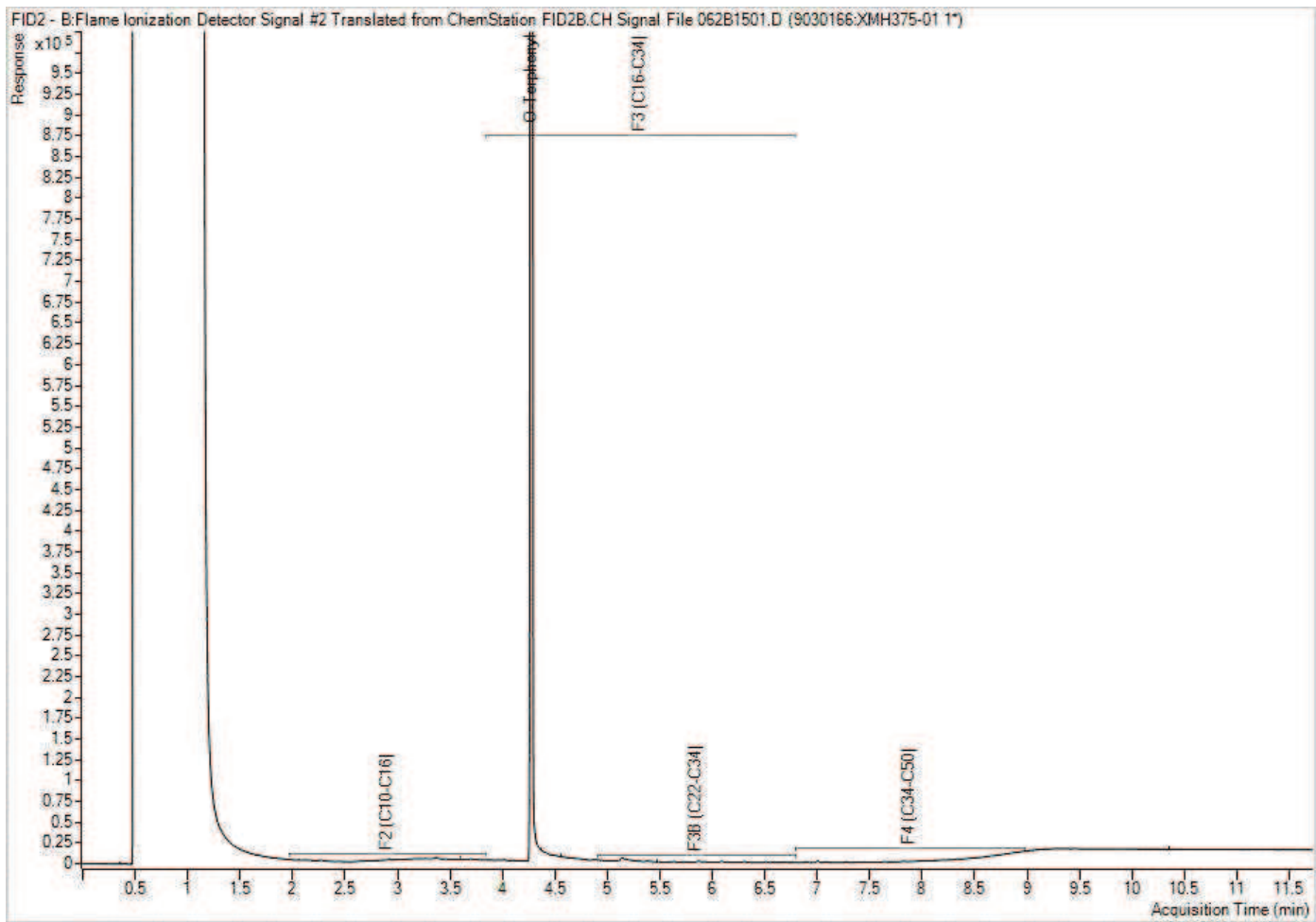
** IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

*** 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.

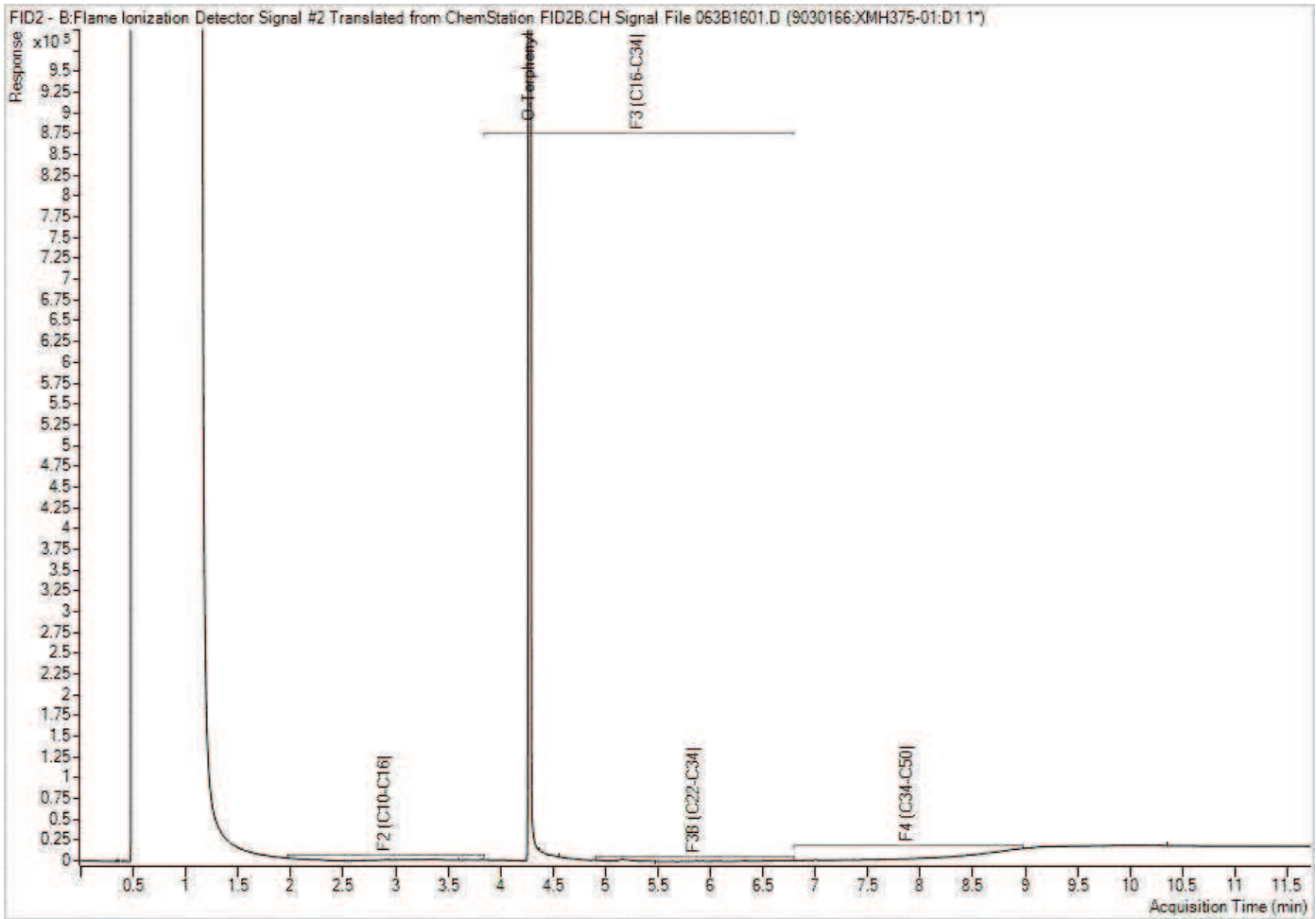
White: Bureau Veritas Yellow: Client

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



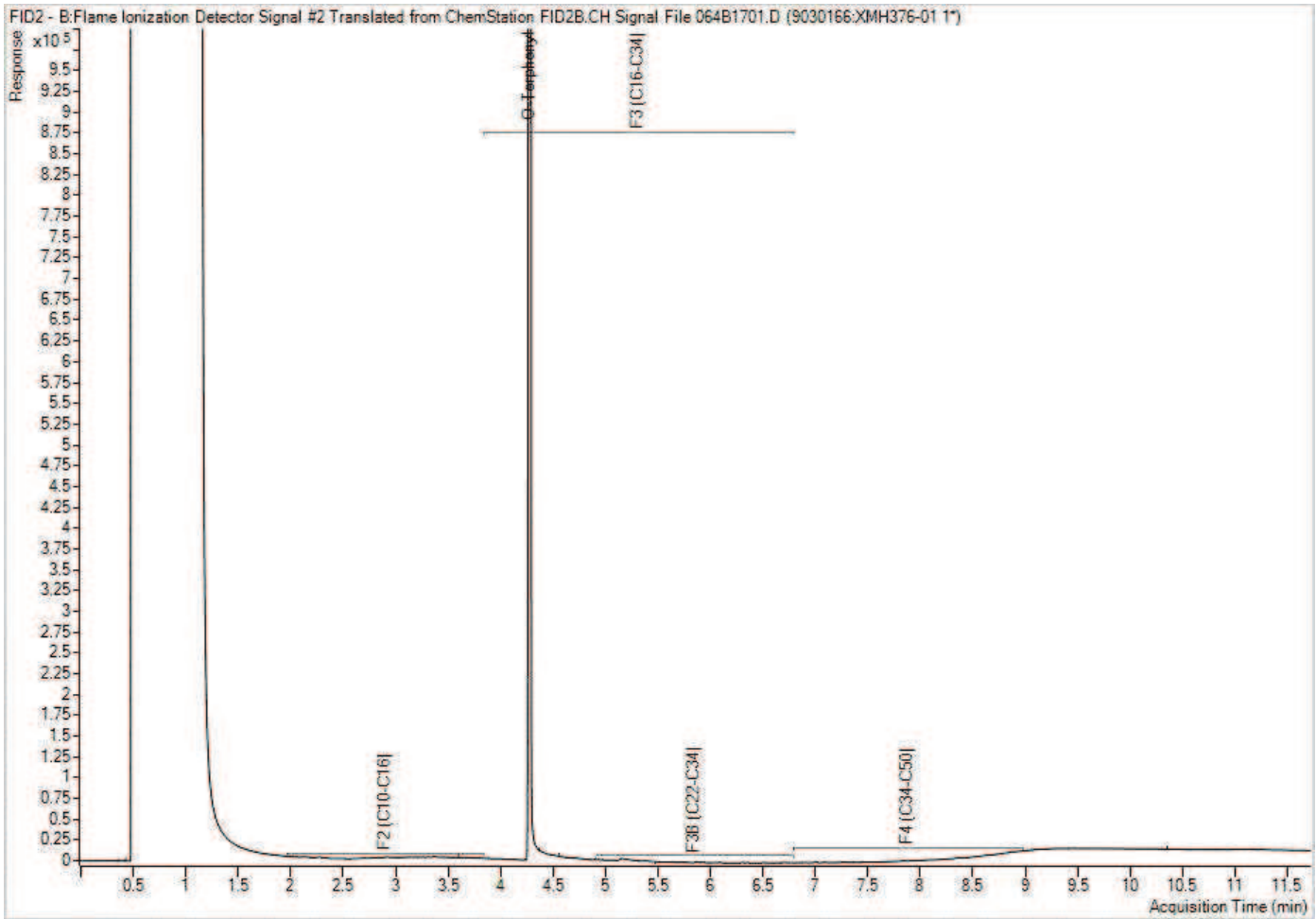
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



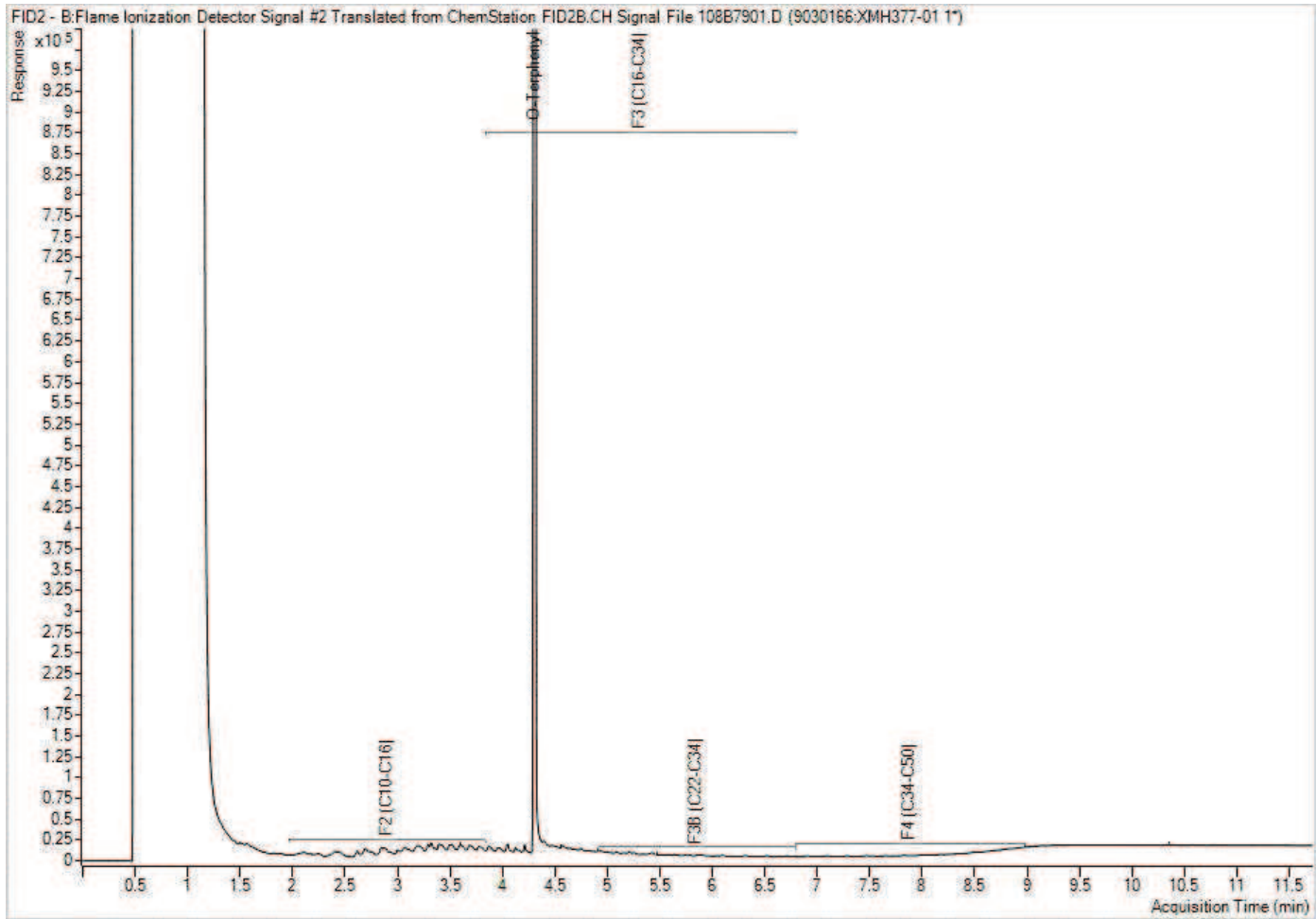
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



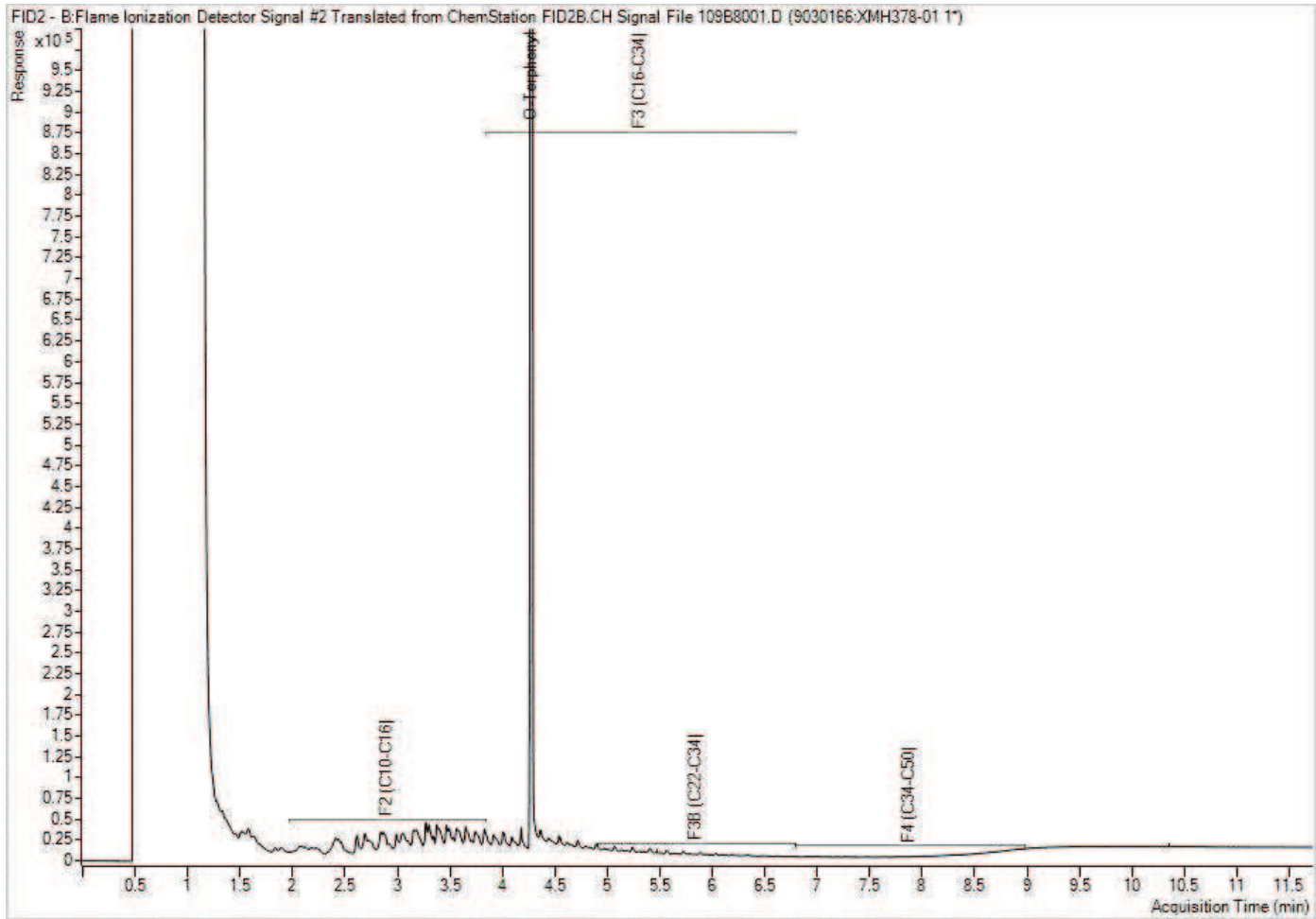
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



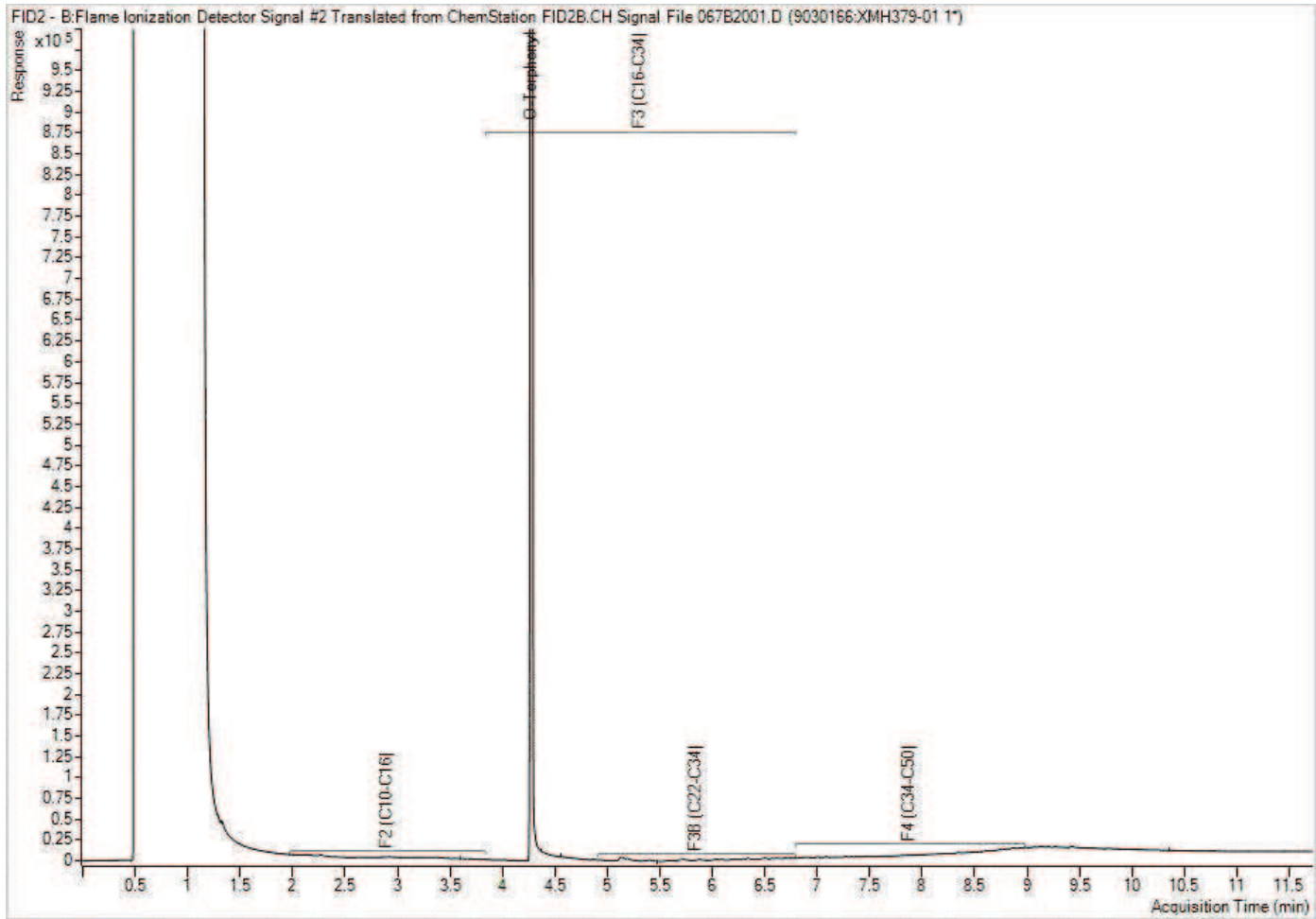
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



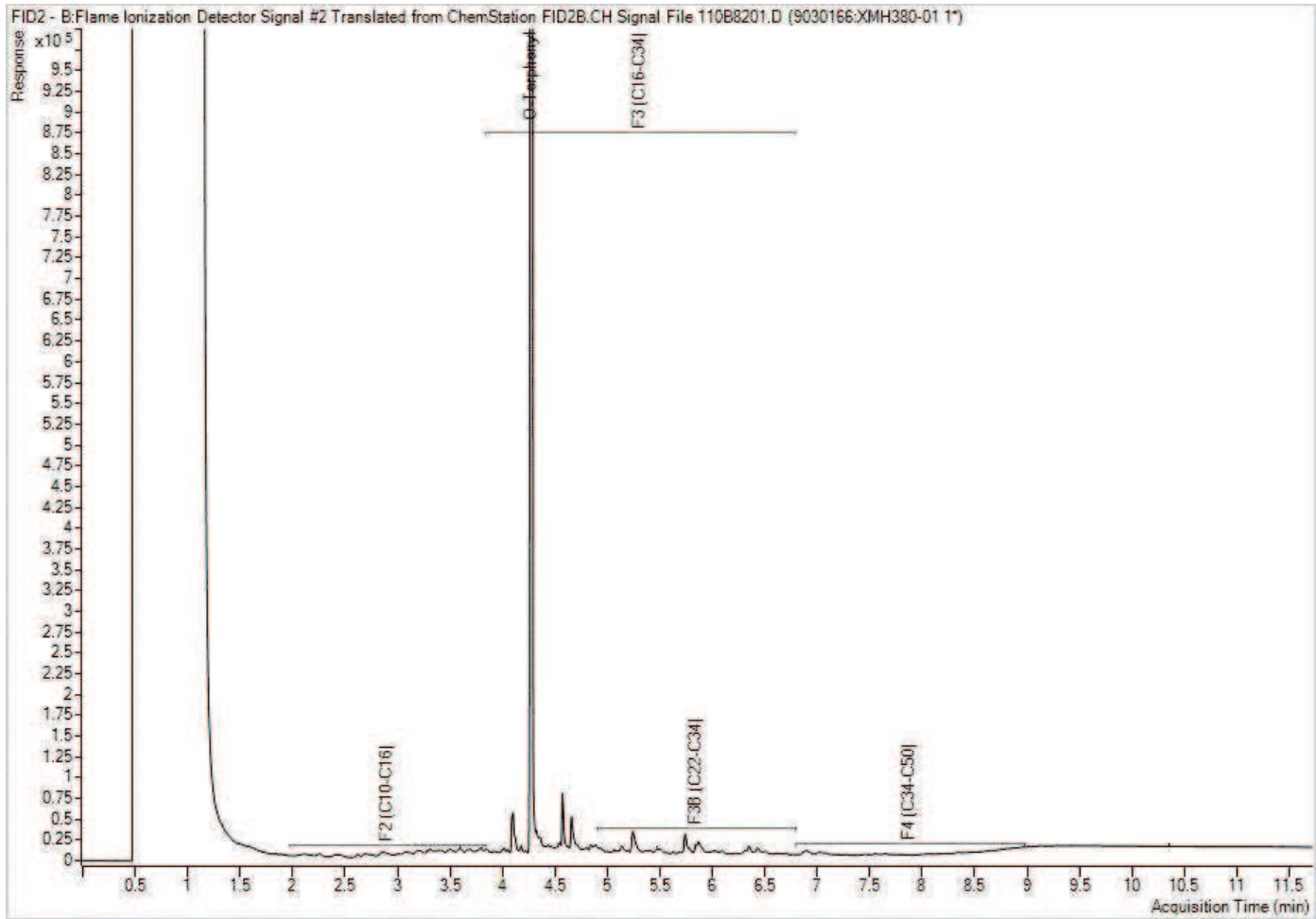
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



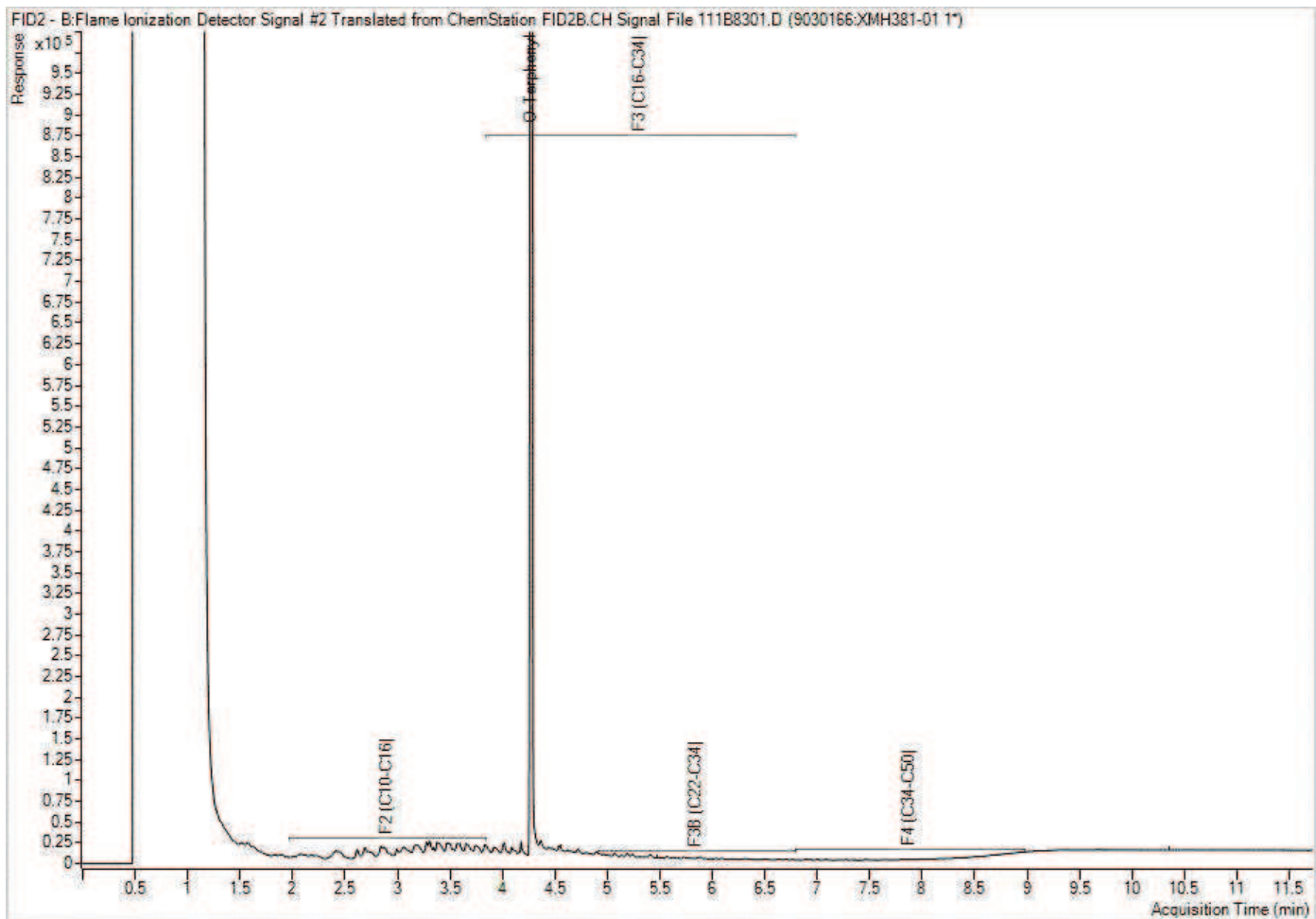
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



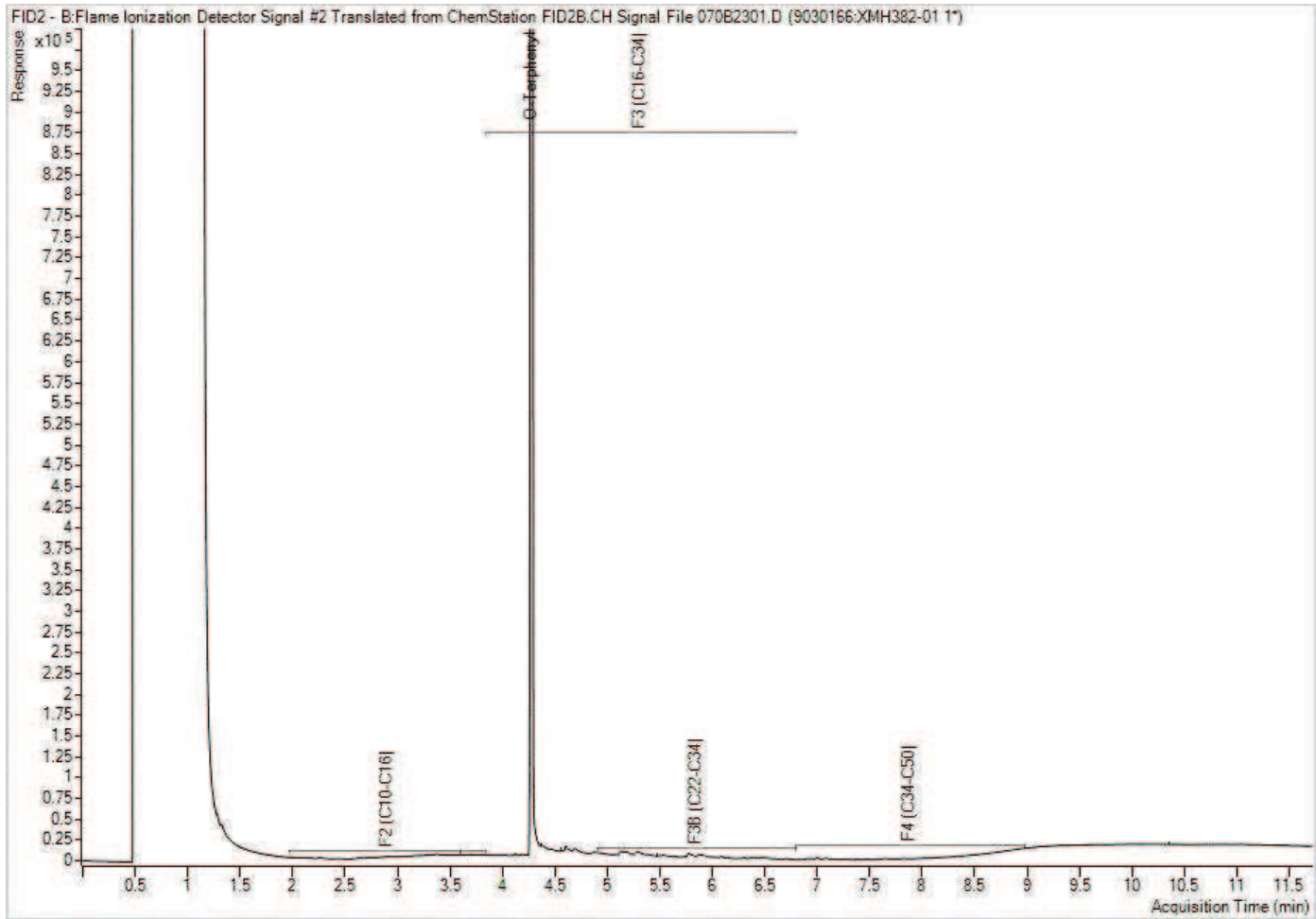
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



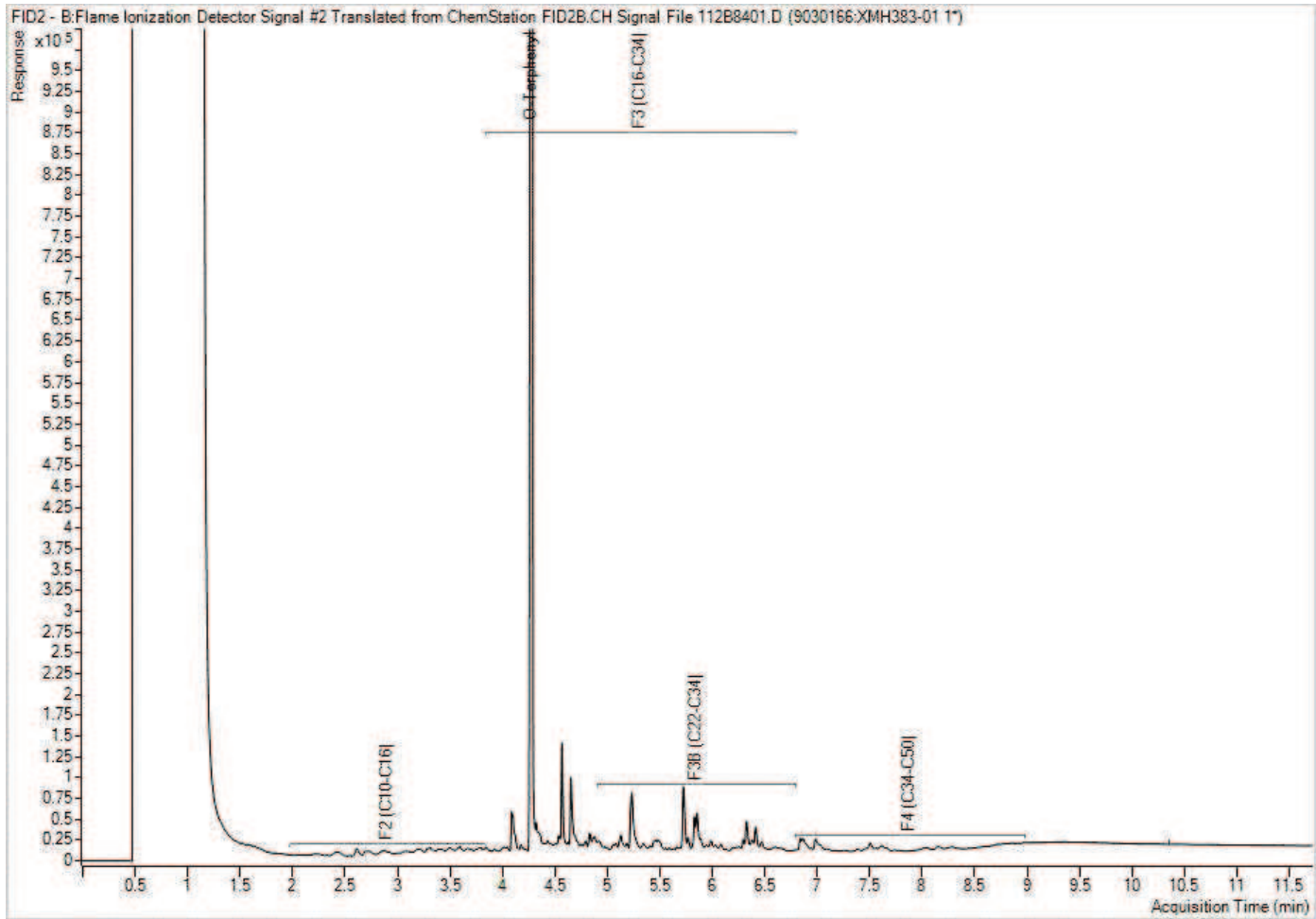
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



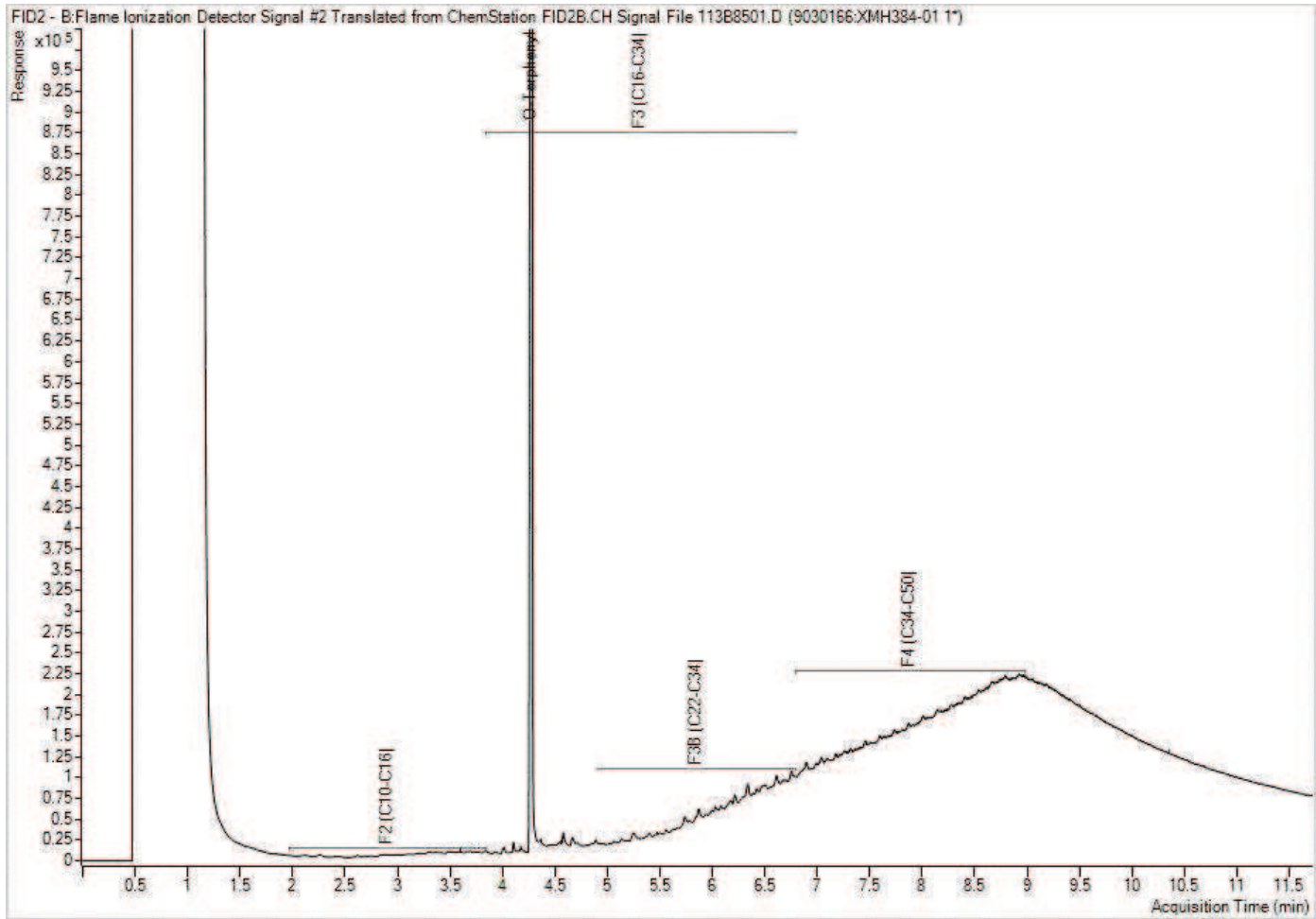
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



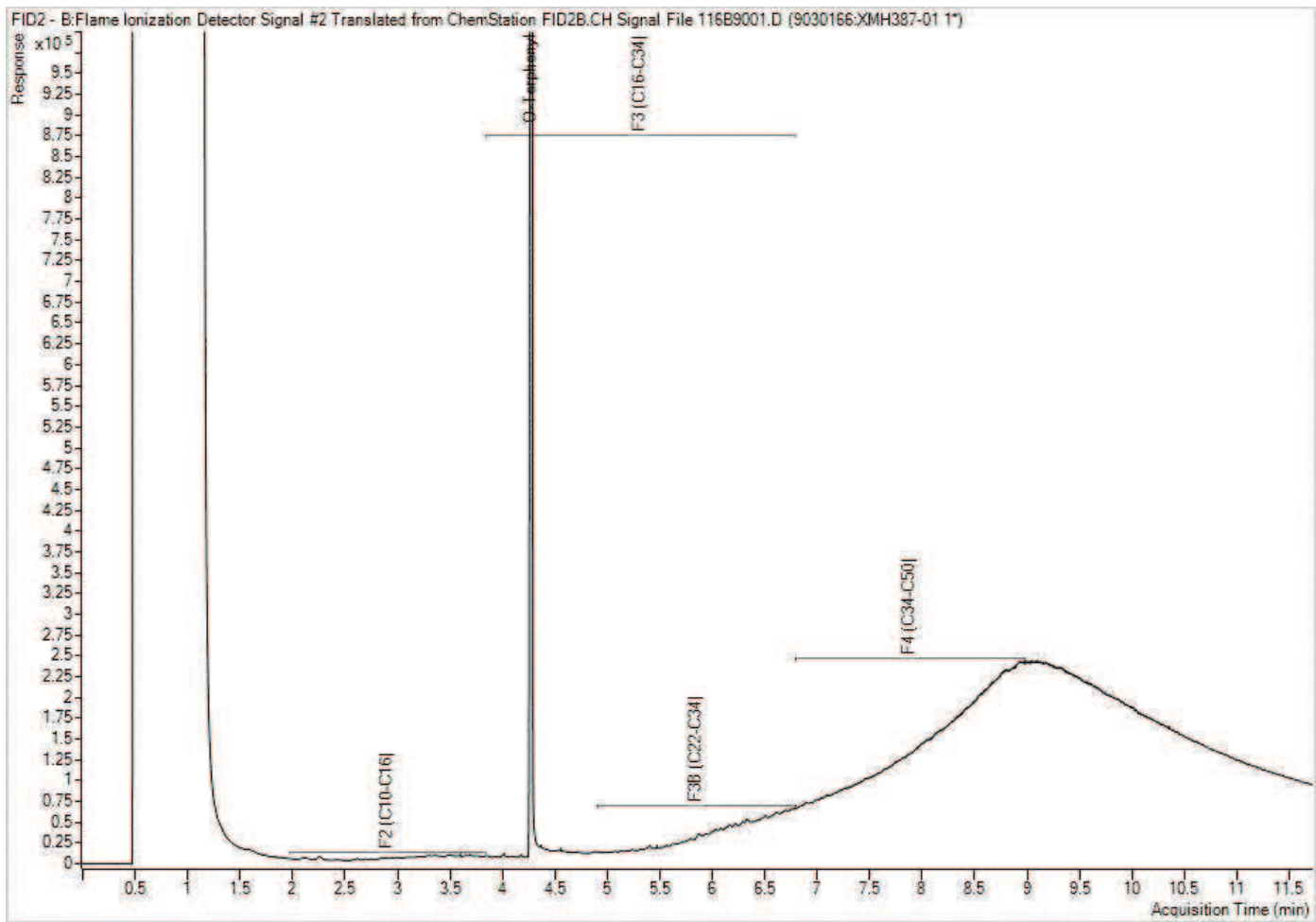
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



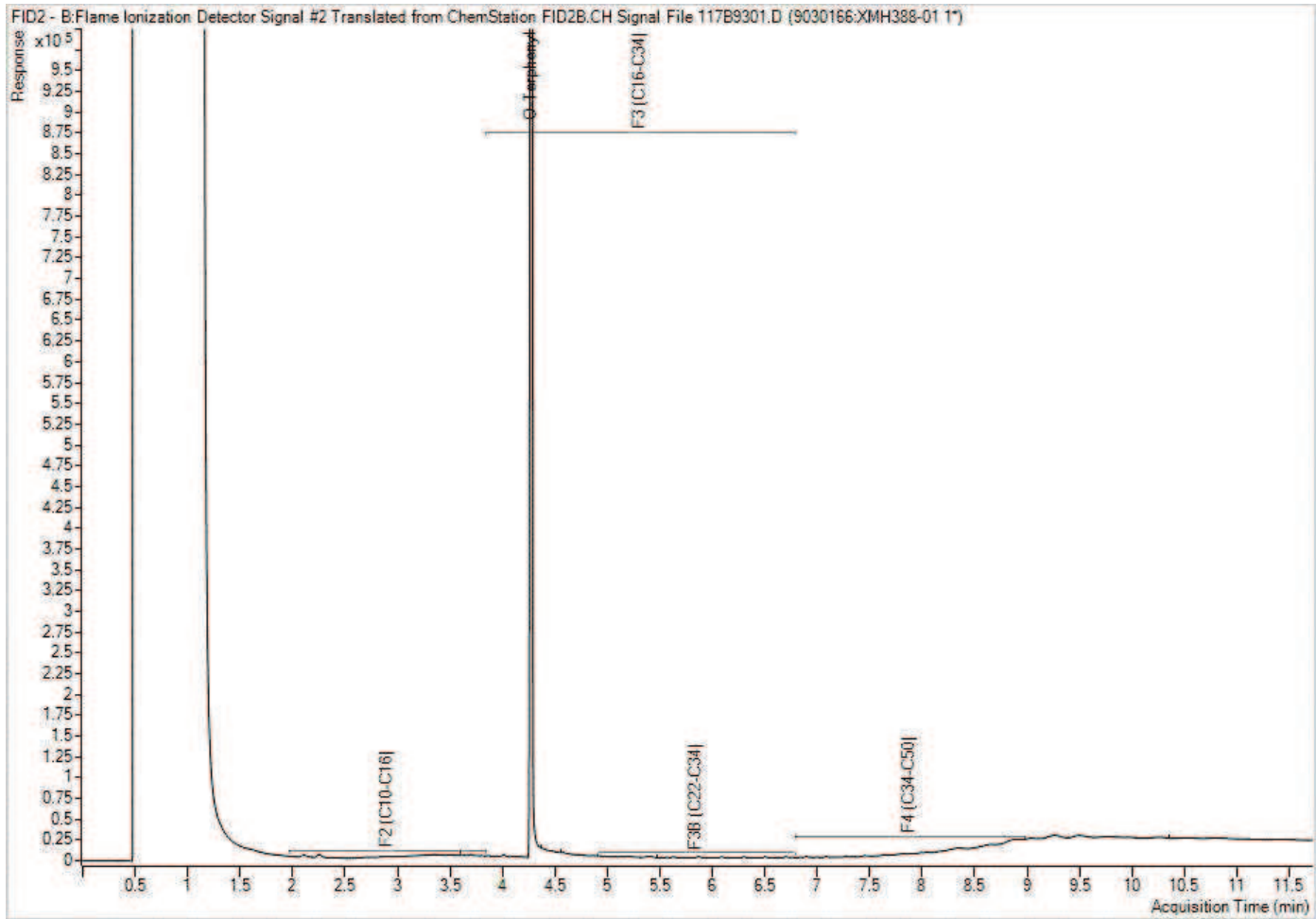
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



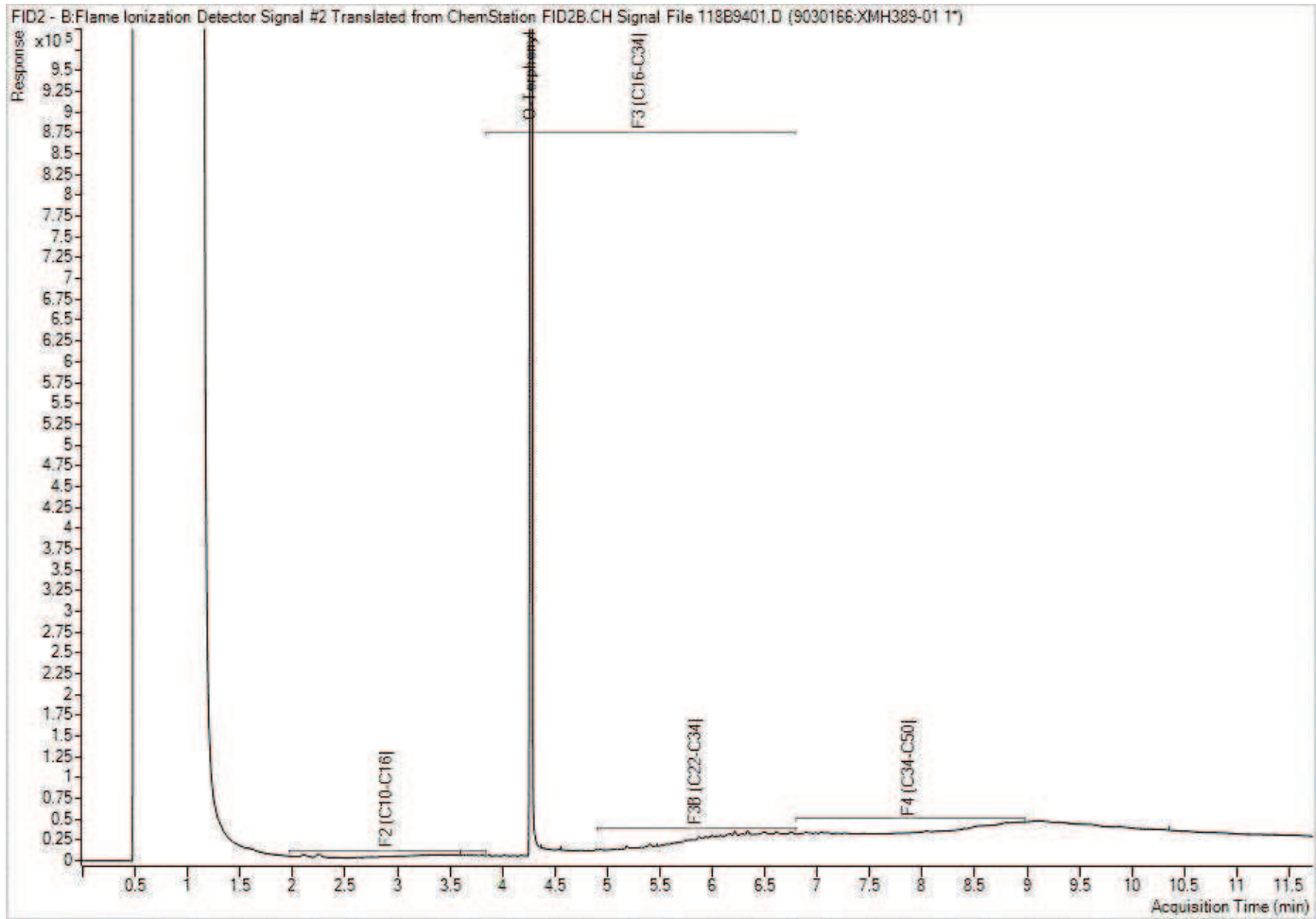
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



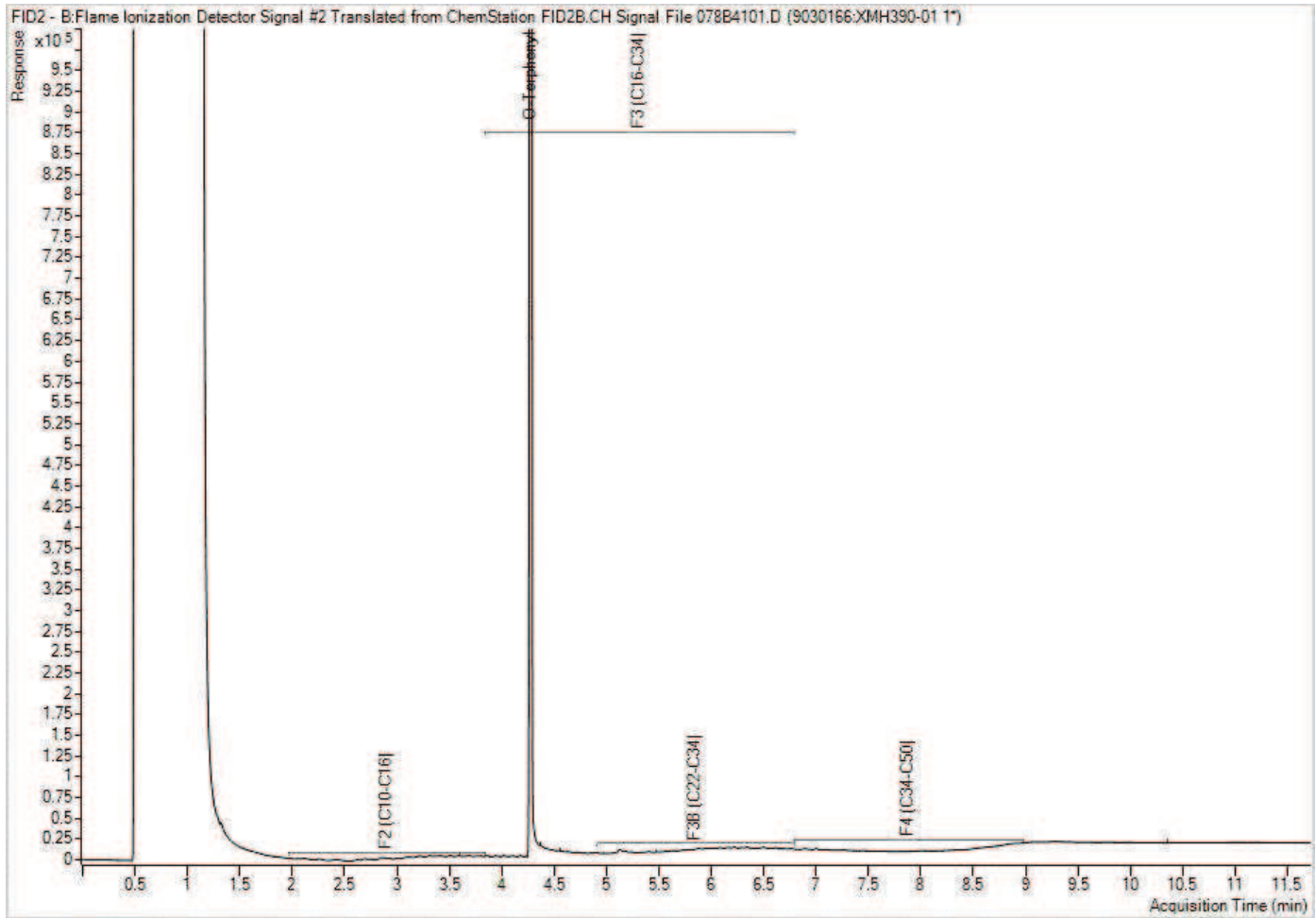
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



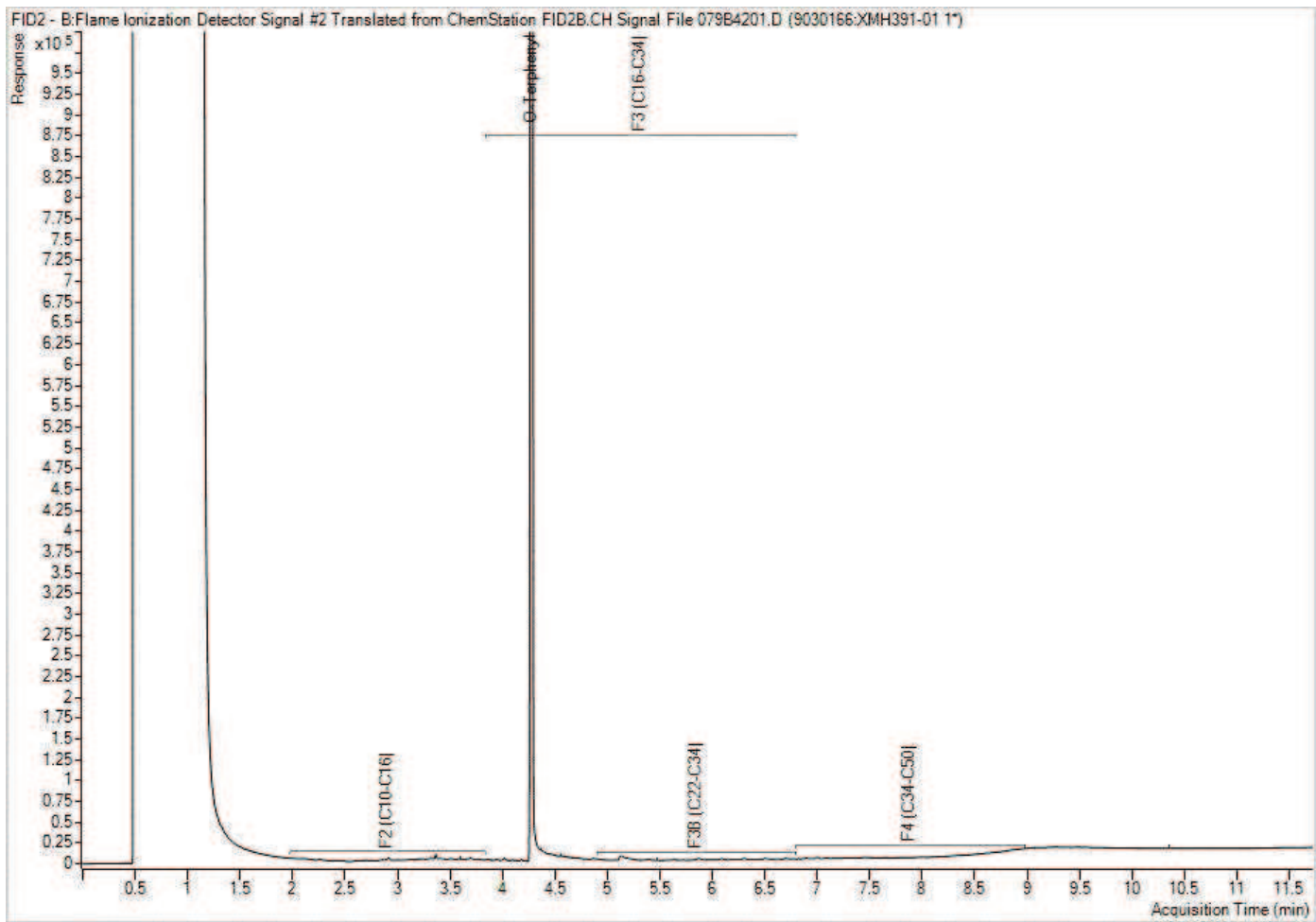
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



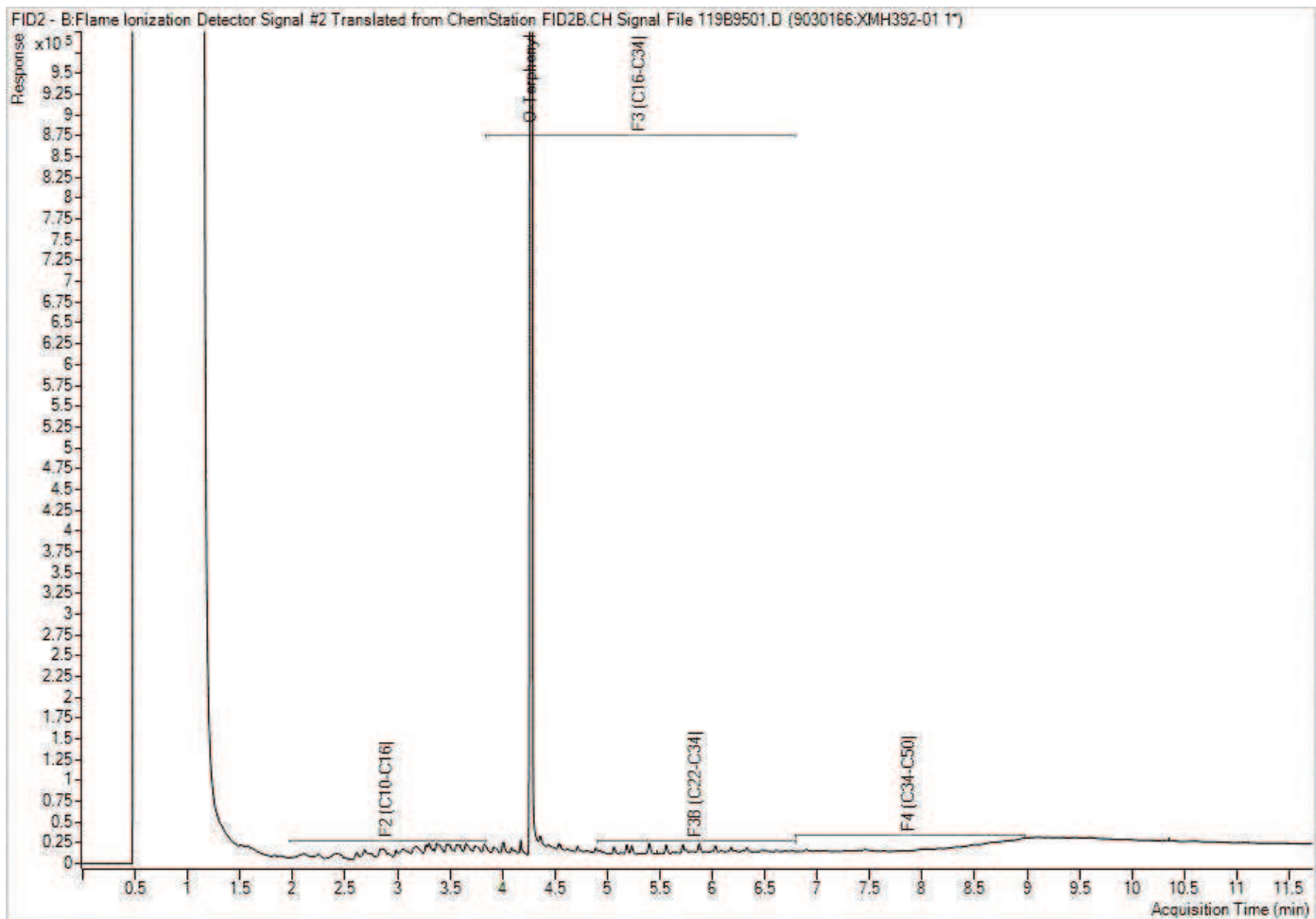
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

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.

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 #: OTT-23002538-AO
 Your C.O.C. #: 997614-01-01

Attention: Chris Kimmerly

exp Services Inc
 Ottawa Branch
 100-2650 Queensview Drive
 Ottawa, ON
 CANADA K2B 8H6

Report Date: 2024/06/27
 Report #: R8211731
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C419095

Received: 2024/06/20, 16:40

Sample Matrix: Water
 # Samples Received: 6

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
1,3-Dichloropropene Sum (1)	4	N/A	2024/06/26		EPA 8260C m
Petroleum Hydro. CCME F1 & BTEX in Water (1)	2	N/A	2024/06/24	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1, 2)	1	2024/06/24	2024/06/24	CAM SOP-00316	CCME PHC-CWS m
Volatile Organic Compounds in Water (1)	4	N/A	2024/06/25	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) 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 #: OTT-23002538-A0
Your C.O.C. #: 997614-01-01

Attention: Chris Kimmerly

exp Services Inc
Ottawa Branch
100-2650 Queensview Drive
Ottawa, ON
CANADA K2B 8H6

Report Date: 2024/06/27
Report #: R8211731
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C419095
Received: 2024/06/20, 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
=====

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.



PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		ZNG101		
Sampling Date		2024/06/20 13:30		
COC Number		997614-01-01		
	UNITS	BH/MW-10	RDL	QC Batch
BTEX & F1 Hydrocarbons				
Benzene	ug/L	<0.20	0.20	9474999
Toluene	ug/L	<0.20	0.20	9474999
Ethylbenzene	ug/L	<0.20	0.20	9474999
o-Xylene	ug/L	<0.20	0.20	9474999
p+m-Xylene	ug/L	<0.40	0.40	9474999
Total Xylenes	ug/L	<0.40	0.40	9474999
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	106		9474999
4-Bromofluorobenzene	%	88		9474999
D10-o-Xylene	%	110		9474999
D4-1,2-Dichloroethane	%	104		9474999
RDL = Reportable Detection Limit QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C419095
Report Date: 2024/06/27

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: PD

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

Bureau Veritas ID		ZNG098			ZNG098		
Sampling Date		2024/06/20 14:20			2024/06/20 14:20		
COC Number		997614-01-01			997614-01-01		
	UNITS	BH/MW-8	RDL	QC Batch	BH/MW-8 Lab-Dup	RDL	QC Batch
BTEX & F1 Hydrocarbons							
Benzene	ug/L	4.3	0.20	9474999	3.8	0.20	9474999
Toluene	ug/L	0.33	0.20	9474999	0.32	0.20	9474999
Ethylbenzene	ug/L	6.5	0.20	9474999	5.8	0.20	9474999
o-Xylene	ug/L	<0.20	0.20	9474999	<0.20	0.20	9474999
p+m-Xylene	ug/L	3.1	0.40	9474999	2.8	0.40	9474999
Total Xylenes	ug/L	3.1	0.40	9474999	2.8	0.40	9474999
F1 (C6-C10)	ug/L	72	25	9474999	56	25	9474999
F1 (C6-C10) - BTEX	ug/L	58	25	9474999	44	25	9474999
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/L	<100	100	9475096			
F3 (C16-C34 Hydrocarbons)	ug/L	<200	200	9475096			
F4 (C34-C50 Hydrocarbons)	ug/L	<200	200	9475096			
Reached Baseline at C50	ug/L	Yes		9475096			
Surrogate Recovery (%)							
1,4-Difluorobenzene	%	103		9474999	104		9474999
4-Bromofluorobenzene	%	96		9474999	93		9474999
D10-o-Xylene	%	126		9474999	114		9474999
D4-1,2-Dichloroethane	%	108		9474999	108		9474999
o-Terphenyl	%	103		9475096			
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate							



BUREAU
VERITAS

Bureau Veritas Job #: C419095
Report Date: 2024/06/27

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: PD

O.REG 153 VOCS BY HS (WATER)

Bureau Veritas ID		ZNG097	ZNG099	ZNG100	ZNG102		
Sampling Date		2024/06/20 11:45	2024/06/20 15:20	2024/06/20 11:45	2024/06/20 15:40		
COC Number		997614-01-01	997614-01-01	997614-01-01	997614-01-01		
	UNITS	BH/MW-2	BH/MW-3	BH/MW-1	BH/MW-4	RDL	QC Batch
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9472840
Volatile Organics							
Acetone (2-Propanone)	ug/L	36	<10	<10	<10	10	9475248
Benzene	ug/L	4.6	0.32	<0.20	<0.20	0.20	9475248
Bromodichloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9475248
Bromoform	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	9475248
Bromomethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9475248
Carbon Tetrachloride	ug/L	<0.19	<0.19	<0.19	<0.19	0.19	9475248
Chlorobenzene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9475248
Chloroform	ug/L	<0.20	<0.20	0.32	<0.20	0.20	9475248
Dibromochloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9475248
1,2-Dichlorobenzene	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9475248
1,3-Dichlorobenzene	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9475248
1,4-Dichlorobenzene	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9475248
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	9475248
1,1-Dichloroethane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9475248
1,2-Dichloroethane	ug/L	<0.49	<0.49	<0.49	<0.49	0.49	9475248
1,1-Dichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9475248
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9475248
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9475248
1,2-Dichloropropane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9475248
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	<0.30	<0.30	0.30	9475248
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9475248
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9475248
Ethylene Dibromide	ug/L	<0.19	<0.19	<0.19	<0.19	0.19	9475248
Hexane	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	9475248
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	9475248
Methyl Ethyl Ketone (2-Butanone)	ug/L	72	<10	<10	<10	10	9475248
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	9475248
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9475248
Styrene	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9475248
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9475248
1,1,2,2-Tetrachloroethane	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9475248
Tetrachloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9475248
Toluene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9475248
RDL = Reportable Detection Limit QC Batch = Quality Control Batch							



BUREAU
VERITAS

Bureau Veritas Job #: C419095
Report Date: 2024/06/27

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: PD

O.REG 153 VOCS BY HS (WATER)

Bureau Veritas ID		ZNG097	ZNG099	ZNG100	ZNG102		
Sampling Date		2024/06/20 11:45	2024/06/20 15:20	2024/06/20 11:45	2024/06/20 15:40		
COC Number		997614-01-01	997614-01-01	997614-01-01	997614-01-01		
	UNITS	BH/MW-2	BH/MW-3	BH/MW-1	BH/MW-4	RDL	QC Batch
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9475248
1,1,2-Trichloroethane	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9475248
Trichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9475248
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9475248
Vinyl Chloride	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9475248
p+m-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9475248
o-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9475248
Total Xylenes	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9475248
Surrogate Recovery (%)							
4-Bromofluorobenzene	%	96	97	95	96		9475248
D4-1,2-Dichloroethane	%	113	112	100	116		9475248
D8-Toluene	%	91	91	93	90		9475248
RDL = Reportable Detection Limit QC Batch = Quality Control Batch							



BUREAU
VERITAS

Bureau Veritas Job #: C419095
Report Date: 2024/06/27

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: PD

TEST SUMMARY

Bureau Veritas ID: ZNG097
Sample ID: BH/MW-2
Matrix: Water

Collected: 2024/06/20
Shipped:
Received: 2024/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9472840	N/A	2024/06/26	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	9475248	N/A	2024/06/25	Narayan Ghimire

Bureau Veritas ID: ZNG098
Sample ID: BH/MW-8
Matrix: Water

Collected: 2024/06/20
Shipped:
Received: 2024/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	9474999	N/A	2024/06/24	Georgeta Rusu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9475096	2024/06/24	2024/06/24	Mohammed Abdul Nafay Shoeb

Bureau Veritas ID: ZNG098 Dup
Sample ID: BH/MW-8
Matrix: Water

Collected: 2024/06/20
Shipped:
Received: 2024/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	9474999	N/A	2024/06/24	Georgeta Rusu

Bureau Veritas ID: ZNG099
Sample ID: BH/MW-3
Matrix: Water

Collected: 2024/06/20
Shipped:
Received: 2024/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9472840	N/A	2024/06/26	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	9475248	N/A	2024/06/25	Narayan Ghimire

Bureau Veritas ID: ZNG100
Sample ID: BH/MW-1
Matrix: Water

Collected: 2024/06/20
Shipped:
Received: 2024/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9472840	N/A	2024/06/26	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	9475248	N/A	2024/06/25	Narayan Ghimire

Bureau Veritas ID: ZNG101
Sample ID: BH/MW-10
Matrix: Water

Collected: 2024/06/20
Shipped:
Received: 2024/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	9474999	N/A	2024/06/24	Georgeta Rusu

Bureau Veritas ID: ZNG102
Sample ID: BH/MW-4
Matrix: Water

Collected: 2024/06/20
Shipped:
Received: 2024/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9472840	N/A	2024/06/26	Automated Statchk



BUREAU
VERITAS

Bureau Veritas Job #: C419095
Report Date: 2024/06/27

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: PD

TEST SUMMARY

Bureau Veritas ID: ZNG102
Sample ID: BH/MW-4
Matrix: Water

Collected: 2024/06/20
Shipped:
Received: 2024/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds in Water	GC/MS	9475248	N/A	2024/06/25	Narayan Ghimire



BUREAU
VERITAS

Bureau Veritas Job #: C419095
Report Date: 2024/06/27

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: PD

GENERAL COMMENTS

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

Package 1	11.7°C
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Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C4I9095

Report Date: 2024/06/27

QUALITY ASSURANCE REPORT

exp Services Inc

Client Project #: OTT-23002538-A0

Sampler Initials: PD

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9474999	1,4-Difluorobenzene	2024/06/24	96	70 - 130	97	70 - 130	103	%		
9474999	4-Bromofluorobenzene	2024/06/24	99	70 - 130	100	70 - 130	94	%		
9474999	D10-o-Xylene	2024/06/24	105	70 - 130	106	70 - 130	104	%		
9474999	D4-1,2-Dichloroethane	2024/06/24	97	70 - 130	97	70 - 130	104	%		
9475096	o-Terphenyl	2024/06/24	103	60 - 140	104	60 - 140	105	%		
9475248	4-Bromofluorobenzene	2024/06/25	100	70 - 130	99	70 - 130	98	%		
9475248	D4-1,2-Dichloroethane	2024/06/25	106	70 - 130	98	70 - 130	98	%		
9475248	D8-Toluene	2024/06/25	98	70 - 130	103	70 - 130	94	%		
9474999	Benzene	2024/06/24	85	50 - 140	92	50 - 140	<0.20	ug/L	12	30
9474999	Ethylbenzene	2024/06/24	92	50 - 140	95	50 - 140	<0.20	ug/L	12	30
9474999	F1 (C6-C10) - BTEX	2024/06/24					<25	ug/L	28	30
9474999	F1 (C6-C10)	2024/06/24	104	60 - 140	104	60 - 140	<25	ug/L	25	30
9474999	o-Xylene	2024/06/24	96	50 - 140	95	50 - 140	<0.20	ug/L	NC	30
9474999	p+m-Xylene	2024/06/24	93	50 - 140	92	50 - 140	<0.40	ug/L	10	30
9474999	Toluene	2024/06/24	88	50 - 140	87	50 - 140	<0.20	ug/L	2.2	30
9474999	Total Xylenes	2024/06/24					<0.40	ug/L	10	30
9475096	F2 (C10-C16 Hydrocarbons)	2024/06/25	96	60 - 140	95	60 - 140	<100	ug/L	NC	30
9475096	F3 (C16-C34 Hydrocarbons)	2024/06/24	108	60 - 140	108	60 - 140	<200	ug/L		
9475096	F4 (C34-C50 Hydrocarbons)	2024/06/24	100	60 - 140	100	60 - 140	<200	ug/L		
9475248	1,1,1,2-Tetrachloroethane	2024/06/25	90	70 - 130	92	70 - 130	<0.50	ug/L	NC	30
9475248	1,1,1-Trichloroethane	2024/06/25	90	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
9475248	1,1,2,2-Tetrachloroethane	2024/06/25	97	70 - 130	88	70 - 130	<0.40	ug/L	NC	30
9475248	1,1,2-Trichloroethane	2024/06/25	95	70 - 130	89	70 - 130	<0.40	ug/L	NC	30
9475248	1,1-Dichloroethane	2024/06/25	94	70 - 130	93	70 - 130	<0.20	ug/L	NC	30
9475248	1,1-Dichloroethylene	2024/06/25	92	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
9475248	1,2-Dichlorobenzene	2024/06/25	89	70 - 130	91	70 - 130	<0.40	ug/L	NC	30
9475248	1,2-Dichloroethane	2024/06/25	100	70 - 130	91	70 - 130	<0.49	ug/L	NC	30
9475248	1,2-Dichloropropane	2024/06/25	95	70 - 130	91	70 - 130	<0.20	ug/L	NC	30
9475248	1,3-Dichlorobenzene	2024/06/25	89	70 - 130	94	70 - 130	<0.40	ug/L	NC	30
9475248	1,4-Dichlorobenzene	2024/06/25	87	70 - 130	92	70 - 130	<0.40	ug/L	NC	30
9475248	Acetone (2-Propanone)	2024/06/25	117	60 - 140	101	60 - 140	<10	ug/L	NC	30
9475248	Benzene	2024/06/25	92	70 - 130	91	70 - 130	<0.20	ug/L	NC	30



BUREAU
VERITAS

Bureau Veritas Job #: C4I9095

Report Date: 2024/06/27

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-A0

Sampler Initials: PD

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9475248	Bromodichloromethane	2024/06/25	95	70 - 130	90	70 - 130	<0.50	ug/L	NC	30
9475248	Bromoform	2024/06/25	92	70 - 130	86	70 - 130	<1.0	ug/L	NC	30
9475248	Bromomethane	2024/06/25	81	60 - 140	80	60 - 140	<0.50	ug/L	NC	30
9475248	Carbon Tetrachloride	2024/06/25	89	70 - 130	94	70 - 130	<0.19	ug/L	NC	30
9475248	Chlorobenzene	2024/06/25	91	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
9475248	Chloroform	2024/06/25	95	70 - 130	92	70 - 130	<0.20	ug/L	NC	30
9475248	cis-1,2-Dichloroethylene	2024/06/25	97	70 - 130	94	70 - 130	<0.50	ug/L	NC	30
9475248	cis-1,3-Dichloropropene	2024/06/25	94	70 - 130	90	70 - 130	<0.30	ug/L	NC	30
9475248	Dibromochloromethane	2024/06/25	93	70 - 130	89	70 - 130	<0.50	ug/L	NC	30
9475248	Dichlorodifluoromethane (FREON 12)	2024/06/25	71	60 - 140	73	60 - 140	<1.0	ug/L	NC	30
9475248	Ethylbenzene	2024/06/25	86	70 - 130	93	70 - 130	<0.20	ug/L	NC	30
9475248	Ethylene Dibromide	2024/06/25	97	70 - 130	90	70 - 130	<0.19	ug/L	NC	30
9475248	Hexane	2024/06/25	94	70 - 130	98	70 - 130	<1.0	ug/L	NC	30
9475248	Methyl Ethyl Ketone (2-Butanone)	2024/06/25	118	60 - 140	99	60 - 140	<10	ug/L	NC	30
9475248	Methyl Isobutyl Ketone	2024/06/25	111	70 - 130	92	70 - 130	<5.0	ug/L	NC	30
9475248	Methyl t-butyl ether (MTBE)	2024/06/25	95	70 - 130	89	70 - 130	<0.50	ug/L	NC	30
9475248	Methylene Chloride(Dichloromethane)	2024/06/25	93	70 - 130	88	70 - 130	<2.0	ug/L	NC	30
9475248	o-Xylene	2024/06/25	88	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
9475248	p+m-Xylene	2024/06/25	87	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
9475248	Styrene	2024/06/25	91	70 - 130	89	70 - 130	<0.40	ug/L	NC	30
9475248	Tetrachloroethylene	2024/06/25	86	70 - 130	93	70 - 130	<0.20	ug/L	NC	30
9475248	Toluene	2024/06/25	89	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
9475248	Total Xylenes	2024/06/25					<0.20	ug/L	NC	30
9475248	trans-1,2-Dichloroethylene	2024/06/25	92	70 - 130	93	70 - 130	<0.50	ug/L	NC	30
9475248	trans-1,3-Dichloropropene	2024/06/25	94	70 - 130	92	70 - 130	<0.40	ug/L	NC	30
9475248	Trichloroethylene	2024/06/25	90	70 - 130	93	70 - 130	<0.20	ug/L	2.1	30
9475248	Trichlorofluoromethane (FREON 11)	2024/06/25	91	70 - 130	95	70 - 130	<0.50	ug/L	NC	30



BUREAU
VERITAS

Bureau Veritas Job #: C4I9095

Report Date: 2024/06/27

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-A0

Sampler Initials: PD

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9475248	Vinyl Chloride	2024/06/25	88	70 - 130	90	70 - 130	<0.20	ug/L	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).



BUREAU
VERITAS

Bureau Veritas Job #: C419095
Report Date: 2024/06/27

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: PD

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 Canada L5N 2L8 Tel:(905) 817-5700 Toll-free:800-563-6266 Fax:(905) 817-5777 www.bvna.com

20-Jun-24 16:40

Katherine Szozda

Page 1 of 1



C419095

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name: #17498 exp Services Inc	Company Name:	Quotation #: C41513	Project: OTT-23002538-A0		Bottle Order #: 997614
Attention: Accounts Payable	Attention: Chris Kimmerly	P.O. #:	Project Name:		Project Manager: Katherine Szozda
Address: 100-2650 Queensview Drive	Address:	Site #:	Sampled By: Philip Oliveira		COC #: C#997614-01-01
Ottawa ON K2B 8H6					
Tel: (613) 688-1899 Fax: (613) 225-7337	Tel: Fax:				
Email: AP@exp.com; Karen.Burke@exp.com	Email: Chris.Kimmerly@exp.com				

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY					ANALYSIS REQUESTED (PLEASE BE SPECIFIC)										Turnaround Time (TAT) Required:						
Regulation 153 (2011)			Other Regulations		Special Instructions	Field Filtered (please circle):	Metals / Hg / Cr VI	O Reg 153 VOCs by HS (Water)	O Reg 153 PHCs, BTEX/F-1,4	BTEX in Water											
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Medium/Fine	<input type="checkbox"/> CCME	<input type="checkbox"/> Sanitary Sewer Bylaw																	
<input type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> Reg 558	<input type="checkbox"/> Storm Sewer Bylaw																	
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Olive	<input type="checkbox"/> For RSC	<input type="checkbox"/> MISA	Municipality _____																	
<input type="checkbox"/> Table _____			<input type="checkbox"/> PWQO	Reg 406 Table _____																	
Include Criteria on Certificate of Analysis (Y/N)?																					
Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix																	
1	BH/mw - 2	June 20/24	11h45	GW		X															2
2	BH/mw - 8	June 20/24	14h20	GW				X													4
3	BA/mw - 3	June 20/24	15h20	GW		X															2
4	BH/mw - 1	June 20/24	11h45	GW		X															2
5	BA/mw - 10	June 20/24	13h30	GW					X												2
6	BH/mw - 4	June 20/24	15h40	GW		X															2
7																					
8																					
9																					
10																					

Received in Ottawa

RELINQUISHED BY: (Signature/Print) Philip Oliveira	Date: (YY/MM/DD) 24-06-20	Time 16h30	RECEIVED BY: (Signature/Print) Angelica Santiago	Date: (YY/MM/DD) 2024/06/20	Time 16:40	# Jars used and not submitted	Laboratory Use Only				
Philip Oliveira							Time Sensitive	Temperature (°C) on Reel 8,14,13 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.

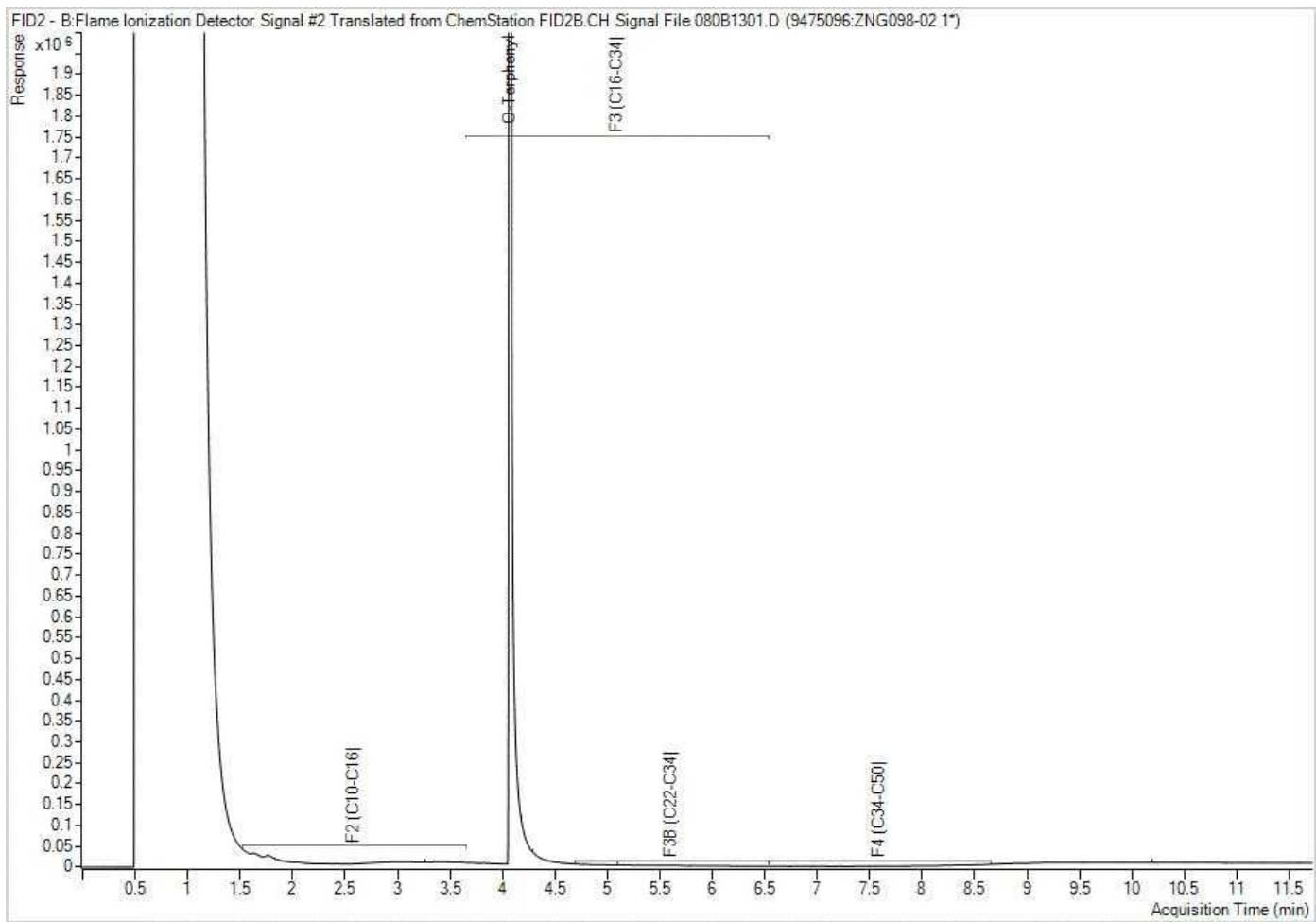
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

* 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

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 #: OTT-23002538-AO
Your C.O.C. #: C#997614-02-01

Attention: Chris Kimmerly

exp Services Inc
Ottawa Branch
100-2650 Queensview Drive
Ottawa, ON
CANADA K2B 8H6

Report Date: 2024/06/24
Report #: R8206084
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4J0198
Received: 2024/06/21, 09:31

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
1,3-Dichloropropene Sum (1)	1	N/A	2024/06/24		EPA 8260C m
Volatile Organic Compounds in Water (1)	1	N/A	2024/06/24	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) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8



Your Project #: OTT-23002538-A0
Your C.O.C. #: C#997614-02-01

Attention: Chris Kimmerly

exp Services Inc
Ottawa Branch
100-2650 Queensview Drive
Ottawa, ON
CANADA K2B 8H6

Report Date: 2024/06/24
Report #: R8206084
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4J0198
Received: 2024/06/21, 09:31

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.

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BUREAU
VERITAS

Bureau Veritas Job #: C4J0198
Report Date: 2024/06/24

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: PO

O.REG 153 VOCS BY HS (WATER)

Bureau Veritas ID		ZNM359		
Sampling Date		2024/06/21 08:45		
COC Number		C#997614-02-01		
	UNITS	BH/MW-12	RDL	QC Batch

Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	0.50	9472840
Volatile Organics				
Acetone (2-Propanone)	ug/L	1000	10	9473354
Benzene	ug/L	3.3	0.20	9473354
Bromodichloromethane	ug/L	<0.50	0.50	9473354
Bromoform	ug/L	<1.0	1.0	9473354
Bromomethane	ug/L	<0.50	0.50	9473354
Carbon Tetrachloride	ug/L	<0.19	0.19	9473354
Chlorobenzene	ug/L	<0.20	0.20	9473354
Chloroform	ug/L	<0.20	0.20	9473354
Dibromochloromethane	ug/L	<0.50	0.50	9473354
1,2-Dichlorobenzene	ug/L	<0.40	0.40	9473354
1,3-Dichlorobenzene	ug/L	<0.40	0.40	9473354
1,4-Dichlorobenzene	ug/L	<0.40	0.40	9473354
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	1.0	9473354
1,1-Dichloroethane	ug/L	<0.20	0.20	9473354
1,2-Dichloroethane	ug/L	<0.49	0.49	9473354
1,1-Dichloroethylene	ug/L	<0.20	0.20	9473354
cis-1,2-Dichloroethylene	ug/L	1.6	0.50	9473354
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	9473354
1,2-Dichloropropane	ug/L	<0.20	0.20	9473354
cis-1,3-Dichloropropene	ug/L	<0.30	0.30	9473354
trans-1,3-Dichloropropene	ug/L	<0.40	0.40	9473354
Ethylbenzene	ug/L	0.56	0.20	9473354
Ethylene Dibromide	ug/L	<0.19	0.19	9473354
Hexane	ug/L	5.9	1.0	9473354
Methylene Chloride(Dichloromethane)	ug/L	<2.0	2.0	9473354
Methyl Ethyl Ketone (2-Butanone)	ug/L	3300	10	9473354
Methyl Isobutyl Ketone	ug/L	<5.0	5.0	9473354
Methyl t-butyl ether (MTBE)	ug/L	<0.50	0.50	9473354
Styrene	ug/L	<0.40	0.40	9473354
1,1,1,2-Tetrachloroethane	ug/L	<0.50	0.50	9473354
1,1,2,2-Tetrachloroethane	ug/L	<0.40	0.40	9473354
Tetrachloroethylene	ug/L	<0.20	0.20	9473354
Toluene	ug/L	5.1	0.20	9473354
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



O.REG 153 VOCS BY HS (WATER)

Bureau Veritas ID		ZNM359		
Sampling Date		2024/06/21 08:45		
COC Number		C#997614-02-01		
	UNITS	BH/MW-12	RDL	QC Batch
1,1,1-Trichloroethane	ug/L	<0.20	0.20	9473354
1,1,2-Trichloroethane	ug/L	<0.40	0.40	9473354
Trichloroethylene	ug/L	1.9	0.20	9473354
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	0.50	9473354
Vinyl Chloride	ug/L	<0.20	0.20	9473354
p+m-Xylene	ug/L	5.6	0.20	9473354
o-Xylene	ug/L	1.7	0.20	9473354
Total Xylenes	ug/L	7.3	0.20	9473354
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	95		9473354
D4-1,2-Dichloroethane	%	106		9473354
D8-Toluene	%	88		9473354
RDL = Reportable Detection Limit QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C4J0198
Report Date: 2024/06/24

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: PO

TEST SUMMARY

Bureau Veritas ID: ZNM359
Sample ID: BH/MW-12
Matrix: Water

Collected: 2024/06/21
Shipped:
Received: 2024/06/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9472840	N/A	2024/06/24	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	9473354	N/A	2024/06/24	Mariia Biliaieva



BUREAU
VERITAS

Bureau Veritas Job #: C4J0198
Report Date: 2024/06/24

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: PO

GENERAL COMMENTS

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

Package 1	14.0°C
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Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C4J0198

Report Date: 2024/06/24

QUALITY ASSURANCE REPORT

exp Services Inc

Client Project #: OTT-23002538-A0

Sampler Initials: PO

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9473354	4-Bromofluorobenzene	2024/06/24	101	70 - 130	103	70 - 130	101	%		
9473354	D4-1,2-Dichloroethane	2024/06/24	102	70 - 130	102	70 - 130	108	%		
9473354	D8-Toluene	2024/06/24	104	70 - 130	104	70 - 130	87	%		
9473354	1,1,1,2-Tetrachloroethane	2024/06/24	100	70 - 130	97	70 - 130	<0.50	ug/L	NC	30
9473354	1,1,1-Trichloroethane	2024/06/24	100	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
9473354	1,1,2,2-Tetrachloroethane	2024/06/24	101	70 - 130	100	70 - 130	<0.40	ug/L	NC	30
9473354	1,1,2-Trichloroethane	2024/06/24	104	70 - 130	102	70 - 130	<0.40	ug/L	NC	30
9473354	1,1-Dichloroethane	2024/06/24	100	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
9473354	1,1-Dichloroethylene	2024/06/24	99	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
9473354	1,2-Dichlorobenzene	2024/06/24	98	70 - 130	95	70 - 130	<0.40	ug/L	NC	30
9473354	1,2-Dichloroethane	2024/06/24	100	70 - 130	98	70 - 130	<0.49	ug/L	NC	30
9473354	1,2-Dichloropropane	2024/06/24	100	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
9473354	1,3-Dichlorobenzene	2024/06/24	97	70 - 130	94	70 - 130	<0.40	ug/L	NC	30
9473354	1,4-Dichlorobenzene	2024/06/24	97	70 - 130	94	70 - 130	<0.40	ug/L	NC	30
9473354	Acetone (2-Propanone)	2024/06/24	101	60 - 140	101	60 - 140	<10	ug/L	NC	30
9473354	Benzene	2024/06/24	95	70 - 130	93	70 - 130	<0.20	ug/L	NC	30
9473354	Bromodichloromethane	2024/06/24	100	70 - 130	97	70 - 130	<0.50	ug/L	NC	30
9473354	Bromoform	2024/06/24	98	70 - 130	99	70 - 130	<1.0	ug/L	NC	30
9473354	Bromomethane	2024/06/24	91	60 - 140	84	60 - 140	<0.50	ug/L	NC	30
9473354	Carbon Tetrachloride	2024/06/24	100	70 - 130	95	70 - 130	<0.19	ug/L	NC	30
9473354	Chlorobenzene	2024/06/24	97	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
9473354	Chloroform	2024/06/24	98	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
9473354	cis-1,2-Dichloroethylene	2024/06/24	101	70 - 130	98	70 - 130	<0.50	ug/L	NC	30
9473354	cis-1,3-Dichloropropene	2024/06/24	103	70 - 130	97	70 - 130	<0.30	ug/L	NC	30
9473354	Dibromochloromethane	2024/06/24	99	70 - 130	98	70 - 130	<0.50	ug/L	NC	30
9473354	Dichlorodifluoromethane (FREON 12)	2024/06/24	85	60 - 140	79	60 - 140	<1.0	ug/L	NC	30
9473354	Ethylbenzene	2024/06/24	93	70 - 130	93	70 - 130	<0.20	ug/L	NC	30
9473354	Ethylene Dibromide	2024/06/24	100	70 - 130	100	70 - 130	<0.19	ug/L	NC	30
9473354	Hexane	2024/06/24	106	70 - 130	101	70 - 130	<1.0	ug/L	NC	30
9473354	Methyl Ethyl Ketone (2-Butanone)	2024/06/24	107	60 - 140	109	60 - 140	<10	ug/L	NC	30
9473354	Methyl Isobutyl Ketone	2024/06/24	110	70 - 130	114	70 - 130	<5.0	ug/L	NC	30
9473354	Methyl t-butyl ether (MTBE)	2024/06/24	97	70 - 130	97	70 - 130	<0.50	ug/L	NC	30



BUREAU
VERITAS

Bureau Veritas Job #: C4J0198

Report Date: 2024/06/24

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-A0

Sampler Initials: PO

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9473354	Methylene Chloride(Dichloromethane)	2024/06/24	99	70 - 130	95	70 - 130	<2.0	ug/L	NC	30
9473354	o-Xylene	2024/06/24	91	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
9473354	p+m-Xylene	2024/06/24	94	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
9473354	Styrene	2024/06/24	74	70 - 130	82	70 - 130	<0.40	ug/L	NC	30
9473354	Tetrachloroethylene	2024/06/24	101	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
9473354	Toluene	2024/06/24	100	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
9473354	Total Xylenes	2024/06/24					<0.20	ug/L	NC	30
9473354	trans-1,2-Dichloroethylene	2024/06/24	101	70 - 130	97	70 - 130	<0.50	ug/L	NC	30
9473354	trans-1,3-Dichloropropene	2024/06/24	113	70 - 130	105	70 - 130	<0.40	ug/L	NC	30
9473354	Trichloroethylene	2024/06/24	99	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
9473354	Trichlorofluoromethane (FREON 11)	2024/06/24	102	70 - 130	96	70 - 130	<0.50	ug/L	NC	30
9473354	Vinyl Chloride	2024/06/24	97	70 - 130	92	70 - 130	<0.20	ug/L	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).



BUREAU
VERITAS

Bureau Veritas Job #: C4J0198
Report Date: 2024/06/24

exp Services Inc
Client Project #: OTT-23002538-A0
Sampler Initials: PO

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.

Affix Job Label Here

Presence of Visible Particulate/Sediment

Maxxam Analytics
CAM FCD-01013/5
Page 1 of 1

When there is >1cm of visible particulate/sediment, the amount will be recorded in the field below

Bottle Types

Sample ID	All	Inorganics					Organics										Hydrocarbons						Volatiles				Other		
		CrVI	CN	General	Hg	Metals (Diss.)	Organic 1 of 2	Organic 2 of 2	PCB 1 of 2	PCB 2 of 2	Pest/Herb 1 of 2	Pest/Herb 2 of 2	SVOC/ABN 1 of 2	SVOC/ABN 2 of 2	PAH 1 of 2	PAH 2 of 2	Dioxin/Furan	F1 Vial 1	F1 Vial 2	F1 Vial 3	F1 Vial 4	F2-F4 1 of 2	F2-F4 2 of 2	F4G	VOC Vial 1	VOC Vial 2		VOC Vial 3	VOC Vial 4
1 BH/MW-12	S																												
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													

Comments:

Legend:	
P	Suspended Particulate
TS	Trace Settled Sediment (just covers bottom of container or less)
S	Sediment greater than (>) Trace, but less than (<) 1 cm

Recorded By: (signature/print)  GIRGESHIMA M J



RUSH

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

Received in Ottawa

CHAIN OF CUSTODY RECORD

RUSH

Page 1 of 1

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name: #17498 exp Services Inc		Company Name:		Quotation #: C41513		Bureau Veritas Job #:	
Attention: Accounts Payable		Attention: Chris Kimmerly		P.O. #:		Bottle Order #:	
Address: 100-2650 Queensview Drive		Address:		Project: OTT-23002538-A0		COC #:	
Ottawa ON K2B 8H6				Project Name:		Project Manager:	
Tel: (613) 688-1899 Fax: (613) 225-7337		Tel:		Site #:		Katherine Szoza	
Email: AP@exp.com; Karen.Burke@exp.com		Email: Chris.Kimmerly@exp.com		Sampled By: <i>Philip Oliveira</i>		C#997614-02-01	

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY					ANALYSIS REQUESTED (PLEASE BE SPECIFIC)				Turnaround Time (TAT) Required: Please provide advance notice for rush projects			
Regulation 153 (2011)			Other Regulations		Special Instructions		Field Filtered (please circle): Metals / Hg / Cr / VI	O Reg 153 VOCs by HS (Water)	O Reg 153 PHCs, BTEX/F1-F4	BTEX in Water	Regular (Standard) TAT: (will be applied if Rush TAT is not specified): Standard TAT = 5-7 Working days for most tests. Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.	
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Medium/Fine	<input type="checkbox"/> CCME	<input type="checkbox"/> Sanitary Sewer Bylaw	<i>Rush 24 hrs.</i>	Job Specific Rush TAT (if applies to entire submission) Date Required: <i>24 hrs</i> Time Required: <input checked="" type="checkbox"/>					Rush Confirmation Number: _____ (call lab for #)	
<input type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> Reg 558	<input type="checkbox"/> Storm Sewer Bylaw		Rush Confirmation Number: _____ (call lab for #)						
<input checked="" type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other	<input type="checkbox"/> For RSC	<input type="checkbox"/> MISA	Municipality _____								
<input type="checkbox"/> Table _____			<input type="checkbox"/> PWQO	<input type="checkbox"/> Reg 406 Table _____								
Include Criteria on Certificate of Analysis (Y/N)?												
Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix						# of Bottles	Comments	
	<i>BH/mw-12</i>	<i>June 21/24</i>	<i>8h45</i>	<i>GW</i>						<i>2</i>	<i>* Please Rush 24 HRS *</i>	
2												
3												
4												
5												
6												
7												
8												
9												
10												



NONT-2024-06-2275

ICE PACK

RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only				
<i>Philip Oliveira</i>		<i>2024-06-21</i>	<i>9h15</i>	<i>Katherine Szoza</i>		<i>2024/06/21</i>	<i>9:31</i>		Time Sensitive	Temperature (°C) on Recei	Custody Seal Present	Yes	No
<i>Philip Oliveira</i>				<i>SUGAR SALTAN</i>		<i>2024/06/22</i>	<i>08:28</i>			<i>15.3/14</i>	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.

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

White: Bureau Veritas Yellow: Client
Custody Seal Present Intact
Cooling Media Yes No



Your Project #: OTT-23002538-B0
 Site Location: 1822, 1846 BANK & WALKLEY
 Your C.O.C. #: C#1014063-01-01

Attention: Chris Kimmerly

exp Services Inc
 Ottawa Branch
 100-2650 Queensview Drive
 Ottawa, ON
 CANADA K2B 8H6

Report Date: 2024/09/30
 Report #: R8342360
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4T9910

Received: 2024/09/24, 15:35

Sample Matrix: Water
 # Samples Received: 6

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
1,3-Dichloropropene Sum (1)	4	N/A	2024/09/30		EPA 8260C m
Petroleum Hydro. CCME F1 & BTEX in Water (1)	2	N/A	2024/09/30	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1, 2)	1	2024/09/29	2024/09/29	CAM SOP-00316	CCME PHC-CWS m
Volatile Organic Compounds in Water (1)	4	N/A	2024/09/29	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) 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 #: OTT-23002538-B0
Site Location: 1822, 1846 BANK & WALKLEY
Your C.O.C. #: C#1014063-01-01

Attention: Chris Kimmerly

exp Services Inc
Ottawa Branch
100-2650 Queensview Drive
Ottawa, ON
CANADA K2B 8H6

Report Date: 2024/09/30
Report #: R8342360
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C4T9910
Received: 2024/09/24, 15:35

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.



PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		ADWW18		
Sampling Date		2024/09/24 11:40		
COC Number		C#1014063-01-01		
	UNITS	MW/BH-10	RDL	QC Batch
BTEX & F1 Hydrocarbons				
Benzene	ug/L	<0.20	0.20	9670442
Toluene	ug/L	<0.20	0.20	9670442
Ethylbenzene	ug/L	<0.20	0.20	9670442
o-Xylene	ug/L	<0.20	0.20	9670442
p+m-Xylene	ug/L	<0.40	0.40	9670442
Total Xylenes	ug/L	<0.40	0.40	9670442
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	98		9670442
4-Bromofluorobenzene	%	96		9670442
D10-o-Xylene	%	97		9670442
D4-1,2-Dichloroethane	%	100		9670442
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C4T9910
Report Date: 2024/09/30

exp Services Inc
Client Project #: OTT-23002538-B0
Site Location: 1822, 1846 BANK & WALKLEY
Sampler Initials: SA

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

Bureau Veritas ID		ADWW17		
Sampling Date		2024/09/24 12:25		
COC Number		C#1014063-01-01		
	UNITS	MW/BH-8	RDL	QC Batch
BTEX & F1 Hydrocarbons				
Benzene	ug/L	2.2	0.20	9670442
Toluene	ug/L	<0.20	0.20	9670442
Ethylbenzene	ug/L	0.69	0.20	9670442
o-Xylene	ug/L	<0.20	0.20	9670442
p+m-Xylene	ug/L	<0.40	0.40	9670442
Total Xylenes	ug/L	<0.40	0.40	9670442
F1 (C6-C10)	ug/L	<25	25	9670442
F1 (C6-C10) - BTEX	ug/L	<25	25	9670442
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/L	<90	90	9670370
F3 (C16-C34 Hydrocarbons)	ug/L	<200	200	9670370
F4 (C34-C50 Hydrocarbons)	ug/L	<200	200	9670370
Reached Baseline at C50	ug/L	Yes		9670370
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	102		9670442
4-Bromofluorobenzene	%	103		9670442
D10-o-Xylene	%	109		9670442
D4-1,2-Dichloroethane	%	102		9670442
o-Terphenyl	%	97		9670370
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C4T9910
Report Date: 2024/09/30

exp Services Inc
Client Project #: OTT-23002538-B0
Site Location: 1822, 1846 BANK & WALKLEY
Sampler Initials: SA

O.REG 153 VOCS BY HS (WATER)

Bureau Veritas ID		ADWW13	ADWW14	ADWW15	ADWW16		
Sampling Date		2024/09/24 10:20	2024/09/24 09:55	2024/09/24 12:30	2024/09/24 13:45		
COC Number		C#1014063-01-01	C#1014063-01-01	C#1014063-01-01	C#1014063-01-01		
	UNITS	MW/BH-1	MW/BH-2	MW/BH-3	MW/BH-4	RDL	QC Batch
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9663211
Volatile Organics							
Acetone (2-Propanone)	ug/L	81	<10	<10	<10	10	9665960
Benzene	ug/L	<0.20	1.6	<0.20	<0.20	0.20	9665960
Bromodichloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9665960
Bromoform	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	9665960
Bromomethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9665960
Carbon Tetrachloride	ug/L	<0.19	<0.19	<0.19	<0.19	0.19	9665960
Chlorobenzene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9665960
Chloroform	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9665960
Dibromochloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9665960
1,2-Dichlorobenzene	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9665960
1,3-Dichlorobenzene	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9665960
1,4-Dichlorobenzene	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9665960
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	9665960
1,1-Dichloroethane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9665960
1,2-Dichloroethane	ug/L	<0.49	<0.49	<0.49	<0.49	0.49	9665960
1,1-Dichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9665960
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9665960
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9665960
1,2-Dichloropropane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9665960
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	<0.30	<0.30	0.30	9665960
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9665960
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9665960
Ethylene Dibromide	ug/L	<0.19	<0.19	<0.19	<0.19	0.19	9665960
Hexane	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	9665960
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	9665960
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	<10	<10	10	9665960
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	9665960
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9665960
Styrene	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9665960
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9665960
1,1,2,2-Tetrachloroethane	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9665960
RDL = Reportable Detection Limit QC Batch = Quality Control Batch							



BUREAU
VERITAS

Bureau Veritas Job #: C4T9910
Report Date: 2024/09/30

exp Services Inc
Client Project #: OTT-23002538-B0
Site Location: 1822, 1846 BANK & WALKLEY
Sampler Initials: SA

O.REG 153 VOCS BY HS (WATER)

Bureau Veritas ID		ADWW13	ADWW14	ADWW15	ADWW16		
Sampling Date		2024/09/24 10:20	2024/09/24 09:55	2024/09/24 12:30	2024/09/24 13:45		
COC Number		C#1014063-01-01	C#1014063-01-01	C#1014063-01-01	C#1014063-01-01		
	UNITS	MW/BH-1	MW/BH-2	MW/BH-3	MW/BH-4	RDL	QC Batch
Tetrachloroethylene	ug/L	<0.20	<0.20	3.8	<0.20	0.20	9665960
Toluene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9665960
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9665960
1,1,2-Trichloroethane	ug/L	<0.40	<0.40	<0.40	<0.40	0.40	9665960
Trichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9665960
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	9665960
Vinyl Chloride	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9665960
p+m-Xylene	ug/L	0.33	<0.20	<0.20	<0.20	0.20	9665960
o-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	9665960
Total Xylenes	ug/L	0.33	<0.20	<0.20	<0.20	0.20	9665960
Surrogate Recovery (%)							
4-Bromofluorobenzene	%	95	95	98	94		9665960
D4-1,2-Dichloroethane	%	110	112	112	113		9665960
D8-Toluene	%	91	92	91	92		9665960
RDL = Reportable Detection Limit QC Batch = Quality Control Batch							



BUREAU
VERITAS

Bureau Veritas Job #: C4T9910
Report Date: 2024/09/30

exp Services Inc
Client Project #: OTT-23002538-B0
Site Location: 1822, 1846 BANK & WALKLEY
Sampler Initials: SA

TEST SUMMARY

Bureau Veritas ID: ADWW13
Sample ID: MW/BH-1
Matrix: Water

Collected: 2024/09/24
Shipped:
Received: 2024/09/24

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9663211	N/A	2024/09/30	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	9665960	N/A	2024/09/29	Noel Ramos

Bureau Veritas ID: ADWW14
Sample ID: MW/BH-2
Matrix: Water

Collected: 2024/09/24
Shipped:
Received: 2024/09/24

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9663211	N/A	2024/09/30	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	9665960	N/A	2024/09/29	Noel Ramos

Bureau Veritas ID: ADWW15
Sample ID: MW/BH-3
Matrix: Water

Collected: 2024/09/24
Shipped:
Received: 2024/09/24

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9663211	N/A	2024/09/30	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	9665960	N/A	2024/09/29	Noel Ramos

Bureau Veritas ID: ADWW16
Sample ID: MW/BH-4
Matrix: Water

Collected: 2024/09/24
Shipped:
Received: 2024/09/24

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9663211	N/A	2024/09/30	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	9665960	N/A	2024/09/29	Noel Ramos

Bureau Veritas ID: ADWW17
Sample ID: MW/BH-8
Matrix: Water

Collected: 2024/09/24
Shipped:
Received: 2024/09/24

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	9670442	N/A	2024/09/30	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9670370	2024/09/29	2024/09/29	Suleeqa Nurr

Bureau Veritas ID: ADWW18
Sample ID: MW/BH-10
Matrix: Water

Collected: 2024/09/24
Shipped:
Received: 2024/09/24

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	9670442	N/A	2024/09/30	Lincoln Ramdahin



BUREAU
VERITAS

Bureau Veritas Job #: C4T9910
Report Date: 2024/09/30

exp Services Inc
Client Project #: OTT-23002538-B0
Site Location: 1822, 1846 BANK & WALKLEY
Sampler Initials: SA

GENERAL COMMENTS

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

Package 1	22.3°C
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Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C4T9910

Report Date: 2024/09/30

QUALITY ASSURANCE REPORT

exp Services Inc

Client Project #: OTT-23002538-B0

Site Location: 1822, 1846 BANK & WALKLEY

Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9665960	4-Bromofluorobenzene	2024/09/28	96	70 - 130	97	70 - 130	98	%		
9665960	D4-1,2-Dichloroethane	2024/09/28	106	70 - 130	103	70 - 130	107	%		
9665960	D8-Toluene	2024/09/28	103	70 - 130	105	70 - 130	93	%		
9670370	o-Terphenyl	2024/09/29	99	60 - 140	100	60 - 140	100	%		
9670442	1,4-Difluorobenzene	2024/09/29	103	70 - 130	100	70 - 130	97	%		
9670442	4-Bromofluorobenzene	2024/09/29	94	70 - 130	96	70 - 130	98	%		
9670442	D10-o-Xylene	2024/09/29	98	70 - 130	100	70 - 130	100	%		
9670442	D4-1,2-Dichloroethane	2024/09/29	104	70 - 130	100	70 - 130	96	%		
9665960	1,1,1,2-Tetrachloroethane	2024/09/28	112	70 - 130	110	70 - 130	<0.50	ug/L	NC	30
9665960	1,1,1-Trichloroethane	2024/09/28	99	70 - 130	97	70 - 130	<0.20	ug/L	NC	30
9665960	1,1,2,2-Tetrachloroethane	2024/09/28	107	70 - 130	102	70 - 130	<0.40	ug/L	NC	30
9665960	1,1,2-Trichloroethane	2024/09/28	110	70 - 130	105	70 - 130	<0.40	ug/L	NC	30
9665960	1,1-Dichloroethane	2024/09/28	104	70 - 130	100	70 - 130	<0.20	ug/L	NC	30
9665960	1,1-Dichloroethylene	2024/09/28	99	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
9665960	1,2-Dichlorobenzene	2024/09/28	104	70 - 130	102	70 - 130	<0.40	ug/L	NC	30
9665960	1,2-Dichloroethane	2024/09/28	112	70 - 130	107	70 - 130	<0.49	ug/L	NC	30
9665960	1,2-Dichloropropane	2024/09/28	110	70 - 130	106	70 - 130	<0.20	ug/L	NC	30
9665960	1,3-Dichlorobenzene	2024/09/28	100	70 - 130	98	70 - 130	<0.40	ug/L	NC	30
9665960	1,4-Dichlorobenzene	2024/09/28	102	70 - 130	101	70 - 130	<0.40	ug/L	NC	30
9665960	Acetone (2-Propanone)	2024/09/28	111	60 - 140	112	60 - 140	<10	ug/L	NC	30
9665960	Benzene	2024/09/28	105	70 - 130	102	70 - 130	<0.20	ug/L	NC	30
9665960	Bromodichloromethane	2024/09/28	105	70 - 130	101	70 - 130	<0.50	ug/L	NC	30
9665960	Bromoform	2024/09/28	105	70 - 130	107	70 - 130	<1.0	ug/L	NC	30
9665960	Bromomethane	2024/09/28	85	60 - 140	85	60 - 140	<0.50	ug/L	NC	30
9665960	Carbon Tetrachloride	2024/09/28	105	70 - 130	103	70 - 130	<0.19	ug/L	NC	30
9665960	Chlorobenzene	2024/09/28	97	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
9665960	Chloroform	2024/09/28	106	70 - 130	101	70 - 130	<0.20	ug/L	NC	30
9665960	cis-1,2-Dichloroethylene	2024/09/28	111	70 - 130	106	70 - 130	<0.50	ug/L	NC	30
9665960	cis-1,3-Dichloropropene	2024/09/28	92	70 - 130	95	70 - 130	<0.30	ug/L	NC	30
9665960	Dibromochloromethane	2024/09/28	110	70 - 130	107	70 - 130	<0.50	ug/L	NC	30
9665960	Dichlorodifluoromethane (FREON 12)	2024/09/28	80	60 - 140	73	60 - 140	<1.0	ug/L	NC	30
9665960	Ethylbenzene	2024/09/28	94	70 - 130	96	70 - 130	<0.20	ug/L	NC	30



BUREAU
VERITAS

Bureau Veritas Job #: C4T9910

Report Date: 2024/09/30

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-B0

Site Location: 1822, 1846 BANK & WALKLEY

Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9665960	Ethylene Dibromide	2024/09/28	108	70 - 130	105	70 - 130	<0.19	ug/L	NC	30
9665960	Hexane	2024/09/28	114	70 - 130	115	70 - 130	<1.0	ug/L	NC	30
9665960	Methyl Ethyl Ketone (2-Butanone)	2024/09/28	124	60 - 140	121	60 - 140	<10	ug/L	NC	30
9665960	Methyl Isobutyl Ketone	2024/09/28	117	70 - 130	115	70 - 130	<5.0	ug/L	NC	30
9665960	Methyl t-butyl ether (MTBE)	2024/09/28	100	70 - 130	99	70 - 130	<0.50	ug/L	NC	30
9665960	Methylene Chloride(Dichloromethane)	2024/09/28	108	70 - 130	102	70 - 130	<2.0	ug/L	NC	30
9665960	o-Xylene	2024/09/28	98	70 - 130	105	70 - 130	<0.20	ug/L	NC	30
9665960	p+m-Xylene	2024/09/28	95	70 - 130	99	70 - 130	<0.20	ug/L	NC	30
9665960	Styrene	2024/09/28	95	70 - 130	105	70 - 130	<0.40	ug/L	NC	30
9665960	Tetrachloroethylene	2024/09/28	98	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
9665960	Toluene	2024/09/28	103	70 - 130	104	70 - 130	<0.20	ug/L	NC	30
9665960	Total Xylenes	2024/09/28					<0.20	ug/L	NC	30
9665960	trans-1,2-Dichloroethylene	2024/09/28	109	70 - 130	104	70 - 130	<0.50	ug/L	NC	30
9665960	trans-1,3-Dichloropropene	2024/09/28	106	70 - 130	111	70 - 130	<0.40	ug/L	NC	30
9665960	Trichloroethylene	2024/09/28	101	70 - 130	97	70 - 130	<0.20	ug/L	NC	30
9665960	Trichlorofluoromethane (FREON 11)	2024/09/28	98	70 - 130	95	70 - 130	<0.50	ug/L	NC	30
9665960	Vinyl Chloride	2024/09/28	99	70 - 130	93	70 - 130	<0.20	ug/L	NC	30
9670370	F2 (C10-C16 Hydrocarbons)	2024/09/29	103	60 - 140	100	60 - 140	<90	ug/L	NC	30
9670370	F3 (C16-C34 Hydrocarbons)	2024/09/29	105	60 - 140	102	60 - 140	<200	ug/L	NC	30
9670370	F4 (C34-C50 Hydrocarbons)	2024/09/29	98	60 - 140	95	60 - 140	<200	ug/L	NC	30
9670442	Benzene	2024/09/29	103	50 - 140	104	50 - 140	<0.20	ug/L	NC	30
9670442	Ethylbenzene	2024/09/29	101	50 - 140	96	50 - 140	<0.20	ug/L	NC	30
9670442	F1 (C6-C10) - BTEX	2024/09/29					<25	ug/L	NC	30
9670442	F1 (C6-C10)	2024/09/29	109	60 - 140	111	60 - 140	<25	ug/L	NC	30
9670442	o-Xylene	2024/09/29	98	50 - 140	102	50 - 140	<0.20	ug/L	NC	30
9670442	p+m-Xylene	2024/09/29	95	50 - 140	99	50 - 140	<0.40	ug/L	NC	30
9670442	Toluene	2024/09/29	94	50 - 140	95	50 - 140	<0.20	ug/L	3.4	30



BUREAU
VERITAS

Bureau Veritas Job #: C4T9910

Report Date: 2024/09/30

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-B0

Site Location: 1822, 1846 BANK & WALKLEY

Sampler Initials: SA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9670442	Total Xylenes	2024/09/29					<0.40	ug/L	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).



BUREAU
VERITAS

Bureau Veritas Job #: C4T9910
Report Date: 2024/09/30

exp Services Inc
Client Project #: OTT-23002538-B0
Site Location: 1822, 1846 BANK & WALKLEY
Sampler Initials: SA

VALIDATION SIGNATURE PAGE

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

Louise Harding, Scientific Specialist

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

C4T9910
2024/09/24 15:35

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 of



NONT-2024-09-5076

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name: #17498 exp Services Inc		Company Name: EXP		Quotation #: C41513	
Attention: Accounts Payable		Attention: Chris Kimmerly		P. O. #: _____	
Address: 100-2650 Queensview Drive		Address: 2650 Queensview Dr. Ottawa		Project: OTT-23002538-B0	
Ottawa ON K2B 8H6				Project Name: 18221848 Bank Runway	
Tel: (613) 688-1899 Fax: (613) 225-7337		Tel: _____ Fax: _____		Site #: _____	
Email: AP@exp.com; Karen.Burke@exp.com		Email: Chris.Kimmerly@exp.com; Shahnaz.AbdelMohsen@exp.com		Sampled By: Shahnaz AbdelMohsen	
				COC #: _____	
				Bottle Order #: _____	
				Barcode: 1014063	
				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) <input type="checkbox"/> Table 1 <input type="checkbox"/> Res/Park <input type="checkbox"/> Medium/Fine <input type="checkbox"/> Table 2 <input type="checkbox"/> Ind/Comm <input type="checkbox"/> Coarse <input type="checkbox"/> Table 3 <input type="checkbox"/> Agri/Other <input type="checkbox"/> For RSC <input type="checkbox"/> Table _____			Other Regulations <input type="checkbox"/> CCME <input type="checkbox"/> Sanitary Sewer Bylaw <input type="checkbox"/> Reg 558 <input type="checkbox"/> Storm Sewer Bylaw <input type="checkbox"/> MISA <input type="checkbox"/> Municipality _____ <input type="checkbox"/> PWQO <input type="checkbox"/> Reg 406 Table _____ <input type="checkbox"/> Other _____			Special Instructions 		
Include Criteria on Certificate of Analysis (Y/N)? _____								

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr / V	O Reg 153 VOCs by HS	O Reg 153 PHCs, BTEX/F1-F4	BTEX	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)		# of Bottles	Comments
1 BW/13H-1		2024/09/24	10:20	G-W	✓						2	
2 MW/13H-2			9:55		✓						2	
3 MW/13H-3			12:30		✓						2	
4 MW/13H-4			1:45		✓						2	
5 MW/13H-8			12:25			✓	✓				4	
6 MW/13H-10			11:40				✓				2	
7												
8												
9												
10												

* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only				
Shahnaz AbdelMohsen		2024/09/24	3:20	Pedro da Silva / SUGAN SARVANI		2024/09/24	15:35		Time Sensitive	Temperature (°C) on Reel	Custody Seal Present	Yes	No
										22/22/23 (none)	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. 6/5/8

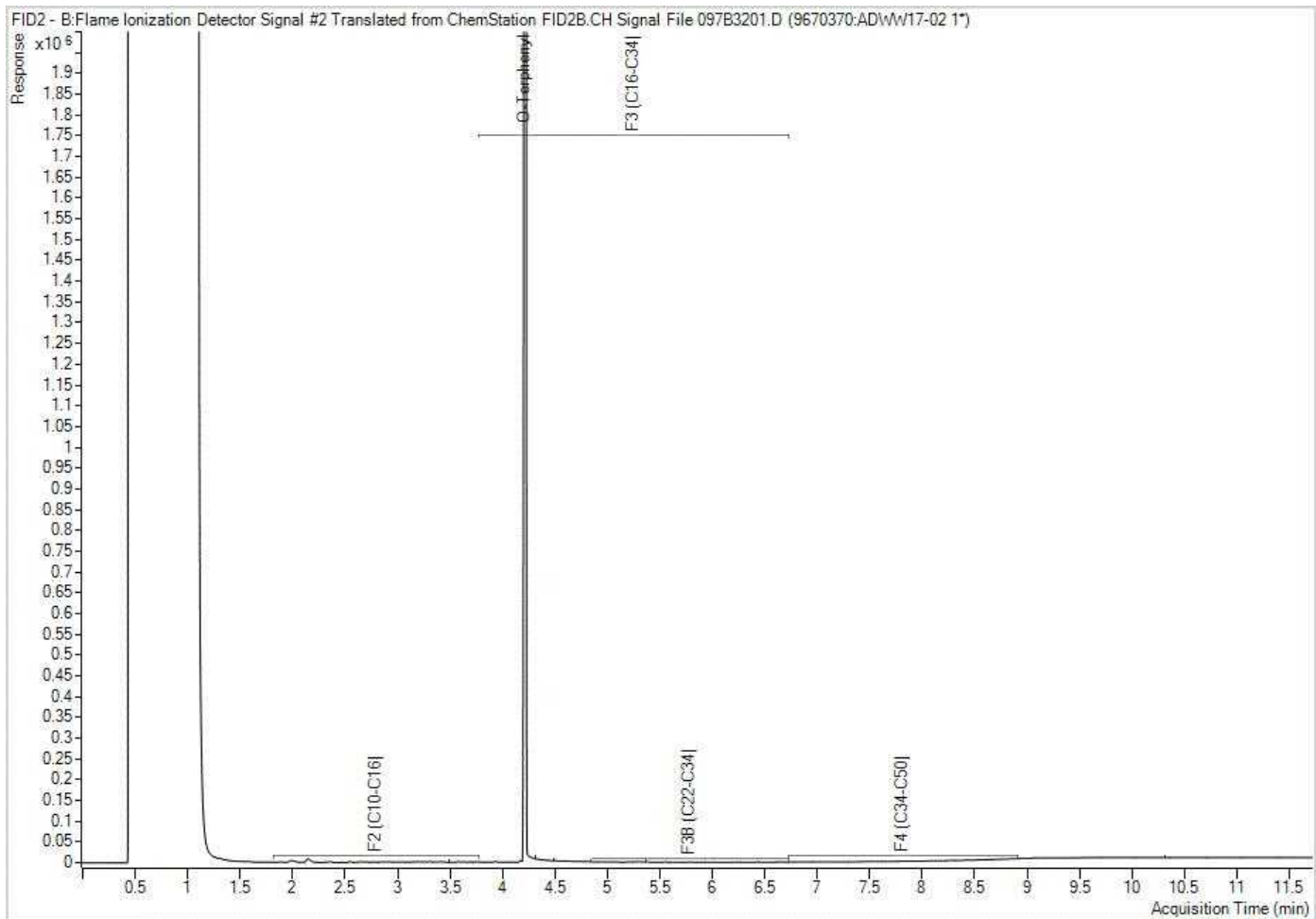
** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.

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

Received in Ottawa

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.



Attention: Chris Kimmerly

exp Services Inc
Ottawa Branch
100-2650 Queensview Drive
Ottawa, ON
CANADA K2B 8H6

Report Date: 2024/03/21
Report #: R8075057
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C479565

Received: 2024/03/15, 14:31

Sample Matrix: Ground Water
Samples Received: 5

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
1,3-Dichloropropene Sum (1)	2	N/A	2024/03/21		EPA 8260C m
Petroleum Hydro. CCME F1 & BTEX in Water (1)	3	N/A	2024/03/19	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1, 2)	2	2024/03/19	2024/03/19	CAM SOP-00316	CCME PHC-CWS m
Volatile Organic Compounds in Water (1)	2	N/A	2024/03/20	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) 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.



Attention: Chris Kimmerly

exp Services Inc
Ottawa Branch
100-2650 Queensview Drive
Ottawa, ON
CANADA K2B 8H6

Report Date: 2024/03/21
Report #: R8075057
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C479565
Received: 2024/03/15, 14:31

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.



PETROLEUM HYDROCARBONS (CCME)

Bureau Veritas ID		YQN538		
Sampling Date		2024/03/15 12:40		
	UNITS	BH-10/MW	RDL	QC Batch
BTEX & F1 Hydrocarbons				
Benzene	ug/L	<0.20	0.20	9282182
Toluene	ug/L	<0.20	0.20	9282182
Ethylbenzene	ug/L	<0.20	0.20	9282182
o-Xylene	ug/L	<0.20	0.20	9282182
p+m-Xylene	ug/L	<0.40	0.40	9282182
Total Xylenes	ug/L	<0.40	0.40	9282182
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	100		9282182
4-Bromofluorobenzene	%	96		9282182
D10-o-Xylene	%	99		9282182
D4-1,2-Dichloroethane	%	121		9282182
RDL = Reportable Detection Limit QC Batch = Quality Control Batch				



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

Bureau Veritas ID		YQN539	YQN540		
Sampling Date		2024/03/15 13:15	2024/03/15 13:15		
	UNITS	BH-8/MW	DUP	RDL	QC Batch
BTEX & F1 Hydrocarbons					
Benzene	ug/L	0.70	0.69	0.20	9282067
Toluene	ug/L	<0.20	<0.20	0.20	9282067
Ethylbenzene	ug/L	1.3	1.2	0.20	9282067
o-Xylene	ug/L	<0.20	<0.20	0.20	9282067
p+m-Xylene	ug/L	2.5	2.3	0.40	9282067
Total Xylenes	ug/L	2.5	2.3	0.40	9282067
F1 (C6-C10)	ug/L	<25	<25	25	9282067
F1 (C6-C10) - BTEX	ug/L	<25	<25	25	9282067
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	100	9282174
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	200	9282174
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	200	9282174
Reached Baseline at C50	ug/L	Yes	Yes		9282174
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	98	100		9282067
4-Bromofluorobenzene	%	96	96		9282067
D10-o-Xylene	%	96	97		9282067
D4-1,2-Dichloroethane	%	111	114		9282067
o-Terphenyl	%	101	98		9282174
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					



O.REG 153 VOCS BY HS (WATER)

Bureau Veritas ID		YQN536	YQN537		
Sampling Date		2024/03/15 11:25	2024/03/15 10:25		
	UNITS	BH-3/MW	BH-4/MW	RDL	QC Batch
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	0.50	9280294
Volatile Organics					
Acetone (2-Propanone)	ug/L	<10	<10	10	9283131
Benzene	ug/L	<0.20	<0.20	0.20	9283131
Bromodichloromethane	ug/L	<0.50	<0.50	0.50	9283131
Bromoform	ug/L	<1.0	<1.0	1.0	9283131
Bromomethane	ug/L	<0.50	<0.50	0.50	9283131
Carbon Tetrachloride	ug/L	<0.19	<0.19	0.19	9283131
Chlorobenzene	ug/L	<0.20	<0.20	0.20	9283131
Chloroform	ug/L	<0.20	<0.20	0.20	9283131
Dibromochloromethane	ug/L	<0.50	<0.50	0.50	9283131
1,2-Dichlorobenzene	ug/L	<0.40	<0.40	0.40	9283131
1,3-Dichlorobenzene	ug/L	<0.40	<0.40	0.40	9283131
1,4-Dichlorobenzene	ug/L	<0.40	<0.40	0.40	9283131
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	1.0	9283131
1,1-Dichloroethane	ug/L	<0.20	<0.20	0.20	9283131
1,2-Dichloroethane	ug/L	<0.49	<0.49	0.49	9283131
1,1-Dichloroethylene	ug/L	<0.20	<0.20	0.20	9283131
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	9283131
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	9283131
1,2-Dichloropropane	ug/L	<0.20	<0.20	0.20	9283131
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	0.30	9283131
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	0.40	9283131
Ethylbenzene	ug/L	<0.20	0.26	0.20	9283131
Ethylene Dibromide	ug/L	<0.19	<0.19	0.19	9283131
Hexane	ug/L	<1.0	<1.0	1.0	9283131
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	2.0	9283131
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	10	9283131
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	5.0	9283131
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	0.50	9283131
Styrene	ug/L	<0.40	<0.40	0.40	9283131
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	9283131
1,1,2,2-Tetrachloroethane	ug/L	<0.40	<0.40	0.40	9283131
Tetrachloroethylene	ug/L	0.47	<0.20	0.20	9283131
Toluene	ug/L	<0.20	1.4	0.20	9283131
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	0.20	9283131
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					



O.REG 153 VOCS BY HS (WATER)

Bureau Veritas ID		YQN536	YQN537		
Sampling Date		2024/03/15 11:25	2024/03/15 10:25		
	UNITS	BH-3/MW	BH-4/MW	RDL	QC Batch
1,1,2-Trichloroethane	ug/L	<0.40	<0.40	0.40	9283131
Trichloroethylene	ug/L	<0.20	<0.20	0.20	9283131
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	0.50	9283131
Vinyl Chloride	ug/L	<0.20	<0.20	0.20	9283131
p+m-Xylene	ug/L	<0.20	1.1	0.20	9283131
o-Xylene	ug/L	<0.20	0.52	0.20	9283131
Total Xylenes	ug/L	<0.20	1.7	0.20	9283131
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	100	100		9283131
D4-1,2-Dichloroethane	%	117	120		9283131
D8-Toluene	%	85	84		9283131
RDL = Reportable Detection Limit QC Batch = Quality Control Batch					



BUREAU
VERITAS

Bureau Veritas Job #: C479565
Report Date: 2024/03/21

exp Services Inc
Sampler Initials: SHA

TEST SUMMARY

Bureau Veritas ID: YQN536
Sample ID: BH-3/MW
Matrix: Ground Water

Collected: 2024/03/15
Shipped:
Received: 2024/03/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9280294	N/A	2024/03/21	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	9283131	N/A	2024/03/20	Mariia Biliaieva

Bureau Veritas ID: YQN537
Sample ID: BH-4/MW
Matrix: Ground Water

Collected: 2024/03/15
Shipped:
Received: 2024/03/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9280294	N/A	2024/03/21	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	9283131	N/A	2024/03/20	Mariia Biliaieva

Bureau Veritas ID: YQN538
Sample ID: BH-10/MW
Matrix: Ground Water

Collected: 2024/03/15
Shipped:
Received: 2024/03/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	9282182	N/A	2024/03/19	Georgeta Rusu

Bureau Veritas ID: YQN539
Sample ID: BH-8/MW
Matrix: Ground Water

Collected: 2024/03/15
Shipped:
Received: 2024/03/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	9282067	N/A	2024/03/19	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9282174	2024/03/19	2024/03/19	Jeevaraj Jeevaratnam

Bureau Veritas ID: YQN540
Sample ID: DUP
Matrix: Ground Water

Collected: 2024/03/15
Shipped:
Received: 2024/03/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	9282067	N/A	2024/03/19	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9282174	2024/03/19	2024/03/19	Jeevaraj Jeevaratnam



GENERAL COMMENTS

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

Package 1	8.3°C
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Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C479565

Report Date: 2024/03/21

QUALITY ASSURANCE REPORT

exp Services Inc
Sampler Initials: SHA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9282067	1,4-Difluorobenzene	2024/03/19	98	70 - 130	97	70 - 130	99	%		
9282067	4-Bromofluorobenzene	2024/03/19	104	70 - 130	102	70 - 130	97	%		
9282067	D10-o-Xylene	2024/03/19	106	70 - 130	106	70 - 130	95	%		
9282067	D4-1,2-Dichloroethane	2024/03/19	109	70 - 130	109	70 - 130	107	%		
9282174	o-Terphenyl	2024/03/19	100	60 - 130	102	60 - 130	100	%		
9282182	1,4-Difluorobenzene	2024/03/19	98	70 - 130	96	70 - 130	102	%		
9282182	4-Bromofluorobenzene	2024/03/19	102	70 - 130	103	70 - 130	100	%		
9282182	D10-o-Xylene	2024/03/19	104	70 - 130	104	70 - 130	95	%		
9282182	D4-1,2-Dichloroethane	2024/03/19	115	70 - 130	113	70 - 130	122	%		
9283131	4-Bromofluorobenzene	2024/03/20	109	70 - 130	109	70 - 130	104	%		
9283131	D4-1,2-Dichloroethane	2024/03/20	102	70 - 130	99	70 - 130	113	%		
9283131	D8-Toluene	2024/03/20	104	70 - 130	105	70 - 130	85	%		
9282067	Benzene	2024/03/19	98	50 - 140	96	50 - 140	<0.20	ug/L	NC	30
9282067	Ethylbenzene	2024/03/19	98	50 - 140	101	50 - 140	<0.20	ug/L	NC	30
9282067	F1 (C6-C10) - BTEX	2024/03/19					<25	ug/L	NC	30
9282067	F1 (C6-C10)	2024/03/19	102	60 - 140	102	60 - 140	<25	ug/L	NC	30
9282067	o-Xylene	2024/03/19	100	50 - 140	100	50 - 140	<0.20	ug/L	NC	30
9282067	p+m-Xylene	2024/03/19	95	50 - 140	95	50 - 140	<0.40	ug/L	NC	30
9282067	Toluene	2024/03/19	93	50 - 140	92	50 - 140	<0.20	ug/L	NC	30
9282067	Total Xylenes	2024/03/19					<0.40	ug/L	NC	30
9282174	F2 (C10-C16 Hydrocarbons)	2024/03/19	96	60 - 130	103	60 - 130	<100	ug/L	NC	30
9282174	F3 (C16-C34 Hydrocarbons)	2024/03/19	105	60 - 130	107	60 - 130	<200	ug/L	NC	30
9282174	F4 (C34-C50 Hydrocarbons)	2024/03/19	97	60 - 130	99	60 - 130	<200	ug/L	NC	30
9282182	Benzene	2024/03/19	107	50 - 140	106	50 - 140	<0.20	ug/L	NC	30
9282182	Ethylbenzene	2024/03/19	104	50 - 140	104	50 - 140	<0.20	ug/L	NC	30
9282182	o-Xylene	2024/03/19	102	50 - 140	101	50 - 140	<0.20	ug/L	NC	30
9282182	p+m-Xylene	2024/03/19	98	50 - 140	97	50 - 140	<0.40	ug/L	NC	30
9282182	Toluene	2024/03/19	99	50 - 140	97	50 - 140	<0.20	ug/L	NC	30
9282182	Total Xylenes	2024/03/19					<0.40	ug/L	NC	30
9283131	1,1,1,2-Tetrachloroethane	2024/03/20	99	70 - 130	99	70 - 130	<0.50	ug/L	NC	30
9283131	1,1,1-Trichloroethane	2024/03/20	99	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
9283131	1,1,2,2-Tetrachloroethane	2024/03/20	99	70 - 130	95	70 - 130	<0.40	ug/L	NC	30
9283131	1,1,2-Trichloroethane	2024/03/20	92	70 - 130	89	70 - 130	<0.40	ug/L	NC	30



BUREAU
VERITAS

Bureau Veritas Job #: C479565

Report Date: 2024/03/21

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Sampler Initials: SHA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9283131	1,1-Dichloroethane	2024/03/20	96	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
9283131	1,1-Dichloroethylene	2024/03/20	94	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
9283131	1,2-Dichlorobenzene	2024/03/20	97	70 - 130	93	70 - 130	<0.40	ug/L	NC	30
9283131	1,2-Dichloroethane	2024/03/20	94	70 - 130	90	70 - 130	<0.49	ug/L	NC	30
9283131	1,2-Dichloropropane	2024/03/20	92	70 - 130	90	70 - 130	<0.20	ug/L	NC	30
9283131	1,3-Dichlorobenzene	2024/03/20	98	70 - 130	96	70 - 130	<0.40	ug/L	NC	30
9283131	1,4-Dichlorobenzene	2024/03/20	112	70 - 130	109	70 - 130	<0.40	ug/L	NC	30
9283131	Acetone (2-Propanone)	2024/03/20	91	60 - 140	87	60 - 140	<10	ug/L	NC	30
9283131	Benzene	2024/03/20	88	70 - 130	87	70 - 130	<0.20	ug/L	NC	30
9283131	Bromodichloromethane	2024/03/20	103	70 - 130	101	70 - 130	<0.50	ug/L	NC	30
9283131	Bromoform	2024/03/20	91	70 - 130	87	70 - 130	<1.0	ug/L	NC	30
9283131	Bromomethane	2024/03/20	89	60 - 140	88	60 - 140	<0.50	ug/L	NC	30
9283131	Carbon Tetrachloride	2024/03/20	98	70 - 130	98	70 - 130	<0.19	ug/L	NC	30
9283131	Chlorobenzene	2024/03/20	100	70 - 130	100	70 - 130	<0.20	ug/L	NC	30
9283131	Chloroform	2024/03/20	101	70 - 130	100	70 - 130	<0.20	ug/L	NC	30
9283131	cis-1,2-Dichloroethylene	2024/03/20	102	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
9283131	cis-1,3-Dichloropropene	2024/03/20	92	70 - 130	89	70 - 130	<0.30	ug/L	NC	30
9283131	Dibromochloromethane	2024/03/20	102	70 - 130	89	70 - 130	<0.50	ug/L	NC	30
9283131	Dichlorodifluoromethane (FREON 12)	2024/03/20	86	60 - 140	87	60 - 140	<1.0	ug/L	NC	30
9283131	Ethylbenzene	2024/03/20	87	70 - 130	86	70 - 130	<0.20	ug/L	NC	30
9283131	Ethylene Dibromide	2024/03/20	97	70 - 130	93	70 - 130	<0.19	ug/L	NC	30
9283131	Hexane	2024/03/20	96	70 - 130	96	70 - 130	<1.0	ug/L	NC	30
9283131	Methyl Ethyl Ketone (2-Butanone)	2024/03/20	100	60 - 140	93	60 - 140	<10	ug/L	NC	30
9283131	Methyl Isobutyl Ketone	2024/03/20	100	70 - 130	92	70 - 130	<5.0	ug/L	NC	30
9283131	Methyl t-butyl ether (MTBE)	2024/03/20	94	70 - 130	92	70 - 130	<0.50	ug/L	NC	30
9283131	Methylene Chloride(Dichloromethane)	2024/03/20	98	70 - 130	95	70 - 130	<2.0	ug/L	NC	30
9283131	o-Xylene	2024/03/20	78	70 - 130	83	70 - 130	<0.20	ug/L	NC	30
9283131	p+m-Xylene	2024/03/20	77	70 - 130	76	70 - 130	<0.20	ug/L	NC	30
9283131	Styrene	2024/03/20	88	70 - 130	88	70 - 130	<0.40	ug/L	NC	30
9283131	Tetrachloroethylene	2024/03/20	100	70 - 130	101	70 - 130	<0.20	ug/L	NC	30
9283131	Toluene	2024/03/20	93	70 - 130	92	70 - 130	<0.20	ug/L	NC	30
9283131	Total Xylenes	2024/03/20					<0.20	ug/L	NC	30
9283131	trans-1,2-Dichloroethylene	2024/03/20	99	70 - 130	98	70 - 130	<0.50	ug/L	NC	30



BUREAU
VERITAS

Bureau Veritas Job #: C479565

Report Date: 2024/03/21

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc
Sampler Initials: SHA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9283131	trans-1,3-Dichloropropene	2024/03/20	100	70 - 130	98	70 - 130	<0.40	ug/L	NC	30
9283131	Trichloroethylene	2024/03/20	101	70 - 130	100	70 - 130	<0.20	ug/L	NC	30
9283131	Trichlorofluoromethane (FREON 11)	2024/03/20	103	70 - 130	104	70 - 130	<0.50	ug/L	NC	30
9283131	Vinyl Chloride	2024/03/20	90	70 - 130	91	70 - 130	<0.20	ug/L	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 $\leq 2x$ RDL).



BUREAU
VERITAS

Bureau Veritas Job #: C479565
Report Date: 2024/03/21

exp Services Inc
Sampler Initials: SHA

VALIDATION SIGNATURE PAGE

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

A handwritten signature in black ink, appearing to read 'Anastassia Hamanov', written over a horizontal line.

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.



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6740 Campbell Road, Mississauga, Ontario L5N 7L8
Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266

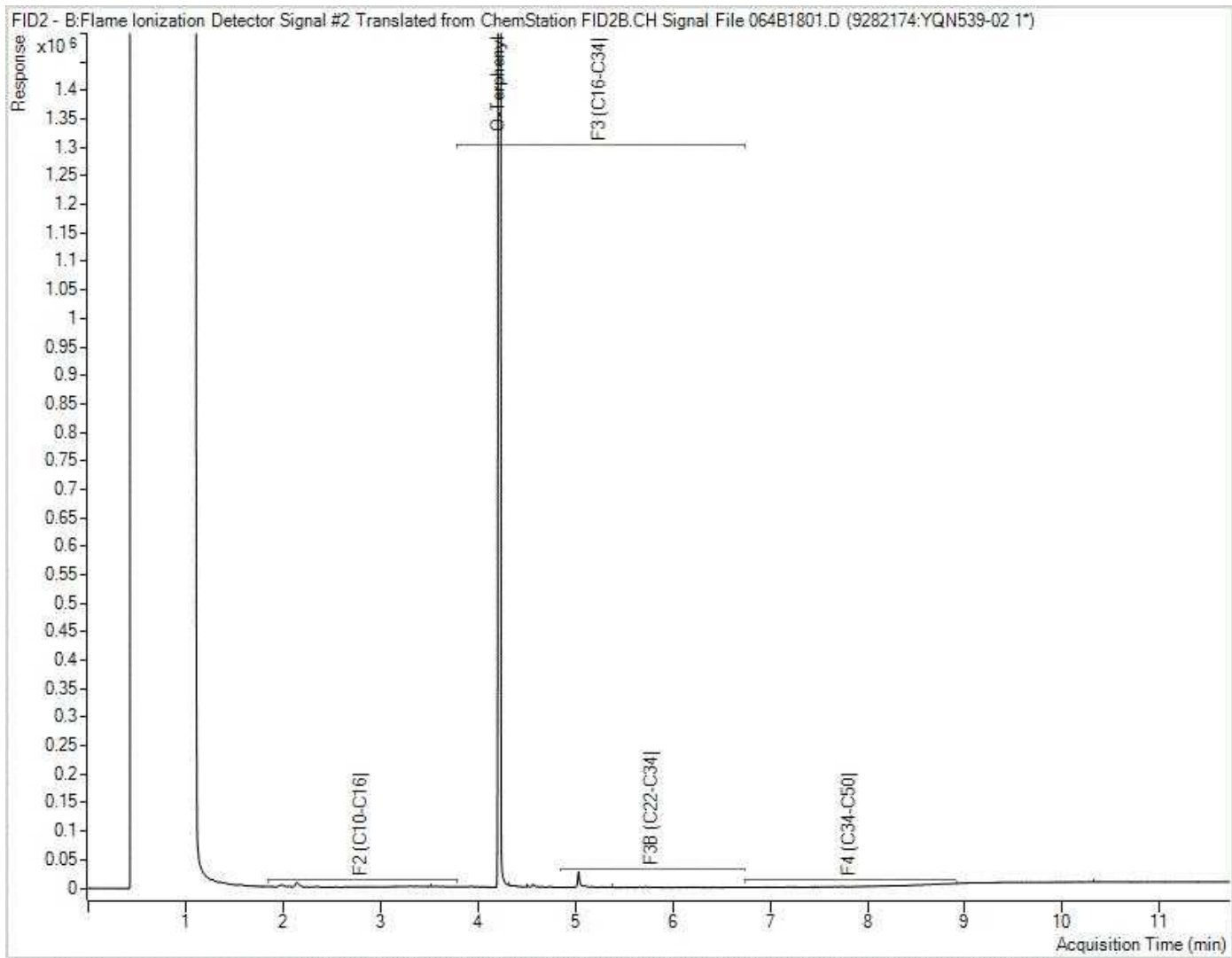
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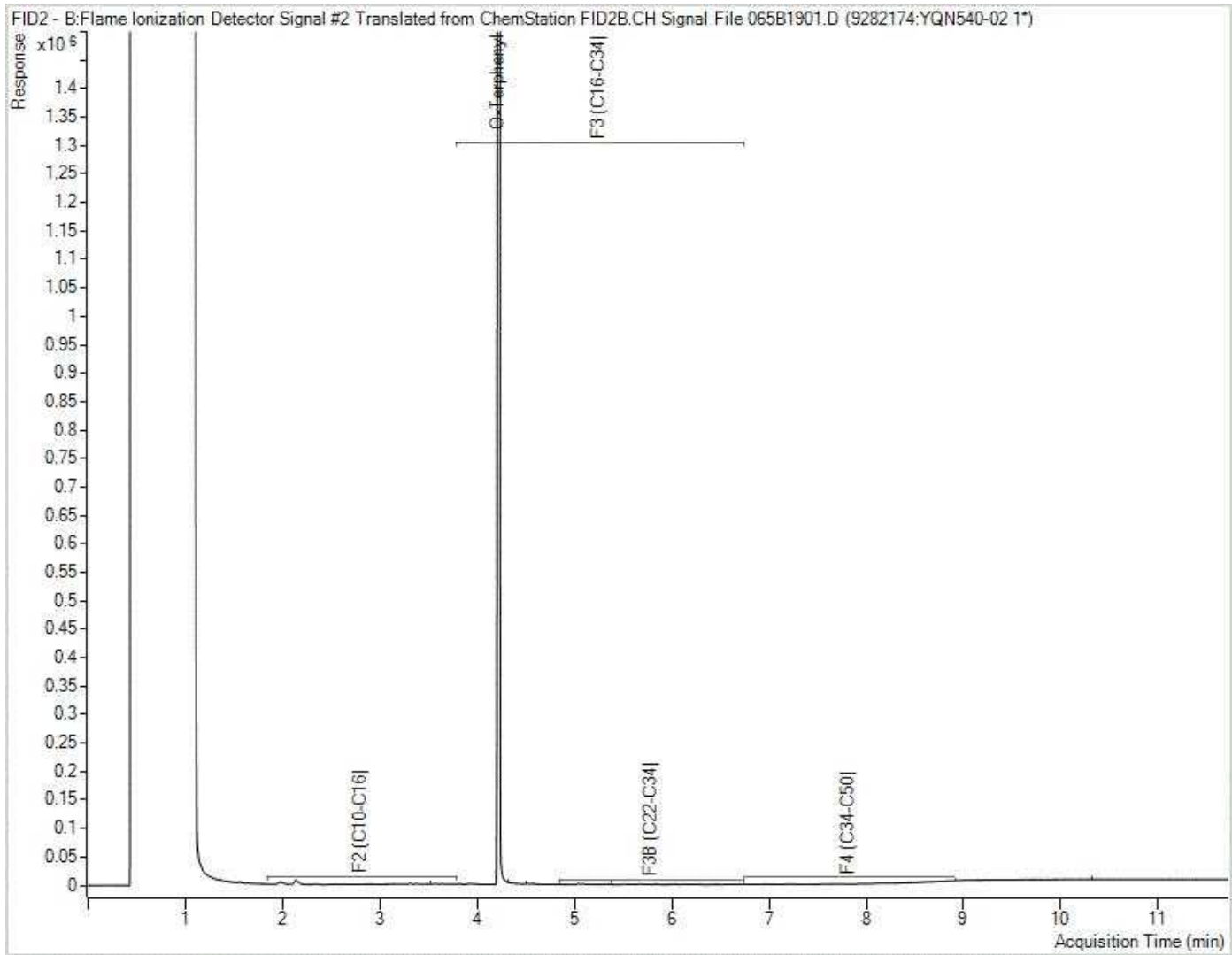
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Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

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 #: OTT-23002538-B0
Your C.O.C. #: C#924624-03-01

Attention: Chris Kimmerly

exp Services Inc
Ottawa Branch
100-2650 Queensview Drive
Ottawa, ON
CANADA K2B 8H6

Report Date: 2024/04/02
Report #: R8090277
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C489646
Received: 2024/03/25, 16:46

Sample Matrix: Water
Samples Received: 2

Analyses	Date		Laboratory Method	Analytical Method
	Quantity	Extracted		
1,3-Dichloropropene Sum (1)	2	N/A	2024/04/01	EPA 8260C m
Volatile Organic Compounds in Water (1)	2	N/A	2024/03/28 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) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8



Your Project #: OTT-23002538-B0
Your C.O.C. #: C#924624-03-01

Attention: Chris Kimmerly

exp Services Inc
Ottawa Branch
100-2650 Queensview Drive
Ottawa, ON
CANADA K2B 8H6

Report Date: 2024/04/02
Report #: R8090277
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C489646
Received: 2024/03/25, 16:46

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.



BUREAU
VERITAS

Bureau Veritas Job #: C489646
Report Date: 2024/04/02

exp Services Inc
Client Project #: OTT-23002538-B0
Sampler Initials: JE

O.REG 153 VOCS BY HS (WATER)

Bureau Veritas ID		YSR117		YSR118		
Sampling Date		2024/03/25 15:30		2024/03/25 16:05		
COC Number		C#924624-03-01		C#924624-03-01		
	UNITS	BH/MW-12	RDL	BH/MW-1	RDL	QC Batch
Calculated Parameters						
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	0.50	<0.50	0.50	9297203
Volatile Organics						
Acetone (2-Propanone)	ug/L	30	10	<10	10	9300150
Benzene	ug/L	12	0.20	<0.20	0.20	9300150
Bromodichloromethane	ug/L	<0.50	0.50	<0.50	0.50	9300150
Bromoform	ug/L	<1.0	1.0	<1.0	1.0	9300150
Bromomethane	ug/L	<0.50	0.50	<0.50	0.50	9300150
Carbon Tetrachloride	ug/L	<0.19	0.19	<0.19	0.19	9300150
Chlorobenzene	ug/L	<0.20	0.20	<0.20	0.20	9300150
Chloroform	ug/L	<0.20	0.20	0.34	0.20	9300150
Dibromochloromethane	ug/L	<0.50	0.50	<0.50	0.50	9300150
1,2-Dichlorobenzene	ug/L	<0.40	0.40	<0.40	0.40	9300150
1,3-Dichlorobenzene	ug/L	<0.40	0.40	<0.40	0.40	9300150
1,4-Dichlorobenzene	ug/L	<0.40	0.40	<0.40	0.40	9300150
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	1.0	<1.0	1.0	9300150
1,1-Dichloroethane	ug/L	<0.20	0.20	<0.20	0.20	9300150
1,2-Dichloroethane	ug/L	<0.49	0.49	<0.49	0.49	9300150
1,1-Dichloroethylene	ug/L	<0.20	0.20	<0.20	0.20	9300150
cis-1,2-Dichloroethylene	ug/L	<0.50	0.50	<0.50	0.50	9300150
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	<0.50	0.50	9300150
1,2-Dichloropropane	ug/L	<0.20	0.20	<0.20	0.20	9300150
cis-1,3-Dichloropropene	ug/L	<0.30	0.30	<0.30	0.30	9300150
trans-1,3-Dichloropropene	ug/L	<0.40	0.40	<0.40	0.40	9300150
Ethylbenzene	ug/L	0.94	0.20	<0.20	0.20	9300150
Ethylene Dibromide	ug/L	<0.19	0.19	<0.19	0.19	9300150
Hexane	ug/L	5.0	1.0	<1.0	1.0	9300150
Methylene Chloride(Dichloromethane)	ug/L	<2.0	2.0	<2.0	2.0	9300150
Methyl Ethyl Ketone (2-Butanone)	ug/L	6400	50	<10	10	9300150
Methyl Isobutyl Ketone	ug/L	<5.0	5.0	<5.0	5.0	9300150
Methyl t-butyl ether (MTBE)	ug/L	<0.50	0.50	<0.50	0.50	9300150
Styrene	ug/L	<0.40	0.40	<0.40	0.40	9300150
1,1,1,2-Tetrachloroethane	ug/L	<0.50	0.50	<0.50	0.50	9300150
1,1,2,2-Tetrachloroethane	ug/L	<0.40	0.40	<0.40	0.40	9300150
Tetrachloroethylene	ug/L	5.3	0.20	<0.20	0.20	9300150
Toluene	ug/L	19	0.20	<0.20	0.20	9300150
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						



BUREAU
VERITAS

Bureau Veritas Job #: C489646
Report Date: 2024/04/02

exp Services Inc
Client Project #: OTT-23002538-B0
Sampler Initials: JE

O.REG 153 VOCs BY HS (WATER)

Bureau Veritas ID		YSR117		YSR118		
Sampling Date		2024/03/25 15:30		2024/03/25 16:05		
COC Number		C#924624-03-01		C#924624-03-01		
	UNITS	BH/MW-12	RDL	BH/MW-1	RDL	QC Batch
1,1,1-Trichloroethane	ug/L	<0.20	0.20	<0.20	0.20	9300150
1,1,2-Trichloroethane	ug/L	<0.40	0.40	<0.40	0.40	9300150
Trichloroethylene	ug/L	0.48	0.20	<0.20	0.20	9300150
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	0.50	<0.50	0.50	9300150
Vinyl Chloride	ug/L	<0.20	0.20	<0.20	0.20	9300150
p+m-Xylene	ug/L	9.8	0.20	<0.20	0.20	9300150
o-Xylene	ug/L	3.3	0.20	<0.20	0.20	9300150
Total Xylenes	ug/L	13	0.20	<0.20	0.20	9300150
Surrogate Recovery (%)						
4-Bromofluorobenzene	%	97		99		9300150
D4-1,2-Dichloroethane	%	105		116		9300150
D8-Toluene	%	97		93		9300150
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						



BUREAU
VERITAS

Bureau Veritas Job #: C489646
Report Date: 2024/04/02

exp Services Inc
Client Project #: OTT-23002538-B0
Sampler Initials: JE

TEST SUMMARY

Bureau Veritas ID: YSR117
Sample ID: BH/MW-12
Matrix: Water

Collected: 2024/03/25
Shipped:
Received: 2024/03/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9297203	N/A	2024/04/01	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	9300150	N/A	2024/03/28	Gabriella Morrone

Bureau Veritas ID: YSR118
Sample ID: BH/MW-1
Matrix: Water

Collected: 2024/03/25
Shipped:
Received: 2024/03/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9297203	N/A	2024/04/01	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	9300150	N/A	2024/03/28	Gabriella Morrone



BUREAU
VERITAS

Bureau Veritas Job #: C489646
Report Date: 2024/04/02

exp Services Inc
Client Project #: OTT-23002538-B0
Sampler Initials: JE

GENERAL COMMENTS

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

Package 1	8.7°C
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Sample YSR117 [BH/MW-12] : VOC Analysis: Due to high concentrations of target analytes, sample required dilution. Detection limits were adjusted accordingly. In order to meet required regulatory criteria or to achieve lower reporting limits, results for selected compounds (obtained by a separate analysis using an appropriate low dilution) are included in the report.

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C489646

Report Date: 2024/04/02

QUALITY ASSURANCE REPORT

exp Services Inc

Client Project #: OTT-23002538-B0

Sampler Initials: JE

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9300150	4-Bromofluorobenzene	2024/03/28	99	70 - 130	100	70 - 130	102	%		
9300150	D4-1,2-Dichloroethane	2024/03/28	108	70 - 130	104	70 - 130	110	%		
9300150	D8-Toluene	2024/03/28	104	70 - 130	104	70 - 130	94	%		
9300150	1,1,1,2-Tetrachloroethane	2024/03/28	98	70 - 130	102	70 - 130	<0.50	ug/L		
9300150	1,1,1-Trichloroethane	2024/03/28	94	70 - 130	98	70 - 130	<0.20	ug/L		
9300150	1,1,2,2-Tetrachloroethane	2024/03/28	99	70 - 130	101	70 - 130	<0.40	ug/L	NC	30
9300150	1,1,2-Trichloroethane	2024/03/28	99	70 - 130	101	70 - 130	<0.40	ug/L		
9300150	1,1-Dichloroethane	2024/03/28	96	70 - 130	99	70 - 130	<0.20	ug/L		
9300150	1,1-Dichloroethylene	2024/03/28	89	70 - 130	93	70 - 130	<0.20	ug/L		
9300150	1,2-Dichlorobenzene	2024/03/28	89	70 - 130	93	70 - 130	<0.40	ug/L	NC	30
9300150	1,2-Dichloroethane	2024/03/28	96	70 - 130	98	70 - 130	<0.49	ug/L		
9300150	1,2-Dichloropropane	2024/03/28	95	70 - 130	98	70 - 130	<0.20	ug/L		
9300150	1,3-Dichlorobenzene	2024/03/28	91	70 - 130	95	70 - 130	<0.40	ug/L		
9300150	1,4-Dichlorobenzene	2024/03/28	99	70 - 130	104	70 - 130	<0.40	ug/L	NC	30
9300150	Acetone (2-Propanone)	2024/03/28	114	60 - 140	115	60 - 140	<10	ug/L		
9300150	Benzene	2024/03/28	87	70 - 130	90	70 - 130	<0.20	ug/L	NC	30
9300150	Bromodichloromethane	2024/03/28	102	70 - 130	105	70 - 130	<0.50	ug/L		
9300150	Bromoform	2024/03/28	90	70 - 130	92	70 - 130	<1.0	ug/L		
9300150	Bromomethane	2024/03/28	79	60 - 140	79	60 - 140	<0.50	ug/L		
9300150	Carbon Tetrachloride	2024/03/28	92	70 - 130	96	70 - 130	<0.19	ug/L		
9300150	Chlorobenzene	2024/03/28	99	70 - 130	103	70 - 130	<0.20	ug/L		
9300150	Chloroform	2024/03/28	99	70 - 130	102	70 - 130	<0.20	ug/L	NC	30
9300150	cis-1,2-Dichloroethylene	2024/03/28	95	70 - 130	97	70 - 130	<0.50	ug/L		
9300150	cis-1,3-Dichloropropene	2024/03/28	94	70 - 130	95	70 - 130	<0.30	ug/L		
9300150	Dibromochloromethane	2024/03/28	96	70 - 130	98	70 - 130	<0.50	ug/L		
9300150	Dichlorodifluoromethane (FREON 12)	2024/03/28	60	60 - 140	63	60 - 140	<1.0	ug/L		
9300150	Ethylbenzene	2024/03/28	87	70 - 130	93	70 - 130	<0.20	ug/L	NC	30
9300150	Ethylene Dibromide	2024/03/28	99	70 - 130	100	70 - 130	<0.19	ug/L		
9300150	Hexane	2024/03/28	84	70 - 130	89	70 - 130	<1.0	ug/L		
9300150	Methyl Ethyl Ketone (2-Butanone)	2024/03/28	107	60 - 140	108	60 - 140	<10	ug/L		
9300150	Methyl Isobutyl Ketone	2024/03/28	108	70 - 130	111	70 - 130	<5.0	ug/L		
9300150	Methyl t-butyl ether (MTBE)	2024/03/28	97	70 - 130	102	70 - 130	<0.50	ug/L		



BUREAU
VERITAS

Bureau Veritas Job #: C489646

Report Date: 2024/04/02

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-B0

Sampler Initials: JE

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9300150	Methylene Chloride(Dichloromethane)	2024/03/28	92	70 - 130	94	70 - 130	<2.0	ug/L	NC	30
9300150	o-Xylene	2024/03/28	78	70 - 130	87	70 - 130	<0.20	ug/L	NC	30
9300150	p+m-Xylene	2024/03/28	95	70 - 130	101	70 - 130	<0.20	ug/L	NC	30
9300150	Styrene	2024/03/28	100	70 - 130	108	70 - 130	<0.40	ug/L		
9300150	Tetrachloroethylene	2024/03/28	92	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
9300150	Toluene	2024/03/28	90	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
9300150	Total Xylenes	2024/03/28					<0.20	ug/L	NC	30
9300150	trans-1,2-Dichloroethylene	2024/03/28	90	70 - 130	94	70 - 130	<0.50	ug/L		
9300150	trans-1,3-Dichloropropene	2024/03/28	103	70 - 130	101	70 - 130	<0.40	ug/L		
9300150	Trichloroethylene	2024/03/28	92	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
9300150	Trichlorofluoromethane (FREON 11)	2024/03/28	91	70 - 130	95	70 - 130	<0.50	ug/L		
9300150	Vinyl Chloride	2024/03/28	79	70 - 130	82	70 - 130	<0.20	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.

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).



BUREAU
VERITAS

Bureau Veritas Job #: C489646
Report Date: 2024/04/02

exp Services Inc
Client Project #: OTT-23002538-B0
Sampler Initials: JE

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.



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

CHAIN OF CUSTODY RECORD

Received in Ottawa

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name: #17498 exp Services Inc	Company Name: XXXXXXXXXX Chris Kimmerly	Quotation #: 000000	Bureau Veritas Job #:	Bottle Order #:	924524		
Attention: Accounts Payable	Attention: XXXXXXXXXX Chris Kimmerly	P.O. #: OTT-23002538-80	COC #:		Project Manager: Katherine Szozda		
Address: 100-2650 Queensview Drive Ottawa ON K2B 9H6	Address: XXXXXXXXXX	Project: XXXXXXXXXX	COC #:		Project Manager: Katherine Szozda		
Tel: (513) 688-1899 Fax: (613) 225-7337	Tel: XXXXXXXXXX Fax: XXXXXXXXXX	Project Name:	COC #:		Project Manager: Katherine Szozda		
Email: AP@exp.com; Karen.Burke@exp.com	Email: XXXXXXXXXX chris.kimmerly@exp.com	Site #:	COC #:		Project Manager: Katherine Szozda		
		Sampled By: Jeremy Eckert	COC #:		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					ANALYSIS REQUESTED (PLEASE BE SPECIFIC)										Turnaround Time (TAT) Required:				
Regulation 153 (2011)		Other Regulations		Special Instructions	Field Filtered (please circle) Metals / Hg / Cr VI	O Reg 153 PHCs BTEX/F1-F4	Gas/Diesel	VOC										Please provide advance notice for rush projects	
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Medium/Fine	<input type="checkbox"/> CCME	<input type="checkbox"/> Sanitary Sewer Bylaw															
<input type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> Reg 558	<input type="checkbox"/> Storm Sewer Bylaw											Job Specific Rush TAT (if applies to entire submission) <input type="checkbox"/>				
<input checked="" type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other	<input checked="" type="checkbox"/> For RSC	<input type="checkbox"/> MISA	Municipality											Date Required: _____ Time Required: _____				
<input type="checkbox"/> Table _____			<input type="checkbox"/> PWGO	Reg 406 Table											Rush Confirmation Number: _____ (call /ah for s)				
Include Criteria on Certificate of Analysis (Y/N)?																			
Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix											# of Bottles	Comments			
1	BH/MW-12	24/03/25	1530	GW											2				
2	BH/MW-1	24/03/25	1605	GW											2				
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			



NONT-2024-03-2012

* RELINQUISHED BY: (Signature/Print) <i>Jeremy Eckert</i>	Date: (YY/MM/DD) 24/03/25	Time 1630	RECEIVED BY: (Signature/Print) <i>Samuel Durand</i>	Date: (YY/MM/DD) 2024/03/25	Time 16:46	# jars used and not submitted 100	Laboratory Use Only				
			SUGAR SERVA			Time Sensitive		Temperature (°C) on Recci 8.9.9	Custody Seal Present	Yes	No
									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/COG-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

Custody Seal Present Intact
Cooling Media Yes No

7/9/27



Your P.O. #: 1824-1826 BANK ST
 Your Project #: OTT-23002538-AO
 Site Location: 1824-1826 BANK ST, OTTAWA, ON
 Your C.O.C. #: n/a

Attention: Leah Wells

exp Services Inc
 Ottawa Branch
 100-2650 Queensview Drive
 Ottawa, ON
 CANADA K2B 8H6

Report Date: 2023/12/06
 Report #: R7943814
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3AR834

Received: 2023/11/30, 11:39

Sample Matrix: Water
 # Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum (1)	6	N/A	2023/12/06	CAM SOP-00301	EPA 8270D m
1,3-Dichloropropene Sum (1)	6	N/A	2023/12/06		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Water (1, 2)	6	2023/12/05	2023/12/06	CAM SOP-00316	CCME PHC-CWS m
Dissolved Metals by ICPMS (1)	6	N/A	2023/12/05	CAM SOP-00447	EPA 6020B m
PAH Compounds in Water by GC/MS (SIM) (1)	6	2023/12/05	2023/12/06	CAM SOP-00318	EPA 8270E
Volatile Organic Compounds and F1 PHCs (1)	6	N/A	2023/12/06	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, MELCCFP, 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 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 P.O. #: 1824-1826 BANK ST
Your Project #: OTT-23002538-A0
Site Location: 1824-1826 BANK ST, OTTAWA, ON
Your C.O.C. #: n/a

Attention: Leah Wells

exp Services Inc
Ottawa Branch
100-2650 Queensview Drive
Ottawa, ON
CANADA K2B 8H6

Report Date: 2023/12/06
Report #: R7943814
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3AR834

Received: 2023/11/30, 11:39

Encryption Key



Bureau Veritas
06 Dec 2023 18:33:50

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.



BUREAU
VERITAS

Bureau Veritas Job #: C3AR834

Report Date: 2023/12/06

exp Services Inc

Client Project #: OTT-23002538-A0

Site Location: 1824-1826 BANK ST, OTTAWA, ON

Your P.O. #: 1824-1826 BANK ST

Sampler Initials: SZA

O.REG 153 DISSOLVED ICPMS METALS (WATER)

Bureau Veritas ID		XTP032	XTP032	XTP033	XTP034	XTP035		XTP036		
Sampling Date		2023/11/30 10:20	2023/11/30 10:20	2023/11/29 13:30	2023/11/29 13:30	2023/11/29 14:15		2023/11/29		
COC Number		n/a	n/a	n/a	n/a	n/a		n/a		
	UNITS	BH-1	BH-1 Lab-Dup	BH-10	DUP.	BH-9	RDL	TRIP BLANK	RDL	QC Batch

Metals										
Dissolved Antimony (Sb)	ug/L	1.4	1.3	0.56	<0.50	0.55	0.50	<0.50	0.50	9091340
Dissolved Arsenic (As)	ug/L	1.1	1.1	<1.0	<1.0	<1.0	1.0	<1.0	1.0	9091340
Dissolved Barium (Ba)	ug/L	1800	1800	150	140	89	2.0	<2.0	2.0	9091340
Dissolved Beryllium (Be)	ug/L	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	<0.40	0.40	9091340
Dissolved Boron (B)	ug/L	520	520	37	36	50	10	<10	10	9091340
Dissolved Cadmium (Cd)	ug/L	<0.090	<0.090	0.28	0.26	0.12	0.090	<0.090	0.090	9091340
Dissolved Chromium (Cr)	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	<5.0	5.0	9091340
Dissolved Cobalt (Co)	ug/L	2.5	2.5	5.9	5.5	2.4	0.50	<0.50	0.50	9091340
Dissolved Copper (Cu)	ug/L	2.5	2.4	4.5	3.6	2.3	0.90	<0.90	0.90	9091340
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	<0.50	0.50	9091340
Dissolved Molybdenum (Mo)	ug/L	11	11	9.7	9.0	1.6	0.50	<0.50	0.50	9091340
Dissolved Nickel (Ni)	ug/L	6.3	6.2	10	9.8	6.2	1.0	<1.0	1.0	9091340
Dissolved Selenium (Se)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	<2.0	2.0	9091340
Dissolved Silver (Ag)	ug/L	<0.090	<0.090	0.093	<0.090	<0.090	0.090	0.098	0.090	9091340
Dissolved Sodium (Na)	ug/L	820000	860000	890000	880000	1100000	500	<100	100	9091340
Dissolved Thallium (Tl)	ug/L	0.059	0.061	0.078	0.070	<0.050	0.050	<0.050	0.050	9091340
Dissolved Uranium (U)	ug/L	2.9	2.8	3.4	3.3	1.8	0.10	<0.10	0.10	9091340
Dissolved Vanadium (V)	ug/L	<0.50	<0.50	0.86	0.58	0.53	0.50	<0.50	0.50	9091340
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	<5.0	5.0	9091340

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate



BUREAU
VERITAS

Bureau Veritas Job #: C3AR834
Report Date: 2023/12/06

exp Services Inc
Client Project #: OTT-23002538-A0
Site Location: 1824-1826 BANK ST, OTTAWA, ON
Your P.O. #: 1824-1826 BANK ST
Sampler Initials: SZA

O.REG 153 DISSOLVED ICPMS METALS (WATER)

Bureau Veritas ID		XTP037		
Sampling Date		2023/11/30 10:30		
COC Number		n/a		
	UNITS	FIELD BLANK	RDL	QC Batch
Metals				
Dissolved Antimony (Sb)	ug/L	<0.50	0.50	9091340
Dissolved Arsenic (As)	ug/L	<1.0	1.0	9091340
Dissolved Barium (Ba)	ug/L	<2.0	2.0	9091340
Dissolved Beryllium (Be)	ug/L	<0.40	0.40	9091340
Dissolved Boron (B)	ug/L	<10	10	9091340
Dissolved Cadmium (Cd)	ug/L	<0.090	0.090	9091340
Dissolved Chromium (Cr)	ug/L	<5.0	5.0	9091340
Dissolved Cobalt (Co)	ug/L	<0.50	0.50	9091340
Dissolved Copper (Cu)	ug/L	<0.90	0.90	9091340
Dissolved Lead (Pb)	ug/L	<0.50	0.50	9091340
Dissolved Molybdenum (Mo)	ug/L	<0.50	0.50	9091340
Dissolved Nickel (Ni)	ug/L	<1.0	1.0	9091340
Dissolved Selenium (Se)	ug/L	<2.0	2.0	9091340
Dissolved Silver (Ag)	ug/L	<0.090	0.090	9091340
Dissolved Sodium (Na)	ug/L	<100	100	9091340
Dissolved Thallium (Tl)	ug/L	<0.050	0.050	9091340
Dissolved Uranium (U)	ug/L	<0.10	0.10	9091340
Dissolved Vanadium (V)	ug/L	<0.50	0.50	9091340
Dissolved Zinc (Zn)	ug/L	<5.0	5.0	9091340
RDL = Reportable Detection Limit QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C3AR834
Report Date: 2023/12/06

exp Services Inc
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Site Location: 1824-1826 BANK ST, OTTAWA, ON
Your P.O. #: 1824-1826 BANK ST
Sampler Initials: SZA

O.REG 153 PAHS (WATER)

Bureau Veritas ID		XTP032	XTP033	XTP034	XTP035	XTP036	XTP037		
Sampling Date		2023/11/30 10:20	2023/11/29 13:30	2023/11/29 13:30	2023/11/29 14:15	2023/11/29	2023/11/30 10:30		
COC Number		n/a	n/a	n/a	n/a	n/a	n/a		
	UNITS	BH-1	BH-10	DUP.	BH-9	TRIP BLANK	FIELD BLANK	RDL	QC Batch

Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/L	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	0.071	9089164
Polyaromatic Hydrocarbons									
Acenaphthene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
Acenaphthylene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
Anthracene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
Benzo(a)anthracene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
Benzo(a)pyrene	ug/L	<0.0090	<0.0090	<0.0090	<0.0090	<0.0090	<0.0090	0.0090	9091558
Benzo(b/j)fluoranthene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
Benzo(g,h,i)perylene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
Benzo(k)fluoranthene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
Chrysene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
Dibenzo(a,h)anthracene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
Fluoranthene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
Fluorene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
Indeno(1,2,3-cd)pyrene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
1-Methylnaphthalene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
2-Methylnaphthalene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
Naphthalene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
Phenanthrene	ug/L	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	9091558
Pyrene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	9091558
Surrogate Recovery (%)									
D10-Anthracene	%	111	109	105	107	106	109		9091558
D14-Terphenyl (FS)	%	94	102	99	103	101	103		9091558
D8-Acenaphthylene	%	95	92	90	92	90	94		9091558
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									



BUREAU
VERITAS

Bureau Veritas Job #: C3AR834
Report Date: 2023/12/06

exp Services Inc
Client Project #: OTT-23002538-A0
Site Location: 1824-1826 BANK ST, OTTAWA, ON
Your P.O. #: 1824-1826 BANK ST
Sampler Initials: SZA

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

Bureau Veritas ID		XTP032			XTP032			XTP033	XTP034		
Sampling Date		2023/11/30 10:20			2023/11/30 10:20			2023/11/29 13:30	2023/11/29 13:30		
COC Number		n/a			n/a			n/a	n/a		
	UNITS	BH-1	RDL	QC Batch	BH-1 Lab-Dup	RDL	QC Batch	BH-10	DUP.	RDL	QC Batch

Calculated Parameters

1,3-Dichloropropene (cis+trans)	ug/L	<0.50	0.50	9088503				<0.50	<0.50	0.50	9088503
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Volatile Organics

Acetone (2-Propanone)	ug/L	<10	10	9090847	<10	10	9090847	<10	<10	10	9090847
Benzene	ug/L	<0.17	0.17	9090847	<0.17	0.17	9090847	0.54	0.51	0.17	9090847
Bromodichloromethane	ug/L	<0.50	0.50	9090847	<0.50	0.50	9090847	<0.50	<0.50	0.50	9090847
Bromoform	ug/L	<1.0	1.0	9090847	<1.0	1.0	9090847	<1.0	<1.0	1.0	9090847
Bromomethane	ug/L	<0.50	0.50	9090847	<0.50	0.50	9090847	<0.50	<0.50	0.50	9090847
Carbon Tetrachloride	ug/L	<0.20	0.20	9090847	<0.20	0.20	9090847	<0.20	<0.20	0.20	9090847
Chlorobenzene	ug/L	<0.20	0.20	9090847	<0.20	0.20	9090847	<0.20	<0.20	0.20	9090847
Chloroform	ug/L	1.7	0.20	9090847	1.6	0.20	9090847	<0.20	<0.20	0.20	9090847
Dibromochloromethane	ug/L	<0.50	0.50	9090847	<0.50	0.50	9090847	<0.50	<0.50	0.50	9090847
1,2-Dichlorobenzene	ug/L	<0.50	0.50	9090847	<0.50	0.50	9090847	<0.50	<0.50	0.50	9090847
1,3-Dichlorobenzene	ug/L	<0.50	0.50	9090847	<0.50	0.50	9090847	<0.50	<0.50	0.50	9090847
1,4-Dichlorobenzene	ug/L	<0.50	0.50	9090847	<0.50	0.50	9090847	<0.50	<0.50	0.50	9090847
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	1.0	9090847	<1.0	1.0	9090847	<1.0	<1.0	1.0	9090847
1,1-Dichloroethane	ug/L	<0.20	0.20	9090847	<0.20	0.20	9090847	<0.20	<0.20	0.20	9090847
1,2-Dichloroethane	ug/L	<0.50	0.50	9090847	<0.50	0.50	9090847	<0.50	<0.50	0.50	9090847
1,1-Dichloroethylene	ug/L	<0.20	0.20	9090847	<0.20	0.20	9090847	<0.20	<0.20	0.20	9090847
cis-1,2-Dichloroethylene	ug/L	<0.50	0.50	9090847	<0.50	0.50	9090847	<0.50	<0.50	0.50	9090847
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	9090847	<0.50	0.50	9090847	<0.50	<0.50	0.50	9090847
1,2-Dichloropropane	ug/L	<0.20	0.20	9090847	<0.20	0.20	9090847	<0.20	<0.20	0.20	9090847
cis-1,3-Dichloropropene	ug/L	<0.30	0.30	9090847	<0.30	0.30	9090847	<0.30	<0.30	0.30	9090847
trans-1,3-Dichloropropene	ug/L	<0.40	0.40	9090847	<0.40	0.40	9090847	<0.40	<0.40	0.40	9090847
Ethylbenzene	ug/L	<0.20	0.20	9090847	<0.20	0.20	9090847	<0.20	<0.20	0.20	9090847
Ethylene Dibromide	ug/L	<0.20	0.20	9090847	<0.20	0.20	9090847	<0.20	<0.20	0.20	9090847
Hexane	ug/L	<1.0	1.0	9090847	<1.0	1.0	9090847	<1.0	<1.0	1.0	9090847
Methylene Chloride(Dichloromethane)	ug/L	<2.0	2.0	9090847	<2.0	2.0	9090847	<2.0	<2.0	2.0	9090847
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	10	9090847	<10	10	9090847	<10	<10	10	9090847
Methyl Isobutyl Ketone	ug/L	<5.0	5.0	9090847	<5.0	5.0	9090847	<5.0	<5.0	5.0	9090847
Methyl t-butyl ether (MTBE)	ug/L	<0.50	0.50	9090847	<0.50	0.50	9090847	<0.50	<0.50	0.50	9090847
Styrene	ug/L	<0.50	0.50	9090847	<0.50	0.50	9090847	<0.50	<0.50	0.50	9090847
1,1,1,2-Tetrachloroethane	ug/L	<0.50	0.50	9090847	<0.50	0.50	9090847	<0.50	<0.50	0.50	9090847

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



BUREAU
VERITAS

Bureau Veritas Job #: C3AR834
Report Date: 2023/12/06

exp Services Inc
Client Project #: OTT-23002538-A0
Site Location: 1824-1826 BANK ST, OTTAWA, ON
Your P.O. #: 1824-1826 BANK ST
Sampler Initials: SZA

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

Bureau Veritas ID		XTP032				XTP032			XTP033		XTP034	
Sampling Date		2023/11/30 10:20				2023/11/30 10:20			2023/11/29 13:30		2023/11/29 13:30	
COC Number		n/a				n/a			n/a		n/a	
	UNITS	BH-1	RDL	QC Batch	BH-1 Lab-Dup	RDL	QC Batch	BH-10	DUP.	RDL	QC Batch	
1,1,2,2-Tetrachloroethane	ug/L	<0.50	0.50	9090847	<0.50	0.50	9090847	<0.50	<0.50	0.50	9090847	
Tetrachloroethylene	ug/L	<0.20	0.20	9090847	<0.20	0.20	9090847	<0.20	<0.20	0.20	9090847	
Toluene	ug/L	<0.20	0.20	9090847	<0.20	0.20	9090847	<0.20	<0.20	0.20	9090847	
1,1,1-Trichloroethane	ug/L	<0.20	0.20	9090847	<0.20	0.20	9090847	<0.20	<0.20	0.20	9090847	
1,1,2-Trichloroethane	ug/L	<0.50	0.50	9090847	<0.50	0.50	9090847	<0.50	<0.50	0.50	9090847	
Trichloroethylene	ug/L	<0.20	0.20	9090847	<0.20	0.20	9090847	<0.20	<0.20	0.20	9090847	
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	0.50	9090847	<0.50	0.50	9090847	<0.50	<0.50	0.50	9090847	
Vinyl Chloride	ug/L	<0.20	0.20	9090847	<0.20	0.20	9090847	<0.20	<0.20	0.20	9090847	
p+m-Xylene	ug/L	<0.20	0.20	9090847	<0.20	0.20	9090847	<0.20	<0.20	0.20	9090847	
o-Xylene	ug/L	<0.20	0.20	9090847	<0.20	0.20	9090847	<0.20	<0.20	0.20	9090847	
Total Xylenes	ug/L	<0.20	0.20	9090847	<0.20	0.20	9090847	<0.20	<0.20	0.20	9090847	
F1 (C6-C10)	ug/L	<25	25	9090847	<25	25	9090847	<25	<25	25	9090847	
F1 (C6-C10) - BTEX	ug/L	<25	25	9090847	<25	25	9090847	<25	<25	25	9090847	
F2-F4 Hydrocarbons												
F2 (C10-C16 Hydrocarbons)	ug/L	<100	100	9091562				<100	<100	100	9091562	
F3 (C16-C34 Hydrocarbons)	ug/L	<200	200	9091562				<200	<200	200	9091562	
F4 (C34-C50 Hydrocarbons)	ug/L	<200	200	9091562				<200	<200	200	9091562	
Reached Baseline at C50	ug/L	Yes		9091562				Yes	Yes		9091562	
Surrogate Recovery (%)												
o-Terphenyl	%	91		9091562				95	95		9091562	
4-Bromofluorobenzene	%	97		9090847	97		9090847	96	96		9090847	
D4-1,2-Dichloroethane	%	98		9090847	97		9090847	95	94		9090847	
D8-Toluene	%	94		9090847	95		9090847	95	95		9090847	
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate												



BUREAU
VERITAS

Bureau Veritas Job #: C3AR834

Report Date: 2023/12/06

exp Services Inc

Client Project #: OTT-23002538-A0

Site Location: 1824-1826 BANK ST, OTTAWA, ON

Your P.O. #: 1824-1826 BANK ST

Sampler Initials: SZA

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

Bureau Veritas ID		XTP035	XTP036	XTP037		
Sampling Date		2023/11/29 14:15	2023/11/29	2023/11/30 10:30		
COC Number		n/a	n/a	n/a		
	UNITS	BH-9	TRIP BLANK	FIELD BLANK	RDL	QC Batch
Calculated Parameters						
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	<0.50	0.50	9088503
Volatile Organics						
Acetone (2-Propanone)	ug/L	<10	<10	<10	10	9090847
Benzene	ug/L	<0.17	<0.17	<0.17	0.17	9090847
Bromodichloromethane	ug/L	<0.50	<0.50	<0.50	0.50	9090847
Bromoform	ug/L	<1.0	<1.0	<1.0	1.0	9090847
Bromomethane	ug/L	<0.50	<0.50	<0.50	0.50	9090847
Carbon Tetrachloride	ug/L	<0.20	<0.20	<0.20	0.20	9090847
Chlorobenzene	ug/L	<0.20	<0.20	<0.20	0.20	9090847
Chloroform	ug/L	<0.20	<0.20	<0.20	0.20	9090847
Dibromochloromethane	ug/L	<0.50	<0.50	<0.50	0.50	9090847
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	0.50	9090847
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	0.50	9090847
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	0.50	9090847
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	<1.0	1.0	9090847
1,1-Dichloroethane	ug/L	<0.20	<0.20	<0.20	0.20	9090847
1,2-Dichloroethane	ug/L	<0.50	<0.50	<0.50	0.50	9090847
1,1-Dichloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	9090847
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	0.50	9090847
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	0.50	9090847
1,2-Dichloropropane	ug/L	<0.20	<0.20	<0.20	0.20	9090847
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	<0.30	0.30	9090847
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	<0.40	0.40	9090847
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	0.20	9090847
Ethylene Dibromide	ug/L	<0.20	<0.20	<0.20	0.20	9090847
Hexane	ug/L	<1.0	<1.0	<1.0	1.0	9090847
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	<2.0	2.0	9090847
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	<10	10	9090847
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	<5.0	5.0	9090847
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	<0.50	0.50	9090847
Styrene	ug/L	<0.50	<0.50	<0.50	0.50	9090847
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	0.50	9090847
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	0.50	9090847
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						



BUREAU
VERITAS

Bureau Veritas Job #: C3AR834

Report Date: 2023/12/06

exp Services Inc

Client Project #: OTT-23002538-A0

Site Location: 1824-1826 BANK ST, OTTAWA, ON

Your P.O. #: 1824-1826 BANK ST

Sampler Initials: SZA

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

Bureau Veritas ID		XTP035	XTP036	XTP037		
Sampling Date		2023/11/29 14:15	2023/11/29	2023/11/30 10:30		
COC Number		n/a	n/a	n/a		
	UNITS	BH-9	TRIP BLANK	FIELD BLANK	RDL	QC Batch
Tetrachloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	9090847
Toluene	ug/L	<0.20	<0.20	<0.20	0.20	9090847
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	<0.20	0.20	9090847
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	<0.50	0.50	9090847
Trichloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	9090847
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	<0.50	0.50	9090847
Vinyl Chloride	ug/L	<0.20	<0.20	<0.20	0.20	9090847
p+m-Xylene	ug/L	<0.20	<0.20	<0.20	0.20	9090847
o-Xylene	ug/L	<0.20	<0.20	<0.20	0.20	9090847
Total Xylenes	ug/L	<0.20	<0.20	<0.20	0.20	9090847
F1 (C6-C10)	ug/L	<25	<25	<25	25	9090847
F1 (C6-C10) - BTEX	ug/L	<25	<25	<25	25	9090847
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	<100	100	9091562
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	<200	200	9091562
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	<200	200	9091562
Reached Baseline at C50	ug/L	Yes	Yes	Yes		9091562
Surrogate Recovery (%)						
o-Terphenyl	%	91	91	95		9091562
4-Bromofluorobenzene	%	96	96	96		9090847
D4-1,2-Dichloroethane	%	93	93	93		9090847
D8-Toluene	%	96	95	96		9090847
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						



BUREAU
VERITAS

Bureau Veritas Job #: C3AR834
Report Date: 2023/12/06

exp Services Inc
Client Project #: OTT-23002538-A0
Site Location: 1824-1826 BANK ST, OTTAWA, ON
Your P.O. #: 1824-1826 BANK ST
Sampler Initials: SZA

TEST SUMMARY

Bureau Veritas ID: XTP032
Sample ID: BH-1
Matrix: Water

Collected: 2023/11/30
Shipped:
Received: 2023/11/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9089164	N/A	2023/12/06	Automated Statchk
1,3-Dichloropropene Sum	CALC	9088503	N/A	2023/12/06	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9091562	2023/12/05	2023/12/06	Dennis Ngondou
Dissolved Metals by ICPMS	ICP/MS	9091340	N/A	2023/12/05	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	9091558	2023/12/05	2023/12/06	Jonghan Yoon
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9090847	N/A	2023/12/06	Cheng-Yu Sha

Bureau Veritas ID: XTP032 Dup
Sample ID: BH-1
Matrix: Water

Collected: 2023/11/30
Shipped:
Received: 2023/11/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	9091340	N/A	2023/12/05	Prempal Bhatti
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9090847	N/A	2023/12/06	Cheng-Yu Sha

Bureau Veritas ID: XTP033
Sample ID: BH-10
Matrix: Water

Collected: 2023/11/29
Shipped:
Received: 2023/11/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9089164	N/A	2023/12/06	Automated Statchk
1,3-Dichloropropene Sum	CALC	9088503	N/A	2023/12/06	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9091562	2023/12/05	2023/12/06	Dennis Ngondou
Dissolved Metals by ICPMS	ICP/MS	9091340	N/A	2023/12/05	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	9091558	2023/12/05	2023/12/06	Jonghan Yoon
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9090847	N/A	2023/12/06	Cheng-Yu Sha

Bureau Veritas ID: XTP034
Sample ID: DUP.
Matrix: Water

Collected: 2023/11/29
Shipped:
Received: 2023/11/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9089164	N/A	2023/12/06	Automated Statchk
1,3-Dichloropropene Sum	CALC	9088503	N/A	2023/12/06	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9091562	2023/12/05	2023/12/06	Dennis Ngondou
Dissolved Metals by ICPMS	ICP/MS	9091340	N/A	2023/12/05	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	9091558	2023/12/05	2023/12/06	Jonghan Yoon
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9090847	N/A	2023/12/06	Cheng-Yu Sha

Bureau Veritas ID: XTP035
Sample ID: BH-9
Matrix: Water

Collected: 2023/11/29
Shipped:
Received: 2023/11/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9089164	N/A	2023/12/06	Automated Statchk



BUREAU
VERITAS

Bureau Veritas Job #: C3AR834
Report Date: 2023/12/06

exp Services Inc
Client Project #: OTT-23002538-A0
Site Location: 1824-1826 BANK ST, OTTAWA, ON
Your P.O. #: 1824-1826 BANK ST
Sampler Initials: SZA

TEST SUMMARY

Bureau Veritas ID: XTP035
Sample ID: BH-9
Matrix: Water

Collected: 2023/11/29
Shipped:
Received: 2023/11/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	9088503	N/A	2023/12/06	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9091562	2023/12/05	2023/12/06	Dennis Ngondou
Dissolved Metals by ICPMS	ICP/MS	9091340	N/A	2023/12/05	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	9091558	2023/12/05	2023/12/06	Jonghan Yoon
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9090847	N/A	2023/12/06	Cheng-Yu Sha

Bureau Veritas ID: XTP036
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2023/11/29
Shipped:
Received: 2023/11/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9089164	N/A	2023/12/06	Automated Statchk
1,3-Dichloropropene Sum	CALC	9088503	N/A	2023/12/06	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9091562	2023/12/05	2023/12/06	Dennis Ngondou
Dissolved Metals by ICPMS	ICP/MS	9091340	N/A	2023/12/05	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	9091558	2023/12/05	2023/12/06	Jonghan Yoon
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9090847	N/A	2023/12/06	Cheng-Yu Sha

Bureau Veritas ID: XTP037
Sample ID: FIELD BLANK
Matrix: Water

Collected: 2023/11/30
Shipped:
Received: 2023/11/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	9089164	N/A	2023/12/06	Automated Statchk
1,3-Dichloropropene Sum	CALC	9088503	N/A	2023/12/06	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	9091562	2023/12/05	2023/12/06	Dennis Ngondou
Dissolved Metals by ICPMS	ICP/MS	9091340	N/A	2023/12/05	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	9091558	2023/12/05	2023/12/06	Jonghan Yoon
Volatile Organic Compounds and F1 PHCs	GC/MSFD	9090847	N/A	2023/12/06	Cheng-Yu Sha



BUREAU
VERITAS

Bureau Veritas Job #: C3AR834
Report Date: 2023/12/06

exp Services Inc
Client Project #: OTT-23002538-A0
Site Location: 1824-1826 BANK ST, OTTAWA, ON
Your P.O. #: 1824-1826 BANK ST
Sampler Initials: SZA

GENERAL COMMENTS

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

Package 1	10.0°C
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Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3AR834

Report Date: 2023/12/06

QUALITY ASSURANCE REPORT

exp Services Inc

Client Project #: OTT-23002538-A0

Site Location: 1824-1826 BANK ST, OTTAWA, ON

Your P.O. #: 1824-1826 BANK ST

Sampler Initials: SZA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9090847	4-Bromofluorobenzene	2023/12/06	97	70 - 130	97	70 - 130	96	%		
9090847	D4-1,2-Dichloroethane	2023/12/06	96	70 - 130	91	70 - 130	92	%		
9090847	D8-Toluene	2023/12/06	100	70 - 130	102	70 - 130	95	%		
9091558	D10-Anthracene	2023/12/06	106	50 - 130	106	50 - 130	111	%		
9091558	D14-Terphenyl (FS)	2023/12/06	105	50 - 130	109	50 - 130	110	%		
9091558	D8-Acenaphthylene	2023/12/06	95	50 - 130	95	50 - 130	95	%		
9091562	o-Terphenyl	2023/12/06	95	60 - 130	89	60 - 130	91	%		
9090847	1,1,1,2-Tetrachloroethane	2023/12/06	98	70 - 130	98	70 - 130	<0.50	ug/L	NC	30
9090847	1,1,1-Trichloroethane	2023/12/06	92	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
9090847	1,1,2,2-Tetrachloroethane	2023/12/06	102	70 - 130	98	70 - 130	<0.50	ug/L	NC	30
9090847	1,1,2-Trichloroethane	2023/12/06	89	70 - 130	87	70 - 130	<0.50	ug/L	NC	30
9090847	1,1-Dichloroethane	2023/12/06	98	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
9090847	1,1-Dichloroethylene	2023/12/06	91	70 - 130	93	70 - 130	<0.20	ug/L	NC	30
9090847	1,2-Dichlorobenzene	2023/12/06	94	70 - 130	95	70 - 130	<0.50	ug/L	NC	30
9090847	1,2-Dichloroethane	2023/12/06	88	70 - 130	85	70 - 130	<0.50	ug/L	NC	30
9090847	1,2-Dichloropropane	2023/12/06	100	70 - 130	99	70 - 130	<0.20	ug/L	NC	30
9090847	1,3-Dichlorobenzene	2023/12/06	97	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
9090847	1,4-Dichlorobenzene	2023/12/06	105	70 - 130	108	70 - 130	<0.50	ug/L	NC	30
9090847	Acetone (2-Propanone)	2023/12/06	98	60 - 140	92	60 - 140	<10	ug/L	NC	30
9090847	Benzene	2023/12/06	93	70 - 130	93	70 - 130	<0.17	ug/L	NC	30
9090847	Bromodichloromethane	2023/12/06	101	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
9090847	Bromoform	2023/12/06	90	70 - 130	87	70 - 130	<1.0	ug/L	NC	30
9090847	Bromomethane	2023/12/06	97	60 - 140	96	60 - 140	<0.50	ug/L	NC	30
9090847	Carbon Tetrachloride	2023/12/06	88	70 - 130	90	70 - 130	<0.20	ug/L	NC	30
9090847	Chlorobenzene	2023/12/06	98	70 - 130	99	70 - 130	<0.20	ug/L	NC	30
9090847	Chloroform	2023/12/06	99	70 - 130	98	70 - 130	<0.20	ug/L	3.1	30
9090847	cis-1,2-Dichloroethylene	2023/12/06	100	70 - 130	99	70 - 130	<0.50	ug/L	NC	30
9090847	cis-1,3-Dichloropropene	2023/12/06	99	70 - 130	97	70 - 130	<0.30	ug/L	NC	30
9090847	Dibromochloromethane	2023/12/06	96	70 - 130	93	70 - 130	<0.50	ug/L	NC	30
9090847	Dichlorodifluoromethane (FREON 12)	2023/12/06	91	60 - 140	94	60 - 140	<1.0	ug/L	NC	30
9090847	Ethylbenzene	2023/12/06	86	70 - 130	89	70 - 130	<0.20	ug/L	NC	30



BUREAU
VERITAS

Bureau Veritas Job #: C3AR834

Report Date: 2023/12/06

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-A0

Site Location: 1824-1826 BANK ST, OTTAWA, ON

Your P.O. #: 1824-1826 BANK ST

Sampler Initials: SZA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9090847	Ethylene Dibromide	2023/12/06	100	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
9090847	F1 (C6-C10) - BTEX	2023/12/06					<25	ug/L	NC	30
9090847	F1 (C6-C10)	2023/12/06	97	60 - 140	96	60 - 140	<25	ug/L	NC	30
9090847	Hexane	2023/12/06	91	70 - 130	94	70 - 130	<1.0	ug/L	NC	30
9090847	Methyl Ethyl Ketone (2-Butanone)	2023/12/06	101	60 - 140	95	60 - 140	<10	ug/L	NC	30
9090847	Methyl Isobutyl Ketone	2023/12/06	100	70 - 130	96	70 - 130	<5.0	ug/L	NC	30
9090847	Methyl t-butyl ether (MTBE)	2023/12/06	100	70 - 130	99	70 - 130	<0.50	ug/L	NC	30
9090847	Methylene Chloride(Dichloromethane)	2023/12/06	99	70 - 130	96	70 - 130	<2.0	ug/L	NC	30
9090847	o-Xylene	2023/12/06	79	70 - 130	82	70 - 130	<0.20	ug/L	NC	30
9090847	p+m-Xylene	2023/12/06	87	70 - 130	91	70 - 130	<0.20	ug/L	NC	30
9090847	Styrene	2023/12/06	102	70 - 130	103	70 - 130	<0.50	ug/L	NC	30
9090847	Tetrachloroethylene	2023/12/06	92	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
9090847	Toluene	2023/12/06	86	70 - 130	88	70 - 130	<0.20	ug/L	NC	30
9090847	Total Xylenes	2023/12/06					<0.20	ug/L	NC	30
9090847	trans-1,2-Dichloroethylene	2023/12/06	95	70 - 130	96	70 - 130	<0.50	ug/L	NC	30
9090847	trans-1,3-Dichloropropene	2023/12/06	100	70 - 130	98	70 - 130	<0.40	ug/L	NC	30
9090847	Trichloroethylene	2023/12/06	98	70 - 130	99	70 - 130	<0.20	ug/L	NC	30
9090847	Trichlorofluoromethane (FREON 11)	2023/12/06	89	70 - 130	91	70 - 130	<0.50	ug/L	NC	30
9090847	Vinyl Chloride	2023/12/06	94	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
9091340	Dissolved Antimony (Sb)	2023/12/05	112	80 - 120	102	80 - 120	<0.50	ug/L	5.3	20
9091340	Dissolved Arsenic (As)	2023/12/05	106	80 - 120	101	80 - 120	<1.0	ug/L	0.37	20
9091340	Dissolved Barium (Ba)	2023/12/05	NC	80 - 120	103	80 - 120	<2.0	ug/L	1.1	20
9091340	Dissolved Beryllium (Be)	2023/12/05	101	80 - 120	98	80 - 120	<0.40	ug/L	NC	20
9091340	Dissolved Boron (B)	2023/12/05	NC	80 - 120	97	80 - 120	<10	ug/L	0.10	20
9091340	Dissolved Cadmium (Cd)	2023/12/05	103	80 - 120	99	80 - 120	<0.090	ug/L	NC	20
9091340	Dissolved Chromium (Cr)	2023/12/05	107	80 - 120	102	80 - 120	<5.0	ug/L	NC	20
9091340	Dissolved Cobalt (Co)	2023/12/05	102	80 - 120	101	80 - 120	<0.50	ug/L	2.1	20
9091340	Dissolved Copper (Cu)	2023/12/05	107	80 - 120	103	80 - 120	<0.90	ug/L	3.9	20
9091340	Dissolved Lead (Pb)	2023/12/05	98	80 - 120	98	80 - 120	<0.50	ug/L	NC	20
9091340	Dissolved Molybdenum (Mo)	2023/12/05	114	80 - 120	101	80 - 120	<0.50	ug/L	0.67	20
9091340	Dissolved Nickel (Ni)	2023/12/05	97	80 - 120	98	80 - 120	<1.0	ug/L	1.7	20



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VERITAS

Bureau Veritas Job #: C3AR834

Report Date: 2023/12/06

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-A0

Site Location: 1824-1826 BANK ST, OTTAWA, ON

Your P.O. #: 1824-1826 BANK ST

Sampler Initials: SZA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9091340	Dissolved Selenium (Se)	2023/12/05	101	80 - 120	99	80 - 120	<2.0	ug/L	NC	20
9091340	Dissolved Silver (Ag)	2023/12/05	85	80 - 120	99	80 - 120	<0.090	ug/L	NC	20
9091340	Dissolved Sodium (Na)	2023/12/05	NC	80 - 120	105	80 - 120	<100	ug/L	3.8	20
9091340	Dissolved Thallium (Tl)	2023/12/05	98	80 - 120	100	80 - 120	<0.050	ug/L	3.3	20
9091340	Dissolved Uranium (U)	2023/12/05	104	80 - 120	97	80 - 120	<0.10	ug/L	2.2	20
9091340	Dissolved Vanadium (V)	2023/12/05	111	80 - 120	103	80 - 120	<0.50	ug/L	NC	20
9091340	Dissolved Zinc (Zn)	2023/12/05	98	80 - 120	99	80 - 120	<5.0	ug/L	NC	20
9091558	1-Methylnaphthalene	2023/12/06	116	50 - 130	120	50 - 130	<0.050	ug/L		
9091558	2-Methylnaphthalene	2023/12/06	105	50 - 130	109	50 - 130	<0.050	ug/L		
9091558	Acenaphthene	2023/12/06	109	50 - 130	111	50 - 130	<0.050	ug/L		
9091558	Acenaphthylene	2023/12/06	106	50 - 130	108	50 - 130	<0.050	ug/L		
9091558	Anthracene	2023/12/06	107	50 - 130	112	50 - 130	<0.050	ug/L		
9091558	Benzo(a)anthracene	2023/12/06	108	50 - 130	114	50 - 130	<0.050	ug/L		
9091558	Benzo(a)pyrene	2023/12/06	103	50 - 130	108	50 - 130	<0.0090	ug/L		
9091558	Benzo(b,j)fluoranthene	2023/12/06	110	50 - 130	115	50 - 130	<0.050	ug/L		
9091558	Benzo(g,h,i)perylene	2023/12/06	114	50 - 130	118	50 - 130	<0.050	ug/L		
9091558	Benzo(k)fluoranthene	2023/12/06	106	50 - 130	112	50 - 130	<0.050	ug/L		
9091558	Chrysene	2023/12/06	105	50 - 130	111	50 - 130	<0.050	ug/L		
9091558	Dibenzo(a,h)anthracene	2023/12/06	101	50 - 130	109	50 - 130	<0.050	ug/L		
9091558	Fluoranthene	2023/12/06	118	50 - 130	123	50 - 130	<0.050	ug/L		
9091558	Fluorene	2023/12/06	108	50 - 130	111	50 - 130	<0.050	ug/L		
9091558	Indeno(1,2,3-cd)pyrene	2023/12/06	111	50 - 130	114	50 - 130	<0.050	ug/L		
9091558	Naphthalene	2023/12/06	101	50 - 130	107	50 - 130	<0.050	ug/L		
9091558	Phenanthrene	2023/12/06	107	50 - 130	110	50 - 130	<0.030	ug/L	NC	30
9091558	Pyrene	2023/12/06	116	50 - 130	122	50 - 130	<0.050	ug/L		
9091562	F2 (C10-C16 Hydrocarbons)	2023/12/06	89	60 - 130	83	60 - 130	<100	ug/L	NC	30
9091562	F3 (C16-C34 Hydrocarbons)	2023/12/06	89	60 - 130	85	60 - 130	<200	ug/L	NC	30



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Bureau Veritas Job #: C3AR834

Report Date: 2023/12/06

QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc

Client Project #: OTT-23002538-A0

Site Location: 1824-1826 BANK ST, OTTAWA, ON

Your P.O. #: 1824-1826 BANK ST

Sampler Initials: SZA

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
9091562	F4 (C34-C50 Hydrocarbons)	2023/12/06	83	60 - 130	76	60 - 130	<200	ug/L	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 #: C3AR834
Report Date: 2023/12/06

exp Services Inc
Client Project #: OTT-23002538-A0
Site Location: 1824-1826 BANK ST, OTTAWA, ON
Your P.O. #: 1824-1826 BANK ST
Sampler Initials: SZA

VALIDATION SIGNATURE PAGE

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

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.

C3AR834

Affix Job Label Here

Presence of Visible Particulate/Sediment

Maxxam Analytics
CAM FCD-01013/5
Page 1 of 1

When there is >1cm of visible particulate/sediment, the amount will be recorded in the field below

Bottle Types

Sample ID	All	Inorganics					Organics										Hydrocarbons						Volatiles				Other		
		CrVI	CN	General	Hg	Metals (Diss.)	Organic 1 of 2	Organic 2 of 2	PCB 1 of 2	PCB 2 of 2	Pest/ Herb 1 of 2	Pest/ Herb 2 of 2	SVOC/ ABN 1 of 2	SVOC/ ABN 2 of 2	PAH 1 of 2	PAH 2 of 2	Dioxin /Furan	F1 Vial 1	F1 Vial 2	F1 Vial 3	F1 Vial 4	F2-F4 1 of 2	F2-F4 2 of 2	F4G	VOC Vial 1	VOC Vial 2		VOC Vial 3	VOC Vial 4
1 BH-1	TS																												
2 BH-10	TS																												
3 Aup	TS																												
4 BH-9	TS																												
5 Tap Blank	TS																												
6 field Blank	TS																												
7																													
8																													
9																													
10																													

Comments:

Except Metals

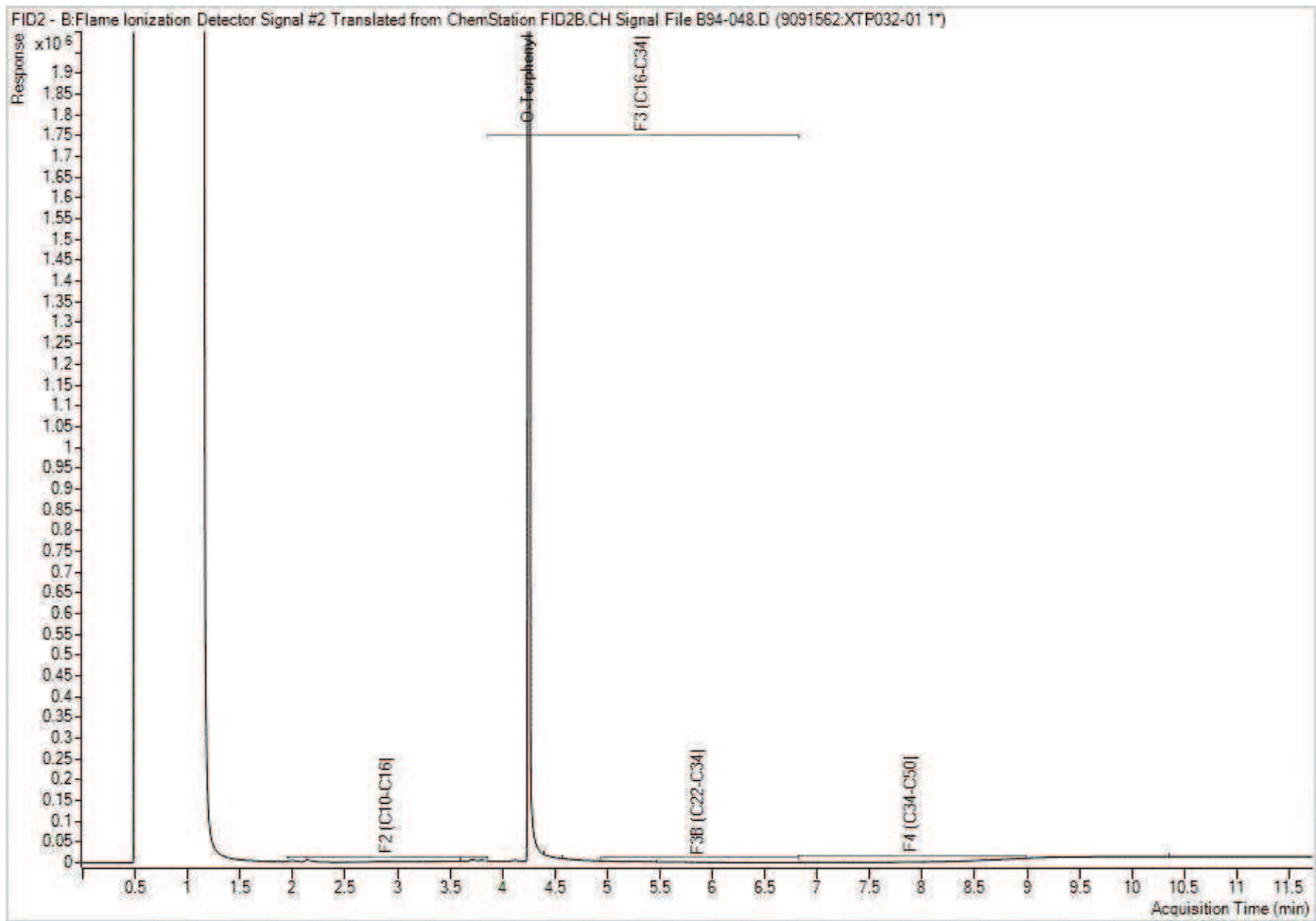
Legend:

P	Suspended Particulate
TS	Trace Settled Sediment (just covers bottom of container or less)
S	Sediment greater than (>) Trace, but less than (<) 1 cm

Recorded By: (signature/print)

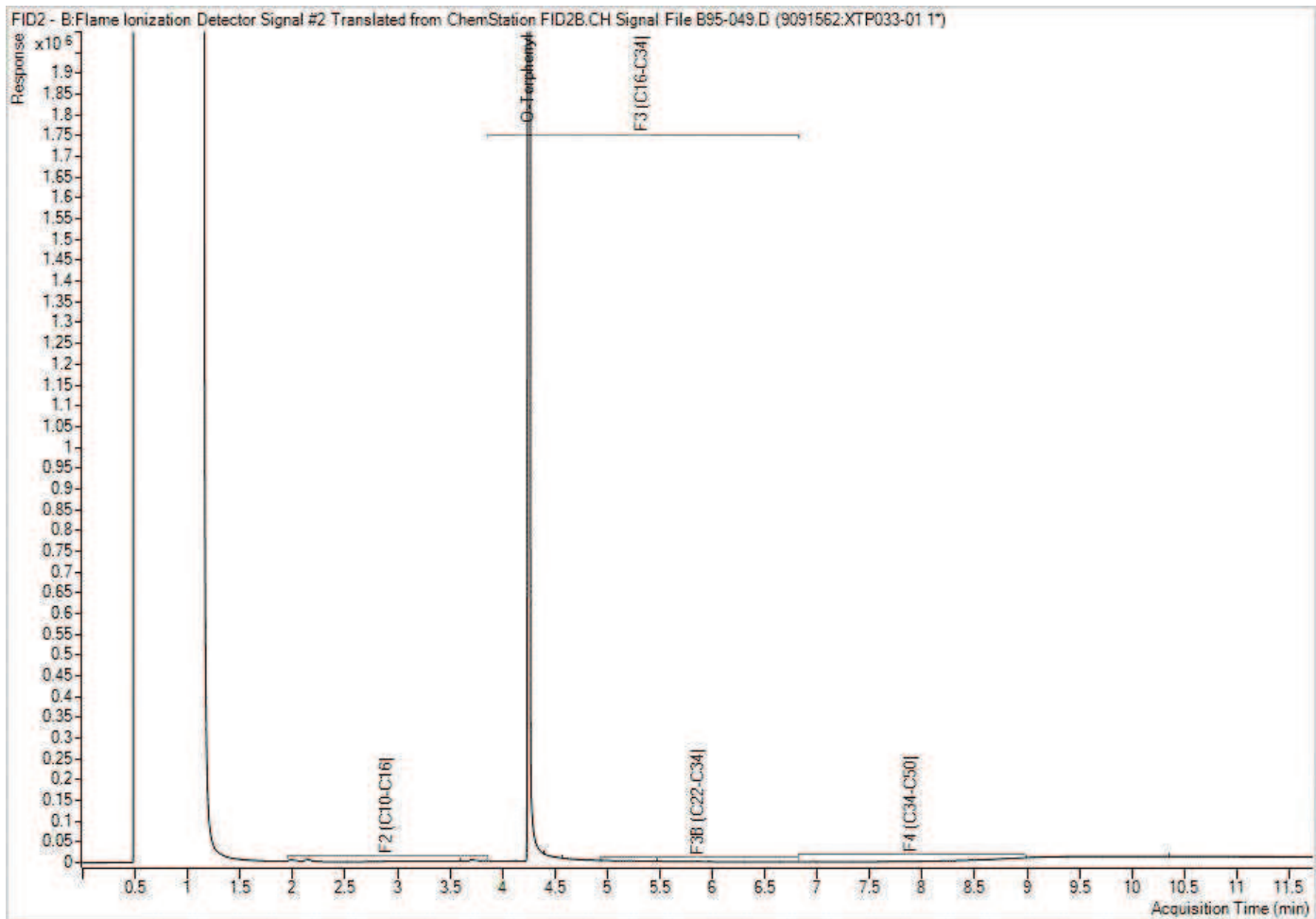
Joseph J. H. [Signature]

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



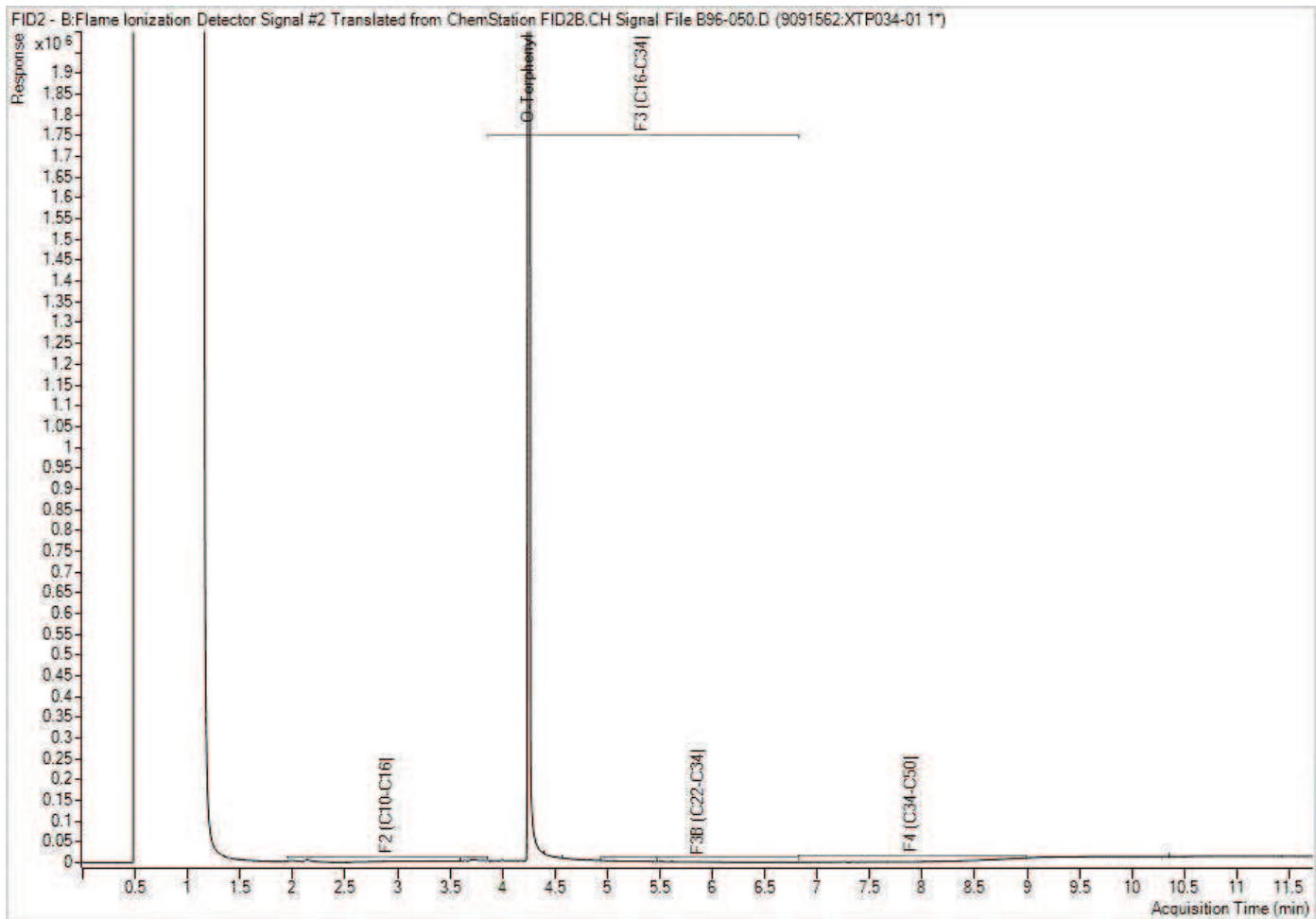
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



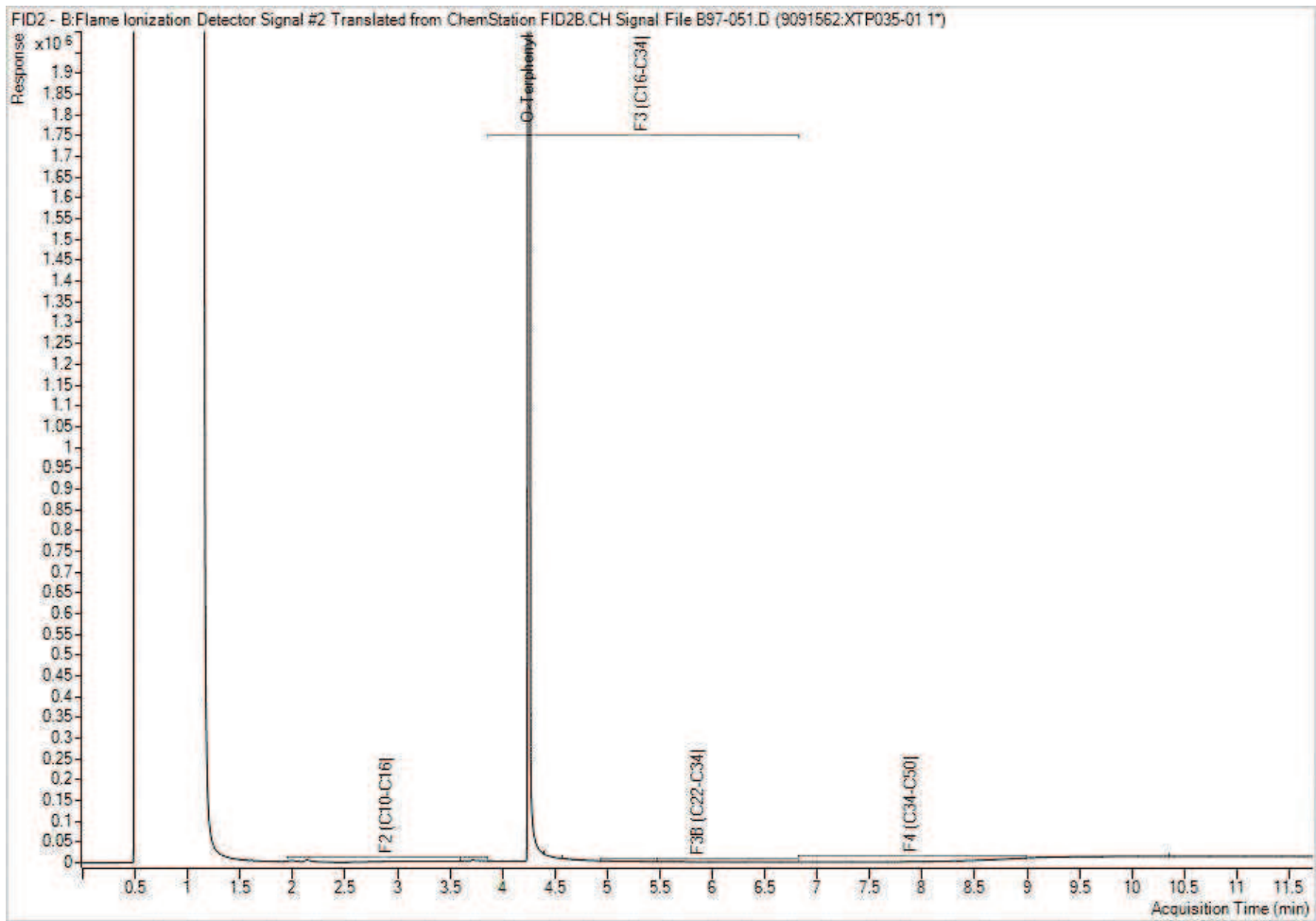
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



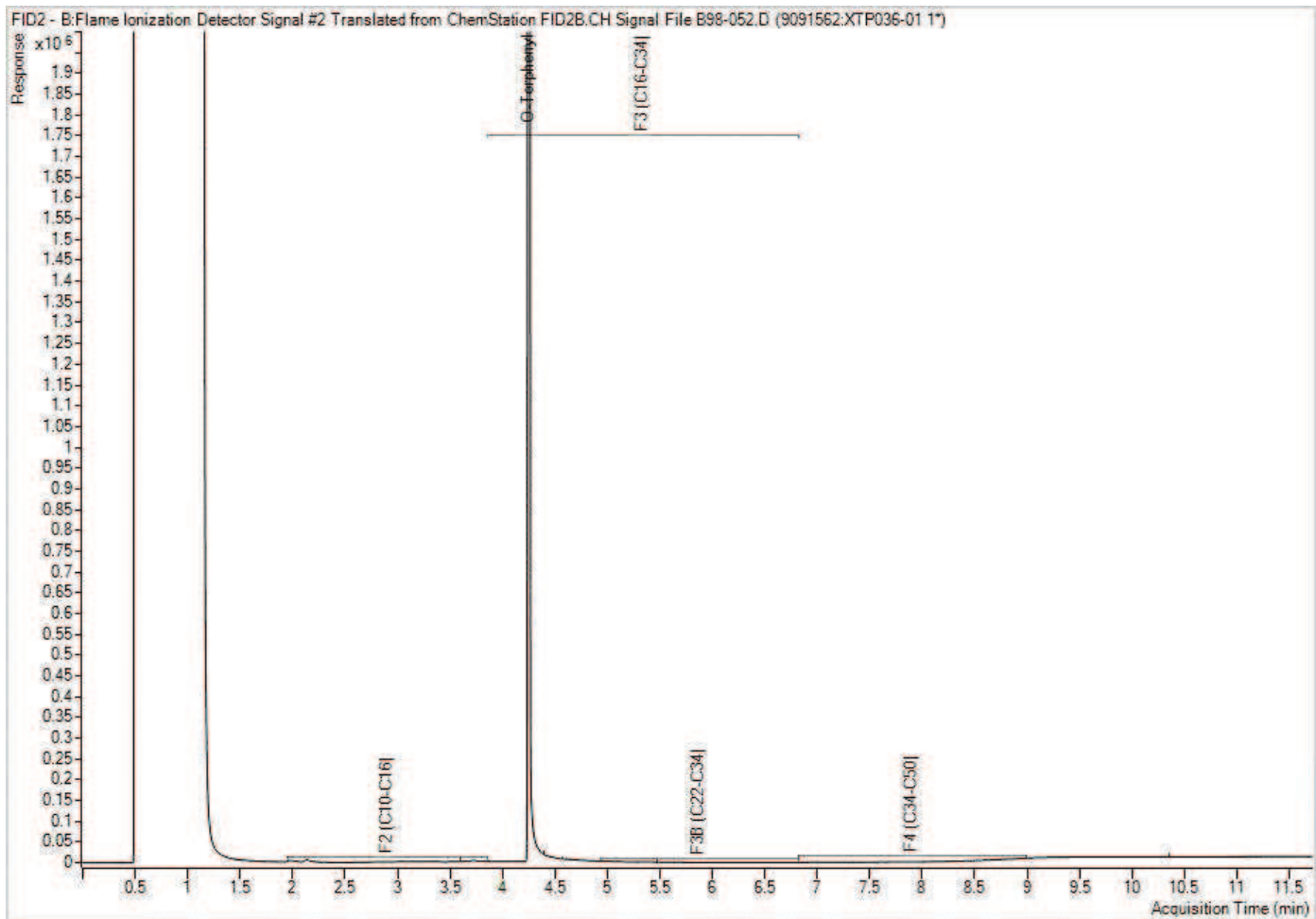
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Petroleum Hydrocarbons F2-F4 in Water Chromatogram



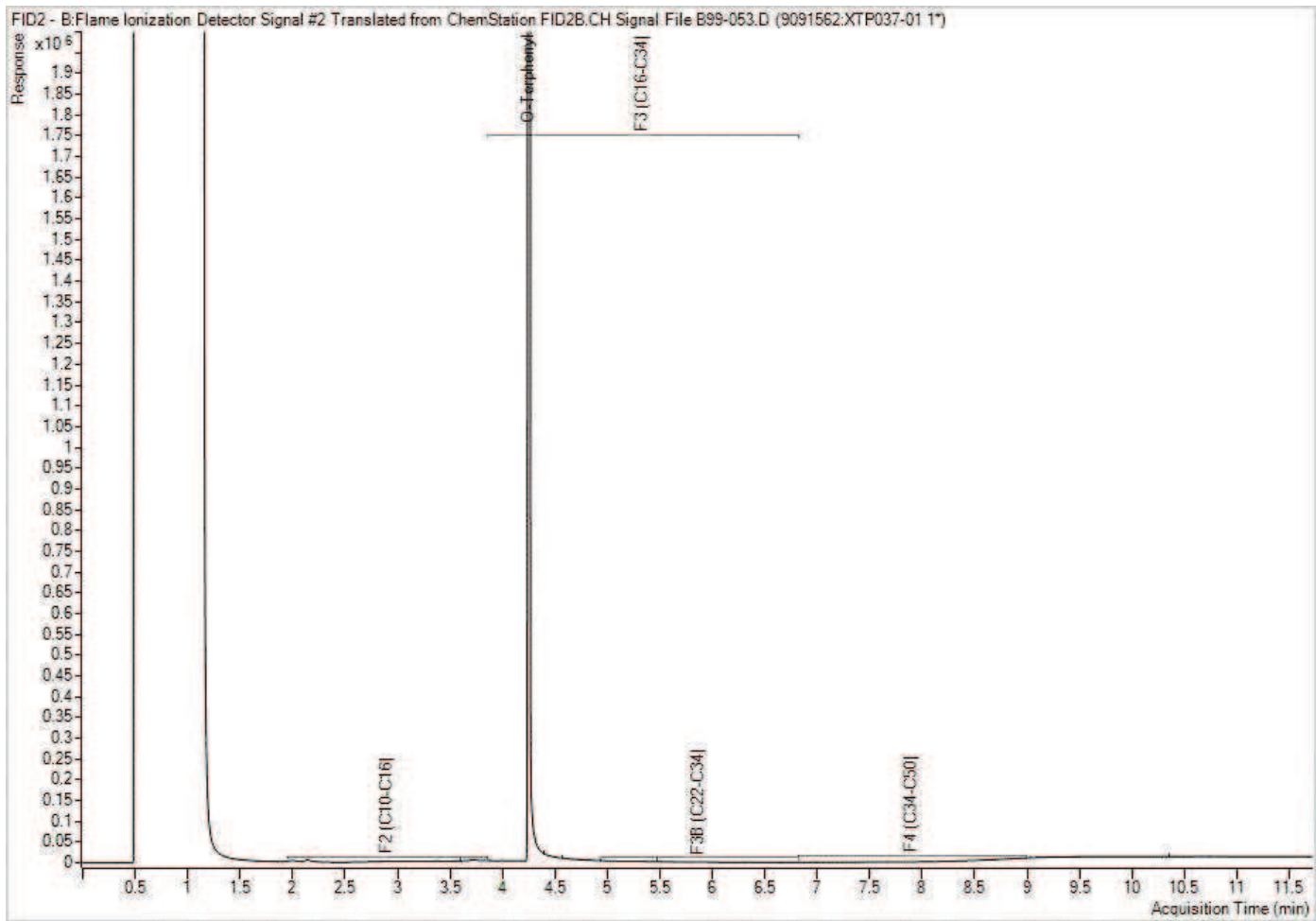
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Petroleum Hydrocarbons F2-F4 in Water Chromatogram



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Petroleum Hydrocarbons F2-F4 in Water Chromatogram



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