Phase Two Environmental Site Assessment

178 Nepean Street, 219 and 223 Bank Street, Ottawa, Ontario

Client:
Smart Living Properties

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Phase Two Environmental Site Assessment

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Legal Notification

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Executive Summary

EXP Services Inc. (EXP) was retained by Smart Living Properties to complete a Phase Two Environmental Site Assessment (ESA) of the property located at 178 Nepean Street, 219 Bank Street, and 223 Bank Street in Ottawa, Ontario hereinafter referred to as the 'Phase Two property'.

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 9 of this report.

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 previous Phase One ESA prepared by EXP. The current site buildings on the Phase One property were built between 1895 and 1922. The buildings currently consist of a mix of residential apartments and commercial businesses. Since the past use of the property was commercial land use, and the proposed future property use is residential, an RSC must be filed, per Ontario Regulation 153/04.

The Phase Two property consists of the block on the east side of Bank Street between Lisgar Street and Nepean Street. The Phase Two property has the municipal addresses of 178 Nepean Street and 219 and 223 Bank Street in Ottawa, Ontario. The Phase Two property is roughly rectangular in shape and has an area of approximately 0.19 hectares. The legal description of the Phase Two property is:

- 178 Nepean Street – Lot 35 Plan 2996, South Side Nepean Street, together with ROW as in CR598638; Ottawa/Nepean; together with an easement of Part Lot 36 Plan 2996, South Side Nepean Street, designated as Part 1 on Plan 4R-32765, as in OC2206172
- 219 Bank Street – Part Lot 3 Plan 2996, East Side Bank Street, as in N700362; Ottawa/Nepean
- 223 Bank Street – Part Lot 35 Plan 2996, North Side Lisgar Street; Part Lot 3 Plan 2996, East Side of Bank Street, as in CR382508; Ottawa/Nepean

The property identification numbers (PIN) are 04115-0238, 04115-0237, and 04115-0236.

The Phase Two property consists of the block on the east side of Bank Street between Lisgar Street and Nepean Street. The Phase Two property is occupied by a two/three-storey commercial/residential dwelling with a full basement (178 Nepean Street), a three-storey commercial building with a full basement (219 Bank Street), and a three-storey commercia/residential building with a full basement (223 Bank Street). Outside of the building footprints, groundcover at the Phase Two property consists of asphalt. 870 m to the north northwest. Topographically, the Phase Two property is relatively flat with a slight slope down to the south in the general area. The groundwater flow at the Phase Two property is anticipated to be northerly due to the influence of the water bodies.

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.

For assessment purposes, EXP selected the 2011 Table 3 SCS in a non-potable groundwater condition for all types of residential/parkland/institutional property use and fine textured soil. The selection of this category was based on the following factors:

- Bedrock is greater than 2 metres below grade across more than 1/3 of the Phase Two property;
- The Phase Two property does not include and is not within 30 m of a water body;

- 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 Phase Two property is not currently serviced, however potable water will be provided by the City of Ottawa through its water distribution system;
- The Phase Two property is planned for residential use; and
- It is the opinion of the Qualified Person who oversaw this work that the Phase Two property is not a sensitive site.

The following PCAs were identified:

- **PCA 1** – 171-175 Nepean Street (15 m northeast) – Lowe-Martin printing shown in the 1963 FIP (PCA #31 – Ink manufacturing, processing and bulk storage);
- **PCA 2** – 177 Nepean Street (30 m north) – Former Chinese Laundry listed in the city directories between 1914 and 1946 and in the 1922 FIP (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 3** – 146 Nepean Street (70 m east northeast) – Former dry cleaner observed in 1956 FIP and listed in the city directories between 1946 and 1961 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 4** – 318-320 Lisgar Street (50 m southeast) – Former dry cleaner observed in 1956 FIP and listed in the city directories between 1946 and 1961 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 5** – 344-346 Lisgar Street (50 m west) – Lillico Garage with the USTs listed in the city directories between 1920 and 1961, shown in the 1922 and 1963 FIPs (PCA #10 – Commercial autobody shops). Small print shop shown in the northeast corner of the garage in the 1963 FIP (PCA #31 – Ink manufacturing, processing and bulk storage);
- **PCA 6** – 393 Cooper Street (60 m south) – Former dry cleaner observed in 1922 FIP and listed in the city directories between 1920 and 1946 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 7 –** 375 Lisgar Street (170 m southwest) Former undertakers with fuel UST shown in the 1963 FIP (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 8** – 262-263 Laurier Avenue (150 m northeast) – Campbell Motors Company garage with UST shown in the 1963 FIP (PCA #10 – Commercial autobody shops, PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 9** – 156 O'Connor Avenue (160 m northeast) – Service station with three USTs listed in the city directories between 1941 and 1966 and shown in the 1963 FIP (PCA#28 – Gasoline and associated products storage in fixed tanks). Listed in the city directories as a repair garage between 1987 and 1997 (PCA #10 – Commercial autobody shops);
- **PCA 10** – 442 Cooper Street (170 m southwest) – Borden's Dairy garage with USTs shown in the 1922 and 1963 FIP and listed in the city directories between 1956 and 1966 (PCA #10 – Commercial autobody shops, PCA#28 – Gasoline and associated products storage in fixed tanks);
- **PCA 11** – 241-243 Kent Street (170 m southwest) – Service station with four USTs listed in the city directories between 1936 and 1961 and shown in the 1963 FIP (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 12** – 324 Laurier Avenue (175 m northwest) – Former dry cleaner observed in 1963 FIP, and listed in the city directories between 1920 and 1971 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 13 –** 234 Laurier Avenue (180 m northeast) former gas station with three USTs shown in the 1956 FIP (PCA #28 – Gasoline and associated products storage in fixed tanks).

- **PCA 14** – 233 Kent Street (200 m west) – Former dry cleaner observed in 1922 FIP, and listed in the city directories between 1920 and 1936 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 15** – 448 Cooper Street (200 m southwest) – Former dry cleaner observed in 1963 FIP, and listed in the city directories between 1956 and 1961 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 16** – 379 Somerset Avenue (200 m south) – Former dry cleaner observed in 1963 FIP, and listed in the city directories between 1941 and 1951 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 17** – 211 (219) Bank Street (Phase Two property) – Former on-site dry cleaner listed in the city directories from the 1980s to the 2000s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 18** – 238 Bank Street (20 m south) – Former Chinese Laundry listed in the city directories between 1910 and 1914 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 19** – 194 Bank Street (80 m north) – Former Chinese Laundry listed in the city directories in 1910 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 20** – 244 Bank Street (40 m south) – Former dry cleaner listed in the city directories between 1936 and 1941 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 21** – 283 Bank Street (170 m southeast) – Former dry cleaner listed in the city directories between 1936 and 1946 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 22** – 287 Bank Street (150 m southeast) – Former dry cleaner listed in the city directories between 1910 and 1951 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 23** – 160 Bank Street (220 m northwest) – Former dry cleaner listed in the city directories between 1936 and 1976 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 24** – 212 Bank Street (20 m west) – Former dry cleaner identified in the HLUI database between 1990s and 1950s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used)); Record for fuel UST installed in the 1960s (PCA #28 – Gasoline and associated products storage in fixed tanks).
- **PCA 25** – 196 Bank Street (45 m northwest) – Former dry cleaner identified in the HLUI database between the 1930s and the 1950s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 26** – 170 Gloucester Street (50 m north) – Former dry cleaner identified in the HLUI database in the 1950s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 27** – 188 Bank Street (60 m northwest) – Former commercial printer identified in the HLUI database between the 1950s and the 1990s (PCA #31 – Ink manufacturing, processing and bulk storage);
- **PCA 28** – 187 Bank Street (60 m north) – Fuel oil UST installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 29** – 251 Bank Street (60 m south) – Fuel oil UST installed in the 1950s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 30** – 287 Lisgar Street (80 m east) – Former dry cleaner identified in the HLUI database from the 1940s to the 1950s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 31** – 222 Nepean Street (80 m west) – Fuel oil AST installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 32** – 190 O'Connor Street (100 m east) – Fuel oil ASTs installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);

- **PCA 33** – 355 Cooper Street (100 m east) – Fuel oil UST installed in the 1950s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 34** – 291 Lisgar Street (100 m southeast) – Former dry cleaner identified in the HLUI database between the 1940s and the 1950s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 35** – 230 Nepean Street (120 m west) – Former commercial printing operations identified in the HLUI database between the 1970s and the 1990s (PCA #31 – Ink manufacturing, processing and bulk storage);
- **PCA 36** – 340 Laurier Avenue (120 m northeast) – Fuel oil ASTs installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 37** – 433 Cooper Street (120 m southwest) – UST installed in the 1930s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 38** – 171 Bank Street (120 m north) – Former dry cleaner identified in the HLUI database between the 1960s and the 1980s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used)); Fuel oil USTs installed in the 1920s and 1950s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks); Former repair garage identified in the HLUI database between the 1920s and the 1950s (PCA #10 – Commercial autobody shops);
- **PCA 39** – 282 Bank Street (145 m south) – Fuel oil ASTs installed in the 1970s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 40** – 257 Lisgar Street (150 m east) – Fuel oil UST installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 41** – 236-234 Laurier Avenue (175 m north) – Former gas station identified in the HLUI database between the 1920s and the 1960s (PCA #28 – Gasoline and associated products storage in fixed tanks); Former dry cleaner identified in the HLUI database between the 1980s and the 2000s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 42** – 258 Lisgar Street (180 m east) – Fuel oil AST installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 43** – 355 Cooper Street (180 m east) – Fuel oil UST installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 44** – 162 Bank Street (180 m northeast) – Former gas station identified in the HLUI database in the 1920s (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 45** – 161 Bank Street (180 m north) – Fuel oil UST installed in the 1950s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 46** – 264 Kent Street (180 m southwest) – Former repair garage identified in the HLUI database between the 1940s and 1950s (PCA #10 – Commercial autobody shops); Former commercial print shop identified in the HLUI database in the 1930s (PCA #31 – Ink manufacturing, processing and bulk storage);
- **PCA 47** – 325 Cooper Street (190 m east) – Fuel oil UST installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 48** – 360 Laurier Avenue (190 m northwest) – Former dry cleaner identified in the HLUI database between the 1990s and the 2000s(PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 49** – 272 Bank Street (250 m south) – Former dry cleaner identified in the HLUI database between the 1960s and the 1990s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));

- **PCA 50** – 271 Bank Street (250 m south) – Identified in the HLUI database as a private fuel outlet in the 1970s (PCA #28 – Gasoline and associated products storage in fixed tanks); Former dry cleaner identified in the HLUI database between the 1960s and the 1970s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 51** – 429 Somerset Avenue West (250 m southwest) – Former gas station identified in the HLUI database between the 1940s and the 1950s (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 52** – 199 Kent Street (250 m northwest) – Former gas station identified in the HLUI database between the 1960s and the 1970s (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 53** – 300 Laurier Avenue West (200 m north) Ottawa Photo Engraving listed in the former industrial sites database, operated between 1925 and 1950 (PCA #31 – Ink manufacturing, processing and bulk storage);
- **PCA 54** – 178 Nepean Street, 219 and 223 Bank Street (Phase Two property) – Previous investigations have identified fill material on the site (PCA #30 – Importation of fill material of unknown quality);
- **PCA 55 –** 219 Bank Street (Phase Two property) fuel oil tank in the basement (PCA #28 – Gasoline and associated products storage in fixed tanks;
- **PCA 56 –** 178 Nepean Street (Phase Two property) – Inferred former fuel oil tank in the basement (PCA #28 – Gasoline and associated products storage in fixed tanks); and,
- **PCA 57 –** 223-231 Bank Street (Phase Two property) – Inferred former fuel oil tank in the basement (PCA #28 – Gasoline and associated products storage in fixed tanks.

The following APECs were identified:

Table EX.1: Areas of Potential Environmental Concern

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase I 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 dry cleaner at 211 Bank Street	211 Bank Street building footprint	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 17**)	On-site	Volatile organic compounds (VOC)	Soil and Groundwater
2. Fuel oil AST at 219 Bank Street	Northwest side of 219 Bank Street Building footprint	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 55**)	On-Site	Benzene, toluene, ethylbenzene, xylene (BTEX), petroleum hydrocarbons (PHC)	Soil and Groundwater
3. Former fuel oil AST at 178 Nepean Street	West side of 178 Nepean Street building footprint	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 56**)	On-Site	BTEX, PHC	Soil and Groundwater
4. Former fuel oil AST at 223 Bank Street	West side of 223 Bank Street building footprint	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 57**)	On-Site	BTEX, PHC	Soil and Groundwater
5. Fill material of unknown quality	Entire Phase Two property	PCA # 30 – Importation of fill material of unknown quality (**PCA 54**)	On-Site	Polycyclic aromatic hydrocarbons (PAH), PHC, VOC, metals	Soil

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase I 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)
6. Former printing plant at 171-175 Nepean Street	North part of the Phase Two property	PCA #31 – Ink manufacturing, Processing and Bulk Storage (**PCA 1**)	Off-Site	VOC	Groundwater
7. Former dry cleaner at 177 Nepean Street	North part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 2**)	Off-Site	VOC	Groundwater
8. Former dry cleaner at 318-320 Lisgar Street	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 4**)	Off-Site	VOC	Groundwater
9. Former dry cleaner at 393 Cooper Street	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 6**)	Off-Site	VOC	Groundwater
10. Former dry cleaner at 238 Bank Steet	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used)(**PCA 18**)	Off-Site	VOC	Groundwater
11. Former dry cleaner at 244 Bank Street	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used)(**PCA 20**)	Off-Site	VOC	Groundwater
12. Former dry cleaner at 212 Bank Street	Northwest part of Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 24**)	Off-Site	VOC	Groundwater
13. Former fuel UST at 212 Bank Street	Northwest part of Phase Two property	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 24**)	Off-Site	BTEX, PHC	Groundwater

The scope of work for the Phase Two ESA was as follows:

- Drilling nine boreholes on the subject property and completing seven of them as monitoring wells;
- Collecting representative soil samples for laboratory analysis of volatile organic compounds (VOC), petroleum hydrocarbons (PHC), polycyclic aromatic hydrocarbons (PAH) and metals;
- Assessing groundwater conditions by sampling the monitoring wells for VOC and PHC;
- Conducting an elevation survey of the boreholes;
- Monitoring ground water levels in the monitors to determine ground water elevations;
- Comparing the results of the soil and groundwater chemical analyses to applicable criteria, as set out by the Ontario Ministry of the Environment, Conservation and Parks (MECP); and

- Preparing a report summarizing the results of the assessment activities.

The site investigative activities consisted of the advancement of boreholes on the Phase Two property to facilitate the collection of soil and groundwater samples for visual inspection and chemical analyses.

The drilling program was completed on September 13, and 28-29, 2023 by Strata Drilling Group (Strata), a licensed well contractor. Strata advanced nine boreholes (MW1 to MW9) across the Phase Two property. Two of the boreholes (MW3 and MW4) were exterior boreholes. The remainder of the boreholes were installed in the basements of the buildings. All of the interior boreholes were completed as monitoring wells. The boreholes were drilled to a maximum depth of 4.88 m.

Two fill samples were submitted for analysis of PAH and metals. Nine soil samples and a duplicate were submitted for analysis of VOC and PHC. All of the soil samples were within the MECP Table 3 SCS, except for the samples collected from MW6 and MW7, which exceeded for PHC F2.

Additional drilling was completed on December 13, 2023 and consisted of drilling three PHC delineation boreholes (BH12, BH13, and BH14) and installing deeper monitoring wells to 6.1 m at MW7 and MW8 (MW10 and MW11, respectively. One soil sample from each of the boreholes were submitted from a depth of 0.9 m to 2.4 m for analysis of BTEX and PHC.

The results of the delineation boreholes showed no detections of BTEX and PHC and therefore the PHC impact observed at MW6 and MW7 has been horizontally delineated.

With respect to groundwater, all final samples were within the MECP Table 3 SCS for VOC and PHC. The deeper monitoring wells MW10 and MW11 were found to be dry following drilling and two months later.

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. Based on the results of the Phase Two ESA, the soil impacts should be delineated prior to soil remediation activities.

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

1.0 Introduction

EXP Services Inc. (EXP) was retained by Smart Living Properties to complete a Phase Two Environmental Site Assessment (ESA) of the property located at 178 Nepean Street, 219 Bank Street, and 223 Bank Street in Ottawa, Ontario hereinafter referred to as the 'Phase Two property'.

The objectives of the Phase Two ESA investigation were 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.

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 9 of this report.

Mackenzie Russell and Jeremy Eckert conducted the field assessment work. Leah Wells, P.Eng., was the report author for this project. Ms. Wells was supervised by Mark McCalla, P. Geo. Mr. McCalla is a Qualified Person, as defined by Ontario Regulation 153/04.

1.1 Site Description

The Phase Two property consists of the block on the east side of Bank Street between Lisgar Street and Nepean Street as shown on Figure 1 in Appendix A. The Phase Two property has the municipal addresses of 178 Nepean Street, and 219 and 223 Bank Street in Ottawa, Ontario. The Phase Two property is roughly rectangular in shape and has an area of approximately 0.19 hectares.

The following buildings are present on the Phase Two property:

- 178 Nepean Street – three-storey commercial/residential building with a full basement. The main floor is tenanted by a hair salon. The upper floors are residential apartments.
- 178 Nepean Street – two-storey residential/commercial building with a full basement. The main floor is tenanted by a mobile phone store and a café, and the upper floor is residential apartments.
- 219 Bank Street – three-storey commercial building with a full basement. The building was vacant at the time of this investigation.
- 223 Bank Street – three-storey commercia/residential building with a full basement. The main floor and basement are tenanted by an art store and gallery. The upper floors are residential apartments.

The legal description of the Phase Two property is:

- 178 Nepean Street – Lot 35 Plan 2996, South Side Nepean Street, together with ROW as in CR598638; Ottawa/Nepean; together with an easement of Part Lot 36 Plan 2996, South Side Nepean Street, designated as Part 1 on Plan 4R-32765, as in OC2206172
- 219 Bank Street – Part Lot 3 Plan 2996, East Side Bank Street, as in N700362; Ottawa/Nepean
- 223 Bank Street – Part Lot 35 Plan 2996, North Side Lisgar Street; Part Lot 3 Plan 2996, East Side of Bank Street, as in CR382508; Ottawa/Nepean

The property identification numbers (PIN) are 04115-0238, 04115-0237, and 04115-0236.

The approximate Universal Transverse Mercator (UTM) coordinates for the Phase Two property centroid are Zone 18, 445421 m E and 5029522 m N. The UTM coordinates are based on measurements from Google Earth Pro, published by the Google Limited Liability Company (LLC). The accuracy of the centroid is estimated to be less than 10 m.

Table 1.1: Site Identification Details

Civic Address	178 Nepean Street, 219 and 223 Bank Street
Current Land Use	Residential and commercial
Proposed Future Land Use	Residential and commercial
Property Identification Number	04115-0238, 04115-0237, and 04115-0236
UTM Coordinates	NAD83 18T 445421 m E and 5029522 m N
Site Area	0.19 hectares
Property Owner	211-231 Bank Street Holdings Inc.

A survey plan of the Phase Two property was completed by Jannis, O'Sullian, Vollebekk Ltd. from August 4 2022. A copy of the survey plan is provided in Appendix B.

1.2 Property Ownership

The Phase Two property is owned by 211-231 Bank Street Holdings Inc. Authorization to proceed with this investigation was provided by Mr. Cory Kou of Smart Living Properties. Contact information for Mr. Kou is 226 Argyle Avenue, Ottawa, Ontario K2P 1B9.

1.3 Current and Proposed Future Use

Based on a review of historical aerial photographs, and other records review, it appears the Phase Two property was first developed for residential use prior to 1895. The current site buildings on the Phase Two property were built between 1895 and 1922. The buildings currently consist of a mix of residential apartments and commercial businesses. Since the current/past use of the property was commercial land use, and the proposed future property use is residential, a Record of Site Condition (RSC) must be filed, per Ontario Regulation 153/04.

The proposed development will consist of a new nine (9) storey building with one basement level. The façade of the original buildings along Nepean Street, Bank Street and Lisgar Street will be preserved and incorporated into the design of the new building. The proposed building will include 263 residential units, with commercial retail units on the ground floor level and the basement level. There will be no underground parking.

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).

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 2011 Table 3 SCS in a non-potable groundwater condition for residential/parkland/institutional property use and fine textured soil. The selection of this category was based on the following factors:

- Bedrock is greater than 2 metres below grade across more than 1/3 of the Phase Two property;
- The Phase Two property does not include and is not within 30 m of a water body;
- The soil type is medium and fine grained based on grain size analysis.
- 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 Phase Two property is not currently serviced, however potable water will be provided by the City of Ottawa through its water distribution system;
- The Phase Two property is planned for residential use; and
- It is the opinion of the Qualified Person who oversaw this work that the Phase Two property is not a sensitive site.

2.0 Background Information

2.1 Physical Setting

The Phase Two property consists of the block on the east side of Bank Street between Lisgar Street and Nepean Street. The Phase Two property is occupied by a two/three-storey commercial/residential dwelling with a full basement (178 Nepean Street), a three-storey commercial building with a full basement (219 Bank Street), and a three-storey commercia/residential building with a full basement (223 Bank Street). Outside of the building footprints, groundcover at the Phase Two property consists of asphalt.

The Phase Two property is located in a mixed commercial/residential area. 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.

The closest bodies of water are the Rideau Canal, approximately 840 m to the northeast and the Ottawa River, approximately 870 m to the north-northwest. Topographically, the Phase Two property is relatively flat. The study area has a slight slope down to the south. The groundwater flow at the Phase Two property is anticipated to be northerly due to the influence of the water bodies.

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 property is not considered a shallow soil property as defined in Section 43.1 of the regulation as more than 1/3 of the Phase Two property has greater than 2 metres of soil.

Beneath any fill, the surficial geology of the subject site is characterised by Champlain Sea deposits of plain till. The bedrock geology underlying the site consists of limestone with some shaley partings of the Ottawa Formation. The depth to rock in the area is typically 5 m below surface grade or less.

2.2 Past Investigations

EXP prepared a report entitled *Phase One Environmental Site Assessment, 178 Nepean Stret, 219 and 233 Bank Street, Ottawa, Ontario* dated May 30, 2023. Based on the results of the Phase One ESA, the following APECs were identified:

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase I 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 dry cleaner at 211 Bank Street	211 Bank Street building footprint	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used)(**PCA 17**)	On-site	Volatile organic compounds (VOC)	Soil and Groundwater
2. Fuel oil AST at 219 Bank Street	Northwest side of 219 Bank Street Building footprint	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 55**)	On-Site	Benzene, toluene, ethylbenzene, xylene (BTEX), petroleum hydrocarbons (PHC)	Soil and Groundwater

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase I 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 fuel oil AST at 178 Nepean Street	West side of 178 Nepean Street building footprint	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 56**)	On-Site	BTEX, PHC	Soil and Groundwater
4. Former fuel oil AST at 223 Bank Street	West side of 223 Bank Street building footprint	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 57**)	On-Site	BTEX, PHC	Soil and Groundwater
5. Fill material of unknown quality	Entire Phase Two property	PCA # 30 – Importation of fill material of unknown quality (**PCA 54**)	On-Site	Polycyclic aromatic hydrocarbons (PAH), PHC, VOC, metals	Soil
6. Former printing plant at 171-175 Nepean Street	North part of the Phase Two property	PCA #31 – Ink manufacturing, Processing and Bulk Storage (**PCA 1**)	Off-Site	VOC	Groundwater
7. Former dry cleaner at 177 Nepean Street	North part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 2**)	Off-Site	VOC	Groundwater
8. Former dry cleaner at 318-320 Lisgar Street	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 4**)	Off-Site	VOC	Groundwater
9. Former dry cleaner at 393 Cooper Street	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 6**)	Off-Site	VOC	Groundwater
10. Former dry cleaner at 238 Bank Steet	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used)(**PCA 18**)	Off-Site	VOC	Groundwater
11. Former dry cleaner at 244 Bank Street	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used)(**PCA 20**)	Off-Site	VOC	Groundwater
12. Former dry cleaner at 212 Bank Street	Northwest part of Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 24**)	Off-Site	VOC	Groundwater
13. Former fuel UST at 212 Bank Street	Northwest part of Phase Two property	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 24**)	Off-Site	BTEX, PHC	Groundwater

The Phase One ESA was conducted per the requirements of Ontario Regulation 153/04, as amended, and in accordance with generally accepted professional practices. A copy of the Phase One conceptual site model is provided as Figure 2 in Appendix A.

3.0 Scope of the Investigation

3.1 Objective of the Site Investigation

The objective of the Phase Two ESA was to assess the quality of soil and groundwater on the Phase Two property.

The most recent use of the property was mixed residential and commercial. The proposed future use of the property is also residential and commercial. Since the past use of the property was commercial land use, an RSC must be filed, per Ontario Regulation 153/04.

3.2 Scope of Work

The scope of work for the Phase Two ESA was as follows:

- Drilling fourteen boreholes on the subject property and completing nine of them as monitoring wells;
- Collecting representative soil samples for laboratory analysis of PHC, PAH, VOC and/or metals;
- Assessing groundwater conditions by sampling the monitoring wells for PHC and VOC;
- Conducting an elevation survey of the boreholes;
- Monitoring ground water levels in the monitors to determine ground water elevations;
- Comparing the results of the soil and groundwater chemical analyses to applicable criteria, as set out by the Ontario Ministry of the Environment, Conservation and Parks (MECP); and
- 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 9 of this report.

3.3 Media Investigated

The Phase Two ESA included the investigation of soil and groundwater on the Phase Two property. No sediment or surface water is present on the Phase Two property. The contaminants of potential concern (COPC) identified in the previously completed Phase One ESA are as follows:

Area of Potential Environmental Concern (APEC)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
APEC #1	VOC	Soil and groundwater
APEC #2	BTEX, PHC	Soil and groundwater
APEC #3	BTEX, PHC	Soil and groundwater
APEC #4	BTEX, PHC	Soil and groundwater
APEC #5	PAH, PHC, VOC, metals	Soil
APEC #6	VOC	Groundwater

Area of Potential Environmental Concern (APEC)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, Soil and/or Sediment)
APEC #7	VOC	Groundwater
APEC #8	VOC	Groundwater
APEC #9	VOC	Groundwater
APEC #10	VOC	Groundwater
APEC #11	VOC	Groundwater
APEC #12	VOC	Groundwater
APEC #13	BTEX, PHC	Groundwater

1. It is noted that additional inorganic parameters were included in the soil analytical programs (i.e., As, Sb, Se, Hg, Cr (VI), B-HWS) These additional parameters are not considered contaminants of potential concern but are included as part of the laboratory package when selecting analyses for O. Reg 153 metals.

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 site plan showing areas of potential environmental concern and boreholes is shown in Figure 3.

3.4.1 Buildings and Structures

The building at 178 Nepean Street is three-storey, red brick clad, with a full basement. The top two floors contain residential apartment units, while the main floor contains a commercial unit (tenanted by a hair salon).

The building at 219 Bank Street is three-storey, red brick clad, with a full basement. All three floors in the building were formerly used for commercial space. At the time of the site visit, the building was vacant.

The building at 223 Bank Street is a three-storey, brick and pebble dash clad, with a full basement. The top two floors contain residential apartment units, while the main floor contains a commercial unit (tenanted by an Art Supply Store and Gallery). A paved laneway is present on the east side of the property leading to a small parking area.

A paved laneway is present on the east side of the Phase Two property.

3.4.2 Water Bodies and Groundwater Flow Direction

There are no water bodies on the subject site. The closest bodies of water are the Rideau Canal, approximately 840 m to the northeast and the Ottawa River, approximately 870 m to the north northwest. Topographically, the Phase Two property is relatively flat. The study area has a slight slope down to the south in the general area. The groundwater flow at the Phase Two property is anticipated to be northerly due to the influence of the water bodies.

3.4.3 Areas of Natural Significance

There are no ANSI within the Phase Two study area.

3.4.4 Water Wells

There are records for twenty-three wells within the study area. All of the records were for monitoring wells.

3.4.5 Potentially Contaminating Activity

The following PCAs were identified:

- **PCA 1** – 171-175 Nepean Street (15 m northeast) – Lowe-Martin printing shown in the 1963 FIP (PCA #31 – Ink manufacturing, processing and bulk storage);
- **PCA 2** – 177 Nepean Street (30 m north) – Former Chinese Laundry listed in the city directories between 1914 and 1946 and in the 1922 FIP (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 3** – 146 Nepean Street (70 m east northeast) – Former dry cleaner observed in 1956 FIP and listed in the city directories between 1946 and 1961 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 4** – 318-320 Lisgar Street (50 m southeast) – Former dry cleaner observed in 1956 FIP and listed in the city directories between 1946 and 1961 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 5** – 344-346 Lisgar Street (50 m west) – Lillico Garage with the USTs listed in the city directories between 1920 and 1961, shown in the 1922 and 1963 FIPs (PCA #10 – Commercial autobody shops). Small print shop shown in the northeast corner of the garage in the 1963 FIP (PCA #31 – Ink manufacturing, processing and bulk storage);
- **PCA 6** – 393 Cooper Street (60 m south) – Former dry cleaner observed in 1922 FIP and listed in the city directories between 1920 and 1946 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 7 –** 375 Lisgar Street (170 m southwest) Former undertakers with fuel UST shown in the 1963 FIP (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 8** – 262-263 Laurier Avenue (150 m northeast) – Campbell Motors Company garage with UST shown in the 1963 FIP (PCA #10 – Commercial autobody shops, PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 9** – 156 O'Connor Avenue (160 m northeast) – Service station with three USTs listed in the city directories between 1941 and 1966 and shown in the 1963 FIP (PCA#28 – Gasoline and associated products storage in fixed tanks). Listed in the city directories as a repair garage between 1987 and 1997 (PCA #10 – Commercial autobody shops);
- **PCA 10** – 442 Cooper Street (170 m southwest) – Borden's Dairy garage with USTs shown in the 1922 and 1963 FIP and listed in the city directories between 1956 and 1966 (PCA #10 – Commercial autobody shops, PCA#28 – Gasoline and associated products storage in fixed tanks);
- **PCA 11** – 241-243 Kent Street (170 m southwest) – Service station with four USTs listed in the city directories between 1936 and 1961 and shown in the 1963 FIP (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 12** – 324 Laurier Avenue (175 m northwest) – Former dry cleaner observed in 1963 FIP, and listed in the city directories between 1920 and 1971 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 13 –** 234 Laurier Avenue (180 m northeast) former gas station with three USTs shown in the 1956 FIP (PCA #28 – Gasoline and associated products storage in fixed tanks).
- **PCA 14** – 233 Kent Street (200 m west) – Former dry cleaner observed in 1922 FIP, and listed in the city directories between 1920 and 1936 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 15** – 448 Cooper Street (200 m southwest) – Former dry cleaner observed in 1963 FIP, and listed in the city directories between 1956 and 1961 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 16** – 379 Somerset Avenue (200 m south) – Former dry cleaner observed in 1963 FIP, and listed in the city directories between 1941 and 1951 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));

- **PCA 17** – 211 (219) Bank Street (Phase Two property) – Former on-site dry cleaner listed in the city directories from the 1980s to the 2000s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 18** – 238 Bank Street (20 m south) – Former Chinese Laundry listed in the city directories between 1910 and 1914 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 19** – 194 Bank Street (80 m north) – Former Chinese Laundry listed in the city directories in 1910 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 20** – 244 Bank Street (40 m south) – Former dry cleaner listed in the city directories between 1936 and 1941 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 21** – 283 Bank Street (170 m southeast) – Former dry cleaner listed in the city directories between 1936 and 1946 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 22** – 287 Bank Street (150 m southeast) – Former dry cleaner listed in the city directories between 1910 and 1951 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 23** – 160 Bank Street (220 m northwest) – Former dry cleaner listed in the city directories between 1936 and 1976 (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 24** – 212 Bank Street (20 m west) – Former dry cleaner identified in the HLUI database between 1990s and 1950s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used)); Record for fuel UST installed in the 1960s (PCA #28 – Gasoline and associated products storage in fixed tanks).
- **PCA 25** – 196 Bank Street (45 m northwest) – Former dry cleaner identified in the HLUI database between the 1930s and the 1950s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 26** – 170 Gloucester Street (50 m north) – Former dry cleaner identified in the HLUI database in the 1950s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 27** – 188 Bank Street (60 m northwest) – Former commercial printer identified in the HLUI database between the 1950s and the 1990s (PCA #31 – Ink manufacturing, processing and bulk storage);
- **PCA 28** – 187 Bank Street (60 m north) – Fuel oil UST installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 29** – 251 Bank Street (60 m south) – Fuel oil UST installed in the 1950s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 30** – 287 Lisgar Street (80 m east) – Former dry cleaner identified in the HLUI database from the 1940s to the 1950s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 31** – 222 Nepean Street (80 m west) – Fuel oil AST installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 32** – 190 O'Connor Street (100 m east) – Fuel oil ASTs installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 33** – 355 Cooper Street (100 m east) – Fuel oil UST installed in the 1950s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 34** – 291 Lisgar Street (100 m southeast) – Former dry cleaner identified in the HLUI database between the 1940s and the 1950s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 35** – 230 Nepean Street (120 m west) – Former commercial printing operations identified in the HLUI database between the 1970s and the 1990s (PCA #31 – Ink manufacturing, processing and bulk storage);

- **PCA 36** – 340 Laurier Avenue (120 m northeast) – Fuel oil ASTs installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 37** – 433 Cooper Street (120 m southwest) – UST installed in the 1930s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 38** – 171 Bank Street (120 m north) – Former dry cleaner identified in the HLUI database between the 1960s and the 1980s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used)); Fuel oil USTs installed in the 1920s and 1950s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks); Former repair garage identified in the HLUI database between the 1920s and the 1950s (PCA #10 – Commercial autobody shops);
- **PCA 39** – 282 Bank Street (145 m south) – Fuel oil ASTs installed in the 1970s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 40** – 257 Lisgar Street (150 m east) – Fuel oil UST installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 41** – 236-234 Laurier Avenue (175 m north) – Former gas station identified in the HLUI database between the 1920s and the 1960s (PCA #28 – Gasoline and associated products storage in fixed tanks); Former dry cleaner identified in the HLUI database between the 1980s and the 2000s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 42** – 258 Lisgar Street (180 m east) – Fuel oil AST installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 43** – 355 Cooper Street (180 m east) – Fuel oil UST installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 44** – 162 Bank Street (180 m northeast) – Former gas station identified in the HLUI database in the 1920s (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 45** – 161 Bank Street (180 m north) – Fuel oil UST installed in the 1950s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 46** – 264 Kent Street (180 m southwest) – Former repair garage identified in the HLUI database between the 1940s and 1950s (PCA #10 – Commercial autobody shops); Former commercial print shop identified in the HLUI database in the 1930s (PCA #31 – Ink manufacturing, processing and bulk storage);
- **PCA 47** – 325 Cooper Street (190 m east) – Fuel oil UST installed in the 1960s identified in the HLUI database (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 48** – 360 Laurier Avenue (190 m northwest) – Former dry cleaner identified in the HLUI database between the 1990s and the 2000s(PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 49** – 272 Bank Street (250 m south) – Former dry cleaner identified in the HLUI database between the 1960s and the 1990s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 50** – 271 Bank Street (250 m south) – Identified in the HLUI database as a private fuel outlet in the 1970s (PCA #28 – Gasoline and associated products storage in fixed tanks); Former dry cleaner identified in the HLUI database between the 1960s and the 1970s (PCA #37 – Operation of dry cleaning equipment (where chemicals are used));
- **PCA 51** – 429 Somerset Avenue West (250 m southwest) – Former gas station identified in the HLUI database between the 1940s and the 1950s (PCA #28 – Gasoline and associated products storage in fixed tanks);

- **PCA 52** – 199 Kent Street (250 m northwest) – Former gas station identified in the HLUI database between the 1960s and the 1970s (PCA #28 – Gasoline and associated products storage in fixed tanks);
- **PCA 53** – 300 Laurier Avenue West (200 m north) Ottawa Photo Engraving listed in the former industrial sites database, operated between 1925 and 1950 (PCA #31 – Ink manufacturing, processing and bulk storage);
- **PCA 54** – 178 Nepean Street, 219 and 223 Bank Street (Phase Two property) – Previous investigations have identified fill material on the site (PCA #30 – Importation of fill material of unknown quality);
- **PCA 55 –** 219 Bank Street (Phase Two property) fuel oil tank in the basement (PCA #28 – Gasoline and associated products storage in fixed tanks;
- **PCA 56 –** 178 Nepean Street (Phase Two property) – Inferred former fuel oil tank in the basement (PCA #28 – Gasoline and associated products storage in fixed tanks); and,
- **PCA 57 –** 223-231 Bank Street (Phase Two property) – Inferred former fuel oil tank in the basement (PCA #28 – Gasoline and associated products storage in fixed tanks.

No other PCAs that took place within the vicinity of the Phase Two property (approximately 250 m radius) were identified.

All of the on-site PCAs (**PCA 17**, **PCA 54**, **PCA 55**, **PCA 56**, **PCA 57**) were determined to result in APECs. It is noted that although Brown's Cleaners is listed at 211 Bank Street (Phase Two property) in the city directories between 1987 and 2001, there are no listings in the Ecolog report for any dry cleaners, or generators of halogenated solvents. It is possible that this listing was for a depot only.

Multiple PCAs were identified in the Phase Two study area, including print shops, dry cleaners, garages, and underground and above ground storage tanks. The closest facilities to the Phase Two property may be a source of contamination to the Phase Two property, particularly chlorinated solvents or lighter petroleum hydrocarbons since these contaminants preferentially partition into groundwater rather than sorb to soil. Due to the proximity to the Phase Two property, several PCAs which were located inferred down/cross- gradient of the Phase Two property, were considered to result in APECs as utilities may influence the local groundwater flow.

PCA 1, **PCA 2**, **PCA 4**, **PCA 6**, **PCA 18**, **PCA 20**, and **PCA 24** contribute to areas of potential environmental concern on the Phase Two property. Based on the distance and/or cross/down gradient location from the Phase Two property, the remainder of the PCAs identified in the Phase Two study were not considered to contribute to APECs.

3.4.6 Areas of Potential Environmental Concern

Ontario Regulation 153/04 defines an APEC as an area on a property where one or more contaminants are potentially present. Based on this Phase One ESA, the following APEC was identified:

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase I 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 dry cleaner at 211 Bank Street	211 Bank Street building footprint	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used)(**PCA 17**)	On-site	Volatile organic compounds (VOC)	Soil and Groundwater
2. Fuel oil AST at 219 Bank Street	Northwest side of 219 Bank Street Building footprint	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 55**)	On-Site	Benzene, toluene, ethylbenzene, xylene (BTEX), petroleum hydrocarbons (PHC)	Soil and Groundwater

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase I 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 fuel oil AST at 178 Nepean Street	West side of 178 Nepean Street building footprint	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 56**)	On-Site	BTEX, PHC	Soil and Groundwater
4. Former fuel oil AST at 223 Bank Street	West side of 223 Bank Street building footprint	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 57**)	On-Site	BTEX, PHC	Soil and Groundwater
5. Fill material of unknown quality	Entire Phase Two property	PCA # 30 – Importation of fill material of unknown quality (**PCA 54**)	On-Site	Polycyclic aromatic hydrocarbons (PAH), PHC, VOC, metals	Soil
6. Former printing plant at 171-175 Nepean Street	North part of the Phase Two property	PCA #31 – Ink manufacturing, Processing and Bulk Storage (**PCA 1**)	Off-Site	VOC	Groundwater
7. Former dry cleaner at 177 Nepean Street	North part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 2**)	Off-Site	VOC	Groundwater
8. Former dry cleaner at 318-320 Lisgar Street	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 4**)	Off-Site	VOC	Groundwater
9. Former dry cleaner at 393 Cooper Street	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 6**)	Off-Site	VOC	Groundwater
10. Former dry cleaner at 238 Bank Steet	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used)(**PCA 18**)	Off-Site	VOC	Groundwater
11. Former dry cleaner at 244 Bank Street	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used)(**PCA 20**)	Off-Site	VOC	Groundwater
12. Former dry cleaner at 212 Bank Street	Northwest part of Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 24**)	Off-Site	VOC	Groundwater
13. Former fuel UST at 212 Bank Street	Northwest part of Phase Two property	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 24**)	Off-Site	BTEX, PHC	Groundwater

3.4.7 Underground Utilities

The Phase Two property is serviced with electrical, natural gas, Bell and municipal water and sanitary and storm sewer services.

Surrounding properties are also supplied by municipal water provided by the City of Ottawa. The source of municipal water is the Ottawa River.

3.4.8 Subsurface Stratigraphy

Beneath any fill, the surficial geology of the subject site is characterised by Champlain Sea deposits of plain till. The bedrock geology underlying the site consists of limestone with some shaley partings of the Ottawa Formation. The depth to rock in the area is typically 5 m below surface grade or less.

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.

No significant deviations from the sampling and analysis plan, as provided in Appendix C, were reported that affected the sampling and data quality objectives for the Phase Two property.

3.6 Impediments

No physical impediments were encountered during the field investigation. The entire Phase Two property was accessible at the time of the investigation.

4.0 Investigation Methodology

4.1 General

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

4.2 Utility Clearances

Prior to the commencement of drilling, 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.

4.3 Soil Investigations

4.3.1 Drilling Program

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

The drilling program was completed on September 13, and 28 to 29, 2023 by Strata Drilling Group (Strata), a licensed well contractor. Strata advanced nine boreholes (MW1 to MW9) across the Phase Two property. Two of the boreholes (MW3 and MW4) were exterior boreholes. The remainder of the boreholes were installed in the basements of the buildings. All of the interior boreholes were completed as monitoring wells. The boreholes were drilled to a maximum depth of 4.88 m.

Additional drilling was completed on December 13, 2023, and consisted of drilling three boreholes (BH12, BH13, and BH14) to delineate PHC impacts identified during the initial drilling program and installing deeper monitoring wells to 6.1 m at MW7 and MW8 (MW10 and MW11), respectively.

EXP staff continuously monitored the drilling activities to log the stratigraphy observed from the recovered samples, to record the depth of the samples, and to record total depths of borings. Field observations are documented on the borehole logs provided in Appendix D. The locations of the boreholes are presented on Figure 3 in Appendix A.

4.4 Soil Sampling

For the purposes of the remediation and environmental site assessment program, the contaminants of concern were based on the results of previous investigations and a recent Phase One ESA completed on the Phase Two property.

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, AGAT Laboratories (AGAT) of Ottawa, Ontario. The samples were transported/submitted within 24 hours of collection to the laboratory following chain of custody protocols for chemical analysis.

Two fill samples were submitted for analysis of PAH and metals. Nine soil samples and a duplicate were submitted for analysis of VOC, and twelve soil samples and a duplicate were submitted for analysis of PHC. One soil sample from each of the delineation boreholes were submitted from a depth of 0.9 m to 2.4 m for analysis of BTEX and PHC.

4.5 Groundwater Investigations

4.5.1 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 38 mm diameter Schedule 40 PVC screen that was no more than 3.0 m long and a 38 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 flushmount casings.

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; and,
- Cleaning or disposal of drilling equipment between sampling locations.

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

4.5.2 Field Measurement and Water Quality Parameters

Groundwater samples were collected via a low flow sampling technique using a Horiba U-52 multi probe water quality meter. The Horiba 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. 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: ± 1°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.

4.5.3 Groundwater Sampling

Five groundwater samples and one field duplicate were submitted for analysis of PHC and VOC. 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.

It is noted that two of the wells (MW7, and MW8) were dry at the time of sampling.

4.6 Sediment and Surface water Sampling

Sediment nor surface water was present on the property; therefore, no sampling was completed.

4.7 Residue Management

No soil cuttings were generated and purge water was stored in a drum located in the basement of 217 Bank Street.

4.8 Elevation Surveying

An elevation survey was conducted by EXP. The top of casing and ground surface elevation of each monitoring well location were surveyed using a high precision GPS unit relative to sea level.

4.9 Analytical Testing and Quality Assurance / Quality Control Measures

The contracted laboratory selected to perform chemical analysis on all soil and water samples was AGAT which is an accredited laboratory 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.

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:

- Collecting and analysing field duplicate soil and groundwater samples to ensure analytical precision;
- 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
- 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.

AGAT's 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

The detailed soil profiles encountered in the boreholes are provided on the borehole logs in Appendix D. Boundaries of soils indicated on the logs are intended to reflect transition zones for the purpose of environmental assessment and should not be interpreted as exact planes of geological change.

The asphalt at the Phase Two property was underlain by 1.4 m of sand and gravel base/sub-base materials in the two exterior boreholes (BH3 and BH4). The fill is underlain by a 2.9 m thick deposit of clay in each of the boreholes down to elevation 68.0 m. Underlying the clay is a layer of glacial till consisting of silty sand and trace gravel. Shale bedrock was confirmed during the geotechnical investigation between 5.5 m and 7.9 m. Groundwater was previously encountered at 6.1 to 7.0 m depths.

Cross sections from the Phase Two property are shown on Figures 5 and 6.

5.2 Groundwater: Elevations and Flow Direction

On October 6, and November 21, 2023, each monitoring wells were monitored. MW10 and MW11 were monitored on February 14, 2024. Both wells were dry. Monitoring consisted of inspection for general physical condition, groundwater depth, the presence of phase-separated liquid petroleum and petroleum vapour. Groundwater monitoring and elevation data are provided below in Table 5.2.1.

Table 5.2.1 – Monitoring and Elevation Data

Monitoring Well ID	Grade Elevation	Top of Casing Elevation (mbTOC)	Screen Depth (mbgs)	Depth to LNAPL (mbgs)	Depth to Groundwater (mbTOC)	Groundwater Elevation October 6, 2023	Depth to Groundwater (mbTOC)	Groundwater Elevation November 21, 2023
MW1	70.40	70.32	1.5 – 4.5	ND	Dry	<65.90	4.25	66.07
MW2	70.40	70.30	2.1 – 3.6	ND	3.32	66.98	NA	NA
MW5	70.40	70.28	1.8 – 4.8	ND	4.06	66.22	NA	NA
MW6	70.20	70.12	0.8 – 2.3	ND	0.72	69.40	NA	NA
MW7	69.90	69.80	1.4 – 2.9	ND	Dry	<67.03	Dry	<67.03
MW10	69.90	69.82	3.0 – 6.1	ND	-	-	-	-
MW8	69.90	69.74	0.9 – 3.9	ND	Dry	<66.02	Dry	<66.02
MW11	69.90	69.83	3.0 – 6.1	ND	-	-	-	-
MW9	70.10	70.00	0.8 – 2.3	ND	0.51	69.49	NA	NA

Notes: Elevations were measured to a geodetic datum.
LNAPL – light non-aqueous phase liquid
ppmv – parts per million by volume
mbgs – metres below ground surface
mbTOC – metres below top of monitor casing
- – not monitored
ND – non-detectable

Based on the groundwater elevations for the monitoring wells in the above tables, groundwater contour plans were prepared. The groundwater flow direction in the overburden was determined to be to the south (Figure 4). The overburden monitoring well pairs, MW7 and MW10, and MW8 and MW11, were dry.

EXP notes that groundwater levels can be influenced by seasonal changes, the presence of subsurface structures, or fill, could affect the groundwater flow direction at the Phase Two property.

5.3 Groundwater: Hydraulic Gradients

Horizontal hydraulic gradients were estimated for the groundwater flow components identified in the overburden aquifer based on the October 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 average horizontal hydraulic gradient was calculated to be 0.06 m/m.

Rising head tests were conducted on two of the monitoring wells (MW5 and MW9). 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 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 (%)	Hydraulic Conductivity (m/s)
MW2	Silty Clay	2.2 – 3.7	3.33	3.47	14	1.3×10^{-7}
MW9	Silty Clay	0.9 – 2.4	0.6	1.91	94	4.1×10^{-7}

Notes: mbTOC – metres below top of monitor casing

The data and the calculations for the hydraulic conductivity testing are provided in Appendix G.

5.4 Soil: Field Screening

The soil samples were screened in the field for visual and olfactory indications of impact. Based on the field observations, no indications of petroleum impact were noted (Appendix D).

5.5 Soil: Quality

In accordance with the scope of work, chemical analyses were performed on selected soil samples recovered from boreholes. The selection of representative "worst case" soil samples was based on field visual or olfactory evidence of impacts.

The MECP Table 3 SCS are applicable if soil pH is in the range of 5 to 9 for surficial soil (less than 1.5 m below soil surface) and 5 to 11 for subsurface soil (greater than 1.5 m below soil surface). Two soil samples collected were submitted for analysis of pH. Both samples were within the acceptable ranges for the application of MECP Table 3 SCS.

Two fill samples were submitted for analysis of PAH and metals. Nine soil samples and a duplicate were submitted for analysis of VOC, and twelve soil samples and a duplicate sample were submitted for analysis of PHC. All of the soil samples met the MECP Table 3 SCS, except for the samples collected from MW6 and MW7, which exceeded for PHC F2.

The results of the delineation boreholes showed no detections of BTEX and PHC and therefore the PHC impact observed at MW6 and MW7 has been horizontally delineated. The estimated area of PHC impacted soil is shown on Figures 7 and 10 in appendix A.

The soil results are provided in Tables 1 to 3 in Appendix E and Figures 7 to 12 (Appendix A). Copies of the laboratory Certificates of Analysis are provided in Appendix F

5.6 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) to ensure that the samples collected were representative of actual groundwater conditions.

Following their installation, the monitoring wells were developed by purging water with an inertial pump and foot valve until it became clear. The following table provides monitoring well construction details and observations made during monitor development.

Five groundwater samples and one field duplicate were submitted for analysis of PHC and VOC. Based on the final analytical results obtained, there were no exceedances of MECP Table 3 SCS for any of the parameters analyzed. The results are presented in Table 5 in Appendix E and Figures 13 and 14. Copies of the laboratory Certificates of Analysis are provided in Appendix F.

5.6.1 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.

The contaminants are present in the soil beneath the concrete floor slab. Potential contaminant migration would have been related to advection mixing, mechanical dispersion/molecular diffusion, phase partitions (i.e., sorption and volatilization), and possibly abiotic or biotic chemical reactions.

As no groundwater impacts were identified on the site, migration of impacted groundwater is not considered a concern at the Phase Two property.

5.6.2 Evidence of Non-Aqueous Phase Liquid

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

5.7 Maximum Concentrations

Contaminants that exceeded the applicable standards included:

Soil: PHC F2 and PHC F3 at MW6 and MW7.

Groundwater: None.

5.8 Sediment: Quality

No sediment was present on the property to facilitate sampling and analyses.

5.9 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 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, proper chain of custody documentation, to ensure integrity of the samples.

AGAT's 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 AGAT. 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. Review of the laboratory QA/QC results reported indicated that they were 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 E in Table 7 for soil and Table 8 for groundwater. All of the RPD for the soil and groundwater samples were either not calculable or within the applicable alert limits.

5.9.1 Human Health Receptors and Exposure Pathway

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

A diagram identifying the release mechanisms, contaminant transport pathway, human receptors, exposure points and routes of exposure are shown on Figure 15.

The identified exposure pathways are considered to potentially pose a concern to human health, as the contaminants of concern until the contaminants are no longer present on the Phase Two property.

5.9.2 Ecological Receptors and Exposure Pathway

Th footprint of the building will occupy most of the property and the Phase Two property will not be capable of supporting 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).

A diagram identifying the release mechanisms, contaminant transport pathway, ecological receptors, exposure points and routes of exposure are shown on Figure 16.

The identified exposure pathways are considered to potentially pose a concern to ecological receptors, as the contaminants of concern until the contaminants are no longer present on the Phase Two property.

6.0 Phase Two Conceptual Site Model

6.1 Introduction

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).

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.

6.2 Current and Proposed Future Uses

Based on a review of historical aerial photographs, and other records review, it appears the subject site was first developed for residential use prior 1895. The current site buildings on the Phase Two property were built between 1895 and 1922. The buildings currently consist of a mix of residential apartments and commercial businesses. It is proposed that a mixed commercial and residential high-rise building be constructed on the Phase Two property.

Since the past use of the property was commercial land use, and the proposed future property use is residential, an RSC must be filed, per Ontario Regulation 153/04.

6.3 Physical Site Description

The Phase Two property consists of the block on the east side of Bank Street between Lisgar Street and Nepean Street. The Phase Two property has the municipal addresses of 178 Nepean Street and 219 and 223 Bank Street in Ottawa, Ontario. The Phase Two property is roughly rectangular in shape and has an area of approximately 0.19 hectares.

The legal description of the Phase Two property is:

- 178 Nepean Street – Lot 35 Plan 2996, South Side Nepean Street, together with ROW as in CR598638; Ottawa/Nepean; together with an easement of Part Lot 36 Plan 2996, South Side Nepean Street, designated as Part 1 on Plan 4R-32765, as in OC2206172
- 219 Bank Street – Part Lot 3 Plan 2996, East Side Bank Street, as in N700362; Ottawa/Nepean
- 223 Bank Street – Part Lot 35 Plan 2996, North Side Lisgar Street; Part Lot 3 Plan 2996, East Side of Bank Street, as in CR382508; Ottawa/Nepean

The property identification numbers (PIN) are 04115-0238, 04115-0237, and 04115-0236.

The approximate Universal Transverse Mercator (UTM) coordinates for the Phase Two property centroid are Zone 18, 445421 m E and 5029522 m N. The UTM coordinates are based on measurements from Google Earth Pro, published by the Google Limited Liability Company (LLC). The accuracy of the centroid is estimated to be less than 10 m.

Table 6.1: Site Identification Details

Civic Address	178 Nepean Street, 219 and 223 Bank Street
Current Land Use	Residential and commercial
Previous Land Use	Residential and commercial

Proposed Future Land Use	04115-0238, 04115-0237, and 04115-0236
Property Identification Number	NAD83 18T 445421 m E and 5029522 m N
UTM Coordinates	0.19 hectares
Site Area	211-231 Bank Street Holdings Inc.
Property Owner	178 Nepean Street, 219 and 223 Bank Street

A survey plan of the Phase Two property was completed by Jannis, O'Sullian, Vollebekk Ltd. from August 4 2022. A copy of the survey plan is provided in Appendix B.

6.4 Buildings and Structures

At the time of this investigation, the Phase Two property was occupied by the following:

- 178 Nepean Street – three-storey commercial/residential building with a full basement. The main floor is tenanted by a hair salon. The upper floors are residential apartments.
- 178 Nepean Street – two-storey residential/commercial building with a full basement. The main floor is tenanted by a mobile phone store and a café, and the upper floor is residential apartments.
- 219 Bank Street – two-storey commercial building with a full basement. The building was vacant at the time of this investigation.
- 223 Bank Street – three-storey commercia/residential building with a full basement. The main floor and basement are tenanted by an art store and gallery. The upper floors are residential apartments.

The proposed development will consist of a new nine-storey building with one basement level. The façade of the original buildings along Nepean Street, Bank Street and Lisgar Street will be preserved and incorporated into the design of the new building. The proposed building will include 263 residential units with commercial retail units at the ground floor level and at the basement level. There will be no underground parking.

6.5 Utilities

The Phase Two property is serviced with electrical, natural gas, Bell and municipal water and sanitary and storm sewer services.

6.6 Geological and Hydrogeological Setting

A summary of factors that apply to the Phase Two property is provided in Table 6.6.1.

Table 6.2: Site Characteristics

Minimum Depth to Bedrock	5.5 m bgs
Minimum Depth to Groundwater	2.81 m
Shallow Soil Property	No, bedrock is greater than 2.0 mbgs
Proximity to water body or ANSI	Approximately 840 m northeast – Rideau Canal
Soil pH	Surface and sub-surface pH was within applicable ranges

Soil Texture	Fine
Current Property Use	Commercial
Future Property Use	Residential
Proposed Future Building	Residential apartments
Areas Containing Suspected Fill	Entire Phase Two property

6.6.1 Site Stratigraphy

The asphalt at the Phase Two property was underlain by 1.4 m of sand and gravel base/sub-base materials in the two exterior boreholes (BH3 and BH4). The fill is underlain by a 2.9 m thick deposit of clay in each of the boreholes down to elevation 68.0 m. Underlying the clay is a layer of glacial till consisting of silty sand and trace gravel. Shale bedrock of the Billing's Formation was confirmed during the geotechnical investigation from 5.5 m to 7.9 m. Groundwater was previously encountered at 6.1 to 7.0 m depths.

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.

6.6.2 Approximate Depth to Water Table

Seven overburden monitoring wells were installed at the Phase Two property. The depth to groundwater in the overburden ranged from 2.81 m to more than 6.1 m below ground surface in monitoring wells where equilibrium had been attained. Based on the groundwater level measurements, groundwater contours in the overburden were plotted, as shown on Figure4. The groundwater flow direction in the overburden was to the south.

EXP notes that groundwater levels can be influenced by seasonal changes, the presence of subsurface structures, or fill.

6.6.3 Hydrogeological Conditions

The closest bodies of water are the Rideau Canal, approximately 840 m to the northeast and the Ottawa River, approximately 870 m to the north northwest. Topographically, the Phase Two property is relatively flat. The study area has a slight slope down to the south. The inferred regional groundwater flow direction is north towards the Ottawa River.

The hydrogeology of the Phase Two property is illustrated on the groundwater elevation plan (Figure 4) and is based on the groundwater information collected from the Phase Two property. No petroleum sheens or odours were observed in the monitoring wells during the sampling event. Based on the measured groundwater levels, the groundwater flow direction on the Site was to the south.

The hydraulic conductivity was calculated in two monitoring wells. The hydraulic conductivity in monitoring well MW2 was calculated to be 1.3×10^{-7} m/s. The hydraulic conductivity monitoring well MW9 was calculated to be 4.1×10^{-7} m/s.

6.6.4 Approximate Depth to Bedrock

Shale bedrock of the Billing's Formation was confirmed during the geotechnical investigation from 5.5 m to 7.9 m.

6.7 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 not considered a shallow soil property as defined in Section 43.1 of the regulation.

6.8 Use of Non-Potable Ground Water Standards at an RSC Property

On December 20, 2023, the City of Ottawa was provided with written notice of the intention to apply non-potable site conditions standards to the Phase Two property. The City of Ottawa has not yet responded to the notice.

6.9 Fine-Medium Soil Texture

Based on field observations and laboratory analysis of two samples from the previous geotechnical investigation for grain size, the soil texture was determined to be medium and fine grained. Grain size results are shown below.

Table 6.3: Grain Size Analysis

Sample Location	Depth (m bgs)	Predominant Soil Type	Particle Smaller than 75 micron by Mean Diameter	Ontario Regulation 153/04 Classification
BH-3 SS-3	1.5 to 2.1	Silt and Clay, some sand	90%	Fine-Medium
BH-4 SS-3	1.2 to 1.8	Silty Clay, trace sand	96%	Fine-Medium

The silt and clay unit is the dominant type of soil on the Phase Two property. Since more than 2/3 of the soil on the Phase Two property consisted of medium and fine textured soil, soil and groundwater results were compared to medium and fine textured SCS.

6.10 Applicable Site Condition Standards

For assessment purposes, EXP selected the 2011 Table 3 Site Condition Standards (SCS) in a non-potable groundwater condition for residential/parkland/institutional property use and fine textured soil. The selection of this category was based on the following factors:

- Bedrock is greater than 2 metres below grade across more than 1/3 of the Phase Two property;
- The Phase Two property does not include and is not within 30 m of a water body;
- 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 Phase Two property is not currently serviced, however potable water will be provided by the City of Ottawa through its water distribution system;
- The soil type is medium and fine grained based on grain size analysis.
- The City of Ottawa has been notified of the intent to file an RSC using non-potable SCS and the municipality has not yet objected;
- The Phase Two property is planned for residential use; and

- It is the opinion of the Qualified Person who oversaw this work that the Phase Two property is not a sensitive site.

Based on the above factors, including the provisions in Sections 35, 41, and 43.1, the Table 3 SCS for a residential/parkland/institutional property use and coarse textured soils were selected for assessment purposes.

6.11 Potentially Contaminating Activities

Ontario Regulation 153/04 defines a potentially contaminating activity (PCA) as one of 59 operations set out in Table 2 of Schedule D that occurs or has occurred in a property study area. If an activity is not listed in Table 2, the PCA is to be identified as "not applicable" and described. Potentially contaminating activities were identified on-Site and within 250 m from the RSC property site boundaries (Figure 2). Each PCA was further evaluated to determine if the activity may be contributing to an area of potential environmental concern (APEC) at the Phase Two property or if they are considered de-minimis and not contributing to an APEC.

Table 6.4: Potentially Contaminating Activities

EXP PCA #	Location of PCA	Potentially Contaminating Activity (PCA)	Description	Rationale
PCA 1	171-175 Nepean Street (15 m northeast)	PCA #31 – Ink manufacturing, processing and bulk storage	Lowe-Martin printing plant shown in the 1963 FIP.	Due to the proximity to the site, this PCA contributes to an APEC.
PCA 2	177 Nepean Street (30 m north)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former Chinese Laundry listed in the city directories between 1914 and 1946 and shown in the 1922 FIP.	Due to the proximity to the site, this PCA contributes to an APEC.
PCA 3	146 Nepean Street (70 m east northeast)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner shown in the 1956 FIP and listed in the city directories between 1946 and 1961.	Due to the distance and regional cross-gradient location from the site, this PCA does not contribute to an APEC.
PCA 4	318-320 Lisgar Street (50 m southeast)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner shown in 1956 FIP and listed in the city directories between 1946 and 1961.	Due to the proximity to site, this PCA contributes to an APEC.
PCA 5	344-346 Lisgar Street (50 m west)	PCA #10 – Commercial autobody shops PCA #31 – Ink manufacturing, processing and bulk storage	Lillico Garage (with USTs) listed in the city directories between 1920 and 1961 and shown in the 1922 and 1963 FIPs. Small print shop shown in the northeast corner of the garage in the 1963 FIP.	Due to the regional cross-gradient location from the site, and the separation from the site by Bank Street and associated underground infrastructure, this PCA does not contribute to an APEC.
PCA 6	393 Cooper Street (60 m south)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner shown in 1922 FIP and listed in the city directories between 1920 and 1946.	Due to the proximity and inferred upgradient location from the site, this PCA contributes to an APEC.
PCA 7	375 Lisgar Street (170 m southwest)	PCA #28 – Gasoline and associated products storage in fixed tanks	Former undertakers with fuel UST shown in the 1963 FIP.	Due to the distance and regional gross-gradient location from the site, this PCA does not contribute to an APEC.

EXP PCA #	Location of PCA	Potentially Contaminating Activity (PCA)	Description	Rationale
PCA 8	262-263 Laurier Avenue (150 m northeast)	PCA #10 – Commercial autobody shops PCA #28 – Gasoline and associated products storage in fixed tanks	Campbell Motors Company garage with UST shown in the 1963 FIP.	Due to the distance and regional down-gradient location from the site, this PCA does not contribute to an APEC.
PCA 9	156 O'Connor Avenue (160 m northeast)	PCA #28 – Gasoline and associated products storage in fixed tanks PCA #10 – Commercial autobody shops	Service station with three USTs listed in the city directories between 1941 and 1966 and shown in the 1963 FIP. Listed in the city directories as a repair garage between 1987 and 1997.	Due to the distance and regional down-gradient direction from the site, this PCA does no contribute than an APEC.
PCA 10	442 Cooper Street (170 m southwest)	PCA #10 – Commercial Autobody Shops PCA#28 – Gasoline and associated products storage in fixed tanks	Borden's Dairy garage with USTs shown in the 1922 and 1963 FIP and listed in the city directories between 1956 and 1966.	Due to the distance from the site, this PCA does not contribute to an APEC.
PCA 11	241-243 Kent Street (170 m southwest)	PCA#28 – Gasoline and associated products storage in fixed tanks	Service station with four USTs listed in the city directories between 1936 and 1961 and shown in the 1963 FIP.	Due to the distance from the site, this PCA does not contribute to an APEC.
PCA 12	324 Laurier Avenue (175 m northwest)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner shown in 1963 FIP and listed in the city directories between 1920 and 1971.	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 13	234 Laurier Avenue (180 m northeast)	PCA#28 – Gasoline and associated products storage in fixed tanks	Former gas station with three USTs shown in the 1956 FIP.	Due to the distance and regional down-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 14	233 Kent Street (200 m west)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner shown in 1922 FIP and listed in the city directories between 1920 and 1936.	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 15	448 Cooper Street (200 m southwest)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner shown in 1963 FIP and listed in the city directories between 1956 and 1961.	Due to the distance from the site, and the separation from the site by Bank Street, Cooper Street, and Lisgar Street and associated underground infrastructure, this PCA does not contribute to an APEC.
PCA 16	379 Somerset Avenue (200 m south)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner shown in 1963 FIP and listed in the city directories between 1941 and 1951.	Due to the distance from the site, and the separation from the site by Bank Street, Cooper Street, and Lisgar Street and associated underground infrastructure, this PCA does not contribute to an APEC.

EXP PCA #	Location of PCA	Potentially Contaminating Activity (PCA)	Description	Rationale
PCA 17	219 Bank Street (Phase One property)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former cleaner listed in the city directories from the 1980s to the 2000s.	As the PCA is located on the site property this PCA contributes to an APEC. Although, it is noted based on records review that this location may have operated as a depot only.
PCA 18	238 Bank Street (20 m south)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former Chinese Laundry listed in the city directories between 1910 and 1914.	Due to the proximity and inferred upgradient location from the site, this PCA contributes to an APEC.
PCA 19	194 Bank Street (80 m north)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former Chinese Laundry listed in the city directories in 1910.	Due to the distance and regional down-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 20	244 Bank Street (40 m south)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner listed in the city directories between 1936 and 1941.	Due to the proximity and inferred upgradient location from the site, this PCA contributes to an APEC.
PCA 21	283 Bank Street (170 m southeast)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner listed in the city directories between 1936 and 1946.	Due to the distance from the site, and the separation from the site by Cooper Street and Lisgar Street, and associated underground infrastructure, this PCA does not contribute to an APEC.
PCA 22	287 Bank Street (150 m southeast)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner listed in the city directories between 1910 and 1951.	Due to the distance from the site, and the separation from the site by Cooper Street and Lisgar Street, and associated underground infrastructure, this PCA does not contribute to an APEC.
PCA 23	160 Bank Street (220 m northwest)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner listed in the city directories between 1936 and 1976	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 24	212 Bank Street (20 m west)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used) PCA#28 – Gasoline and associated products storage in fixed tanks	Former dry cleaner identified in the HLUI database between 1990s and 1950s. HLUI database record for fuel UST installed in the 1960s.	Due to the proximity to the site, this PCA contributes to an APEC.
PCA 25	196 Bank Street (45 m northwest)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner identified in the HLUI database between the 1930s and the 1950s.	Due to the regional cross-gradient direction, and the separation from the site by Bank Street, Nepean Street and associated underground infrastructure, this PCA does not contribute than an APEC.

EXP PCA #	Location of PCA	Potentially Contaminating Activity (PCA)	Description	Rationale
PCA 26	170 Gloucester Street (50 m north)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner identified in the HLUI database in the 1950s.	Due to the regional down-gradient direction, and the separation from the site by Nepean Street and associated underground infrastructure, this PCA does not contribute than an APEC.
PCA 27	188 Bank Street (60 m northwest)	PCA #31 – Ink manufacturing, processing and bulk storage	Former commercial printer identified in the HLUI database between the 1950s and the 1990s.	Due to the regional cross-gradient direction, and the separation from the site by Bank Street, Nepean Street and associated underground infrastructure, this PCA does not contribute than an APEC.
PCA 28	187 Bank Street (60 m north)	PCA #28 – Gasoline and associated products storage in fixed tanks	Fuel oil UST installed in the 1960s identified in the HLUI database.	Due to the regional down-gradient direction, and the separation from the site by Nepean Street and associated underground infrastructure, this PCA does not contribute than an APEC.
PCA 29	251 Bank Street (60 m south)	PCA #28 – Gasoline and associated products storage in fixed tanks	Fuel oil UST installed in the 1950s identified in the HLUI database.	Due to the distance, and the separation from the site by Lisgar Street and associated underground infrastructure, this PCA does not contribute to an APEC.
PCA 30	287 Lisgar Street (80 m east)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner identified in the HLUI database from the 1940s to the 1950s.	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 31	222 Nepean Street (80 m west)	PCA #28 – Gasoline and associated products storage in fixed tanks	Fuel oil AST installed in the 1960s identified in the HLUI database.	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 32	190 O'Connor Street (100 m east)	PCA #28 – Gasoline and associated products storage in fixed tanks	Fuel oil ASTs installed in the 1960s identified in the HLUI database.	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 33	355 Cooper Street (100 m east)	PCA #28 – Gasoline and associated products storage in fixed tanks	Fuel oil UST installed in the 1950s identified in the HLUI database.	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 34	291 Lisgar Street (100 m east)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner identified in the HLUI database between the 1940s and the 1950s.	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 35	230 Nepean Street (120 m west)	PCA #31 – Ink manufacturing, processing and bulk storage	Former commercial printing operations identified in the HLUI database between the 1970s and the 1990s.	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.

EXP PCA #	Location of PCA	Potentially Contaminating Activity (PCA)	Description	Rationale
PCA 36	340 Laurier Avenue (120 m northeast)	PCA #28 – Gasoline and associated products storage in fixed tanks	Fuel oil ASTs installed in the 1960s identified in the HLUI database.	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 37	433 Cooper Street (120 m southwest)	PCA #28 – Gasoline and associated products storage in fixed tanks	UST installed in the 1930s identified in the HLUI database.	Due to the distance from the site, and the separation from the site by Bank Street and Lisgar Street and associated underground infrastructure, this PCA does not contribute than an APEC.
PCA 38	171 Bank Street (120 m north)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used) PCA #28 – Gasoline and associated products storage in fixed tanks PCA #10 – Commercial autobody shops	Former dry cleaner identified in the HLUI database between the 1960s and the 1980s. Fuel oil USTs installed in the 1920s and 1950s identified in the HLUI database. Former repair garage identified in the HLUI database between the 1920s and the 1950s.	Due to the distance and regional down-gradient location from the site, this PCA does not contribute than an APEC.
PCA 39	282 Bank Street (145 m south)	PCA #28 – Gasoline and associated products storage in fixed tanks	Fuel oil ASTs installed in the 1970s identified in the HLUI database.	Due to the distance from the site, and the separation from the site by Bank Street, Cooper Street, and Lisgar Street and associated underground infrastructure, this PCA does not contribute than an APEC.
PCA 40	257 Lisgar Street (150 m east)	PCA #28 – Gasoline and associated products storage in fixed tanks	Fuel oil UST installed in the 1960s identified in the HLUI database.	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 41	236-234 Laurier Avenue (175 m north)	PCA #28 – Gasoline and associated products storage in fixed tanks PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former gas station identified in the HLUI database between the 1920s and the 1960s. Former dry cleaner identified in the HLUI database between the 1980s and the 2000s.	Due to the distance and regional down-gradient location from the site, this PCA does not contribute than an APEC.
PCA 42	258 Lisgar Street (180 m east)	PCA #28 – Gasoline and associated products storage in fixed tanks	Fuel oil AST installed in the 1960s identified in the HLUI database.	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 43	355 Cooper Street (180 m east)	PCA #28 – Gasoline and associated products storage in fixed tanks	Fuel oil UST installed in the 1960s identified in the HLUI database.	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 44	162 Bank Street (180 m northeast)	PCA #28 – Gasoline and associated products storage in fixed tanks	Former gas station identified in the HLUI database in the 1920s.	Due to the distance and regional down-gradient location from the site, this PCA does not contribute than an APEC.

EXP PCA #	Location of PCA	Potentially Contaminating Activity (PCA)	Description	Rationale
PCA 45	161 Bank Street (180 m north)	PCA #28 – Gasoline and associated products storage in fixed tanks	Fuel oil UST installed in the 1950s identified in the HLUI database.	Due to the distance and regional down-gradient location from the site, this PCA does not contribute than an APEC.
PCA 46	264 Kent Street (180 m southwest)	PCA #10 – Commercial autobody shops PCA #31 – Ink manufacturing, processing and bulk storage	Former repair garage identified in the HLUI database between the 1940s and 1950s. Former commercial print shop identified in the HLUI database in the 1930s	Due to the distance from the site, and the separation from the site by Bank Street and Lisgar Street and associated underground infrastructure, this PCA does not contribute than an APEC.
PCA 47	325 Cooper Street (190 m east)	PCA #28 – Gasoline and associated products storage in fixed tanks	Fuel oil UST installed in the 1960s identified in the HLUI database	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 48	360 Laurier Avenue (190 m northwest)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner identified in the HLUI database between the 1990s and the 2000s.	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 49	272 Bank Street (250 m south)	PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Former dry cleaner identified in the HLUI database between the 1960s and the 1990s	Due to the distance from the site, and the separation from the site by Bank Street, Cooper Street, Lisgar Street, and Somerset Street West and associated underground infrastructure, this PCA does not contribute than an APEC.
PCA 50	271 Bank Street (250 m south)	PCA #28 – Gasoline and associated products storage in fixed tanks PCA #37 – Operation of dry cleaning equipment (where chemicals are used)	Identified in the HLUI database as a private fuel outlet in the 1970s. Former dry cleaner identified in the HLUI database between the 1960s and the 1970s.	Due to the distance from the site, and the separation from the site by Cooper Street and Lisgar Street and associated underground infrastructure, this PCA does not contribute than an APEC.
PCA 51	429 Somerset Avenue West (250 m southwest)	PCA #28 – Gasoline and associated products storage in fixed tanks	Former gas station identified in the HLUI database between the 1940s and the 1950s.	Due to the distance from the site, and the separation from the site by Bank Street, Cooper Street, Lisgar Street, and Somerset Street West and associated underground infrastructure, this PCA does not contribute than an APEC.
PCA 52	199 Kent Street (250 m northwest)	PCA #28 – Gasoline and associated products storage in fixed tanks	Former gas station identified in the HLUI database between the 1960s and the 1970s.	Due to the distance and regional cross-gradient direction from the site, this PCA does not contribute than an APEC.
PCA 53	300 Laurier Avenue West (200 m north)	PCA #31 – Ink manufacturing, processing and bulk storage	Ottawa Photo Engraving listed in the former industrial sites database, operated between 1925 and 1950.	Due to the distance and regional down-gradient location from the site, this PCA does not contribute than an APEC.

EXP PCA #	Location of PCA	Potentially Contaminating Activity (PCA)	Description	Rationale
PCA 54	178 Nepean Street, 219 and 223 Bank Street (Phase Two property)	PCA #30 – Importation of fill material of unknown quality	Previous investigations have identified fill material on the site.	As the PCA is located on the Phase Two property, this PCA contributes to an APEC.
PCA 55	219 Bank Street (Phase Two property)	PCA#28 – Gasoline and associated products storage in fixed tanks	Fuel oil tank was observed in the basement during the site visit.	As the PCA is located on the Phase Two property, this PCA contributes to an APEC.
PCA 56	178 Nepean Street (Phase Two property)	PCA#28 – Gasoline and associated products storage in fixed tanks	Based on the age of the site building, it is inferred a former fuel oil tank was present in the basement.	As the PCA is located on the Phase Two property, this PCA contributes to an APEC.
PCA 57	223-231 Bank Street (Phase Two property)	PCA#28 – Gasoline and associated products storage in fixed tanks	Based on the age of the site building, it is inferred a former fuel oil tank was present in the basement.	As the PCA is located on the Phase Two property, this PCA contributes to an APEC.

No other PCAs that took place within the vicinity of the Phase Two property (approximately 250 m radius) were identified.

All of the on-site PCAs (**PCA 17**, **PCA 54**, **PCA 55**, **PCA 56**, **PCA 57**) were determined to result in APECs. It is noted that although Brown's Cleaners is listed at 211 (219) Bank Street (Phase Two property) in the city directories between 1987 and 2001, there are no listings in the Ecolog report for any dry cleaners, or generators of halogenated solvents. It is considered likely that this listing was for a depot only.

Multiple PCAs were identified in the Phase Two study area, including print shops, dry cleaners, garages, and underground and above ground storage tanks. The closest facilities to the Phase Two property may be a source of contamination to the Phase Two property, particularly chlorinated solvents or lighter petroleum hydrocarbons since these contaminants preferentially partition into groundwater rather than sorb to soil. Due to the proximity to the Phase Two property, several PCAs which were located inferred down/cross- gradient of the Phase Two property, were considered to result in APECs as utilities may influence the local groundwater flow.

PCA 1, **PCA 2**, **PCA 4**, **PCA 6**, **PCA 18**, **PCA 20**, and **PCA 24** contribute to areas of potential environmental concern on the Phase Two property. Based on the distance and/or cross/down gradient location from the Phase Two property, the remainder of the PCAs identified in the Phase Two study were not considered to contribute to APECs.

6.12 Areas of Potential Environmental Concern

Ontario Regulation 153/04 defines an APEC as an area on a property where one or more contaminants are potentially present. The following APEC were identified on the RSC property, as shown in Table 3 below.

Table 6.3: Areas of Potential Environmental Concern

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase I 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 dry cleaner at 211 Bank Street	211 Bank Street building footprint	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used)(**PCA 17**)	On-site	Volatile organic compounds (VOC)	Soil and Groundwater

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase I 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. Fuel oil AST at 219 Bank Street	Northwest side of 219 Bank Street Building footprint	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 55**)	On-Site	Benzene, toluene, ethylbenzene, xylene (BTEX), petroleum hydrocarbons (PHC)	Soil and Groundwater
3. Former fuel oil AST at 178 Nepean Street	West side of 178 Nepean Street building footprint	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 56**)	On-Site	BTEX, PHC	Soil and Groundwater
4. Former fuel oil AST at 223 Bank Street	West side of 223 Bank Street building footprint	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 57**)	On-Site	BTEX, PHC	Soil and Groundwater
5. Fill material of unknown quality	Entire Phase Two property	PCA # 30 – Importation of fill material of unknown quality (**PCA 54**)	On-Site	Polycyclic aromatic hydrocarbons (PAH), PHC, VOC, metals	Soil
6. Former printing plant at 171-175 Nepean Street	North part of the Phase Two property	PCA #31 – Ink manufacturing, Processing and Bulk Storage (**PCA 1**)	Off-Site	VOC	Groundwater
7. Former dry cleaner at 177 Nepean Street	North part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 2**)	Off-Site	VOC	Groundwater
8. Former dry cleaner at 318-320 Lisgar Street	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 4**)	Off-Site	VOC	Groundwater
9. Former dry cleaner at 393 Cooper Street	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 6**)	Off-Site	VOC	Groundwater
10. Former dry cleaner at 238 Bank Steet	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used)(**PCA 18**)	Off-Site	VOC	Groundwater
11. Former dry cleaner at 244 Bank Street	South Part of the Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used)(**PCA 20**)	Off-Site	VOC	Groundwater
12. Former dry cleaner at 212 Bank Street	Northwest part of Phase Two property	PCA #37 – Operation of dry-cleaning equipment (where chemicals are used) (**PCA 24**)	Off-Site	VOC	Groundwater

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase I 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)
13. Former fuel UST at 212 Bank Street	Northwest part of Phase Two property	PCA #28 – Gasoline and associated products storage in fixed tanks (**PCA 24**)	Off-Site	BTEX, PHC	Groundwater

6.13 Scope of the Investigation

The Phase Two ESA was conducted to assess the soil and groundwater at the Phase Two property. The following table summarizes the soil and groundwater locations on the Phase Two property, and the APECs each sample location addresses.

Table 6.4: 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 #
APEC #1	VOC	Soil and groundwater	MW1 and MW2
APEC #2	BTEX, PHC	Soil and groundwater	MW6
APEC #3	BTEX, PHC	Soil and groundwater	MW6, MW7, MW8, MW9
APEC #4	BTEX, PHC	Soil and groundwater	MW2, MW5
APEC #5	PAH, PHC, VOC, metals	Soil	BH3 and BH4
APEC #6	VOC	Groundwater	MW8
APEC #7	VOC	Groundwater	MW8
APEC #8	VOC	Groundwater	MW1 and MW2
APEC #9	VOC	Groundwater	MW1 and MW2
APEC #10	VOC	Groundwater	MW1 and MW2
APEC #11	VOC	Groundwater	MW1 and MW2
APEC #12	VOC	Groundwater	MW8
APEC #13	BTEX, PHC	Groundwater	MW8

6.14 Investigation

The site investigative activities 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 drilling, 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 drilling program was completed on September 13, and 28 to 29, 2023 by Strata Drilling Group (Strata), a licensed well contractor. Strata advanced nine boreholes (MW1, MW2, BH3, BH4, MW5 to MW9) across the Phase Two property, using a manual drill. Seven of the boreholes (MW1, MW2, MW5 to MW9) were completed as monitoring wells. The boreholes were drilled to a maximum depth of 4.88 m. Two of the boreholes (BH3 and BH4) were exterior boreholes. The remainder of the boreholes were installed in the basements of the buildings.

Additional drilling was completed on December 13, 2023, by Strata. Three boreholes (BH12, BH13, and BH14) were drilled to delineate PHC soil impacts identified during the initial investigation. Since two monitoring wells were dry during the first phase of drilling, two deeper monitoring wells (MW10 and MW11) were installed to 6.1 m adjacent to the dry wells (MW7 and MW8).

The locations of the APECs and boreholes are presented on Figure 3 in Appendix A.

6.14.1 Soil Sampling

For the purposes of the remediation and environmental site assessment program, the contaminants of concern were based on the results of previous investigations and a recent Phase One ESA completed on the Phase Two property.

Soil samples identified for possible laboratory analysis were placed directly into pre-cleaned, laboratory-supplied glass sample jars. All soil samples were placed in clean coolers containing ice prior to and during transportation to the subcontract laboratory, AGAT Laboratories (AGAT) of Ottawa, Ontario. The samples were transported/submitted within 24 hours of collection to the laboratory following chain of custody protocols for chemical analysis.

Two fill samples were submitted for analysis of PAH and metals. Nine soil samples and a duplicate were submitted for analysis of VOC, and twelve soil samples and a duplicate were submitted for analysis of PHC. All of the soil samples were within the MECP Table 3 SCS, except for the samples collected from MW6 and MW7, which exceeded for PHC F2. One soil sample from each of the delineation boreholes (BH12 to BH14) were submitted from a depth of 0.9 m to 2.4 m for analysis of BTEX and PHC. The results of the delineation boreholes showed no detections of BTEX and PHC and therefore the PHC impact observed at MW6 and MW7 has been horizontally delineated. The estimated area of PHC impacted soil is shown on Figures 7 and 10 in appendix A.

The soil results are provided in Tables 1 to 3 in Appendix E and Figures 7 to 12 (Appendix A). Copies of the laboratory Certificates of Analysis are provided in Appendix F.

6.14.2 Groundwater Sampling

During the Phase Two ESA, groundwater samples were collected via a low flow sampling technique with the pump intake placed within the well screen. 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.

Five groundwater samples and one field duplicate were submitted for analysis of PHC and VOC. Based on the final analytical results obtained, there were no exceedances of MECP Table 3 SCS for any of the parameters analyzed.

The results are presented in Table 5 in Appendix E and Figures 13 and 14. Copies of the laboratory Certificates of Analysis are provided in Appendix F.

6.15 Contaminants of Concern

Potential contaminants of concern (COC) that were identified on the Phase Two property included:

- Soil: PHC, VOC, PAH, and metals
- Groundwater: PHC and VOC

Prior to remediation, contaminants that exceeded the applicable standards included:

Following the drilling program, the contaminants that exceeded the applicable standards included:

Soil: PHC.

Groundwater: None.

6.16 Contaminant Fate and Transport

A variety of physical, chemical and biochemical mechanisms affect the fate and transport of the potential COCs in soil, 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 COCs. 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.

The contaminants are present in the soil beneath the concrete floor slab. Potential contaminant migration would have been related to advection mixing, mechanical dispersion/molecular diffusion, phase partitions (i.e., sorption and volatilization), and possibly abiotic or biotic chemical reactions.

As no groundwater impacts were identified on the site, migration of impacted groundwater is not considered a concern at the Phase Two property.

6.17 Preferential Pathways

The preferential pathways for contaminants present in the soil include underground utilities and surface features. No utilities corridors are currently present on the Phase Two property.

There are no surface water features on the site and any surface water would be directed to the storm sewers near the Phase Two property. As no groundwater impacts were identified on the site, migration of impacted groundwater is not considered a concern at the Phase Two property.

6.18 Climatic 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.

However, based on the conditions observed at the Phase Two and the fact that acceptable soil concentrations were noted in the soil horizon above the water table, it is not anticipated that the climatic or meteorological changes have had any impact on the distribution of contaminants.

6.19 Human Health Receptors and Exposure Pathway

Residential apartments with parking 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, soil dermal contact.

A diagram identifying the release mechanisms, contaminant transport pathway, human receptors, exposure points and routes of exposure are shown on Figure 15.

6.20 Ecological Receptors and Exposure Pathway

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).

A diagram identifying the release mechanisms, contaminant transport pathway, ecological receptors, exposure points and routes of exposure are shown on Figure 16.

7.0 Conclusion

During the current investigation, the soil and groundwater quality at the Phase Two property were investigated. The investigation included soil and groundwater sampling. Results were compared to Regulation 153/04 Table 3 standards for a residential/parkland/institutional property use in a non-potable groundwater condition.

Two fill samples were submitted for analysis of PAH and metals. Nine soil samples and a duplicate were submitted for analysis of VOC, and twelve soil samples and a duplicate sample were submitted for analysis of PHC. All of the soil samples were within the MECP Table 3 SCS, except for the samples collected from MW6 and MW7, which exceeded for PHC F2. One soil sample from each of the delineation boreholes (BH12 to BH14) were submitted from a depth of 0.9 m to 2.4 m for analysis of BTEX and PHC. The results of the delineation boreholes showed no detections of BTEX and PHC and therefore the PHC impact observed at MW6 and MW7 has been horizontally delineated.

With respect to groundwater, all samples were within the MECP Table 3 SCS for VOC and PHC.

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. Based on the results of the Phase Two ESA, the soil impacts should be delineated prior to soil remediation activities.

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.

- Canadian Standards Association, *CSA-Z769-00 (R2013), Phase II Environmental Assessment Standard*, 2013.
- EXP Services Inc., *Phase One Environmental Site Assessment, 178 Nepean Street, 219 and 223 Bank Street, Ottawa, Ontario.* May 30, 2023.
- Freeze and Cherry, *Groundwater*, Prentice Hall, 1979.
- 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 211-231 Bank Street Holdings Inc. ("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.

Use of Report

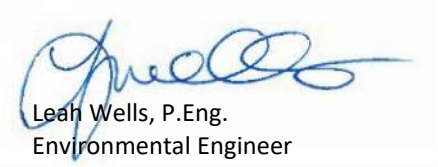
The information and opinions expressed in the Report, or any document forming part of the Report, are for the sole benefit of the Client. No other party may use or rely upon the Report in whole or in part without the written consent of EXP. Any use of the Report, or any portion of the Report, by a third party are the sole responsibility of such third party. EXP is not responsible for damages suffered by any third party resulting from unauthorised use of the Report.

Report Format

Where EXP has submitted both electronic file and a hard copy of the Report, or any document forming part of the Report, only the signed and sealed hard copy shall be the original documents for record and working purposes. In the event of a dispute or discrepancy, the hard copy shall govern. Electronic files transmitted by EXP utilize specific software and hardware systems. EXP makes no representation about the compatibility of these files with the Client's current or future software and hardware systems. Regardless of format, the documents described herein are EXP's instruments of professional service and shall not be altered without the written consent of EXP.

10.0 Signatures

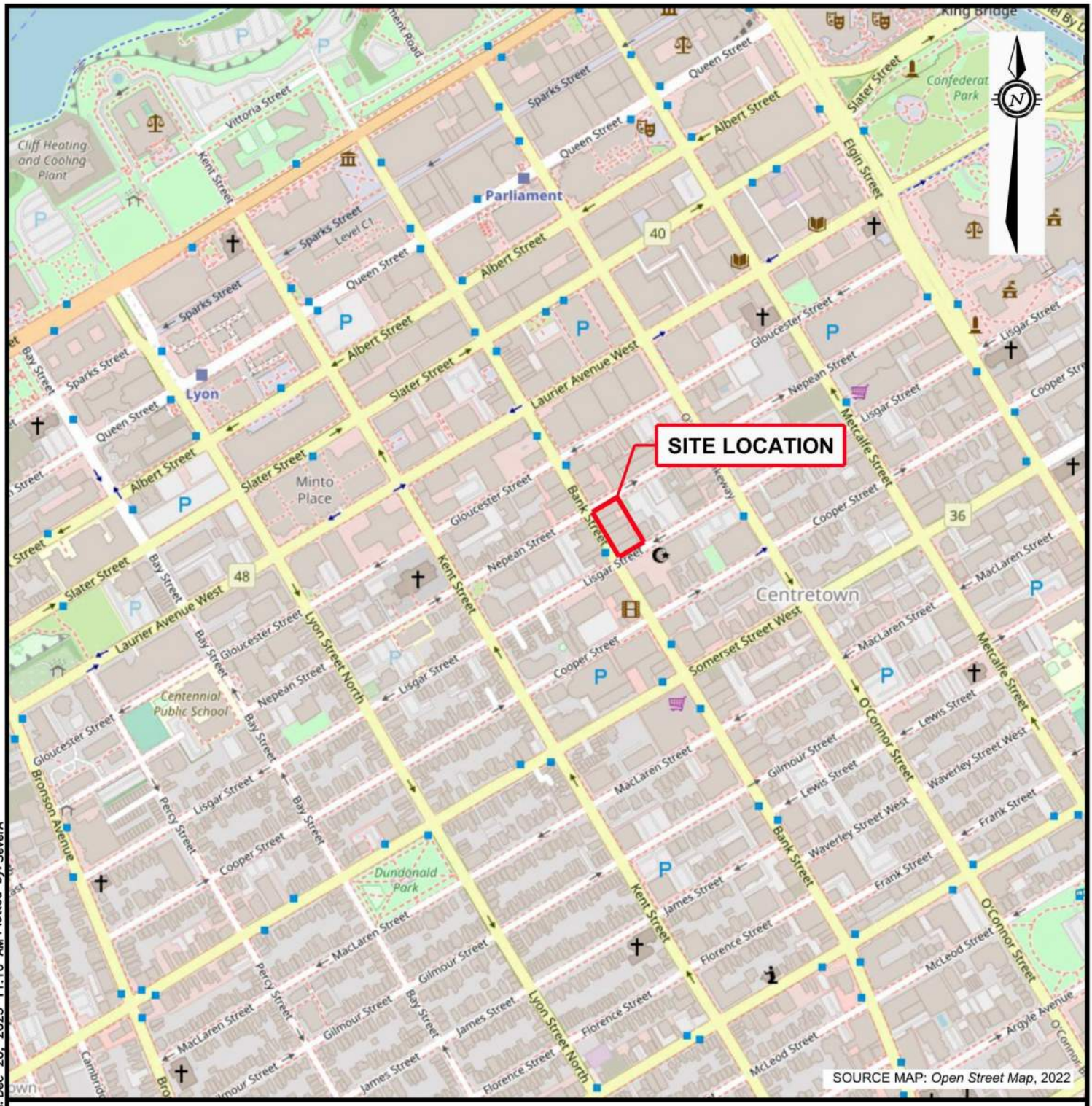
We trust this report meets your current needs. If you have any questions pertaining to the investigation undertaken by EXP, please do not hesitate to contact the undersigned.



Leah Wells, P.Eng.
Environmental Engineer
Earth and Environment

Mark McCalla, P.Geo.
Senior Geoscientist
Earth and Environment

Appendix A: Figures



0 50m 100m 300m

HORIZONTAL 1:7,500

EXP Services Inc. www.exp.com
t: +1.613.688.1899 | f: +1.613.225.7337
2650 Queensview Drive, Suite 100
Ottawa, ON K2B 8H6, Canada

DATE: DECEMBER 2023	CLIENT: SMART LIVING PROPERTIES	project no. OTT-22010865-A0
DESIGN: LW / CHECKED: MM	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	scale 1:7,500
DRAWN BY: AS	TITLE: SITE LOCATION PLAN 178 NEPEAN STREET, 219 AND 223 BANK STREET, OTTAWA, ON	FIG 1

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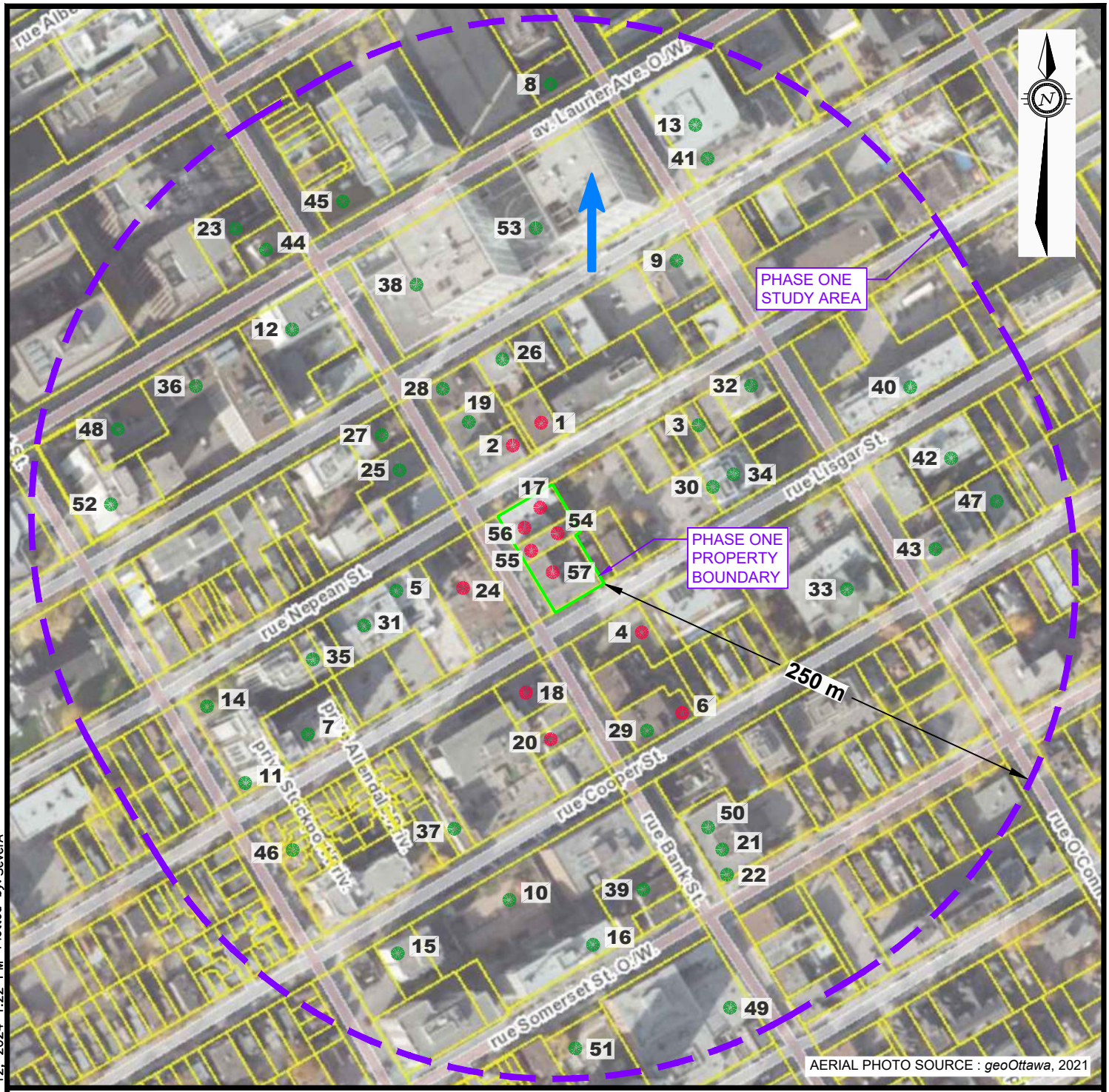

LEGEND

- APPROXIMATE SITE BOUNDARY
- PHASE ONE STUDY AREA
- INFERRED GROUNDWATER FLOW DIRECTION
- PCA #1 — POTENTIALLY CONTAMINATING ACTIVITY (PCA) CONTRIBUTES TO APEC
- PCA #3 — POTENTIALLY CONTAMINATING ACTIVITY (PCA) DOES NOT CONTRIBUTE TO APEC

0 25m 50m 100m
HORIZONTAL 1:3,000

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Ottawa, ON K2B 8H6, Canada

DATE: MARCH 2024	CLIENT: SMART LIVING PROPERTIES	project no.: OTT-22010865-A0
DESIGN: LW / CHECKED: MM	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	scale: 1:3,000
DRAWN BY: AS	TITLE: PHASE ONE CONCEPTUAL SITE MODEL 178 NEPEAN STREET, 219 AND 223 BANK STREET, OTTAWA, ON	FIG 2

Filename: E:\OTT\OTT-22010865-A0\60 Execution\65 Drawings\22010865-A0_Ph2.dwg
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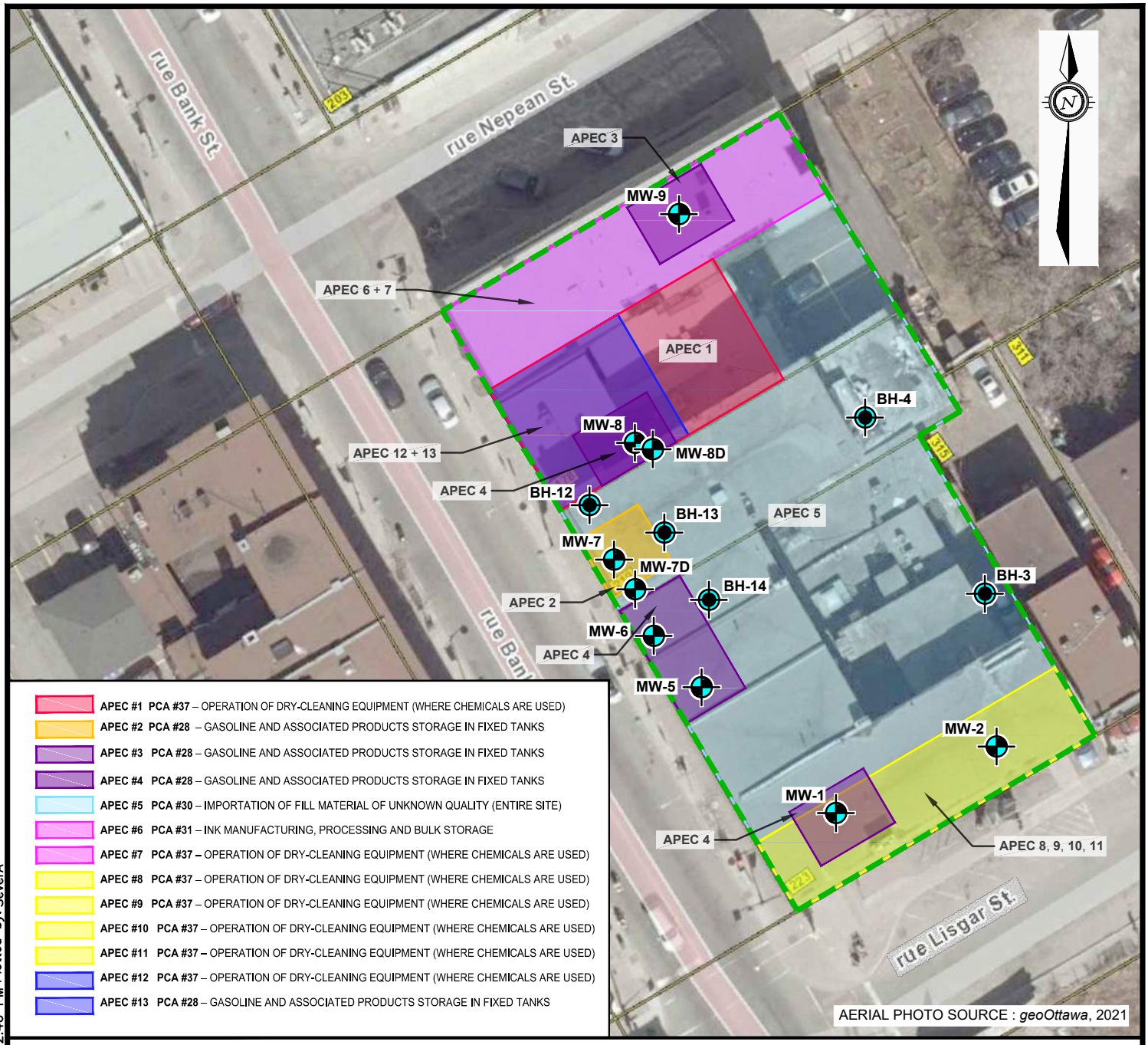

LEGEND

PROPERTY BOUNDARY

BH-3 — BOREHOLE NO. AND LOCATION

MW-1 — MONITORING WELL NO. AND LOCATION

0 5m 10m 20m

HORIZONTAL 1:500

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Ottawa, ON K2B 8H6, Canada

DATE: JANUARY 2024	CLIENT: SMART LIVING PROPERTIES	project no.: OTT-22010865-A0
DESIGN: LW / CHECKED: MM	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	scale: 1:500
DRAWN BY: AS	TITLE: SITE PLAN - AREAS OF POTENTIAL ENVIRONMENTAL CONCERN 178 NEPEAN STREET, 219 AND 223 BANK STREET, OTTAWA, ON	FIG 3

Filename: E:\OTT\OTT-22010865-A0\60 Execution\65 Drawings\22010865-A0_Ph2.dwg
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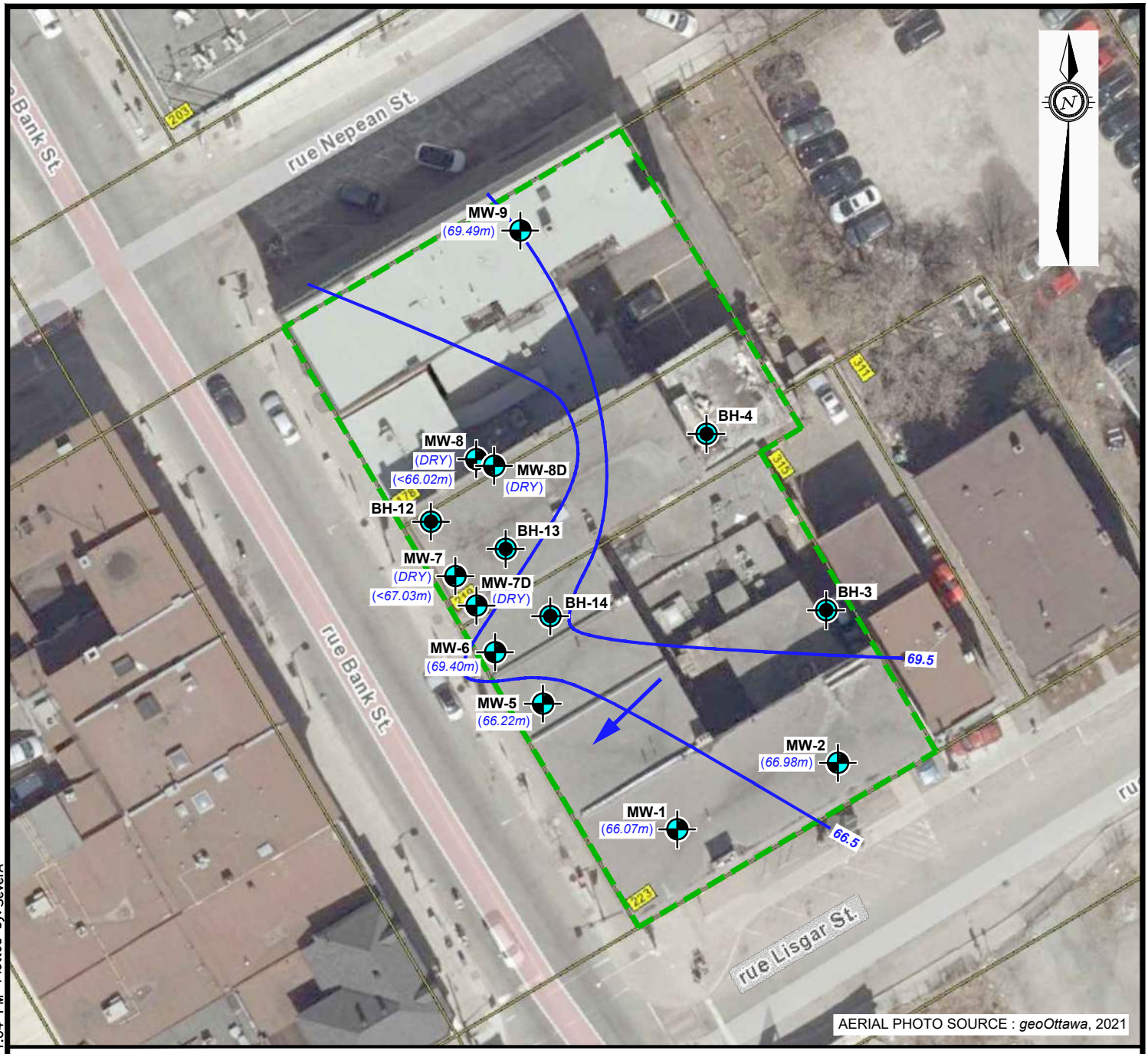

LEGEND

- PROPERTY BOUNDARY
- BH-3 — BOREHOLE NO. AND LOCATION
- MW-1 — MONITORING WELL NO. AND LOCATION
- (66.07m) — GROUNDWATER ELEVATION (m)
- GROUNDWATER FLOW DIRECTION
- 67.0 — GROUNDWATER CONTOURS

0 5m 10m 20m

HORIZONTAL 1:500

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DATE: MARCH 2024	CLIENT: SMART LIVING PROPERTIES	project no. OTT-22010865-A0
DESIGN: LW / CHECKED: MM	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	scale 1:500
DRAWN BY: AS	TITLE: GROUNDWATER CONTOUR PLAN 178 NEPEAN STREET, 219 AND 223 BANK STREET, OTTAWA, ON	FIG 4

Filename: E:\OTT\OTT-22010865-A0\60 Execution\65 Drawings\22010865-A0_Ph2.dwg
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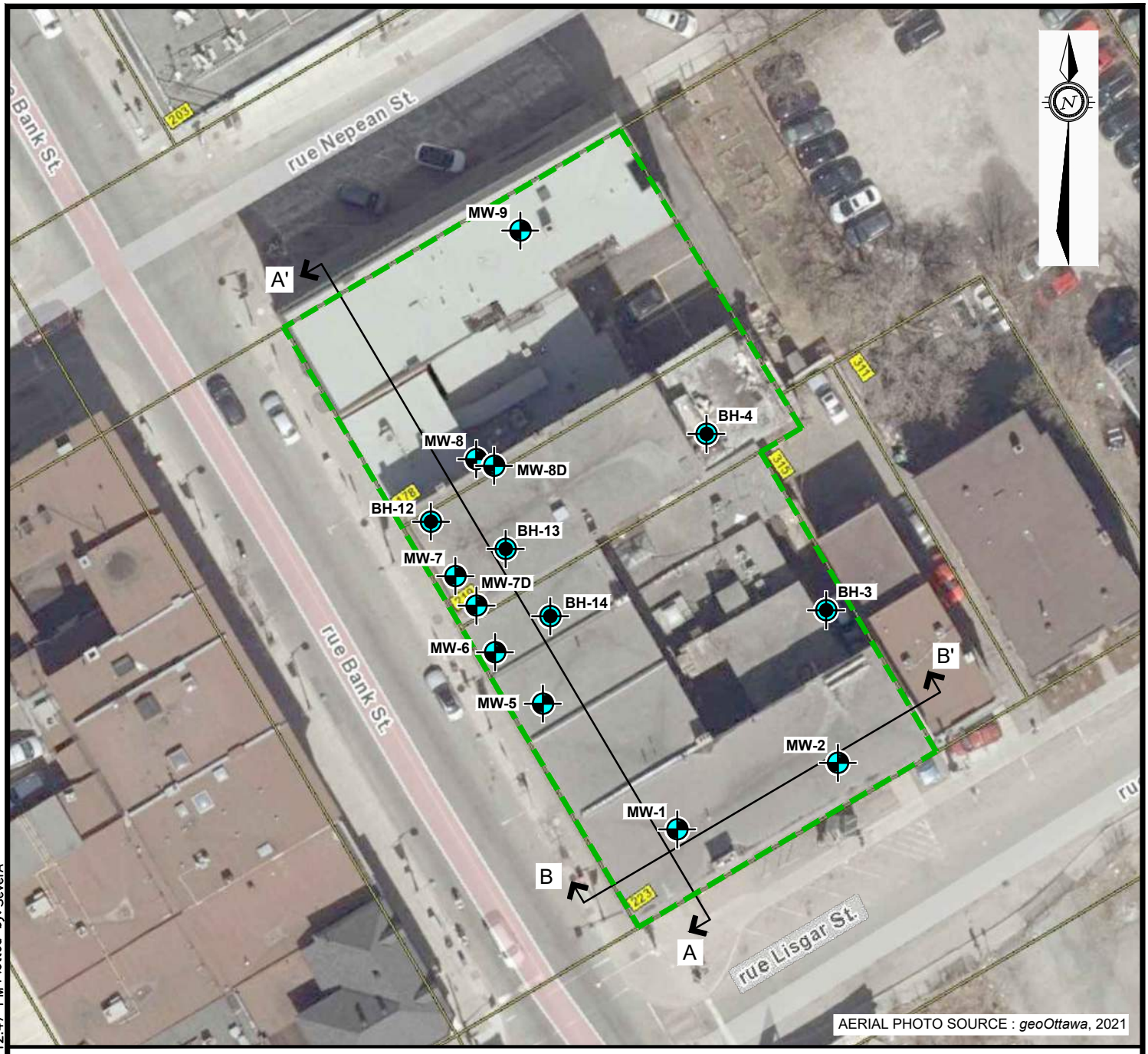

LEGEND

PROPERTY BOUNDARY

BH-3 BOREHOLE NO. AND LOCATION

MW-1 MONITORING WELL NO. AND LOCATION

A SECTION MARK

0 5m 10m 20m

HORIZONTAL 1:500

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DATE: JANUARY 2024	CLIENT: SMART LIVING PROPERTIES	project no. OTT-22010865-A0
DESIGN: LW / CHECKED: MM	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	scale 1:500
DRAWN BY: AS	TITLE: CROSS SECTION PLAN 178 NEPEAN STREET, 219 AND 223 BANK STREET, OTTAWA, ON	FIG 5

Filename: E:\OTT\OTT-22010865-A0\60 Execution\65 Drawings\22010865-A0_Ph2.dwg
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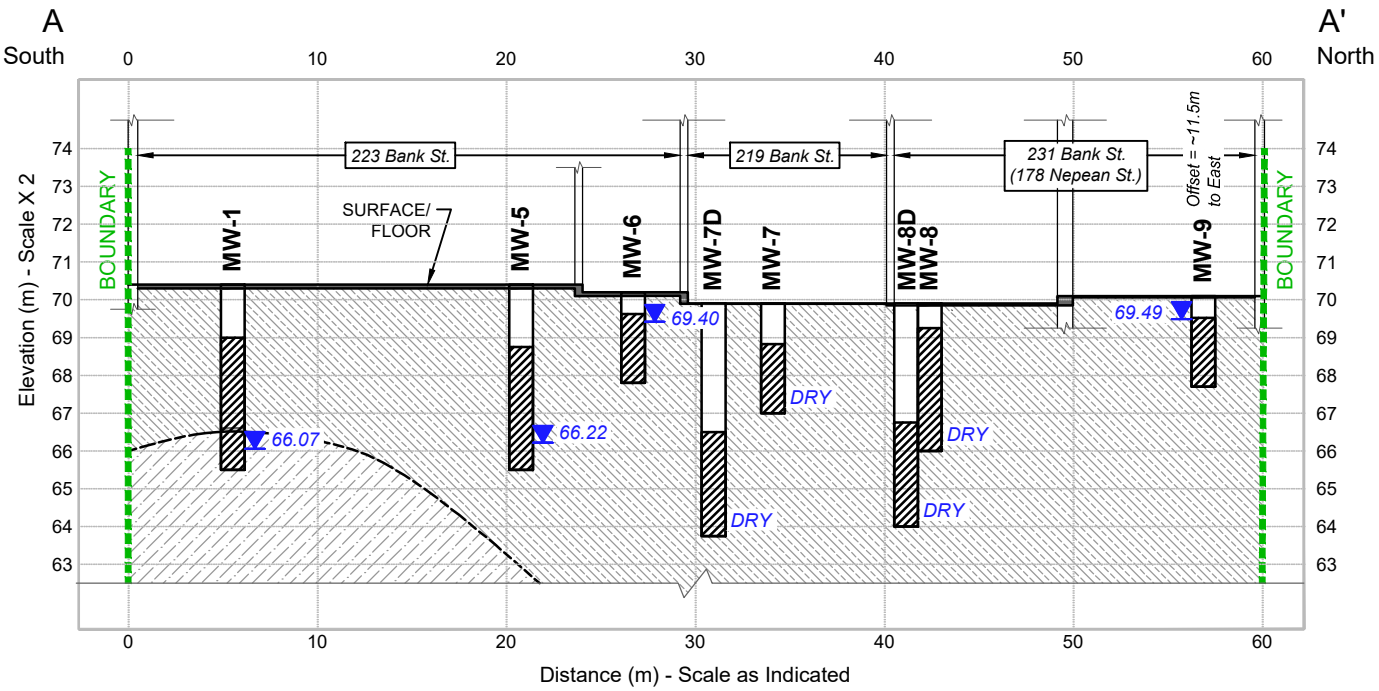
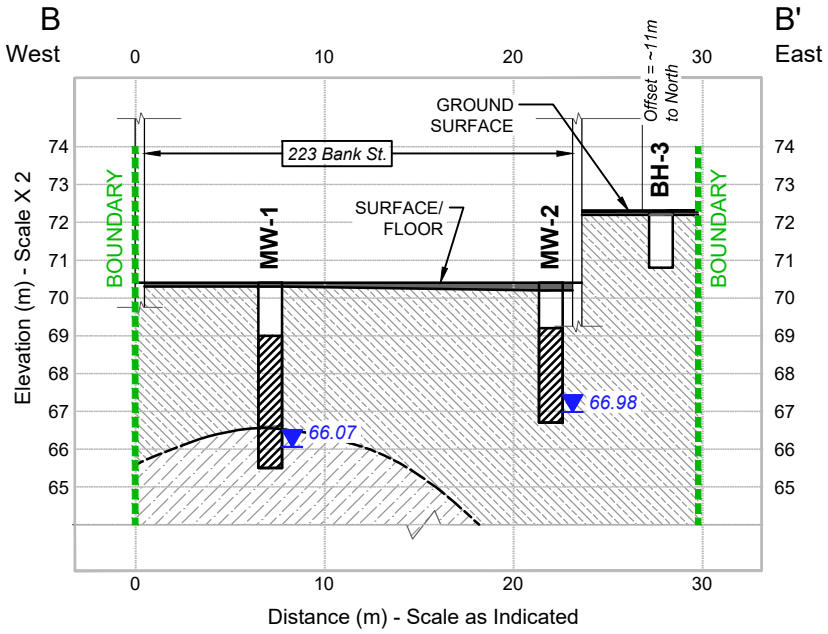


CROSS SECTION A-A'



CROSS SECTION B-B'

LEGEND

- CONCRETE
- SILTY CLAY
- SANDY SILT
- 66.07 GROUNDWATER ELEVATION

0 4m 8m 16m

HORIZONTAL 1:400

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DATE: JANUARY 2024	CLIENT: SMART LIVING PROPERTIES	project no. OTT-22010865-A0
DESIGN: LW / CHECKED: MM	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	scale 1:400
DRAWN BY: AS	TITLE: CROSS SECTIONS A-A' AND B-B' 178 NEPEAN STREET, 219 AND 223 BANK STREET, OTTAWA, ON	FIG 6

Filename: E:\OTT\OTT-22010865-A0\60 Execution\65 Drawings\22010865-A0_Ph2.dwg
Last Saved: Jan 31, 2024 12:48 PM Last Plotted: Jan 31, 2024 12:48 PM Plotted by: SeverA

MW1	Depth (mbgs)																13-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS4	3.8 to 4.8	<0.02	<0.05	<0.05	<0.05	<5	100	87	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

MW2	Depth (mbgs)																13-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS1	0.15 to 0.3	<0.02	<0.05	<0.05	<0.05	<5	<10	<50	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

BH3	Depth (mbgs)																13-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS2	0.15 to 0.6	-	-	-	-	<5	<10	<50	<50	-	-	-	-	-	-	-	-

BH4	Depth (mbgs)																13-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS2	0.75 to 1.35	<0.02	<0.05	<0.05	<0.05	<10	<10	<50	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

MW5	Depth (mbgs)																13-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS3	3.0 to 3.8	<0.02	<0.05	<0.05	<0.05	<10	<10	<50	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02
DUP	3.0 to 3.8	<0.02	<0.05	<0.05	<0.05	<10	<10	<50	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

MW6	Depth (mbgs)																29-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS2	0.6 to 1.5	-	-	-	-	-	<10	<50	<50	-	-	-	-	-	-	-	-
SS3	1.5 to 2.1	-	-	-	-	-	1070	423	<50	-	-	-	-	-	-	-	-
SS4	2.0 to 2.3	< 0.02	< 0.5	<0.05	< 0.05	<5	964	454	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

MW7	Depth (mbgs)																28-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS2	0.8 to 1.7	<0.02	<0.05	<0.05	<0.05	<5	642	304	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02
SS3	1.6 to 2.2	-	-	-	-	-	<10	<50	<50	-	-	-	-	-	-	-	-

MW8	Depth (mbgs)																28-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS3	1.2 to 2.1	<0.02	<0.05	<0.05	<0.05	<5	<10	<50	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

MW9	Depth (mbgs)																28-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
S1	0.15 to 0.8	<0.02	<0.05	<0.05	<0.05	<5	<10	<50	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

BH12	Depth (mbgs)																12-Dec-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS2	0.9 to 1.8	<0.02	<0.05	<0.05	<0.05	<10	<10	<50	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

BH13	Depth (mbgs)																12-Dec-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS2	0.9 to 1.8	<0.02	<0.05	<0.05	<0.05	<10	<10	<50	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

BH14	Depth (mbgs)																19-Dec-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS2	1.8 to 2.4	<0.02	<0.05	<0.05	<0.05	<10	<10	<50	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Benzene	B	0.17
Toluene	T	6
Ethylbenzene	E	15
Total Xylenes	X	25
F1	F1 (C6-C10)	65
F2	F2 (C10-C16)	150
F3	F3 (C16-C34)	1300
F4	F4 (C34-C50)	5600

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
1,1-Dichloroethane	1,1-DCA	11
1,2-Dichlororethane	1,2-DCA	0.05
1,1-Dichloroethylene	1,1-DCE	0.05
Cis-1,2-Dichloroethylene	c-1,2-DCE	30
Trans-1,2,-Dichlorothylene	t-1,2-DCE	0.75
Tetrachloroethylene	PCE	2.3
Trichloroethylene	TCE	0.52
Vinyl Chloride	VC	0.022

LEGEND

- PROPERTY BOUNDARY
- BH-3 BOREHOLE NO. AND LOCATION
- MW-1 MONITORING WELL NO. AND LOCATION
- SAMPLE MEETS TABLE 3 SCS
- SAMPLE EXCEEDS TABLE 3 SCS

0 5m 10m 20m
HORIZONTAL 1:500

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Ottawa, ON K2B 8H6, Canada

DATE: MARCH 2024
DESIGN: LW CHECKED: MM
DRAWN BY: AS

CLIENT: SMART LIVING PROPERTIES
PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
TITLE: SOIL ANALYTICAL RESULTS – BTEX & PHC
178 NEPEAN STREET, 219 AND 223 BANK STREET, OTTAWA, ON

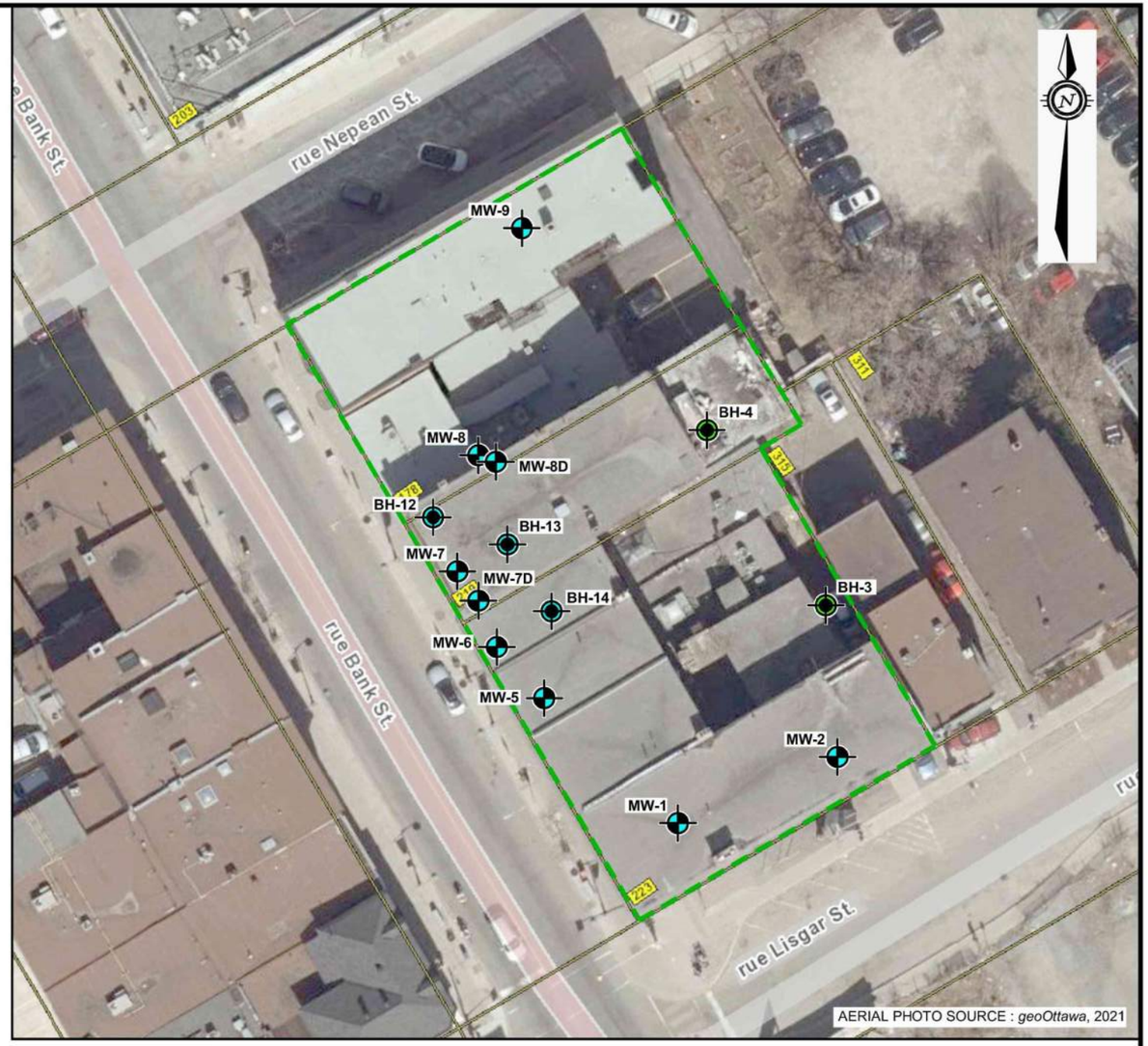
project no. OTT-22010865-A0
scale 1:500
FIG 7

Filename: E:\OTT\OTT-22010865-A0\60 Execution\65 Drawings\22010865-A0_Ph2.dwg
Last Saved: Mar 12, 2024 2:15 PM Last Plotted: Mar 12, 2024 2:15 PM Plotted by: SeverA

MW3	Depth (mbgs)	13-Sep-23																	
		Ace	Acl	An	B(a)A	B(a)P	B(b)F	B(b/k)F	B(ghi)P	B(k)F	C	DA	Fl	F	I(123)P	T-MN	N	P	Py
SS2	0.75 - 1.5	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

MW4	Depth (mbgs)	13-Sep-23																	
		Ace	Acl	An	B(a)A	B(a)P	B(b)F	B(b/k)F	B(ghi)P	B(k)F	C	DA	Fl	F	I(123)P	T-MN	N	P	Py
SS3	0.75 to 1.35	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Acenaphthene	Ace	58
Acenaphthylene	Acl	0.15
Anthracene	An	0.74
Benzo(a)anthracene	B(a)A	0.63
Benzo(a)pyrene	B(a)P	0.3
Benzo(b)fluoranthene	B(b)F	0.78
Benzo(g,h,i)perylene	B(ghi)P	7.8
Benzo(k)fluoranthene	B(k)F	0.78
Chrysene	C	7.8
Dibenzo(a,h)anthracene	DA	0.1
Fluoranthene	Fl	0.69
Fluorene	F	69
Indeno(1,2,3,-cd)pyrene	I(123)P	0.48
Total Methylnaphthalene	T-MN	3.4
Naphthalene	N	0.75
Phenanthrene	P	7.8
Pyrene	Py	78



LEGEND

PROPERTY BOUNDARY

BH-3 BOREHOLE NO. AND LOCATION

MW-1 MONITORING WELL NO. AND LOCATION

SAMPLE MEETS TABLE 3 SCS

SAMPLE EXCEEDS TABLE 3 SCS

0 5m 10m 20m

HORIZONTAL 1:500

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Ottawa, ON K2B 8H6, Canada

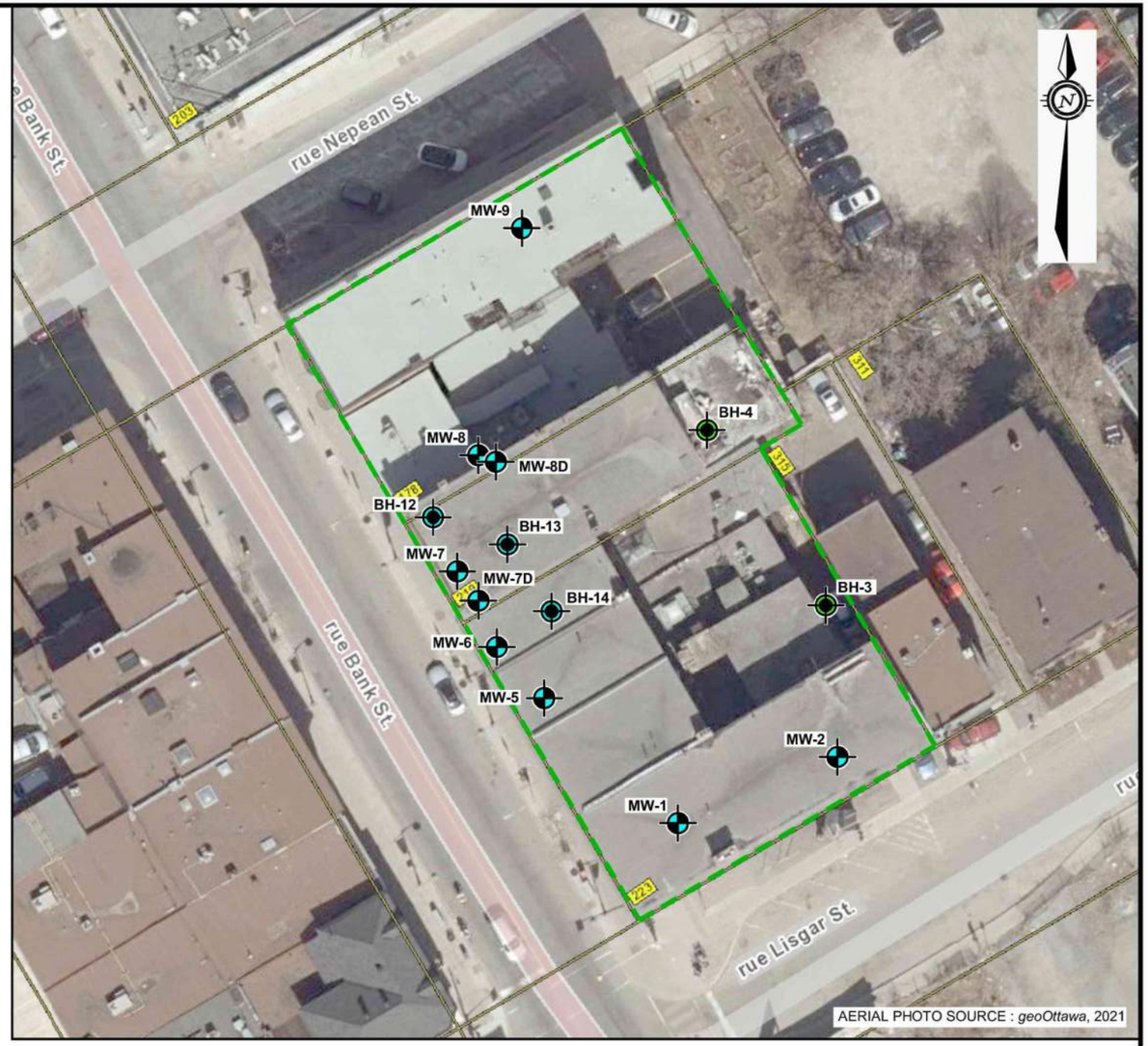
DATE: JANUARY 2024	CLIENT: SMART LIVING PROPERTIES		project no. OTT-22010865-A0
DESIGN: LW / CHECKED: MM	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT		scale 1:500
DRAWN BY: AS	TITLE: SOIL ANALYTICAL RESULTS – PAH 178 NEPEAN STREET, 219 AND 223 BANK STREET, OTTAWA, ON		FIG 8

Filename: E:\OTT\OTT-22010865-A0\60 Execution\65 Drawings\22010865-A0_Ph2.dwg
Last Saved: Jan 31, 2024 12:50 PM Last Plotted: Jan 31, 2024 12:50 PM Plotted by: SeverA

MW3	Depth (mbgs)																				13-Sep-23
		Sb	As	Ba	Be	B	B (HWS)	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	U	V	Zn
SS2	0.75 - 1.5	<0.8	3	73.7	<0.5	7	0.42	<0.5	23	<0.2	6.8	14.3	56	0.24	0.6	13	<0.8	<0.5	<0.5	0.68	42.5	67

MW4	Depth (mbgs)																				13-Sep-23
		Sb	As	Ba	Be	B	B (HWS)	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	U	V	Zn
SS3	0.75 to 1.35	1.1	<1	28.5	<0.5	<5	0.53	<0.5	18	<0.2	4.8	7.7	6	<0.10	0.5	10	<0.8	<0.5	<0.5	<0.50	25.2	32

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Antimony	Sb	7.5
Arsenic	As	18
Barium	Ba	390
Beryllium	Be	5
Boron	B	120
Boron (HWS)	B (HWS)	1.5
Cadmium	Cd	1.2
Chromium	Cr	160
Chromium VI	Cr VI	8
Cobalt	Co	22
Copper	Cu	180
Lead	Pb	120
Mercury	Hg	1.8
Molybdenum	Mo	6.9
Nickel	Ni	130
Selenium	Se	2.4
Silver	Ag	25
Thallium	Tl	1
Uranium	U	23
Vanadium	V	86
Zinc	Zn	340



LEGEND

PROPERTY BOUNDARY

BH-3 BOREHOLE NO. AND LOCATION

MW-1 MONITORING WELL NO. AND LOCATION

SAMPLE MEETS TABLE 3 SCS

SAMPLE EXCEEDS TABLE 3 SCS

0 5m 10m 20m

HORIZONTAL 1:500

EXP Services Inc. www.exp.com
t: +1.613.688.1899 | f: +1.613.225.7337
2650 Queensview Drive, Suite 100
Ottawa, ON K2B 8H6, Canada

DATE: JANUARY 2024
DESIGN: LW
CHECKED: MM
DRAWN BY: AS

CLIENT: SMART LIVING PROPERTIES
PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
TITLE: SOIL ANALYTICAL RESULTS – METALS
178 NEPEAN STREET, 219 AND 223 BANK STREET, OTTAWA, ON

project no. OTT-22010865-A0
scale 1:500
FIG 9

Filename: E:\OTT\OTT-22010865-A0\60 Execution\65 Drawings\22010865-A0_Ph2.dwg
Last Saved: Jan 31, 2024 12:50 PM Last Plotted: Jan 31, 2024 12:50 PM Plotted by: SeverA

MW1	Depth (mbgs)																13-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS4	3.8 to 4.8	<0.02	<0.05	<0.05	<0.05	<5	100	87	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

MW2	Depth (mbgs)																13-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS1	0.15 to 0.3	<0.02	<0.05	<0.05	<0.05	<5	<10	<50	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

MW3	Depth (mbgs)																13-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS2	0.15 to 0.6	-	-	-	-	<5	<10	<50	<50	-	-	-	-	-	-	-	-

MW4	Depth (mbgs)																13-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS2	0.75 to 1.35	<0.02	<0.05	<0.05	<0.05	<10	<10	<50	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

MW5	Depth (mbgs)																13-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS3	3.0 to 3.8	<0.02	<0.05	<0.05	<0.05	<10	<10	<50	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02
DUP	3.0 to 3.8	<0.02	<0.05	<0.05	<0.05	<10	<10	<50	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

MW6	Depth (mbgs)																29-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS2	0.6 to 1.5	-	-	-	-	-	<10	<50	<50	-	-	-	-	-	-	-	-
SS3	1.5 to 2.1	-	-	-	-	-	1070	423	<50	-	-	-	-	-	-	-	-
SS4	2.0 to 2.3	< 0.02	< 0.5	<0.05	< 0.05	<5	964	454	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

MW7	Depth (mbgs)																28-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS2	0.8 to 1.7	<0.02	<0.05	<0.05	<0.05	<5	642	304	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02
SS3	1.6 to 2.2	-	-	-	-	-	<10	<50	<50	-	-	-	-	-	-	-	-

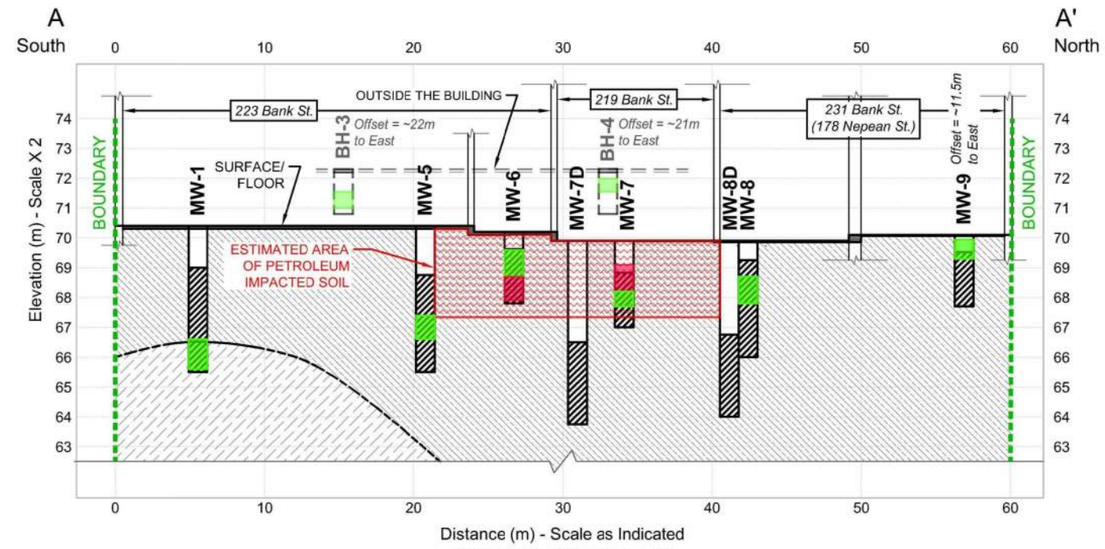
MW8	Depth (mbgs)																28-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
SS3	1.2 to 2.1	<0.02	<0.05	<0.05	<0.05	<5	<10	<50	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

MW9	Depth (mbgs)																28-Sep-23
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
S1	0.15 to 0.8	<0.02	<0.05	<0.05	<0.05	<5	<10	<50	<50	<0.02	<0.03	<0.05	<0.02	<0.05	<0.05	<0.03	<0.02

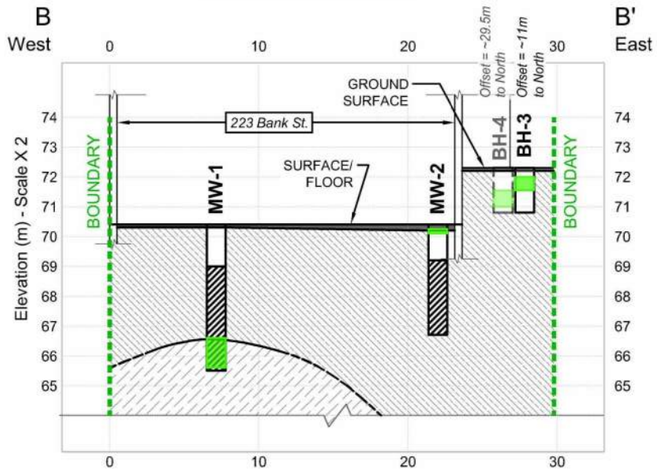
PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Benzene	B	0.17
Toluene	T	6
Ethylbenzene	E	15
Total Xylenes	X	25
F1	F1 (C6-C10)	65
F2	F2 (C10-C16)	150
F3	F3 (C16-C34)	1300
F4	F4 (C34-C50)	5600
1,1-Dichloroethane	1,1-DCA	11
1,2-Dichlororethane	1,2-DCA	0.05
1,1-Dichloroethylene	1,1-DCE	0.05
Cis-1,2-Dichloroethylene	c-1,2-DCE	30
Trans-1,2,-Dichlorothylene	t-1,2-DCE	0.75
Tetrachloroethylene	PCE	2.3
Trichloroethylene	TCE	0.52
Vinyl Chloride	VC	0.022

SAMPLE MEETS TABLE 3 SCS

SAMPLE EXCEEDS TABLE 3 SCS



CROSS SECTION A-A'



CROSS SECTION B-B'

LEGEND

CONCRETE

SILTY CLAY

SANDY SILT

HORIZONTAL 1:400

EXP Services Inc. www.exp.com
t: +1.613.688.1899 | f: +1.613.225.7337
2650 Queensview Drive, Suite 100
Ottawa, ON K2B 8H6, Canada

DATE	CLIENT:	project no.
MARCH 2024	SMART LIVING PROPERTIES	OTT-22010865-A0
DESIGN LW / CHECKED MM	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	scale 1:400
DRAWN BY AS	TITLE: SOIL CROSS SECTIONS A-A' AND B-B' – BTEX & PHC, 178 NEPEAN STREET, 219 AND 223 BANK STREET, OTTAWA, ON	FIG 10

Filename: E:\OTT\OTT-22010865-A0\60 Execution\65 Drawings\22010865-A0_Ph2.dwg
Last Saved: Mar 12, 2024 2:30 PM Last Plotted: Mar 12, 2024 2:30 PM Plotted by: SeverA

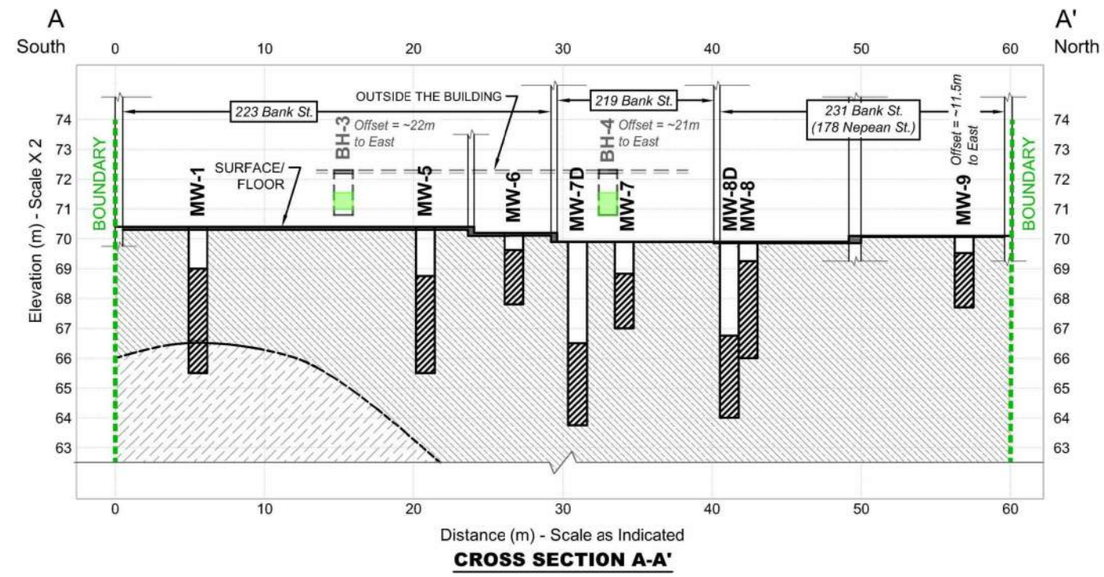
MW3	Depth (mbgs)	13-Sep-23																	
		Ace	Acl	An	B(a)A	B(a)P	B(b)F	B(b/k)F	B(ghi)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py
SS2	0.75 - 1.5	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

MW4	Depth (mbgs)	13-Sep-23																	
		Ace	Acl	An	B(a)A	B(a)P	B(b)F	B(b/k)F	B(ghi)P	B(k)F	C	DA	FI	F	I(123)P	T-MN	N	P	Py
SS3	0.75 to 1.35	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

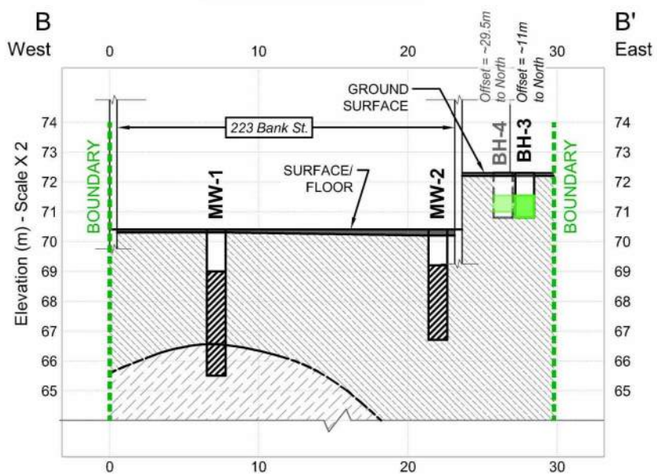
PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Acenaphthene	Ace	58
Acenaphthylene	Acl	0.15
Anthracene	An	0.74
Benzo(a)anthracene	B(a)A	0.63
Benzo(a)pyrene	B(a)P	0.3
Benzo(b)fluoranthene	B(b)F	0.78
Benzo(g,h,i)perylene	B(ghi)P	7.8
Benzo(k)fluoranthene	B(k)F	0.78
Chrysene	C	7.8
Dibenzo(a,h)anthracene	DA	0.1
Fluoranthene	FI	0.69
Fluorene	F	69
Indeno(1,2,3,-cd)pyrene	I(123)P	0.48
Total Methylnaphthalene	T-MN	3.4
Naphthalene	N	0.75
Phenanthrene	P	7.8
Pyrene	Py	78

SAMPLE MEETS TABLE 3 SCS

SAMPLE EXCEEDS TABLE 3 SCS



CROSS SECTION A-A'



CROSS SECTION B-B'

LEGEND

CONCRETE

SILTY CLAY

SANDY SILT

HORIZONTAL 1:400

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

DATE: MARCH 2024	CLIENT:	SMART LIVING PROPERTIES	project no. OTT-22010865-A0
DESIGN: LW / CHECKED: MM	PROJECT:	PHASE TWO ENVIRONMENTAL SITE ASSESSMENT	scale 1:400
DRAWN BY: AS	TITLE:	SOIL CROSS SECTIONS A-A' AND B-B' – PAH 178 NEPEAN STREET, 219 AND 223 BANK STREET, OTTAWA, ON	FIG 11

Filename: E:\OTT\OTT-22010865-A0\60 Execution\65 Drawings\22010865-A0_Ph2.dwg
Last Saved: Mar 12, 2024 2:31 PM Last Plotted: Mar 12, 2024 2:31 PM Plotted by: SeverA

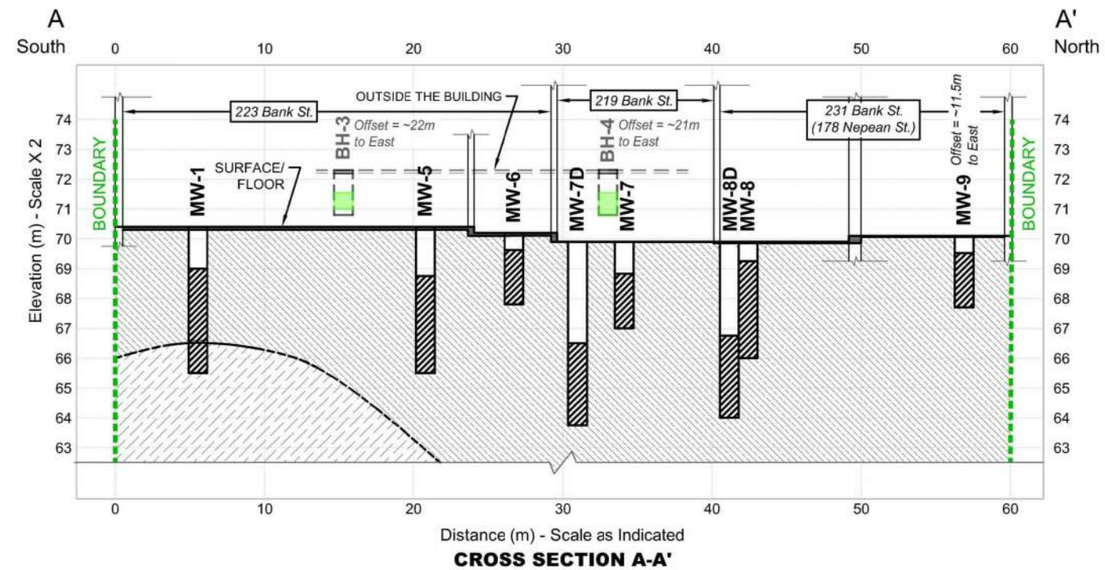
MW3	Depth (mbgs)	13-Sep-23																			
		Sb	As	Ba	Be	B	B (HWS)	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	U	V	Zn
SS2	0.75 - 1.5	<0.8	3	73.7	<0.5	7	0.42	<0.5	23	<0.2	6.8	14.3	56	0.24	0.6	13	<0.8	<0.5	<0.5	0.68	42.5	67

MW4	Depth (mbgs)	13-Sep-23																			
		Sb	As	Ba	Be	B	B (HWS)	Cd	Cr	Cr VI	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	U	V	Zn
SS3	0.75 to 1.35	1.1	<1	28.5	<0.5	<5	0.53	<0.5	18	<0.2	4.8	7.7	6	<0.10	0.5	10	<0.8	<0.5	<0.5	<0.50	25.2	32

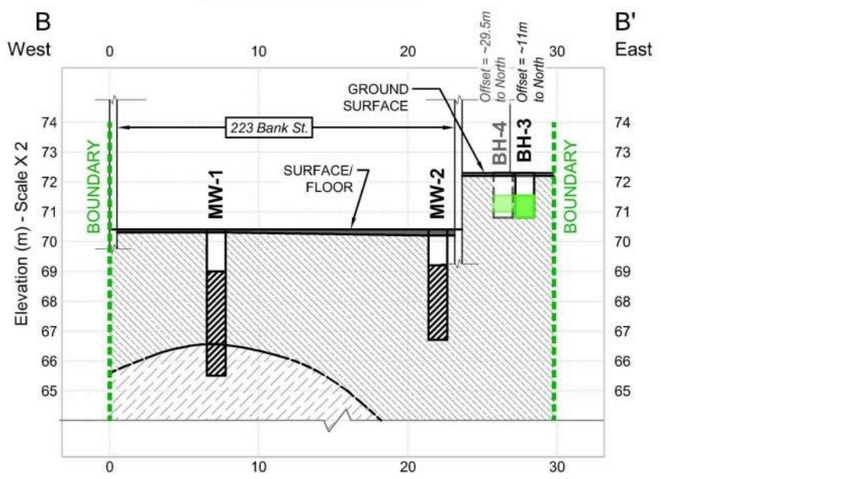
PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Antimony	Sb	7.5
Arsenic	As	18
Barium	Ba	390
Beryllium	Be	5
Boron	B	120
Boron (HWS)	B (HWS)	1.5
Cadmium	Cd	1.2
Chromium	Cr	160
Chromium VI	Cr VI	8
Cobalt	Co	22
Copper	Cu	180
Lead	Pb	120
Mercury	Hg	1.8
Molybdenum	Mo	6.9
Nickel	Ni	130
Selenium	Se	2.4
Silver	Ag	25
Thallium	Tl	1
Uranium	U	23
Vanadium	V	86
Zinc	Zn	340

SAMPLE MEETS TABLE 3 SCS

SAMPLE EXCEEDS TABLE 3 SCS



CROSS SECTION A-A'



CROSS SECTION B-B'

LEGEND

CONCRETE

SILTY CLAY

SANDY SILT

0 4m 8m 16m

HORIZONTAL 1:400

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

DATE: MARCH 2024	CLIENT: SMART LIVING PROPERTIES		project no. OTT-22010865-A0
DESIGN: LW / CHECKED: MM	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT		scale 1:400
DRAWN BY: AS	TITLE: SOIL CROSS SECTIONS A-A' AND B-B' – METALS 178 NEPEAN STREET, 219 AND 223 BANK STREET, OTTAWA, ON		FIG 12

Filename: E:\OTT\OTT-22010865-A0\60 Execution\65 Drawings\22010865-A0_Ph2.dwg
Last Saved: Mar 12, 2024 2:32 PM Last Plotted: Mar 12, 2024 2:32 PM Plotted by: SeverA

MW1	Date	Screen Interval 1.5 to 4.5 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	21-Nov-23	<0.20	<0.20	<0.10	<0.20	<25	462	384	<100	<0.20	<0.20	< 0.30	<0.20	<0.20	0.93	<0.20	< 0.17
	4-Dec-23	-	-	-	-	-	<100	<100	<100	-	-	-	-	-	-	-	-

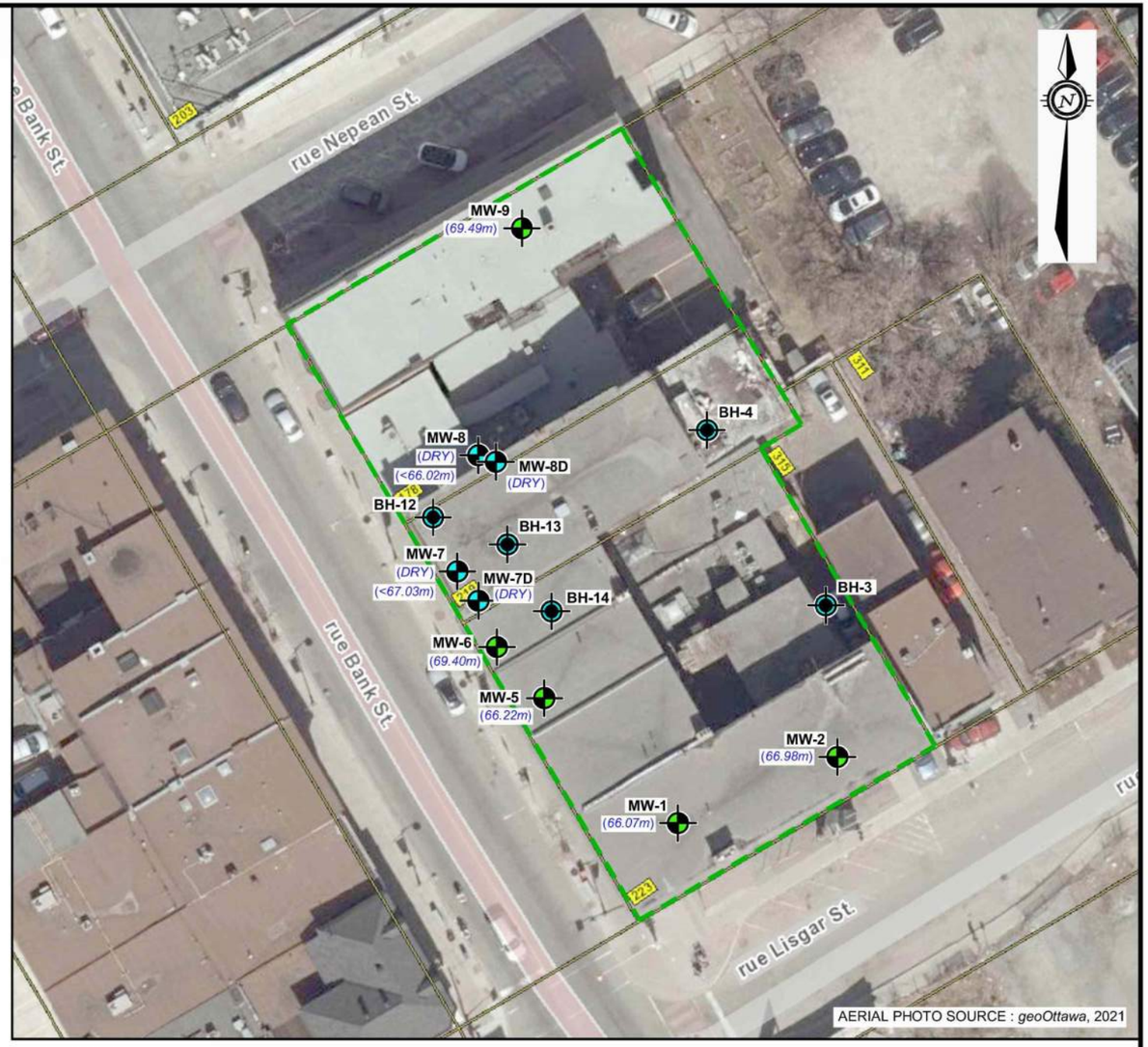
MW2	Date	Screen Interval 2.1 to 3.6 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	6-Oct-23	<0.20	0.6	<0.10	<0.20	<25	<100	<100	<100	<0.30	<0.20	< 0.30	<0.20	<0.20	<0.20	<0.20	< 0.17

MW5	Date	Screen Interval 1.8 to 4.8 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	6-Oct-23	<0.20	<0.20	<0.10	<0.20	<25	<100	<100	<100	<0.30	<0.20	< 0.30	<0.20	<0.20	<0.20	<0.20	< 0.17

MW6	Depth (mbgs)	Screen Interval 0.8 to 2.3 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	6-Oct-23	<0.20	<0.20	<0.10	<0.20	<25	<100	<100	<100	<0.30	<0.20	< 0.30	<0.20	<0.20	<0.20	<0.20	< 0.17

MW9	Date	Screen Interval 0.8 to 2.3 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	6-Oct-23	<0.20	<0.20	<0.10	<0.20	<25	<100	<100	<100	<0.30	<0.20	< 0.30	<0.20	<0.20	<0.20	<0.20	< 0.17
	10/6/2023 (Dup)	<0.20	<0.20	<0.10	<0.20	<25	<100	<100	<100	<0.30	<0.20	< 0.30	<0.20	<0.20	<0.20	<0.20	< 0.17

PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Benzene	B	430
Toluene	T	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
1,1-Dichloroethane	1,1-DCA	3100
1,2-Dichlororethane	1,2-DCA	12
1,1-Dichloroethylene	1,1-DCE	17
Cis-1,2-Dichloroethylene	c-1,2-DCE	17
Trans-1,2,-Dichlorothylene	t-1,2-DCE	17
Tetrachloroethylene	PCE	17
Trichloroethylene	TCE	17
Vinyl Chloride	VC	1.7



LEGEND

- PROPERTY BOUNDARY
- BH-3 — BOREHOLE NO. AND LOCATION
- MW-1 — MONITORING WELL NO. AND LOCATION
- (66.07m) — GROUNDWATER ELEVATION (m)
- SAMPLE MEETS TABLE 3 SCS
- SAMPLE EXCEEDS TABLE 3 SCS

0 5m 10m 20m
HORIZONTAL 1:500

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

DATE: JANUARY 2024
DESIGN: LW | CHECKED: MM
DRAWN BY: AS

CLIENT: SMART LIVING PROPERTIES
PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
TITLE: GROUNDWATER ANALYTICAL RESULTS – BTEX & PHC
178 NEPEAN STREET, 219 AND 223 BANK STREET, OTTAWA, ON

project no. OTT-22010865-A0
scale 1:500
FIG 13

Filename: E:\OTT\OTT-22010865-A0\60 Execution\65 Drawings\22010865-A0_Ph2.dwg
Last Saved: Jan 31, 2024 12:55 PM Last Plotted: Jan 31, 2024 12:56 PM Plotted by: SeverA

MW1	Date	Screen Interval 1.5 to 4.5 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	21-Nov-23	<0.20	<0.20	<0.10	<0.20	<25	462	384	<100	<0.20	<0.20	< 0.30	<0.20	<0.20	0.93	<0.20	< 0.17
	4-Dec-23	-	-	-	-	-	<100	<100	<100	-	-	-	-	-	-	-	-

MW2	Date	Screen Interval 2.1 to 3.6 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	6-Oct-23	<0.20	0.6	<0.10	<0.20	<25	<100	<100	<100	<0.30	<0.20	< 0.30	<0.20	<0.20	<0.20	<0.20	< 0.17

MW5	Date	Screen Interval 1.8 to 4.8 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	6-Oct-23	<0.20	<0.20	<0.10	<0.20	<25	<100	<100	<100	<0.30	<0.20	< 0.30	<0.20	<0.20	<0.20	<0.20	< 0.17

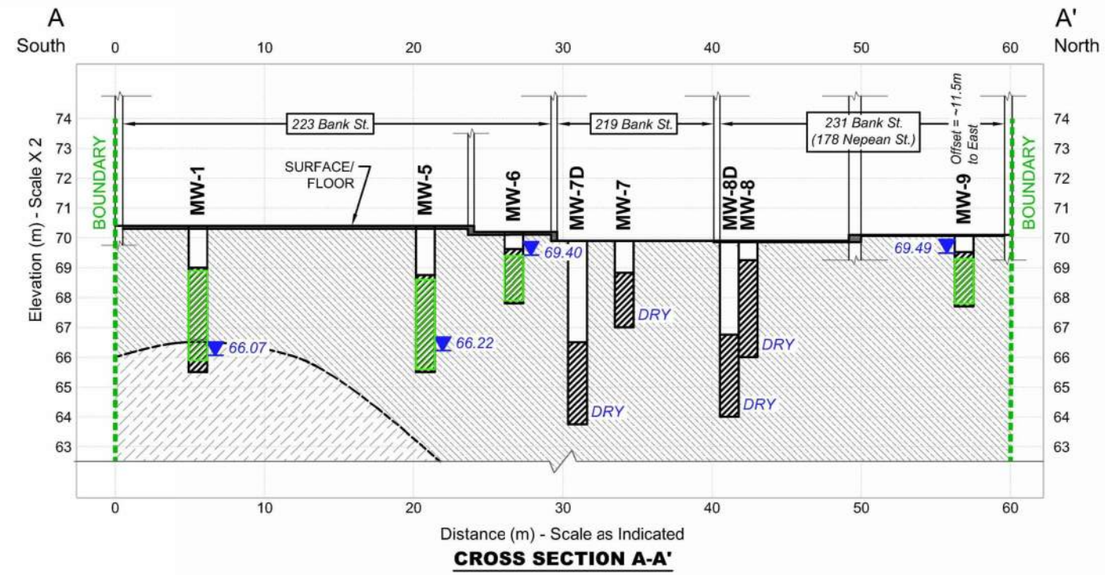
MW6	Depth (mbgs)	Screen Interval 0.8 to 2.3 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	6-Oct-23	<0.20	<0.20	<0.10	<0.20	<25	<100	<100	<100	<0.30	<0.20	< 0.30	<0.20	<0.20	<0.20	<0.20	< 0.17

MW9	Date	Screen Interval 0.8 to 2.3 m bgs															
		B	T	E	X	F1	F2	F3	F4	1,1-DCA	1,2-DCA	1,1-DCE	c-1,2-DCE	t-1,2-DCE	PCE	TCE	VC
	6-Oct-23	<0.20	<0.20	<0.10	<0.20	<25	<100	<100	<100	<0.30	<0.20	< 0.30	<0.20	<0.20	<0.20	<0.20	< 0.17
	10/6/2023 (Dup)	<0.20	<0.20	<0.10	<0.20	<25	<100	<100	<100	<0.30	<0.20	< 0.30	<0.20	<0.20	<0.20	<0.20	< 0.17

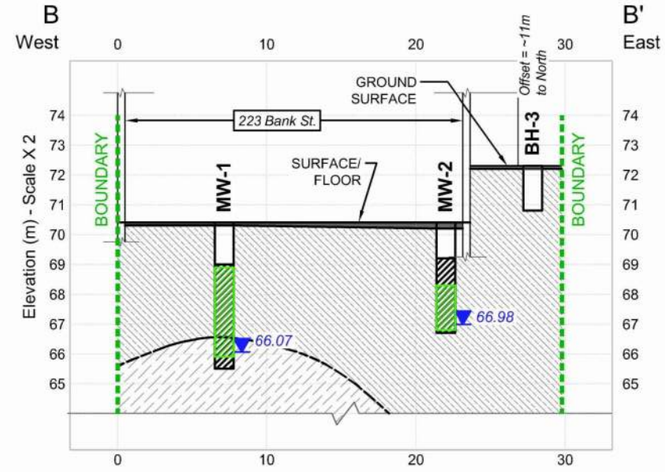
PARAMETERS	ABBREVIATION	REG 153/04 TABLE 3 SCS Residential
Benzene	B	430
Toluene	T	18000
Ethylbenzene	E	2300
Total Xylenes	X	4200
F1	F1 (C6-C10)	750
F2	F2 (C10-C16)	150
F3	F3 (C16-C34)	500
F4	F4 (C34-C50)	500
1,1-Dichloroethane	1,1-DCA	3100
1,2-Dichlororethane	1,2-DCA	12
1,1-Dichloroethylene	1,1-DCE	17
Cis-1,2-Dichloroethylene	c-1,2-DCE	17
Trans-1,2,-Dichlorothylene	t-1,2-DCE	17
Tetrachloroethylene	PCE	17
Trichloroethylene	TCE	17
Vinyl Chloride	VC	1.7

SAMPLE MEETS TABLE 3 SCS

SAMPLE EXCEEDS TABLE 3 SCS



CROSS SECTION A-A'



CROSS SECTION B-B'

LEGEND

CONCRETE

SILTY CLAY

SANDY SILT

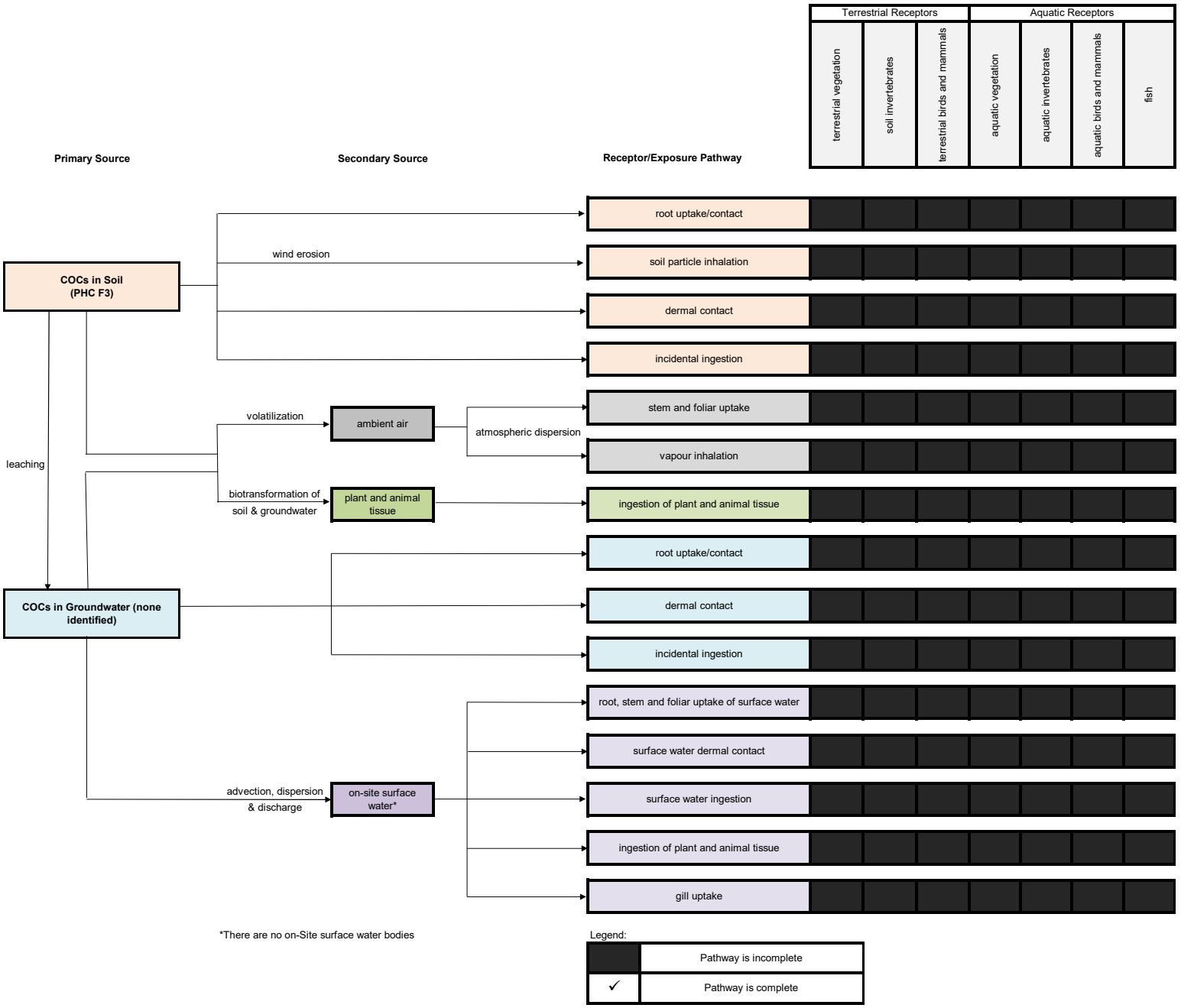
66.07 GROUNDWATER ELEVATION

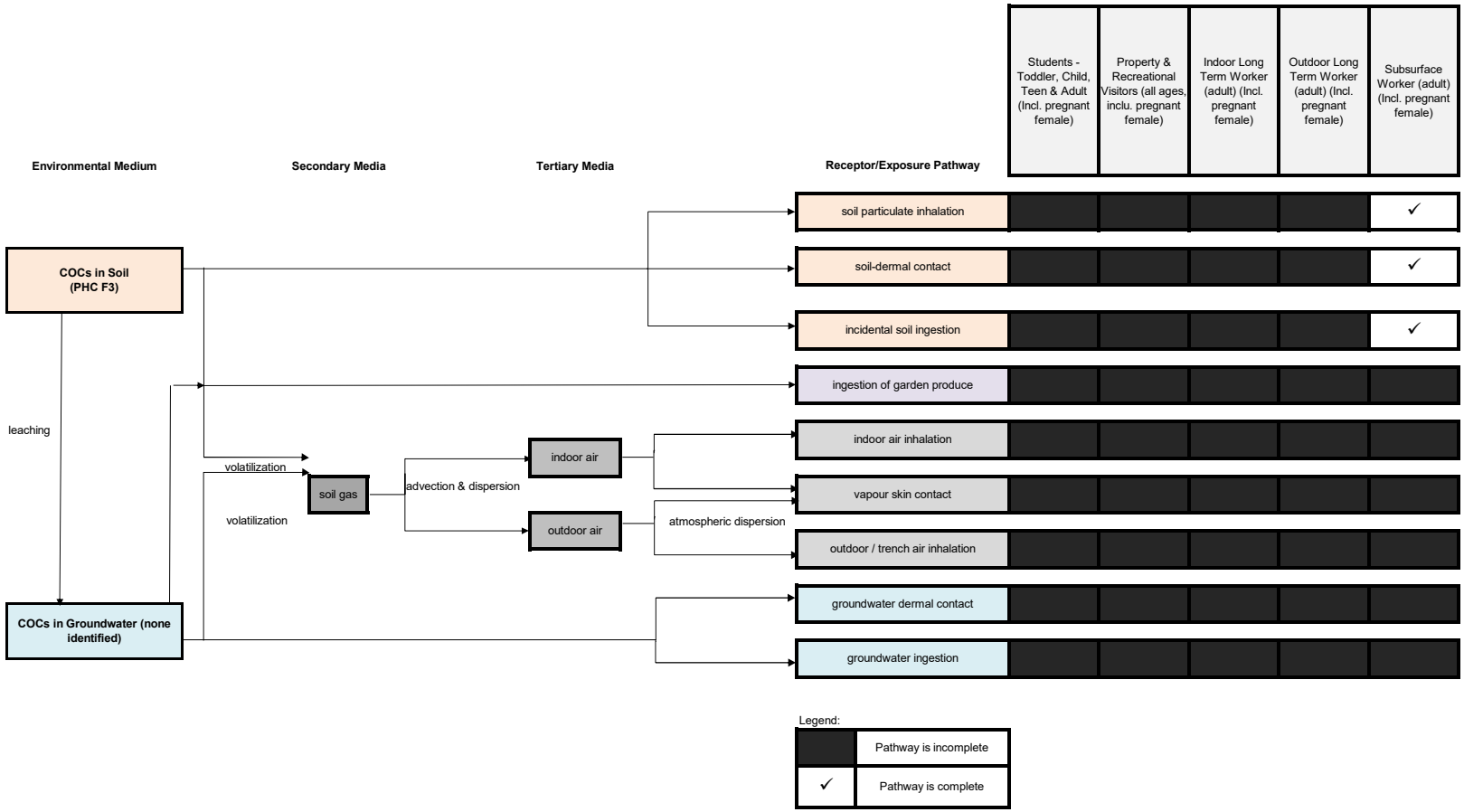
HORIZONTAL 1:400

EXP Services Inc. www.exp.com
t: +1.613.688.1899 | f: +1.613.225.7337
2650 Queensview Drive, Suite 100
Ottawa, ON K2B 8H6, Canada

DATE: JANUARY 2024	CLIENT: SMART LIVING PROPERTIES		project no. OTT-22010865-A0
DESIGN: LW / CHECKED: MM	PROJECT: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT		scale 1:400
DRAWN BY: AS	TITLE: GROUNDWATER CROSS SECTIONS A-A' AND B-B' – BTEX & PHC 178 NEPEAN STREET, 219 AND 223 BANK STREET, OTTAWA, ON		FIG 14

Filename: E:\OTT\OTT-22010865-A0\60 Execution\65 Drawings\22010865-A0_Ph2.dwg
Last Saved: Jan 31, 2024 12:55 PM Last Plotted: Jan 31, 2024 12:56 PM Plotted by: SeverA


Terrestrial Receptors
Aquatic Receptors
terrestrial vegetation
soil invertebrates
terrestrial birds and mammals
aquatic vegetation
aquatic invertebrates
aquatic birds and mammals
fish
Primary Source
Secondary Source
Receptor/Exposure Pathway
COCs in Soil (PHC F3)
COCs in Groundwater (none identified)
leaching
wind erosion
volatilization
ambient air
atmospheric dispersion
biotransformation of soil & groundwater
plant and animal tissue
advection, dispersion & discharge
on-site surface water*
root uptake/contact
soil particle inhalation
dermal contact
incidental ingestion
stem and foliar uptake
vapour inhalation
ingestion of plant and animal tissue
root uptake/contact
dermal contact
incidental ingestion
root, stem and foliar uptake of surface water
surface water dermal contact
surface water ingestion
ingestion of plant and animal tissue
gill uptake
*There are no on-Site surface water bodies
Legend:
Pathway is incomplete
✓
Pathway is complete


Environmental Medium
Secondary Media
Tertiary Media
Receptor/Exposure Pathway
Students - Toddler, Child, Teen & Adult (Incl. pregnant female)
Property & Recreational Visitors (all ages, inclu. pregnant female)
Indoor Long Term Worker (adult) (Incl. pregnant female)
Outdoor Long Term Worker (adult) (Incl. pregnant female)
Subsurface Worker (adult) (Incl. pregnant female)
COCs in Soil (PHC F3)
COCs in Groundwater (none identified)
leaching
volatilization
volatilization
soil gas
advection & dispersion
indoor air
outdoor air
atmospheric dispersion
soil particulate inhalation
soil-dermal contact
incidental soil ingestion
ingestion of garden produce
indoor air inhalation
vapour skin contact
outdoor / trench air inhalation
groundwater dermal contact
groundwater ingestion
✓
✓
✓
Legend:
Pathway is incomplete
✓
Pathway is complete

Appendix B: Survey Plan

PLAN OF SURVEY OF

LOT 35 (South Nepean Street)
AND
PART OF LOT 3 (East Bank Street)
AND
PART OF LOT 35 (North Lisgar Street)
REGISTERED PLAN 2996
CITY OF OTTAWA

Surveyed by Annis, O'Sullivan, Vollebekk Ltd.

Scale 1 : 200

8.0 6.0 4.0 2.0 0 4 8 Metres

Metric

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

Surveyor's Certificate

I CERTIFY THAT :

1. This survey and plan are correct and in accordance with the Surveys Act and the Surveyors Act and the regulations made under them.
2. The survey was completed on the 29th day of July, 2022.

Aug. 4/22
Date

T. Hartwick
Ontario Land Surveyor

Notes & Legend

—□—	Denotes	Survey Monument Planted
—■—	"	Survey Monument Found
SIB	"	Standard Iron Bar
SSIB	"	Short Standard Iron Bar
IB	"	Iron Bar
CC	"	Cut Cross
CP	"	Concrete Pin
(WIT)	"	Witness
Meas.	"	Measured
Conc.	"	Concrete
(AOG)	"	Annis, O'Sullivan, Vollebekk Ltd.
(PI)	"	Registered Plan 2996
(P2)	"	(AOG) Plan dated May 5, 2022
(P3)	"	Plan 4R-33030
(P4)	"	(AOG) Plan dated April 27, 1989
(P5)	"	(725) Plan dated November 22, 1967
(P6)	"	(647) Plan dated December 22, 1978
(P7)	"	Plan 4R-19844
(P8)	"	(AOG) Plan dated August 25, 1981
(DI)	"	Instrument CR382508
CLF	"	Chain Link Fence
UP	"	Utility Pole
—OHW—	"	Overhead Wires
RWC	"	Concrete Retaining Wall

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
V-31710

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

Bearings are grid, derived from the southerly limit of Nepean Street, shown to be N58°57'50"E on Plan 4R-33030 and are referred to the Central Meridian of MTM Zone 9 (76°30' West Longitude) NAD-83 (original).

For bearing comparison purposes, a rotation of 0°05'40" counter-clockwise was applied to bearings on (P4).

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

Job No. 22902-22 SLP L135 PIL138,35 RP2996 T 03 | CA

V:\2022\22902-22_Smart Living_178 Nepean Street_Topo_TH\Drawings\22902-22 SLP L135 PIL138,35 RP2996 T 03.dwg

Appendix C: Sampling and Analysis Plan

OTT-2101499-C0
178 Nepean Street and 219 to 233 Bank Street, Ottawa, ON

Objectives:

The objectives of this project are as follows to file a Record of Site Condition (RSC), supported by the completion of Phase One and Phase Two Environmental Site Assessment (ESA) reports, after assessment and remediation activities occur.

Drilling:

A total of 9 BH will be drilled and a monitoring will be installed in seven boreholes.

- 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:

- Soil samples should be submitted to AGAT labs as follows:

BH ID	Sample Depth	Parameters	Other
MW1	Worst Case	VOC, PHC	One field duplicate should be submitted.
MW2	Worst Case	VOC, PHC	
BH3	Fill	VOC, PHC, PAH, metals	
BH4	Fill	VOC, PHC, PAH, metals	
MW5	Worst Case	VOC, PHC	
MW6	Worst Case	VOC, PHC	
MW7	2 Worst Case	VOC, PHC	
MW8	Worst Case	VOC, PHC	
MW9	Worst Case	VOC, PHC	

- "Surficial samples" are samples that are within 0.6 metres of ground surface.
- "Worst case samples" are determined in the field, based on the following considerations: (1) presence of staining; (2) presence of odours; (3) petroleum vapour concentration. If the worst-case sample cannot be identified based on those factors, submit the sample at water table depth or the sample immediately above bedrock surface.
- Samples should be submitted to AGAT within 48 hours of sample collection.

Monitor Development:

- Develop wells at least 3 x well volumes or until clear

- Do not purge if monitor contains LNAPL.
- Purged water to be stored in a drum to be collected by CWW

Low Flow Groundwater Sampling

- Monitor the interior monitoring wells and record organic vapours, depth to water, and depth to LNAPL, if any
- Seven groundwater samples and a duplicate should be submitted to AGAT for analysis of VOC and PHC.
- Be careful to sample from near top of water table and use low flow rate to avoid collecting any fine sediment
- 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

Appendix D: Borehole Logs

Explanation of Terms Used on Borehole Records

SOIL DESCRIPTION

Terminology describing common soil genesis:

Topsoil: mixture of soil and humus capable of supporting good vegetative growth.

Peat: fibrous fragments of visible and invisible decayed organic matter.

Fill: where fill is designated on the borehole log it is defined as indicated by the sample recovered during the boring process. The reader is cautioned that fills are heterogeneous in nature and variable in density or degree of compaction. The borehole description may therefore not be applicable as a general description of site fill materials. All fills should be expected to contain obstruction such as wood, large concrete pieces or subsurface basements, floors, tanks, etc.; none of these may have been encountered in the boreholes. Since boreholes cannot accurately define the contents of the fill, test pits are recommended to provide supplementary information. Despite the use of test pits, the heterogeneous nature of fill will leave some ambiguity as to the exact composition of the fill. Most fills contain pockets, seams, or layers of organically contaminated soil. This organic material can result in the generation of methane gas and/or significant ongoing and future settlements. Fill at this site may have been monitored for the presence of methane gas and, if so, the results are given on the borehole logs. The monitoring process does not indicate the volume of gas that can be potentially generated nor does it pinpoint the source of the gas. These readings are to advise of the presence of gas only, and a detailed study is recommended for sites where any explosive gas/methane is detected. Some fill material may be contaminated by toxic/hazardous waste that renders it unacceptable for deposition in any but designated land fill sites; unless specifically stated the fill on this site has not been tested for contaminants that may be considered toxic or hazardous. This testing and a potential hazard study can be undertaken if requested. In most residential/commercial areas undergoing reconstruction, buried oil tanks are common and are generally not detected in a conventional geotechnical site investigation.

Till: the term till on the borehole logs indicates that the material originates from a geological process associated with glaciation. Because of this geological process the till must be considered heterogeneous in composition and as such may contain pockets and/or seams of material such as sand, gravel, silt or clay. Till often contains cobbles (60 to 200 mm) or boulders (over 200 mm). Contractors may therefore encounter cobbles and boulders during excavation, even if they are not indicated by the borings. It should be appreciated that normal sampling equipment cannot differentiate the size or type of any obstruction. Because of the horizontal and vertical variability of till, the sample description may be applicable to a very limited zone; caution is therefore essential when dealing with sensitive excavations or dewatering programs in till materials.

Terminology describing soil structure:

Desiccated: having visible signs of weathering by oxidization of clay minerals, shrinkage cracks, etc.

Stratified: alternating layers of varying material or color with the layers greater than 6 mm thick.

Laminated: alternating layers of varying material or color with the layers less than 6 mm thick.

Fissured: material breaks along plane of fracture.

Varved: composed of regular alternating layers of silt and clay.

Slickensided: fracture planes appear polished or glossy, sometimes striated.

Blocky: cohesive soil that can be broken down into small angular lumps which resist further breakdown.

Lensed: inclusion of small pockets of different soil, such as small lenses of sand scattered through a mass of clay; not thickness.

Seam: a thin, confined layer of soil having different particle size, texture, or color from materials above and below.

Homogeneous: same color and appearance throughout.

Well Graded: having wide range in grain sized and substantial amounts of all predominantly on grain size.

Uniformly Graded: predominantly on grain size.

All soil sample descriptions included in this report follow the ASTM D2487-11 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System). The system divides soils into three major categories: (1) coarse grained, (2) fine-grained, and (3) highly organic. The soil is then subdivided based on either gradation or plasticity characteristics. The system provides a group symbol (e.g. SM) and group name (e.g. silty sand) for identification. The classification excludes particles larger than 76 mm. Please note that, with the exception of those samples where a grain size analysis has been made, all samples are classified visually in accordance with ASTM D2488-09a Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Visual classification is not sufficiently accurate to provide exact grain sizing or precise differentiation between size classification systems. Others may use different classification systems; one such system is the ISSMFE Soil Classification.

ISSMFE SOIL CLASSIFICATION

CLAY	SILT			SAND			GRAVEL			COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE		

0.002	0.006	0.02	0.06	0.2	0.6	2.0	6.0	20	60	200

EQUIVALENT GRAIN DIAMETER IN MILLIMETRES

CLAY (PLASTIC) TO	FINE	MEDIUM	CRS.	FINE	COARSE
SILT (NONPLASTIC)	SAND			GRAVEL	

UNIFIED SOIL CLASSIFICATION

Terminology describing materials outside the USCS, (e.g. particles larger than 76 mm, visible organic matter, construction debris) is based upon the proportion of these materials present and as described below in accordance with Note 16 in ASTM D2488-09a:

Table a: Percent or Proportion of Soil, Pp

	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5≤Pp≤10%
Little	15≤Pp≤25%
Some	30≤Pp≤45%
Mostly	50≤Pp≤100%

The standard terminology to describe cohesionless soils includes the compactness as determined by the Standard Penetration Test 'N' value:

Table b: Apparent Density of Cohesionless Soil

	'N' Value (blows/0.3 m)
Very Loose	N<5
Loose	5≤N<10
Compact	10≤N<30
Dense	30≤N<50
Very Dense	50≤N

The standard terminology to describe cohesive soils includes consistency, which is based on undrained shear strength as measured by insitu vane tests, penetrometer tests, unconfined compression tests or similar field and laboratory analysis, Standard Penetration Test 'N' values can also be used to provide an approximate indication of the consistency and shear strength of fine grained, cohesive soils:

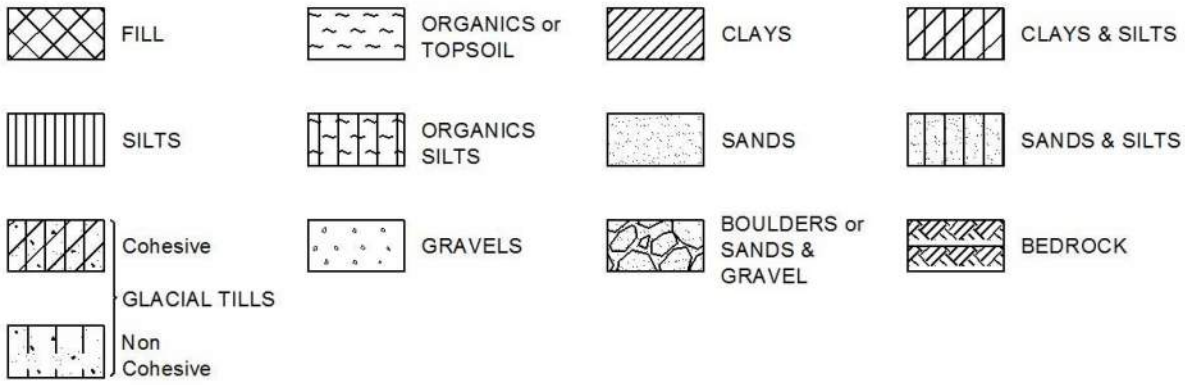
Table c: Consistency of Cohesive Soil

Consistency	Vane Shear Measurement (kPa)	'N' Value
Very Soft	<12.5	<2
Soft	12.5-25	2-4
Firm	25-50	4-8
Stiff	50-100	8-15
Very Stiff	100-200	15-30
Hard	>200	>30

Note: 'N' Value - The Standard Penetration Test records the number of blows of a 140 pound (64kg) hammer falling 30 inches (760mm), required to drive a 2 inch (50.8mm) O.D. split spoon sampler 1 foot (305mm). For split spoon samples where full penetration is not achieved, the number of blows is reported over the sampler penetration in meters (e.g. 50/0.15).

STRATA PLOT

Strata plots symbolize the soil or bedrock description. They are combinations of the following basic symbols:



WATER LEVEL MEASUREMENT

Log of Borehole MW1

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Figure No. 3

Page. 1 of 1

Date Drilled: ' September 13, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: MR Checked by: MC

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~150 mm thick	70.4	0				
		Gravel, concrete crumbles, grey, moist, slightly petroluem odours	70.3					
		SILTY CLAY Trace gravel, with sand, possible cobbles, brown to grey, moist, no odours, no stains.		1		20 pmm	SS1	
				2		20 pmm	SS2	
		Petroleum odours and stains from 2.6 m to 3.8 m depths		3		30 pmm	SS3	
			66.6					
		SANDY SILT With clay, grey, wet, petroluem odours	66.07	4		45 pmm	SS4	
		Auger Refusal at 4.9 m Depth	65.5					

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 50 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' November 21, 2023	4.3	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 12/14/23

Log of Borehole MW2

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' September 13, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: shahynaz Checked by: IT

Figure No. 4

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~180 mm thick	70.4	0				
		Sandy clay, with gravel, bricks and concrete pieces, grey, moist to wet, no odours, no stains	70.2			30 ppm	SS1	
		SILTY CLAY Trace gravel, with sand, possible cobbles, brown to grey, moist, no odours, no stains.		1		15 ppm	SS2	
				2		15 pmm	SS3	
▼			66.98	3		5 ppm	SS4	
		Auger Refusal at 3.7 m Depth	66.7					

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 50 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' October 6, 2023	3.4	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 12/14/23

Log of Borehole BH3

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' September 13, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: JE Checked by: IT

Figure No. 5

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength (kPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~125 mm thick	72.31	0	20 40 60 80 / 50 100 150 200	250 500 750 / 20 40 60		
		FILL Sand and gravel, trace clay, possible cobbles, dry, no odours, orange and black stains	72.2			15pmm	SS1	
				1		15ppm	SS2	
			70.8					
		Borehole Terminated at 1.5 m Depth						

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. Borehole was backfilled upon completion of drilling.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

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

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 12/14/23

Log of Borehole BH4

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' September 13, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: JE Checked by: IT

Figure No. 6

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength (kPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		ASHPHALT ~125 mm thick	72.3	0	20 40 60 80 / 50 100 150 200	250 500 750 / 20 40 60		
		FILL	72.2				SS1	
		Gravel, sand and clay, trees remains, brown to dark brown, moist, no odours, orange and black stains				45 pmm		
				1			SS2	
			70.8			45 pmm		
		Borehole Terminated at 1.5 m Depth						

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. Borehole was backfilled upon completion of drilling.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

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

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 12/14/23

Log of Borehole MW5

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' September 13, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: JE Checked by: IT

Figure No. 7

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~150 mm thick	70.4	0				
		Sandy clay, with gravel, bricks and concrete pieces, grey, moist to wet, no odours, no stains	70.3			5 ppm	SS1	
		SILTY CLAY Silty clay with sand, grey, moist, slightly petroleum odours, no stains.		1				
				2		10 pmm	SS2	
				3		15 pmm	SS3	
			66.22	4		15 pmm	SS4	
		Borehole Terminated at 4.9 m Depth	65.5					

Standard Penetration Test N Value: 20 40 60 80
Shear Strength kPa: 50 100 150 200
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 20 40 60

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 50 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' October 21, 2023	4.2	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 12/14/23

Log of Borehole MW6

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Figure No. 8

Page. 1 of 1

Date Drilled: ' September 29, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: JE Checked by: IT

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~150 mm thick	70.2	0	20 40 60 80 / 50 100 150 200 kPa	250 500 750 / 20 40 60		
		Sandy fill, possible cobbles, trace bricks, no odours, no stains	70.1			0 pmm	SS1	
		SILTY CLAY	69.4	1		0 pmm	SS2	
		With sand, trace cobbles and rocks, grey, wet, petroleum odours, no stains.				0 pmm	SS3	
			67.8	2		0 pmm	SS4	
		Auger Refusal at 2.4 m Depth						

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 38 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' October 21, 2023	0.8	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 12/14/23

Log of Borehole MW7

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' September 28, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: JE Checked by: IT

Figure No. 9

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth
		CONCRETE ~10 mm thick	69.9	0
		SILTY CLAY	69.9	
		Silty sand , trace cobbles and rocks, grey to brown, petroleum odours, no stains (compact)		1
				2
			67.0	
		Auger Refusal at 2.9 m Depth		

Standard Penetration Test N Value: 20 40 60 80
Shear Strength: 50 100 150 200 kPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 20 40 60

SAMPLES: SS1 (570 pmm), SS2 (490 pmm), SS3 (600 pmm), SS4 (620 pmm)

Natural Unit Wt. kN/m³

NOTES:
1. Borehole data requires interpretation by EXP before use by others
2. A 38 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' October 21, 2023	Dry	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 12/14/23

Log of Borehole MW8

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' September 28, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: JE Checked by: IT

Figure No. 10

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~50 mm thick	69.9	0				
		SILTY SAND Clay clumps, some gravel, cobbles, no odours, no stains	69.8			640 pmm	SS1	
		SILTY CLAY With sand, trace cobbles and rocks, grey, wet, petroleum odours, no stains.		1		660 pmm	SS2	
						650 pmm	SS3	
		No odours or stains below 2.3 m depth.		2				
						640 pmm	SS4	
				3				
			66.0			640 pmm	SS5	
		Borehole Terminated at 3.9 m Depth						

Standard Penetration Test N Value: 20 40 60 80
Shear Strength: 50 100 150 200 kPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 20 40 60

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 38 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' October 21, 2023	Dry	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 12/14/23

Log of Borehole MW9

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' September 28, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: JE Checked by: IT

Figure No. 11

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test + S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~40 mm thick	70.1	0	20 40 60 80 / 50 100 150 200 kPa	250 500 750 / 20 40 60		
		SILTY CLAY	70.1					
		Sand and gravel , trace bricks, grey to brown, no odours, no stains	69.49			100 pmm	SS1	
				1		200 pmm	SS2	
						570 pmm	SS3	
			67.7	2		620 pmm	SS4	
		Borehole Terminated at 2.4 m Depth						

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 38 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' October 21, 2023	0.6	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 12/14/23

Log of Borehole MW1

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' September 13, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: MR Checked by: MM

Figure No. 3

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~150 mm thick	70.4	0				
		Gravel, concrete crumbles, grey, moist, slightly petroluem odours	70.3					
		SILTY CLAY Trace gravel, with sand, possible cobbles, brown to grey, moist, no odours, no stains.		1		20 pmm	SS1	
				2		20 pmm	SS2	
		Petroleum odours and stains from 2.6 m to 3.8 m depths		3		30 pmm	SS3	
			66.6					
		SANDY SILT With clay, grey, wet, petroluem odours	66.07	4		45 pmm	SS4	
		Auger Refusal at 4.9 m Depth	65.5					

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 50 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' November 21, 2023	4.3	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 1/29/24

Log of Borehole MW2

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' September 13, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: shahynaz Checked by: IT

Figure No. 4

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
			70.4	0	20 40 60 80 / 50 100 150 200 kPa	250 500 750 / 20 40 60		
		CONCRETE ~180 mm thick	70.2			30 ppm	SS1	
		Sandy clay, with gravel, bricks and concrete pieces, grey, moist to wet, no odours, no stains		1		15 ppm	SS2	
		SILTY CLAY Trace gravel, with sand, possible cobbles, brown to grey, moist, no odours, no stains.		2		15 pmm	SS3	
			66.98	3		5 ppm	SS4	
		Auger Refusal at 3.7 m Depth	66.7					

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 50 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' October 6, 2023	3.4	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 1/29/24

Log of Borehole BH3

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' September 13, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: JE Checked by: IT

Figure No. 5

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength (kPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~125 mm thick	72.31	0	20 40 60 80 / 50 100 150 200	250 500 750 / 20 40 60		
		FILL	72.2					
		Sand and gravel, trace clay, possible cobbles, dry, no odours, orange and black stains				15pmm	SS1	
				1		15ppm	SS2	
			70.8					
		Borehole Terminated at 1.5 m Depth						

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. Borehole was backfilled upon completion of drilling.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

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

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 1/29/24

Log of Borehole BH4

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' September 13, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: JE Checked by: IT

Figure No. 6

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength (kPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		ASHPHALT ~125 mm thick	72.3	0				
		FILL	72.2					
		Gravel, sand and clay, trees remains, brown to dark brown, moist, no odours, orange and black stains				45 pmm	SS1	
				1		45 pmm	SS2	
			70.8					
		Borehole Terminated at 1.5 m Depth						

Standard Penetration Test N Value: 20 40 60 80
Shear Strength: 50 100 150 200 kPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 20 40 60

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. Borehole was backfilled upon completion of drilling.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

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

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 1/29/24

Log of Borehole MW5

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' September 13, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: JE Checked by: IT

Figure No. 7

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~150 mm thick	70.4	0				
		Sandy clay, with gravel, bricks and concrete pieces, grey, moist to wet, no odours, no stains	70.3			5 ppm	SS1	
		SILTY CLAY Silty clay with sand, grey, moist, slightly petroleum odours, no stains.		1				
				2		10 pmm	SS2	
				3		15 pmm	SS3	
			66.22	4		15 pmm	SS4	
		Borehole Terminated at 4.9 m Depth	65.5					

Standard Penetration Test N Value: 20 40 60 80
Shear Strength kPa: 50 100 150 200
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 20 40 60

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 50 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' October 21, 2023	4.2	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 1/29/24

Log of Borehole MW6

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Figure No. 8

Page. 1 of 1

Date Drilled: ' September 29, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: JE Checked by: IT

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~150 mm thick	70.2	0				
		Sandy fill, possible cobbles, trace bricks, no odours, no stains	70.1			0 pmm	SS1	
		SILTY CLAY	69.4	1				
		With sand, trace cobbles and rocks, grey, wet, petroleum odours, no stains.				0 pmm	SS2	
						0 pmm	SS3	
			67.8	2		0 pmm	SS4	
		Auger Refusal at 2.4 m Depth						

Standard Penetration Test N Value: 20 40 60 80
Shear Strength: 50 100 150 200 kPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 20 40 60

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 38 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' October 21, 2023	0.8	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 1/29/24

Log of Borehole MW7

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' September 28, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: JE Checked by: IT

Figure No. 9

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~10 mm thick	69.9	0				
		SILTY CLAY	69.9					
		Silty sand , trace cobbles and rocks, grey to brown, petroleum odours, no stains (compact)				570 pmm	SS1	
				1		490 pmm	SS2	
				2		600 pmm	SS3	
						620 pmm	SS4	
			67.0					
		Auger Refusal at 2.9 m Depth						

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 38 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' October 21, 2023	Dry	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 1/29/24

Log of Borehole MW7 D (MW11)

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Figure No. 9

Page. 1 of 1

Date Drilled: ' December 12, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: MR Checked by: MM

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth
		CONCRETE ~10 mm thick	69.9	0
		SILTY CLAY	69.9	
		Silty sand , trace cobbles and rocks, grey to brown, petroleum odours, no stains (compact)		1
				2
				3
				4
				5
			63.8	6
		Borehole Borehole Terminated at 6.1 m Depth		

Standard Penetration Test N Value: 20 40 60 80
Shear Strength kPa: 50 100 150 200
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % Atterberg Limits (% Dry Weight): 20 40 60

570 pmm
490 pmm
600 pmm
620 pmm

SAMPLES	Natural Unit Wt. kN/m³
SS1	
SS2	
SS3	
SS4	

NOTES:
1. Borehole data requires interpretation by EXP before use by others
2. A 38 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' December 19, 2023 Dry	Dry	' January 5, 2024

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 1/29/24

Log of Borehole MW8

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' September 28, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: JE Checked by: IT

Figure No. 10

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~50 mm thick	69.9	0				
		SILTY SAND Clay clumps, some gravel, cobbles, no odours, no stains	69.8			640 pmm	SS1	
		SILTY CLAY With sand, trace cobbles and rocks, grey, wet, petroleum odours, no stains.		1		660 pmm	SS2	
						650 pmm	SS3	
		No odours or stains below 2.3 m depth.		2				
						640 pmm	SS4	
				3				
			66.0			640 pmm	SS5	
		Borehole Terminated at 3.9 m Depth						

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 38 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' October 21, 2023	Dry	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 1/29/24

Log of Borehole MW8 D (MW10)

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Figure No. 10

Page. 1 of 1

Date Drilled: ' December 12, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: MR Checked by: MM

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits —○—
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength (kPa)	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~50 mm thick	69.9	0				
		SILTY SAND Clay clumps, some gravel, cobbles, no odours, no stains	69.9			640 pmm	SS1	
		SILTY CLAY With sand, trace cobbles and rocks, grey, wet, petroleum odours, no stains.	69.8	1		660 pmm	SS2	
						650 pmm	SS3	
		No odours or stains below 2.3 m depth.		2				
				3		640 pmm	SS4	
						640 pmm	SS5	
				4				
				5				
		Borehole Terminated at 5.94 m Depth	64.0					

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 38 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' December 19, 2023 Dry	Dry	' January 5, 2024

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 1/29/24

Log of Borehole MW9

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' September 28, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: JE Checked by: IT

Figure No. 11

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~40 mm thick	70.1	0	20 40 60 80 / 50 100 150 200 kPa	250 500 750 / 20 40 60		
		SILTY CLAY	70.1					
		Sand and gravel , trace bricks, grey to brown, no odours, no stains	69.49			100 pmm	SS1	
				1		200 pmm	SS2	
						570 pmm	SS3	
			67.7	2		620 pmm	SS4	
		Borehole Terminated at 2.4 m Depth						

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. A 38 mm diameter monitoring well was installed, as shown.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

Date	Water Level (m)	Hole Open To (m)
' October 21, 2023	0.6	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 1/29/24

Log of Borehole BH12

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' December 12, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: MR Checked by: MM

Figure No. 5

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~50 mm thick	69.9	0				
		SILTY SAND Clay clumps, some gravel, cobbles, no odours, no stains	69.8			0 pmm	SS1	
		SILTY CLAY With sand, trace cobbles and rocks, grey, wet, petroleum odours, no stains.		1		0 pmm	SS2	
				2		0 pmm	SS3	
			67.3					
		Borehole Terminated at 2.59 m Depth						

Standard Penetration Test N Value: 20 40 60 80
Shear Strength: 50 100 150 200 kPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 20 40 60

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. Borehole was backfilled upon completion of drilling.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

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

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 1/29/24

Log of Borehole BH13

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' December 12, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: MR Checked by: MM

Figure No. 5

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~50 mm thick	69.9	0				
		SILTY SAND Clay clumps, some gravel, cobbles, no odours, no stains	69.8			30 ppm	SS1	
		SILTY CLAY With sand, trace cobbles and rocks, grey, wet, petroleum odours, no stains.		1		0 ppm	SS2	
				2		0 ppm	SS3	
			67.2					
		Borehole Terminated at 2.74 m Depth						

Standard Penetration Test N Value: 20 40 60 80
Shear Strength: 50 100 150 200 kPa
Combustible Vapour Reading (ppm): 250 500 750
Natural Moisture Content % / Atterberg Limits (% Dry Weight): 20 40 60

NOTES:
1. Borehole data requires interpretation by EXP before use by others
2. Borehole was backfilled upon completion of drilling.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

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

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 1/29/24

Log of Borehole BH14

Project No: OTT-22010865-A0

Project: Phase Two Environmental Site Assessment

Location: 231 Bank , Ottawa, Ontario

Date Drilled: ' December 12, 2023

Drill Type: Geoprobe 420

Datum: Geodetic

Logged by: MR Checked by: MM

Figure No. 5

Page. 1 of 1

Split Spoon Sample ☒
Auger Sample ◧
SPT (N) Value ○
Dynamic Cone Test ——
Shelby Tube ■
Shear Strength by Vane Test +S

Combustible Vapour Reading □
Natural Moisture Content ×
Atterberg Limits ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Shear Strength by Penetrometer Test ▲

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic m	Depth	Standard Penetration Test N Value / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	SAMPLES	Natural Unit Wt. kN/m³
		CONCRETE ~50 mm thick	70.2	0				
		SILTY SAND Clay clumps, some gravel, cobbles, no odours, no stains	70.1			25 ppm	SS1	
		SILTY CLAY With sand, trace cobbles and rocks, grey, wet, petroleum odours, no stains.		1		25 ppm	SS2	
				2		20 ppm	SS3	
				3		20 ppm	SS4	
		Borehole Terminated at 3.2 m Depth	67.0					

NOTES:

1. Borehole data requires interpretation by EXP before use by others
2. Borehole was backfilled upon completion of drilling.
3. Field work was supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. Log to be read with EXP Report No. OTT-22010865-A0

WATER LEVEL RECORDS

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

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %

LOG OF BOREHOLE 213-231 BANK.GPJ TROW OTTAWA.GDT 1/29/24

Appendix E: Analytical Summary Tables

Table 1 - Analytical Results in Soil - VOC
178 Nepean Street, 219 and 223 Bank Street, Ottawa, Ontario
OTT-22010865-A0

Parameter	Units	MECP Table 3 [1] Residential	MW1 SS4	MW2 SS1	MW3 SS2	MW4 SS2	MW5 SS3	DUP	MW6 SS2	MW6 SS3	MW6 SS4	MW7 SS2	MW7 SS3	MW8 SS3	MW9 SS1	BH12 SS2	BH13 SS2	BH14 SS3	TRIP BLANK
Sampling Date			13-Sep-2023	13-Sep-2023	13-Sep-2023	13-Sep-2023	13-Sep-2023	Duplicate of	29-Sep-2023	29-Sep-2023	29-Sep-2023	28-Sep-2023	28-Sep-2023	28-Sep-2023	28-Sep-2023	12-Dec-2023	12-Dec-2023	19-Dec-2023	13-Sep-2023
Sample Depth (mbgs)			5.7 - 6.7	2.05 - 2.2	0.75 - 1.5	0.75 to 1.35	4.9 - 5.7	MW5 SS3	2.5 - 3.4	3.4 - 4.0	4.0 - 4.3	2.7 - 3.6	3.5 - 4.1	3.1 - 4.0	2.05 - 2.7	0.9 - 1.8	0.9 - 1.8	1.8 - 2.4	NA
Volatile Organic Compounds																			
Acetone	ug/g dry	28	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	ug/g dry	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	NA	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	ug/g dry	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g dry	0.26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	ug/g dry	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g dry	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	ug/g dry	2.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	ug/g dry	0.18	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	NA	NA	<0.04	<0.04	NA	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Dibromochloromethane	ug/g dry	9.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	ug/g dry	25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g dry	4.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g dry	6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g dry	0.097	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g dry	11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	NA	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloroethane	ug/g dry	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NA	NA	<0.03	<0.03	NA	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1-Dichloroethylene	ug/g dry	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethylene	ug/g dry	30	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	NA	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
trans-1,2-Dichloroethylene	ug/g dry	0.75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	ug/g dry	0.085	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NA	NA	<0.03	<0.03	NA	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,3-Dichloropropene, total	ug/g dry	0.083	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g dry	15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene dibromide	ug/g dry	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	NA	NA	<0.04	<0.04	NA	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Hexane	ug/g dry	34	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	ug/g dry	44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	ug/g dry	4.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl ether	ug/g dry	1.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g dry	0.96	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g dry	2.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g dry	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	NA	NA	<0.04	<0.04	NA	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,1,2,2-Tetrachloroethane	ug/g dry	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	ug/g dry	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	ug/g dry	6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	ug/g dry	3.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	ug/g dry	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	NA	NA	<0.04	<0.04	NA	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Trichloroethylene	ug/g dry	0.52	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NA	NA	<0.03	<0.03	NA	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichlorofluoromethane	ug/g dry	5.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g dry	0.022	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA	NA	<0.02	<0.02	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Xylenes, total	ug/g dry	25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PHC F1	ug/g dry	65	<5	<5	<10	<10	<10	<10	NA	NA	<5	<5	NA	<5	<5	<5	<5	<5	NA
PHC F2	ug/g dry	150	100	<10	<10	<10	<10	<10	<10	**1070**	**964**	**642**	<10	<10	<10	<10	<10	<10	NA
PHC F3	ug/g dry	1300	87	<50	<50	<50	<50	<50	<50	423	454	304	<50	<50	<50	<50	<50	<50	NA
PHC F4	ug/g dry	5600	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	NA

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 3 Generic Site Condition Standards for Use in a Non-Potable Ground Water Condition for Residenital/Parkland/Institutional Property Use (fine textured soils)

NV No Value
N/A Not Applicable
- Parameter not analyzed
m bgs Metres below ground surface
Indicates soil exceedance of MECP Table 3 SCS

Table 2 - Analytical Results in Soil - Inorganic Parameters
178 Nepean Street, 219 and 223 Bank Street, Ottawa, Ontario
OTT-22010865-A0

Sample ID	UNITS	Provincial MECP Table 3 Residential [1]	MW3 SS2	MW4 SS2
Sampling Date			**13-Sep-2023**	**13-Sep-2023**
Sample Depth (mbgs)			**0.75 - 1.5**	**0.75 - 1.35**
Metals				
Antimony	µg/g	7.5	<0.8	1.1
Arsenic	µg/g	18	3.0	<1
Barium	µg/g	390	73.7	28.5
Beryllium	µg/g	5	<0.5	<0.5
Boron (Total)	µg/g	120	7	<5
Boron (Hot Water Soluble)	µg/g	1.5	0.42	0.53
Cadmium	µg/g	1.2	<0.5	<0.5
Chromium (Total)	µg/g	160	23	18
Chromium VI	µg/g	10	<0.2	<0.2
Cobalt	µg/g	22	6.8	4.8
Copper	µg/g	180	14.3	7.7
Lead	µg/g	120	56	6
Mercury	µg/g	1.8	0.24	<0.10
Molybdenum	µg/g	6.9	0.6	0.5
Nickel	µg/g	130	13	10
Selenium	µg/g	2.4	<0.8	<0.8
Silver	µg/g	25	<0.5	<0.5
Thallium	µg/g	1	<0.5	<0.5
Uranium	µg/g	23	0.68	<0.50
Vanadium	µg/g	86	42.5	25.2
Zinc	µg/g	340	67	32
Inorganic Parameters				
Conductivity	mS/cm	0.7	0.238	0.627
Sodium Adsorption Ratio	N/A	5	2.27	4.3
pH	N/A	6 to 9	7.05	7.19
Cyanide	µg/g	0.051	<0.040	<0.040

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 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Use (fine textured soils)

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

NV No Value

\- Parameter not analyzed

Indicates soil exceedance of MECP Table 3 SCS

Table 3 - Analytical Results in Soil - Inorganic Parameters
178 Nepean Street, 219 and 223 Bank Street, Ottawa, Ontario
OTT-22010865-A0

Sample ID	UNITS	Provincial MECP Table 3 Residential [1]	MW3 SS2	MW4 SS2
Sampling Date			**13-Sep-2023**	**13-Sep-2023**
Sample Depth (mbgs)			**0.75 - 1.5**	**0.75 - 1.35**
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	µg/g	58	<0.05	<0.05
Acenaphthylene	µg/g	0.17	<0.05	<0.05
Anthracene	µg/g	0.74	<0.05	<0.05
Benzo(a)anthracene	µg/g	0.63	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	<0.05	<0.05
Benzo(b/j)fluoranthene	µg/g	0.78	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	7.8	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	<0.05	<0.05
Chrysene	µg/g	7.8	<0.05	<0.05
Dibenzo(a,h)anthracene	µg/g	0.1	<0.05	<0.05
Fluoranthene	µg/g	0.69	<0.05	<0.05
Fluorene	µg/g	69	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.48	<0.05	<0.05
Methylnaphthalene, 2-(1-)	µg/g	3.4	<0.05	<0.05
Naphthalene	µg/g	0.75	<0.05	<0.05
Phenanthrene	µg/g	7.8	<0.05	<0.05
Pyrene	µg/g	78	<0.05	<0.05

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 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Use (fine textured soils)

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

NV No Value

\- Parameter not analyzed

Indicates soil exceedance of MECP Table 3 SCS

TABLE 4 MAXIMUM CONCENTRATIONS IN SOIL

178 Nepean Street, 219 and 223 Bank Street, Ottawa, Ontario

OTT-22010865-A0

Parameter	Sample Location	Sample Depth (mbgs)	Sampling Date	Maximum Concentration	MECP Table 3
Petroleum Hydrocarbons					
F1 PHC (C6 - C10) - BTEX	MW4 SS2	0.75 - 1.35	13-Sep-23	<10	65
F2 PHC (C10-C16)	MW6 SS3	1.5 - 2.1	29-Sep-23	1070	150
F3 PHC (C16-C34)	MW6 SS4	2.1 - 2.3	29-Sep-23	450	1300
F4 PHC (C34-C50)	MW4 SS2	0.75 - 1.35	13-Sep-23	<50	5600
Volatile Organic Compounds					
Acetone	All Locations	0.75 - 1.35	13-Sep-23	<0.50	28
Benzene	All Locations	0.75 - 1.35	13-Sep-23	<0.02	0.17
Bromodichloromethane	All Locations	0.75 - 1.35	13-Sep-23	<0.05	13
Bromoform	All Locations	0.75 - 1.35	13-Sep-23	<0.05	0.26
Bromomethane	All Locations	0.75 - 1.35	13-Sep-23	<0.05	0.05
Carbon Tetrachloride	All Locations	0.75 - 1.35	13-Sep-23	<0.05	0.12
Chlorobenzene	All Locations	0.75 - 1.35	13-Sep-23	<0.05	2.7
Chloroform	All Locations	0.75 - 1.35	13-Sep-23	<0.04	0.18
Dibromochloromethane	All Locations	0.75 - 1.35	13-Sep-23	<0.05	9.4
1,2-Dichlorobenzene	All Locations	0.75 - 1.35	13-Sep-23	<0.05	25
1,3-Dichlorobenzene	All Locations	0.75 - 1.35	13-Sep-23	<0.05	4.3
1,4-Dichlorobenzene	All Locations	0.75 - 1.35	13-Sep-23	<0.05	6
Difluorodifluoromethane	All Locations	0.75 - 1.35	13-Sep-23	<0.05	0.097
1,1-Dichloroethane	All Locations	0.75 - 1.35	13-Sep-23	<0.02	11
1,2-Dichloroethane	All Locations	0.75 - 1.35	13-Sep-23	<0.03	0.05
1,1-Dichloroethylene	All Locations	0.75 - 1.35	13-Sep-23	<0.05	0.05
Cis-1,2-Dichloroethylene	All Locations	0.75 - 1.35	13-Sep-23	<0.02	30
Trans-1,2-Dichloroethylene	All Locations	0.75 - 1.35	13-Sep-23	<0.05	0.75
1,2-Dichloropropane	All Locations	0.75 - 1.35	13-Sep-23	<0.03	0.085
1,3-Dichloropropene (cis+trans)	All Locations	0.75 - 1.35	13-Sep-23	<0.05	0.083
Ethylbenzene	All Locations	0.75 - 1.35	13-Sep-23	<0.05	15
Ethylene Dibromide	All Locations	0.75 - 1.35	13-Sep-23	<0.04	0.05
Hexane	All Locations	0.75 - 1.35	13-Sep-23	<0.05	34
Methylene Chloride	All Locations	0.75 - 1.35	13-Sep-23	<0.50	44
Methyl Ethyl Ketone	All Locations	0.75 - 1.35	13-Sep-23	<0.50	4.3
Methyl Isobutyl Ketone	All Locations	0.75 - 1.35	13-Sep-23	<0.05	1.4
Methyl-t-Butyl Ether	All Locations	0.75 - 1.35	13-Sep-23	<0.05	0.96
Styrene	All Locations	0.75 - 1.35	13-Sep-23	<0.05	2.2
1,1,1,2-Tetrachloroethane	All Locations	0.75 - 1.35	13-Sep-23	<0.04	0.05
1,1,2,2-Tetrachloroethane	All Locations	0.75 - 1.35	13-Sep-23	<0.05	0.05
Tetrachloroethylene	All Locations	0.75 - 1.35	13-Sep-23	<0.05	2.3
Toluene	All Locations	0.75 - 1.35	13-Sep-23	<0.05	6
1,1,1-Trichloroethane	All Locations	0.75 - 1.35	13-Sep-23	<0.05	3.4
1,1,2-Trichloroethane	All Locations	0.75 - 1.35	13-Sep-23	<0.04	0.05
Trichloroethylene	All Locations	0.75 - 1.35	13-Sep-23	<0.03	0.52
Trichlorofluoromethane	All Locations	0.75 - 1.35	13-Sep-23	<0.05	5.8
Vinyl Chloride	All Locations	0.75 - 1.35	13-Sep-23	<0.02	0.022
Total Xylenes	BH19-5 SS3	0.75 - 1.35	13-Sep-23	<0.05	25
Inorganic Parameters					
Antimony	MW4 SS2	0.75 - 1.35	13-Sep-23	1.1	7.5
Arsenic	MW3 SS2	0.75 - 1.5	13-Sep-23	3.0	18
Barium	MW3 SS2	0.75 - 1.5	13-Sep-23	73.7	390
Beryllium	MW3 SS2	0.75 - 1.5	13-Sep-23	<0.5	5
Boron	MW3 SS2	0.75 - 1.5	13-Sep-23	7	120
Boron (HWS)	MW4 SS2	0.75 - 1.35	13-Sep-23	0.53	1.5
Cadmium	MW3 SS2	0.75 - 1.5	13-Sep-23	<0.5	1.2
Chromium	MW3 SS2	0.75 - 1.5	13-Sep-23	23	160
Cobalt	MW3 SS2	0.75 - 1.5	13-Sep-23	7	22
Copper	MW3 SS2	0.75 - 1.5	13-Sep-23	14	180
Lead	MW3 SS2	0.75 - 1.5	13-Sep-23	56.0	120
Molybdenum	MW3 SS2	0.75 - 1.5	13-Sep-23	0.6	6.9
Nickel	MW3 SS2	0.75 - 1.5	13-Sep-23	13	130
Selenium	MW3 SS2	0.75 - 1.5	13-Sep-23	<0.8	2.4
Silver	MW3 SS2	0.75 - 1.5	13-Sep-23	<0.5	25
Thallium	MW3 SS2	0.75 - 1.5	13-Sep-23	<0.5	1
Uranium	MW3 SS2	0.75 - 1.5	13-Sep-23	0.68	23
Vanadium	MW3 SS2	0.75 - 1.5	13-Sep-23	43	86
Zinc	MW3 SS2	0.75 - 1.5	13-Sep-23	67	340
Cyanide	MW4 SS2	0.75 - 1.35	13-Sep-23	<0.04	0.051
Chromium VI	MW3 SS2	0.75 - 1.5	13-Sep-23	<0.2	10
Mercury	MW3 SS2	0.75 - 1.5	13-Sep-23	0.24	1.8
Conductivity	MW4 SS2	0.75 - 1.35	13-Sep-23	0.627	0.7
Sodium Adsorption Ratio	MW4 SS2	0.75 - 1.35	13-Sep-23	4.3	5

TABLE 4 MAXIMUM CONCENTRATIONS IN SOIL

178 Nepean Street, 219 and 223 Bank Street, Ottawa, Ontario

OTT-22010865-A0

Parameter	Sample Location	Sample Depth (mbgs)	Sampling Date	Maximum Concentration	MECP Table 3
Polycylic Aromatic Hydrocarbons					
Acenaphthene	All Locations	0.75 - 1.5	13-Sep-23	0.05	58
Acenaphthylene	All Locations	0.75 - 1.5	13-Sep-23	0.05	0.17
Anthracene	All Locations	0.75 - 1.5	13-Sep-23	0.05	0.74
Benzo(a)anthracene	All Locations	0.75 - 1.5	13-Sep-23	0.05	0.63
Benzo(a)pyrene	All Locations	0.75 - 1.5	13-Sep-23	0.05	0.3
Benzo(b/j)fluoranthene	All Locations	0.75 - 1.5	13-Sep-23	0.05	0.78
Benzo(g,h,i)perylene	All Locations	0.75 - 1.5	13-Sep-23	0.05	7.8
Benzo(k)fluoranthene	All Locations	0.75 - 1.5	13-Sep-23	0.05	0.78
Chrysene	All Locations	0.75 - 1.5	13-Sep-23	0.05	7.8
Dibenz(a,h)anthracene	All Locations	0.75 - 1.5	13-Sep-23	0.05	0.1
Fluoranthene	All Locations	0.75 - 1.5	13-Sep-23	0.05	0.69
Fluorene	All Locations	0.75 - 1.5	13-Sep-23	0.05	69
Indeno(1,2,3-cd)pyrene	All Locations	0.75 - 1.5	13-Sep-23	0.05	0.48
Methylnaphthalene, 2-(1-)	All Locations	0.75 - 1.5	13-Sep-23	0.05	3.4
Naphthalene	All Locations	0.75 - 1.5	13-Sep-23	0.05	0.75
Phenanthrene	All Locations	0.75 - 1.5	13-Sep-23	0.05	7.8
Pyrene	All Locations	0.75 - 1.5	13-Sep-23	0.0110	78

NOTES:

Analysis by Maxxam Analytics

All results are in ppm on dry weight basis

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

Results were compared to Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for

Table 5 - Analytical Results in Groundwater - PHC and VOC
231 Bank Street, Ottawa, Ontario
OTT-22010865-A0

Sample ID	UNITS	Provincial MECP Table 3 Residential [1]	MW1	MW1	MW2	MW5	MW6	MW9	DUP	Trip Blank	Field Blank
Sampling Date			21-Nov-2023	4-Dec-2023	6-Oct-2023	6-Oct-2023	6-Oct-2023	6-Oct-2023	Duplicate of	NA	NA
Screen Depth			1.5 - 4.5	1.5 - 4.5	2.1 - 3.6	1.8 - 4.8	0.8 - 2.3	0.8 - 2.3	MW9	NA	NA
Petroleum Hydrocarbons											
F1 PHC (C6-C10)*	µg/L	750	<25	-	<25	<25	<25	<25	<25	<25	<25
F2 PHC (C10-C16)	µg/L	150	462	<100	<100	<100	<100	<100	<100	<100	<100
F3 PHC (C16-C34)	µg/L	500	384	<100	<100	<100	<100	<100	<100	<100	<100
F4 PHC (C34-C50)	µg/L	500	<100	<100	<100	<100	<100	<100	<100	<100	<100
Volatile Organic Compounds											
Acetone	µg/L	130000	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Benzene	µg/L	430	<0.2	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	85000	<0.2	-	<0.20	<0.20	<0.20	0.99	0.87	<0.20	<0.20
Bromoform	µg/L	770	<0.1	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Bromomethane	µg/L	56	<0.2	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Carbon Tetrachloride	µg/L	8.4	<0.2	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	µg/L	630	<0.1	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	µg/L	22	<0.2	-	<0.20	<0.20	<0.20	15	13.2	<0.20	<0.20
Dibromochloromethane	µg/L	82000	<0.1	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	9600	<0.1	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	9600	<0.1	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	67	<0.1	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorodifluoromethane	µg/L	4400	<0.4	-	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
1,1-Dichloroethane	µg/L	3100	<0.2	-	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,2-Dichloroethane	µg/L	12	<0.2	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethylene	µg/L	17	<0.3	-	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
cis-1,2-Dichloroethylene	µg/L	17	<0.2	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
trans-1,2-Dichloroethylene	µg/L	17	<0.2	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	140	<0.2	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,3-Dichloropropene (cis+trans)	µg/L	45	<0.1	-	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	µg/L	2300	<0.1	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.83	<0.1	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Hexane	µg/L	520	<0.2	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methylene Chloride	µg/L	5500	<0.3	-	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	1500000	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Isobutyl Ketone	µg/L	580000	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl t-butyl ether (MTBE)	µg/L	1400	<0.2	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Styrene	µg/L	9100	<0.1	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,1,2-Tetrachloroethane	µg/L	28	<0.1	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	15	<0.1	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	17	<0.2	-	0.93	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	18000	<0.2	-	0.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	6700	<0.3	-	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1,2-Trichloroethane	µg/L	30	<0.2	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	17	<0.2	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2500	<0.4	-	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	1.7	<0.17	-	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Total Xylenes	µg/L	30	<0.2	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

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 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Use (fine textured soils)

* F1 fraction does not include BTEX; however, the proponent has the choice as to whether or not to subtract BTEX from the analytical result

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

NV No Value

\- Parameter not analyzed

Indicates groundwater exceedance of MECP Table 3 SCS

Table 6 - Maximum Concentrations in Groundwater
178 Nepean Street, 219 and 223 Bank Street, Ottawa, Ontario
OTT-22010865-A0

Parameter	Sample Location	Sample Depth (m bgs)	Sampling Date	Maximum Concentration	MECP Table 3 Residential
Petroleum Hydrocarbons					
F1 PHC (C6-C10)	All locations	1.5 - 4.5	6-Oct-23	<25	750
F2 PHC (C10-C16)	All locations	1.5 - 4.5	6-Oct-23	<100	150
F3 PHC (C16-C34)	All locations	1.5 - 4.5	6-Oct-23	<100	500
F4 PHC (C34-C50)	All locations	1.5 - 4.5	6-Oct-23	<100	500
Volatile Organic Compounds					
Acetone (2-Propanone)	All locations	1.5 - 4.5	6-Oct-23	<1.0	130000
Benzene	All locations	1.5 - 4.5	6-Oct-23	<0.20	430.000
Bromodichloromethane	All locations	1.5 - 4.5	6-Oct-23	<0.20	85000
Bromoform	All locations	1.5 - 4.5	6-Oct-23	<0.10	770
Bromomethane	All locations	1.5 - 4.5	6-Oct-23	<0.20	56
Carbon Tetrachloride	All locations	1.5 - 4.5	6-Oct-23	<0.20	8.4
Chlorobenzene	All locations	1.5 - 4.5	6-Oct-23	<0.10	630
Chloroform	MW9	0.8 - 2.3	6-Oct-23	15	22
Dibromochloromethane	All locations	1.5 - 4.5	6-Oct-23	<0.10	82000
1,2-Dichlorobenzene	All locations	1.5 - 4.5	6-Oct-23	<0.10	9600
1,3-Dichlorobenzene	All locations	1.5 - 4.5	6-Oct-23	<0.10	9600
1,4-Dichlorobenzene	All locations	1.5 - 4.5	6-Oct-23	<0.10	67
Dichlorodifluoromethane	All locations	1.5 - 4.5	6-Oct-23	<0.40	4400
1,1-Dichloroethane	All locations	1.5 - 4.5	6-Oct-23	<0.30	3100
1,2-Dichloroethane	All locations	1.5 - 4.5	6-Oct-23	<0.20	12
1,1-Dichloroethylene	All locations	1.5 - 4.5	6-Oct-23	<0.30	17
cis-1,2-Dichloroethylene	All locations	1.5 - 4.5	6-Oct-23	<0.20	17
trans-1,2-Dichloroethylene	All locations	1.5 - 4.5	6-Oct-23	<0.20	17
1,2-Dichloropropane	All locations	1.5 - 4.5	6-Oct-23	<0.20	140
1,3-Dichloropropene (cis+trans)	All locations	1.5 - 4.5	6-Oct-23	<0.30	45
Ethylbenzene	All locations	1.5 - 4.5	6-Oct-23	<0.10	2300
Ethylene Dibromide	All locations	1.5 - 4.5	6-Oct-23	<0.10	0.83
Hexane	All locations	1.5 - 4.5	6-Oct-23	<0.20	520
Methylene Chloride	All locations	1.5 - 4.5	6-Oct-23	<0.30	5500
Methyl Ethyl Ketone	All locations	1.5 - 4.5	6-Oct-23	<1.0	1500000
Methyl Isobutyl Ketone	All locations	1.5 - 4.5	6-Oct-23	<1.0	580000
Methyl t-butyl ether (MTBE)	All locations	1.5 - 4.5	6-Oct-23	<0.20	1400
Styrene	All locations	1.5 - 4.5	6-Oct-23	<0.10	9100
1,1,1,2-Tetrachloroethane	All locations	1.5 - 4.5	6-Oct-23	<0.10	28
1,1,2,2-Tetrachloroethane	All locations	1.5 - 4.5	6-Oct-23	<0.10	15
Tetrachloroethylene	MW2	2.1 - 3.6	6-Oct-23	0.93	17
Toluene	MW2	2.1 - 3.6	6-Oct-23	0.6	18000
1,1,1-Trichloroethane	All locations	1.5 - 4.5	6-Oct-23	<0.30	6700
1,1,2-Trichloroethane	All locations	1.5 - 4.5	6-Oct-23	<0.20	30
Trichloroethylene	All locations	1.5 - 4.5	6-Oct-23	<0.20	17
Trichlorofluoromethane	All locations	1.5 - 4.5	6-Oct-23	<0.40	2500
Vinyl Chloride	All locations	1.5 - 4.5	6-Oct-23	<0.17	1.7
Total Xylenes	All locations	1.5 - 4.5	6-Oct-23	<0.20	30

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 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
NV	No Value
-	Parameter not analyzed
m bgs	Metres below ground surface

Table 7 - Relative Percent Differences - PHC and VOC in Soil
178 Nepean Street, 219 and 223 Bank Street, Ottawa, Ontario
OTT-22010865-A0

Parameter	Units	RDL	MW5 SS3	DUP	RPD (%)	Alert Limit (%)
			13-Sep-2023	13-Sep-2023		
Petroleum Hydrocarbons						
F1 PHC (C6 - C10) - BTEX	ug/g dry	10	<10	<10	nc	60
F2 PHC (C10-C16)	ug/g dry	10	<10	<10	nc	60
F3 PHC (C16-C34)	ug/g dry	50	<50	<50	nc	60
F4 PHC (C34-C50)	ug/g dry	50	<50	<50	nc	60
Volatile Organic Compounds						
Acetone	ug/g dry	<1.0	<0.50	<0.50	nc	100
Benzene	ug/g dry	<0.20	<0.02	<0.02	nc	100
Bromodichloromethane	ug/g dry	<0.20	<0.05	<0.05	nc	100
Bromoform	ug/g dry	<0.10	<0.05	<0.05	nc	100
Bromomethane	ug/g dry	<0.20	<0.05	<0.05	nc	100
Carbon Tetrachloride	ug/g dry	<0.20	<0.05	<0.05	nc	100
Chlorobenzene	ug/g dry	<0.10	<0.05	<0.05	nc	100
Chloroform	ug/g dry	<0.20	<0.04	<0.04	nc	100
Dibromochloromethane	ug/g dry	<0.10	<0.05	<0.05	nc	100
Dichlorodifluoromethane	ug/g dry	<0.10	<0.05	<0.05	nc	100
1,2-Dichlorobenzene	ug/g dry	<0.10	<0.05	<0.05	nc	100
1,3-Dichlorobenzene	ug/g dry	<0.10	<0.05	<0.05	nc	100
1,4-Dichlorobenzene	ug/g dry	<0.40	<0.05	<0.05	nc	100
1,1-Dichloroethane	ug/g dry	<0.30	<0.02	<0.02	nc	100
1,2-Dichloroethane	ug/g dry	<0.20	<0.03	<0.03	nc	100
1,1-Dichloroethylene	ug/g dry	<0.30	<0.05	<0.05	nc	100
cis-1,2-Dichloroethylene	ug/g dry	<0.20	<0.02	<0.02	nc	100
trans-1,2-Dichloroethylene	ug/g dry	<0.20	<0.05	<0.05	nc	100
1,2-Dichloropropane	ug/g dry	<0.20	<0.03	<0.03	nc	100
1,3-Dichloropropene, total	ug/g dry	<0.30	<0.05	<0.05	nc	100
Ethylbenzene	ug/g dry	<0.10	<0.05	<0.05	nc	100
Ethylene dibromide	ug/g dry	<0.10	<0.04	<0.04	nc	100
Hexane	ug/g dry	<0.20	<0.05	<0.05	nc	100
Methyl Ethyl Ketone	ug/g dry	<0.30	<0.50	<0.50	nc	100
Methyl Isobutyl Ketone	ug/g dry	<1.0	<0.50	<0.50	nc	100
Methyl tert-butyl ether	ug/g dry	<1.0	<0.05	<0.05	nc	100
Methylene Chloride	ug/g dry	<0.20	<0.05	<0.05	nc	100
Styrene	ug/g dry	<0.10	<0.05	<0.05	nc	100
1,1,1,2-Tetrachloroethane	ug/g dry	<0.10	<0.04	<0.04	nc	100
1,1,2,2-Tetrachloroethane	ug/g dry	<0.10	<0.05	<0.05	nc	100
Tetrachloroethylene	ug/g dry	<0.20	<0.05	<0.05	nc	100
Toluene	ug/g dry	<0.20	<0.05	<0.05	nc	100
1,1,1-Trichloroethane	ug/g dry	<0.30	<0.05	<0.05	nc	100
1,1,2-Trichloroethane	ug/g dry	<0.20	<0.04	<0.04	nc	100
Trichloroethylene	ug/g dry	<0.20	<0.03	<0.03	nc	100
Trichlorofluoromethane	ug/g dry	<0.40	<0.05	<0.05	nc	100
Vinyl Chloride	ug/g dry	<0.17	<0.02	<0.02	nc	100
Xylenes, total	ug/g dry	<0.20	<0.05	<0.05	nc	100

Table 8 - Relative Percent Differences - PHC and VOC in Groundwater
178 Nepean Street, 219 and 223 Bank Street, Ottawa, Ontario
OTT-22010865-A0

Parameter	Units	RDL	MW9	DUP	RPD (%)	Alert Limit (%)
			6-Oct-2023	6-Oct-2023		
Petroleum Hydrocarbons						
F1 PHC (C6 - C10) - BTEX	ug/L	25	<25	<25	nc	60
F2 PHC (C10-C16)	ug/L	100	<100	<100	nc	60
F3 PHC (C16-C34)	ug/L	100	<100	<100	nc	60
F4 PHC (C34-C50)	ug/L	100	<100	<100	nc	60
Volatiles						
Acetone	ug/L	5.0	<1.0	<1.0	nc	60
Benzene	ug/L	0.5	<0.20	<0.20	nc	60
Bromodichloromethane	ug/L	0.5	0.99	0.87	nc	60
Bromoform	ug/L	0.5	<0.10	<0.10	nc	60
Bromomethane	ug/L	0.5	<0.20	<0.20	nc	60
Carbon Tetrachloride	ug/L	0.2	<0.20	<0.20	nc	60
Chlorobenzene	ug/L	0.5	<0.10	<0.10	nc	60
Chloroform	ug/L	0.5	15	13.2	12.8	60
Dibromochloromethane	ug/L	0.5	<0.10	<0.10	nc	60
Dichlorodifluoromethane	ug/L	1.0	<0.10	<0.10	nc	60
1,2-Dichlorobenzene	ug/L	0.5	<0.10	<0.10	nc	60
1,3-Dichlorobenzene	ug/L	0.5	<0.10	<0.10	nc	60
1,4-Dichlorobenzene	ug/L	0.5	<0.40	<0.40	nc	60
1,1-Dichloroethane	ug/L	0.5	<0.30	<0.30	nc	60
1,2-Dichloroethane	ug/L	0.5	<0.20	<0.20	nc	60
1,1-Dichloroethylene	ug/L	0.5	<0.30	<0.30	nc	60
cis-1,2-Dichloroethylene	ug/L	0.5	<0.20	<0.20	nc	60
trans-1,2-Dichloroethylene	ug/L	0.5	<0.20	<0.20	nc	60
1,2-Dichloropropane	ug/L	0.5	<0.20	<0.20	nc	60
1,3-Dichloropropene, total	ug/L	0.5	<0.30	<0.30	nc	60
Ethylbenzene	ug/L	0.5	<0.10	<0.10	nc	60
Ethylene dibromide	ug/L	0.2	<0.10	<0.10	nc	60
Hexane	ug/L	1.0	<0.20	<0.20	nc	60
Methyl Ethyl Ketone	ug/L	5.0	<0.30	<0.30	nc	60
Methyl Isobutyl Ketone	ug/L	5.0	<1.0	<1.0	nc	60
Methyl tert-butyl ether	ug/L	2.0	<1.0	<1.0	nc	60
Methylene Chloride	ug/L	5.0	<0.20	<0.20	nc	60
Styrene	ug/L	0.5	<0.10	<0.10	nc	60
1,1,1,2-Tetrachloroethane	ug/L	0.5	<0.10	<0.10	nc	60
1,1,2,2-Tetrachloroethane	ug/L	0.5	<0.10	<0.10	nc	60
Tetrachloroethylene	ug/L	0.5	<0.20	<0.20	nc	60
Toluene	ug/L	0.5	<0.20	<0.20	nc	60
1,1,1-Trichloroethane	ug/L	0.5	<0.30	<0.30	nc	60
1,1,2-Trichloroethane	ug/L	0.5	<0.20	<0.20	nc	60
Trichloroethylene	ug/L	0.5	<0.20	<0.20	nc	60
Trichlorofluoromethane	ug/L	1.0	<0.40	<0.40	nc	60
Vinyl Chloride	ug/L	0.5	<0.17	<0.17	nc	60
Xylenes, total	ug/L	0.5	<0.20	<0.20	nc	60

NOTES:

Analysis by Caduceon Environmental Laboratries/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**

Appendix F: Laboratory Certificates of Analysis

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: **EXP SERVICES INC**
2650 QUEENSVIEW DRIVE, UNIT 100
OTTAWA, ON K2B8H6
(613) 688-1899

ATTENTION TO: **..**

PROJECT: **OTT-22010865**

AGAT WORK ORDER: **23Z069053**

SOIL ANALYSIS REVIEWED BY: **Sukhwinder Randhawa, Lab Team Leader**

TRACE ORGANICS REVIEWED BY: **Oksana Gushyla, Trace Organics Lab Supervisor**

DATE REPORTED: **Sep 21, 2023**

PAGES (INCLUDING COVER): **20**

VERSION*: **1**

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2023-09-14

DATE REPORTED: 2023-09-21

				SAMPLE DESCRIPTION:	MW3	MW4
				SAMPLE TYPE:	Soil	Soil
				DATE SAMPLED:	2023-09-13 10:40	2023-09-13 09:40
Parameter	Unit	G / S	RDL		5289236	5289242
Antimony	µg/g		0.8		<0.8	1.1
Arsenic	µg/g		1		3	<1
Barium	µg/g		2.0		73.7	28.5
Beryllium	µg/g		0.5		<0.5	<0.5
Boron	µg/g		5		7	<5
Boron (Hot Water Soluble)	µg/g		0.10		0.42	0.53
Cadmium	µg/g		0.5		<0.5	<0.5
Chromium	µg/g		5		23	18
Cobalt	µg/g		0.8		6.8	4.8
Copper	µg/g		1.0		14.3	7.7
Lead	µg/g		1		56	6
Molybdenum	µg/g		0.5		0.6	0.5
Nickel	µg/g		1		13	10
Selenium	µg/g		0.8		<0.8	<0.8
Silver	µg/g		0.5		<0.5	<0.5
Thallium	µg/g		0.5		<0.5	<0.5
Uranium	µg/g		0.50		0.68	<0.50
Vanadium	µg/g		2.0		42.5	25.2
Zinc	µg/g		5		67	32
Chromium, Hexavalent	µg/g		0.2		<0.2	<0.2
Cyanide, WAD	µg/g		0.040		<0.040	<0.040
Mercury	µg/g		0.10		0.24	<0.10
Electrical Conductivity (2:1)	mS/cm		0.005		0.238	0.627
Sodium Adsorption Ratio (2:1) (Calc.)	N/A		N/A		2.27	4.30
pH, 2:1 CaCl2 Extraction	pH Units		NA		7.05	7.19

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2023-09-14 **DATE REPORTED: 2023-09-21**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5289236-5289242 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2023-09-14

DATE REPORTED: 2023-09-21

		SAMPLE DESCRIPTION:		MW3	MW4
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2023-09-13 10:40	2023-09-13 09:40
Parameter	**Unit**	**G / S**	**RDL**	**5289236**	**5289242**
Naphthalene	µg/g		0.05	<0.05	<0.05
Acenaphthylene	µg/g		0.05	<0.05	<0.05
Acenaphthene	µg/g		0.05	<0.05	<0.05
Fluorene	µg/g		0.05	<0.05	<0.05
Phenanthrene	µg/g		0.05	<0.05	<0.05
Anthracene	µg/g		0.05	<0.05	<0.05
Fluoranthene	µg/g		0.05	<0.05	<0.05
Pyrene	µg/g		0.05	<0.05	<0.05
Benz(a)anthracene	µg/g		0.05	<0.05	<0.05
Chrysene	µg/g		0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g		0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g		0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05
1 and 2 Methlynaphthalene	µg/g		0.05	<0.05	<0.05
Moisture Content	%		0.1	10.8	12.6
Surrogate	**Unit**	**Acceptable Limits**			
Naphthalene-d8	%	50-140		70	70
Acridine-d9	%	50-140		85	70
Terphenyl-d14	%	50-140		75	85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5289236-5289242 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2023-09-14

DATE REPORTED: 2023-09-21

		SAMPLE DESCRIPTION:		MW3	MW4
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2023-09-13 10:40	2023-09-13 09:40
Parameter	**Unit**	**G / S**	**RDL**	**5289236**	**5289242**
F1 (C6 - C10)	µg/g		5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g		5	<5	<5
F2 (C10 to C16)	µg/g		10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10
F3 (C16 to C34)	µg/g		50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50
F4 (C34 to C50)	µg/g		50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA
Moisture Content	%		0.1	10.8	12.6
Surrogate	**Unit**	**Acceptable Limits**			
Toluene-d8	%	50-140		101	104
Terphenyl	%	60-140		81	80

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5289236-5289242 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

DATE RECEIVED: 2023-09-14

DATE REPORTED: 2023-09-21

				SAMPLE DESCRIPTION:	MW1	MW2	MW5	DUP
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2023-09-13 14:40	2023-09-13 12:40	2023-09-13 16:30	2023-09-13 12:40
Parameter	**Unit**	**G / S**	**RDL**		**5289226**	**5289231**	**5289246**	**5289247**
F1 (C6 - C10)	µg/g		5		<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g		5		<5	<5	<5	<5
F2 (C10 to C16)	µg/g		10		100	<10	<10	<10
F3 (C16 to C34)	µg/g		50		87	<50	<50	<50
F4 (C34 to C50)	µg/g		50		<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50		NA	NA	NA	NA
Moisture Content	%		0.1		16.8	30.2	9.2	29.1
Surrogate	**Unit**	**Acceptable Limits**						
Toluene-d8	%	50-140			106	98	104	100
Terphenyl	%	60-140			80	78	85	67

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5289226-5289247 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - VOCs (MeOH)

DATE RECEIVED: 2023-09-14

DATE REPORTED: 2023-09-21

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		MeOH
		DATE SAMPLED:		2023-09-13
Parameter	Unit	G / S	RDL	5289249
Dichlorodifluoromethane	µg/g		0.05	<0.05
Vinyl Chloride	ug/g		0.02	<0.02
Bromomethane	ug/g		0.05	<0.05
Trichlorofluoromethane	ug/g		0.05	<0.05
Acetone	ug/g		0.50	<0.50
1,1-Dichloroethylene	ug/g		0.05	<0.05
Methylene Chloride	ug/g		0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g		0.05	<0.05
Methyl tert-butyl Ether	ug/g		0.05	<0.05
1,1-Dichloroethane	ug/g		0.02	<0.02
Methyl Ethyl Ketone	ug/g		0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g		0.02	<0.02
Chloroform	ug/g		0.04	<0.04
1,2-Dichloroethane	ug/g		0.03	<0.03
1,1,1-Trichloroethane	ug/g		0.05	<0.05
Carbon Tetrachloride	ug/g		0.05	<0.05
Benzene	ug/g		0.02	<0.02
1,2-Dichloropropane	ug/g		0.03	<0.03
Trichloroethylene	ug/g		0.03	<0.03
Bromodichloromethane	ug/g		0.05	<0.05
Methyl Isobutyl Ketone	ug/g		0.50	<0.50
1,1,2-Trichloroethane	ug/g		0.04	<0.04
Toluene	ug/g		0.05	<0.05
Dibromochloromethane	ug/g		0.05	<0.05
Ethylene Dibromide	ug/g		0.04	<0.04
Tetrachloroethylene	ug/g		0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g		0.04	<0.04
Chlorobenzene	ug/g		0.05	<0.05
Ethylbenzene	ug/g		0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - VOCs (MeOH)

DATE RECEIVED: 2023-09-14

DATE REPORTED: 2023-09-21

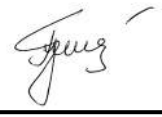
		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		MeOH
		DATE SAMPLED:		2023-09-13
Parameter	**Unit**	**G / S**	**RDL**	**5289249**
Bromoform	ug/g		0.05	<0.05
Styrene	ug/g		0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g		0.05	<0.05
o-Xylene	ug/g		0.05	<0.05
1,3-Dichlorobenzene	ug/g		0.05	<0.05
1,4-Dichlorobenzene	ug/g		0.05	<0.05
1,2-Dichlorobenzene	ug/g		0.05	<0.05
Xylenes (Total)	ug/g		0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g		0.04	<0.04
n-Hexane	µg/g		0.05	<0.05
Surrogate	**Unit**	**Acceptable Limits**		
Toluene-d8	% Recovery	50-140		100
4-Bromofluorobenzene	% Recovery	50-140		98

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5289249 A small amount of methanol extract was diluted in water and analyzed by purge & trap GC/MS.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-09-14

DATE REPORTED: 2023-09-21

SAMPLE DESCRIPTION:				MW1	MW2	MW3	MW4	MW5	DUP
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2023-09-13 14:40	2023-09-13 12:40	2023-09-13 10:40	2023-09-13 09:40	2023-09-13 16:30	2023-09-13 12:40
Parameter	Unit	G / S	RDL	5289226	5289231	5289236	5289242	5289246	5289247
Dichlorodifluoromethane	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g		0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g		0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g		0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-09-14 **DATE REPORTED: 2023-09-21**

		SAMPLE DESCRIPTION:		MW1	MW2	MW3	MW4	MW5	DUP
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-09-13 14:40	2023-09-13 12:40	2023-09-13 10:40	2023-09-13 09:40	2023-09-13 16:30	2023-09-13 12:40
Parameter	**Unit**	**G / S**	**RDL**	**5289226**	**5289231**	**5289236**	**5289242**	**5289246**	**5289247**
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	16.8	30.2	10.8	12.6	9.2	29.1
Surrogate	**Unit**	**Acceptable Limits**							
Toluene-d8	% Recovery	50-140		106	98	101	104	104	100
4-Bromofluorobenzene	% Recovery	50-140		98	84	101	100	99	95

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5289226-5289247 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

Soil Analysis

RPT Date: Sep 21, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	5295581		<0.8	<0.8	NA	< 0.8	131%	70%	130%	103%	80%	120%	108%	70%	130%
Arsenic	5295581		3	3	NA	< 1	118%	70%	130%	106%	80%	120%	125%	70%	130%
Barium	5295581		27.4	30.0	9.1%	< 2.0	106%	70%	130%	101%	80%	120%	99%	70%	130%
Beryllium	5295581		<0.5	<0.5	NA	< 0.5	103%	70%	130%	102%	80%	120%	118%	70%	130%
Boron	5295581		7	7	NA	< 5	91%	70%	130%	101%	80%	120%	122%	70%	130%
Boron (Hot Water Soluble)	5299058		0.52	0.61	15.9%	< 0.10	92%	60%	140%	108%	70%	130%	81%	60%	140%
Cadmium	5295581		<0.5	<0.5	NA	< 0.5	117%	70%	130%	110%	80%	120%	119%	70%	130%
Chromium	5295581		9	10	NA	< 5	104%	70%	130%	106%	80%	120%	118%	70%	130%
Cobalt	5295581		3.7	3.8	NA	< 0.8	107%	70%	130%	104%	80%	120%	114%	70%	130%
Copper	5295581		10.6	10.6	0.0%	< 1.0	105%	70%	130%	103%	80%	120%	106%	70%	130%
Lead	5295581		24	25	4.1%	< 1	115%	70%	130%	95%	80%	120%	103%	70%	130%
Molybdenum	5295581		<0.5	<0.5	NA	< 0.5	118%	70%	130%	112%	80%	120%	127%	70%	130%
Nickel	5295581		8	8	0.0%	< 1	106%	70%	130%	103%	80%	120%	111%	70%	130%
Selenium	5295581		<0.8	<0.8	NA	< 0.8	100%	70%	130%	108%	80%	120%	120%	70%	130%
Silver	5295581		<0.5	<0.5	NA	< 0.5	119%	70%	130%	120%	80%	120%	111%	70%	130%
Thallium	5295581		<0.5	<0.5	NA	< 0.5	118%	70%	130%	101%	80%	120%	129%	70%	130%
Uranium	5295581		<0.50	<0.50	NA	< 0.50	108%	70%	130%	92%	80%	120%	107%	70%	130%
Vanadium	5295581		19.1	20.0	4.6%	< 2.0	117%	70%	130%	106%	80%	120%	121%	70%	130%
Zinc	5295581		53	56	5.5%	< 5	110%	70%	130%	112%	80%	120%	122%	70%	130%
Chromium, Hexavalent	5291327		<0.2	<0.2	NA	< 0.2	94%	70%	130%	94%	80%	120%	90%	70%	130%
Cyanide, WAD	5288076		<0.040	<0.040	NA	< 0.040	104%	70%	130%	98%	80%	120%	85%	70%	130%
Mercury	5295581		<0.10	<0.10	NA	< 0.10	126%	70%	130%	95%	80%	120%	104%	70%	130%
Electrical Conductivity (2:1)	5288076		0.301	0.273	9.8%	< 0.005	93%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	5288076		1.39	1.35	2.9%	NA									
pH, 2:1 CaCl2 Extraction	5290718		6.46	6.70	3.6%	NA	102%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Certified By:

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Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

Trace Organics Analysis

RPT Date: Sep 21, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)															
F1 (C6 - C10)	5292050		<5	<5	NA	< 5	103%	60%	140%	112%	60%	140%	80%	60%	140%
F2 (C10 to C16)	5284571		< 10	< 10	NA	< 10	114%	60%	140%	88%	60%	140%	123%	60%	140%
F3 (C16 to C34)	5284571		< 50	< 50	NA	< 50	109%	60%	140%	87%	60%	140%	111%	60%	140%
F4 (C34 to C50)	5284571		< 50	< 50	NA	< 50	68%	60%	140%	92%	60%	140%	96%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	5292050		<0.05	<0.05	NA	< 0.05	84%	50%	140%	72%	50%	140%	75%	50%	140%
Vinyl Chloride	5292050		<0.02	<0.02	NA	< 0.02	103%	50%	140%	111%	50%	140%	106%	50%	140%
Bromomethane	5292050		<0.05	<0.05	NA	< 0.05	90%	50%	140%	103%	50%	140%	99%	50%	140%
Trichlorofluoromethane	5292050		<0.05	<0.05	NA	< 0.05	101%	50%	140%	82%	50%	140%	98%	50%	140%
Acetone	5292050		<0.50	<0.50	NA	< 0.50	93%	50%	140%	101%	50%	140%	79%	50%	140%
1,1-Dichloroethylene	5292050		<0.05	<0.05	NA	< 0.05	95%	50%	140%	89%	60%	130%	83%	50%	140%
Methylene Chloride	5292050		<0.05	<0.05	NA	< 0.05	87%	50%	140%	72%	60%	130%	72%	50%	140%
Trans- 1,2-Dichloroethylene	5292050		<0.05	<0.05	NA	< 0.05	95%	50%	140%	102%	60%	130%	100%	50%	140%
Methyl tert-butyl Ether	5292050		<0.05	<0.05	NA	< 0.05	73%	50%	140%	84%	60%	130%	91%	50%	140%
1,1-Dichloroethane	5292050		<0.02	<0.02	NA	< 0.02	114%	50%	140%	100%	60%	130%	80%	50%	140%
Methyl Ethyl Ketone	5292050		<0.50	<0.50	NA	< 0.50	102%	50%	140%	96%	50%	140%	111%	50%	140%
Cis- 1,2-Dichloroethylene	5292050		<0.02	<0.02	NA	< 0.02	117%	50%	140%	104%	60%	130%	79%	50%	140%
Chloroform	5292050		<0.04	<0.04	NA	< 0.04	89%	50%	140%	98%	60%	130%	74%	50%	140%
1,2-Dichloroethane	5292050		<0.03	<0.03	NA	< 0.03	116%	50%	140%	113%	60%	130%	83%	50%	140%
1,1,1-Trichloroethane	5292050		<0.05	<0.05	NA	< 0.05	113%	50%	140%	94%	60%	130%	74%	50%	140%
Carbon Tetrachloride	5292050		<0.05	<0.05	NA	< 0.05	83%	50%	140%	118%	60%	130%	75%	50%	140%
Benzene	5292050		<0.02	<0.02	NA	< 0.02	93%	50%	140%	101%	60%	130%	73%	50%	140%
1,2-Dichloropropane	5292050		<0.03	<0.03	NA	< 0.03	100%	50%	140%	113%	60%	130%	104%	50%	140%
Trichloroethylene	5292050		<0.03	<0.03	NA	< 0.03	119%	50%	140%	105%	60%	130%	75%	50%	140%
Bromodichloromethane	5292050		<0.05	<0.05	NA	< 0.05	95%	50%	140%	100%	60%	130%	77%	50%	140%
Methyl Isobutyl Ketone	5292050		<0.50	<0.50	NA	< 0.50	97%	50%	140%	97%	50%	140%	109%	50%	140%
1,1,2-Trichloroethane	5292050		<0.04	<0.04	NA	< 0.04	88%	50%	140%	108%	60%	130%	111%	50%	140%
Toluene	5292050		<0.05	<0.05	NA	< 0.05	111%	50%	140%	108%	60%	130%	101%	50%	140%
Dibromochloromethane	5292050		<0.05	<0.05	NA	< 0.05	112%	50%	140%	113%	60%	130%	106%	50%	140%
Ethylene Dibromide	5292050		<0.04	<0.04	NA	< 0.04	112%	50%	140%	106%	60%	130%	117%	50%	140%
Tetrachloroethylene	5292050		<0.05	<0.05	NA	< 0.05	105%	50%	140%	109%	60%	130%	90%	50%	140%
1,1,1,2-Tetrachloroethane	5292050		<0.04	<0.04	NA	< 0.04	116%	50%	140%	100%	60%	130%	111%	50%	140%
Chlorobenzene	5292050		<0.05	<0.05	NA	< 0.05	109%	50%	140%	106%	60%	130%	99%	50%	140%
Ethylbenzene	5292050		<0.05	<0.05	NA	< 0.05	108%	50%	140%	99%	60%	130%	84%	50%	140%
m & p-Xylene	5292050		<0.05	<0.05	NA	< 0.05	113%	50%	140%	110%	60%	130%	102%	50%	140%
Bromoform	5292050		<0.05	<0.05	NA	< 0.05	119%	50%	140%	112%	60%	130%	116%	50%	140%
Styrene	5292050		<0.05	<0.05	NA	< 0.05	98%	50%	140%	90%	60%	130%	81%	50%	140%
1,1,2,2-Tetrachloroethane	5292050		<0.05	<0.05	NA	< 0.05	105%	50%	140%	106%	60%	130%	94%	50%	140%
o-Xylene	5292050		<0.05	<0.05	NA	< 0.05	115%	50%	140%	112%	60%	130%	107%	50%	140%

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Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

Trace Organics Analysis (Continued)

RPT Date: Sep 21, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5292050		<0.05	<0.05	NA	< 0.05	120%	50%	140%	99%	60%	130%	95%	50%	140%
1,4-Dichlorobenzene	5292050		<0.05	<0.05	NA	< 0.05	117%	50%	140%	96%	60%	130%	85%	50%	140%
1,2-Dichlorobenzene	5292050		<0.05	<0.05	NA	< 0.05	112%	50%	140%	117%	60%	130%	114%	50%	140%
n-Hexane	5292050		<0.05	<0.05	NA	< 0.05	79%	50%	140%	119%	60%	130%	96%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)															
F1 (C6 - C10)	5292050		<5	<5	NA	< 5	103%	60%	140%	112%	60%	140%	80%	60%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	5288690		<0.05	<0.05	NA	< 0.05	85%	50%	140%	73%	50%	140%	78%	50%	140%
Acenaphthylene	5288690		<0.05	<0.05	NA	< 0.05	75%	50%	140%	73%	50%	140%	75%	50%	140%
Acenaphthene	5288690		<0.05	<0.05	NA	< 0.05	81%	50%	140%	93%	50%	140%	73%	50%	140%
Fluorene	5288690		<0.05	<0.05	NA	< 0.05	77%	50%	140%	85%	50%	140%	73%	50%	140%
Phenanthrene	5288690		<0.05	<0.05	NA	< 0.05	81%	50%	140%	110%	50%	140%	93%	50%	140%
Anthracene	5288690		<0.05	<0.05	NA	< 0.05	78%	50%	140%	78%	50%	140%	93%	50%	140%
Fluoranthene	5288690		<0.05	<0.05	NA	< 0.05	81%	50%	140%	110%	50%	140%	98%	50%	140%
Pyrene	5288690		<0.05	<0.05	NA	< 0.05	81%	50%	140%	78%	50%	140%	108%	50%	140%
Benz(a)anthracene	5288690		<0.05	<0.05	NA	< 0.05	81%	50%	140%	85%	50%	140%	103%	50%	140%
Chrysene	5288690		<0.05	<0.05	NA	< 0.05	93%	50%	140%	95%	50%	140%	95%	50%	140%
Benzo(b)fluoranthene	5288690		<0.05	<0.05	NA	< 0.05	110%	50%	140%	90%	50%	140%	73%	50%	140%
Benzo(k)fluoranthene	5288690		<0.05	<0.05	NA	< 0.05	95%	50%	140%	78%	50%	140%	98%	50%	140%
Benzo(a)pyrene	5288690		<0.05	<0.05	NA	< 0.05	110%	50%	140%	90%	50%	140%	100%	50%	140%
Indeno(1,2,3-cd)pyrene	5288690		<0.05	<0.05	NA	< 0.05	85%	50%	140%	93%	50%	140%	108%	50%	140%
Dibenz(a,h)anthracene	5288690		<0.05	<0.05	NA	< 0.05	65%	50%	140%	83%	50%	140%	75%	50%	140%
Benzo(g,h,i)perylene	5288690		<0.05	<0.05	NA	< 0.05	74%	50%	140%	110%	50%	140%	95%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By:

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QC Exceedance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

ATTENTION TO: ..

RPT Date: Sep 21, 2023

PARAMETER	Sample Id	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)										
Antimony		131%	70%	130%	103%	80%	120%	108%	70%	130%

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Dichlorodifluoromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromomethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Acetone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Chloroform	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Toluene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromoform	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Styrene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
o-Xylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
n-Hexane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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FAX (905)712-5122
http://www.agatlabs.com

Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z069053

PROJECT: OTT-22010865

ATTENTION TO: ..

SAMPLING SITE:213-213 Bank St, 178 Nepean St

SAMPLED BY:Mackenzie Russell

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

Have feedback? Scan here for a quick survey!

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
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webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Laboratory Use Only

Work Order #: 23T069053

Cooler Quantity: one-cooler

Arrival Temperatures: 5.1 | 5.2 | 5.9

Custody Seal Intact: ☐Yes ☐No ☑N/A

Notes: bagged ice

Report Information:

Company: EXP Services Inc.
Contact: Mark McCalla
Address: 2650 Queensview dr. Ottawa, ON
Phone: 613 688 1899 Fax:
Reports to be sent to:
1. Email: mackenzie.russell@exp.com
2. Email: mark.mccalla@exp.com

Regulatory Requirements:

(Please check all applicable boxes)

- ☑ Regulation 153/04 — Table 3 *(Indicate One)*: ☐Ind/Com ☐Res/Park ☐Agriculture; Soil Texture *(Check One)*: ☐Coarse ☑Fine
- ☐ Regulation 406 — Table ____ *(Indicate One)*
- ☐ Regulation 558
- ☐ CCME
- ☐ Sewer Use: ☐Sanitary ☐Storm — Region ____
- ☐ Prov. Water Quality Objectives (PWQO)
- ☐ Other ____ *(Indicate One)*

Is this submission for a Record of Site Condition? ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): ____

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CPM

Project Information:

Project: OTT-22010865
Site Location: 231-213 Bank St, 178 Nepean St
Sampled By: Mackenzie Russell
AGAT Quote #: ____ PO: ____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company: EXP Services Inc.
Contact: Mark McCalla
Address: 2650 Queensview dr. Ottawa
Email: mark.mccalla@exp.com

Sample Matrix Legend

GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐CrVI, ☐Hg, ☐HWSB	O. Reg 153: ~~BTEX~~, F1-F4 PHCs	VOC	PAHs	PCBs	PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: TCLP: ☐M&I ☐VOCs ☐ABNs ☐B(a)P ☐PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐Metals ☐VOCs ☐SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐Moisture ☐Sulphide	HOLD					Potentially Hazardous or High Concentration (Y/N)
1. MW1	09/13/2023	14:40 PM	2	S					✓	✓													
2. MW2	↓	12:40 PM	2	↓					✓	✓													
3. MW3	↓	10:40 AM	4	↓			✓		✓	✓	✓												
4. MW4	↓	9:40 AM	4	↓			✓		✓	✓	✓												
5. MW5	↓	16:30 PM	2	↓					✓	✓													
6. DUP	↓	12:40 PM	2	↓					✓	✓													
7. TCLP	↓	10:40 AM	3	↓														✓					
8. Trip Blank	—	—	1	—						✓													
9.		AM PM																					
10.		AM PM																					
11.		AM PM																					

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Mackenzie Russell / [signature]	09/14/23	12:45	[signature]	2023-09-14	12h47
			TK	Sept 15	8:45Am

Page 1 of 1

Nº: T-146973

Any and all products and/or services provided by AGAT Labs are pursuant to the terms and conditions as set forth at www.agatlabs.com/termsandconditions unless otherwise agreed in a current written contractual document.

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

AGAT Laboratories

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CANADA L4Z 1Y2
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CLIENT NAME: EXP SERVICES INC
2650 QUEENSVIEW DRIVE, UNIT 100
OTTAWA, ON K2B8H6
(613) 688-1899
ATTENTION TO: Mark Mccalla
PROJECT: OTT-22010865
AGAT WORK ORDER: 23Z075893
TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer
DATE REPORTED: Oct 06, 2023
PAGES (INCLUDING COVER): 10
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
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- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 23Z075893

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark Mccalla

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

DATE RECEIVED: 2023-09-29

DATE REPORTED: 2023-10-06

		SAMPLE DESCRIPTION:		MW6	MW7	MW8	MW9
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-09-29 11:00	2023-09-28 16:20	2023-09-28 14:00	2023-09-28 11:00
Parameter	**Unit**	**G / S**	**RDL**	**5335251**	**5335253**	**5335254**	**5335255**
F1 (C6 - C10)	µg/g	65	5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	65	5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	150	10	**964**	**642**	<10	<10
F3 (C16 to C34)	µg/g	1300	50	454	304	<50	<50
F4 (C34 to C50)	µg/g	5600	50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	5600	50	NA	NA	NA	NA
Moisture Content	%		0.1	11.5	9.6	7.9	34.1
Surrogate	**Unit**	**Acceptable Limits**					
Toluene-d8	%	50-140		107	113	108	112
Terphenyl	%	60-140		98	80	79	71

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5335251-5335255 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z075893

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark Mccalla

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-09-29

DATE REPORTED: 2023-10-06

		SAMPLE DESCRIPTION:		MW6	MW7	MW8	MW9
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-09-29 11:00	2023-09-28 16:20	2023-09-28 14:00	2023-09-28 11:00
Parameter	Unit	G / S	RDL	5335251	5335253	5335254	5335255
Dichlorodifluoromethane	µg/g	25	0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.022	0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	5.8	0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	28	0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.96	0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	1.4	0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	11	0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	44	0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	30	0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.18	0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	3.4	0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.12	0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.17	0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.085	0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.52	0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	13	0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	4.3	0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	6	0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	9.4	0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.7	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	15	0.05	<0.05	<0.05	<0.05	<0.05

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z075893

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark Mccalla

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-09-29

DATE REPORTED: 2023-10-06

				SAMPLE DESCRIPTION:	MW6	MW7	MW8	MW9
				SAMPLE TYPE:	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2023-09-29 11:00	2023-09-28 16:20	2023-09-28 14:00	2023-09-28 11:00
Parameter	**Unit**	**G / S**	**RDL**		**5335251**	**5335253**	**5335254**	**5335255**
m & p-Xylene	ug/g		0.05		<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g	0.26	0.05		<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	2.2	0.05		<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05		<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05		<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	6	0.05		<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.097	0.05		<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	4.3	0.05		<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	25	0.05		<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.083	0.05		<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	34	0.05		<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1		11.5	9.6	7.9	34.1
Surrogate	**Unit**	**Acceptable Limits**						
Toluene-d8	% Recovery	50-140			107	113	108	112
4-Bromofluorobenzene	% Recovery	50-140			86	87	78	75

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5335251-5335255 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

5835 COOPERS AVENUE
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Exceedance Summary

AGAT WORK ORDER: 23Z075893

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark Mccalla

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5335251	MW6	ON T3 S RPI MFT	O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)	F2 (C10 to C16)	µg/g	150	964
5335253	MW7	ON T3 S RPI MFT	O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)	F2 (C10 to C16)	µg/g	150	642

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Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z075893

PROJECT: OTT-22010865

ATTENTION TO: Mark Mccalla

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 06, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)															
F1 (C6 - C10)	5337136		<5	<5	NA	< 5	96%	60%	140%	87%	60%	140%	76%	60%	140%
F2 (C10 to C16)	5335251	5335251	964	959	0.5%	< 10	108%	60%	140%	102%	60%	140%	76%	60%	140%
F3 (C16 to C34)	5335251	5335251	454	456	0.4%	< 50	103%	60%	140%	116%	60%	140%	108%	60%	140%
F4 (C34 to C50)	5335251	5335251	< 50	< 50	NA	< 50	83%	60%	140%	92%	60%	140%	106%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	5337136		<0.05	<0.05	NA	< 0.05	73%	50%	140%	73%	50%	140%	88%	50%	140%
Vinyl Chloride	5337136		<0.02	<0.02	NA	< 0.02	103%	50%	140%	100%	50%	140%	105%	50%	140%
Bromomethane	5337136		<0.05	<0.05	NA	< 0.05	105%	50%	140%	95%	50%	140%	106%	50%	140%
Trichlorofluoromethane	5337136		<0.05	<0.05	NA	< 0.05	102%	50%	140%	113%	50%	140%	106%	50%	140%
Acetone	5337136		<0.50	<0.50	NA	< 0.50	93%	50%	140%	100%	50%	140%	94%	50%	140%
1,1-Dichloroethylene	5337136		<0.05	<0.05	NA	< 0.05	84%	50%	140%	102%	60%	130%	85%	50%	140%
Methylene Chloride	5337136		<0.05	<0.05	NA	< 0.05	97%	50%	140%	101%	60%	130%	102%	50%	140%
Trans- 1,2-Dichloroethylene	5337136		<0.05	<0.05	NA	< 0.05	73%	50%	140%	90%	60%	130%	84%	50%	140%
Methyl tert-butyl Ether	5337136		<0.05	<0.05	NA	< 0.05	96%	50%	140%	102%	60%	130%	77%	50%	140%
1,1-Dichloroethane	5337136		<0.02	<0.02	NA	< 0.02	94%	50%	140%	112%	60%	130%	96%	50%	140%
Methyl Ethyl Ketone	5337136		<0.50	<0.50	NA	< 0.50	90%	50%	140%	98%	50%	140%	89%	50%	140%
Cis- 1,2-Dichloroethylene	5337136		<0.02	<0.02	NA	< 0.02	82%	50%	140%	96%	60%	130%	82%	50%	140%
Chloroform	5337136		<0.04	<0.04	NA	< 0.04	96%	50%	140%	112%	60%	130%	101%	50%	140%
1,2-Dichloroethane	5337136		<0.03	<0.03	NA	< 0.03	97%	50%	140%	111%	60%	130%	100%	50%	140%
1,1,1-Trichloroethane	5337136		<0.05	<0.05	NA	< 0.05	78%	50%	140%	98%	60%	130%	84%	50%	140%
Carbon Tetrachloride	5337136		<0.05	<0.05	NA	< 0.05	79%	50%	140%	98%	60%	130%	78%	50%	140%
Benzene	5337136		<0.02	<0.02	NA	< 0.02	71%	50%	140%	89%	60%	130%	72%	50%	140%
1,2-Dichloropropane	5337136		<0.03	<0.03	NA	< 0.03	75%	50%	140%	92%	60%	130%	110%	50%	140%
Trichloroethylene	5337136		<0.03	<0.03	NA	< 0.03	96%	50%	140%	90%	60%	130%	83%	50%	140%
Bromodichloromethane	5337136		<0.05	<0.05	NA	< 0.05	85%	50%	140%	96%	60%	130%	90%	50%	140%
Methyl Isobutyl Ketone	5337136		<0.50	<0.50	NA	< 0.50	95%	50%	140%	102%	50%	140%	99%	50%	140%
1,1,2-Trichloroethane	5337136		<0.04	<0.04	NA	< 0.04	110%	50%	140%	101%	60%	130%	118%	50%	140%
Toluene	5337136		<0.05	<0.05	NA	< 0.05	78%	50%	140%	111%	60%	130%	79%	50%	140%
Dibromochloromethane	5337136		<0.05	<0.05	NA	< 0.05	114%	50%	140%	100%	60%	130%	109%	50%	140%
Ethylene Dibromide	5337136		<0.04	<0.04	NA	< 0.04	91%	50%	140%	111%	60%	130%	79%	50%	140%
Tetrachloroethylene	5337136		<0.05	<0.05	NA	< 0.05	99%	50%	140%	90%	60%	130%	108%	50%	140%
1,1,1,2-Tetrachloroethane	5337136		<0.04	<0.04	NA	< 0.04	96%	50%	140%	95%	60%	130%	102%	50%	140%
Chlorobenzene	5337136		<0.05	<0.05	NA	< 0.05	84%	50%	140%	107%	60%	130%	83%	50%	140%
Ethylbenzene	5337136		<0.05	<0.05	NA	< 0.05	82%	50%	140%	82%	60%	130%	77%	50%	140%
m & p-Xylene	5337136		<0.05	<0.05	NA	< 0.05	85%	50%	140%	85%	60%	130%	82%	50%	140%
Bromoform	5337136		<0.05	<0.05	NA	< 0.05	92%	50%	140%	73%	60%	130%	90%	50%	140%
Styrene	5337136		<0.05	<0.05	NA	< 0.05	75%	50%	140%	78%	60%	130%	84%	50%	140%
1,1,2,2-Tetrachloroethane	5337136		<0.05	<0.05	NA	< 0.05	85%	50%	140%	104%	60%	130%	91%	50%	140%
o-Xylene	5337136		<0.05	<0.05	NA	< 0.05	83%	50%	140%	87%	60%	130%	78%	50%	140%

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z075893

PROJECT: OTT-22010865

ATTENTION TO: Mark Mccalla

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Oct 06, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5337136		<0.05	<0.05	NA	< 0.05	101%	50%	140%	100%	60%	130%	98%	50%	140%
1,4-Dichlorobenzene	5337136		<0.05	<0.05	NA	< 0.05	105%	50%	140%	88%	60%	130%	101%	50%	140%
1,2-Dichlorobenzene	5337136		<0.05	<0.05	NA	< 0.05	95%	50%	140%	108%	60%	130%	93%	50%	140%
n-Hexane	5337136		<0.05	<0.05	NA	< 0.05	82%	50%	140%	97%	60%	130%	87%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z075893

PROJECT: OTT-22010865

ATTENTION TO: Mark Mccalla

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z075893

PROJECT: OTT-22010865

ATTENTION TO: Mark Mccalla

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

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Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Laboratory Use Only
Work Order #: 23Z075893
Cooler Quantity: one - ice pack
Arrival Temperatures: 9.6 | 9.5 | 9.6 / 8.6 | 8.1 | 8.4
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: Ice bagged

Report Information:
Company: EXP Services Inc.
Contact: Mark McCalla
Address: 2650 Queensview Dr. Ottawa, ON
Phone: 613 688 1899 Fax:
Reports to be sent to:
1. Email: Mark.mccalla@exp.com
2. Email: Mackenzie.russell@exp.com

Regulatory Requirements:
(Please check all applicable boxes)
☑ Regulation 153/04 — Table 3 (Indicate One) — ☐ Ind/Com ☐ Res/Park ☐ Agriculture
Soil Texture (Check One): ☐ Coarse ☑ Fine
☐ Excess Soils R406 — Table (Indicate One)
☐ Regulation 558
☐ CCME
☐ Sewer Use ☐ Sanitary ☐ Storm — Region
☐ Prov. Water Quality Objectives (PWQO)
☐ Other — Indicate One

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Turnaround Time (TAT) Required:
Regular TAT ☑ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply):
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CPM

Project Information:
Project: OTT-22010865
Site Location: 178 Nepean & 217-231 Bank
Sampled By: Mackenzie Russell
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:
Bill To Same: Yes ☑ No ☐
Company: EXP Services Inc
Contact: Mark McCalla
Address: 2650 Queensview dr.
Email: mark.mccalla@exp.com

Sample Matrix Legend
B	Biota
GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs — Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach — SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
MW6	09/29/2023	11:00 AM/PM	2	S					✓			✓			pH, ICPMS Metals, BTEX, F1-F4		
MW7	09/28/2023	4:20 AM/PM	↓	↓					↓			↓					
MW8	↓	2:00 AM/PM															
MW9		11:00 AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															

Samples Relinquished By (Print Name and Sign): Mackenzie Russell	Date 09/29/2023	Time 13:48	Samples Received By (Print Name and Sign): C. Griffith	Date 09/29/23	Time 13h48
Samples Relinquished By (Print Name and Sign): C. to DHL	Date 10/02/23	Time 15h30	Samples Received By (Print Name and Sign): Rhianne	Date Oct 3	Time 8:30am
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1
N°: T 129312

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: EXP SERVICES INC
2650 QUEENSVIEW DRIVE, UNIT 100
OTTAWA, ON K2B8H6
(613) 688-1899
ATTENTION TO: Mark McCalla
PROJECT: OTT-22010865
AGAT WORK ORDER: 23Z078623
TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist
DATE REPORTED: Oct 17, 2023
PAGES (INCLUDING COVER): 6
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

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- *All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

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Certificate of Analysis

AGAT WORK ORDER: 23Z078623

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:Mackenzie R.

O. Reg. 153(511) - PHCs F2 - F4 (Soil)

DATE RECEIVED: 2023-10-10

DATE REPORTED: 2023-10-17

				SAMPLE DESCRIPTION:	MW6-SS2	MW6-SS3	MW7-SS3
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2023-10-10 09:00	2023-10-10 09:00	2023-10-10 09:00
Parameter	**Unit**	**G / S**	**RDL**		**5354522**	**5354524**	**5354525**
F2 (C10 to C16)	µg/g	98	10		<10	**1070**	<10
F3 (C16 to C34)	µg/g	300	50		<50	**423**	<50
F4 (C34 to C50)	µg/g	2800	50		<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50		NA	NA	NA
Moisture Content	%		0.1		46.0	18.2	9.6
Surrogate	**Unit**	**Acceptable Limits**					
Terphenyl	%	60-140			78	67	75

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5354522-5354525 Results are based on sample dry weight.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popnikolof

Results relate only to the items tested. Results apply to samples as received.

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Exceedance Summary

AGAT WORK ORDER: 23Z078623

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark McCalla

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5354524	MW6-SS3	ON T3 S RPI CT	O. Reg. 153(511) - PHCs F2 - F4 (Soil)	F2 (C10 to C16)	µg/g	98	1070
5354524	MW6-SS3	ON T3 S RPI CT	O. Reg. 153(511) - PHCs F2 - F4 (Soil)	F3 (C16 to C34)	µg/g	300	423

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z078623

PROJECT: OTT-22010865

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:Mackenzie R.

Trace Organics Analysis

RPT Date: Oct 17, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F2 - F4 (Soil)															
F2 (C10 to C16)	5360106		< 10	< 10	NA	< 10	125%	60%	140%	98%	60%	140%	96%	60%	140%
F3 (C16 to C34)	5360106		< 50	< 50	NA	< 50	126%	60%	140%	83%	60%	140%	82%	60%	140%
F4 (C34 to C50)	5360106		< 50	< 50	NA	< 50	94%	60%	140%	92%	60%	140%	109%	60%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: N Popowkolof

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z078623

PROJECT: OTT-22010865

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:Mackenzie R.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: EXP Services Inc
Contact: Mark McCalla
Address: 2650 Queensview Dr.
Ottawa, ON
Phone: 613 688 1899 Fax:
Reports to be sent to:
1. Email: mark.mccalla@exp.com
2. Email: mackenzie.russell@exp.com

Project Information:

Project: OTT-22010865
Site Location: Bank & Nepean
Sampled By: Mackenzie Russell
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company: EXP Services Inc
Contact: Mark McCalla
Address: 2650 Queensview dr.
Email: mark.mccalla@exp.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 *Indicate One*
☐ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☐ Fine

☐ Regulation 406
Table _____ *Indicate One*

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
_____ *Region*

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
_____ *Indicate One*

Is this submission for a Record of Site Condition? ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Sample Matrix Legend

GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Laboratory Use Only

Work Order #: 23T078623
Cooler Quantity: One - ICE
Arrival Temperatures: 9.8 | 9.7 | 9.7
2.3 | 2.2 | 2.1
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: bagged ice

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CPM

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	VOC	PAHs	PCBs	PCBs: Arochlors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach ☐ VOCs ☐ SVOCs	Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	VPHC F2-F4						Potentially Hazardous or High Concentration (Y/N)
1. MW6 - SS2	10/10/2023	9:00 AM/PM	1	S														V						
2. MW6 - SS3	↓	↓ AM/PM	↓	↓														V						
3. MW7 - SS3	↓	↓ AM/PM	↓	↓														V						
4.		AM/PM																						
5.		AM/PM																						
6.		AM/PM																						
7.		AM/PM																						
8.		AM/PM																						
9.		AM/PM																						
10.		AM/PM																						
11.		AM/PM																						

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Mackenzie Russell	10/10/2023	12:30	[illegible]	2023/10/10	12h31
[illegible] 20231010	10/10/2023	15h15	[illegible]	Oct 11	8:45

Page 1 of 1
N°: T-148926

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CLIENT NAME: EXP SERVICES INC
2650 QUEENSVIEW DRIVE, UNIT 100
OTTAWA, ON K2B8H6
(613) 688-1899
ATTENTION TO: Mark McCalla
PROJECT: OTT-22010865
AGAT WORK ORDER: 23Z078628
TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist
DATE REPORTED: Oct 16, 2023
PAGES (INCLUDING COVER): 10
VERSION*: 1

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Notes

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Certificate of Analysis

AGAT WORK ORDER: 23Z078628

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:Mackenzie R.

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)

DATE RECEIVED: 2023-10-06 **DATE REPORTED: 2023-10-12**

				SAMPLE DESCRIPTION:	MW2	MW5	MW6	MW9	DUP	Trip Blank	Field Blank
				SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water
				DATE SAMPLED:	2023-10-06 12:40	2023-10-06 11:50	2023-10-06 11:10	2023-10-06 10:20	2023-10-06 10:20	2023-10-06	2023-10-06 13:00
Parameter	**Unit**	**G / S**	**RDL**		**5352206**	**5352211**	**5352212**	**5352213**	**5352214**	**5352215**	**5352216**
F1 (C6 - C10)	µg/L	750	25		<25	<25	<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25		<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100		<100	<100	<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100		<100	<100	<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100		<100	<100	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA	NA	NA	NA	NA
Sediment					1	1	1	1	1	1	1
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	%	50-140			98	98	99	92	100	95	98
Terphenyl	% Recovery	60-140			90	79	81	79	92	86	78

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5352206-5352216 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: 

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z078628

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE:Bank & Nepean

ATTENTION TO: Mark McCalla

SAMPLED BY:Mackenzie R.

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2023-10-06 **DATE REPORTED: 2023-10-11**

		SAMPLE DESCRIPTION:		MW2	MW5	MW6	MW9	DUP	Trip Blank	Field Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2023-10-06 12:40	2023-10-06 11:50	2023-10-06 11:10	2023-10-06 10:20	2023-10-06 10:20	2023-10-06	2023-10-06 13:00
Parameter	Unit	G / S	RDL	5352206	5352211	5352212	5352213	5352214	5352215	5352216
Dichlorodifluoromethane	µg/L	4400	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	5.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2500	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	130000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	1.6	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	610	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	190	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	320	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	470000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2.4	0.20	<0.20	<0.20	<0.20	**15.0**	**13.2**	<0.20	<0.20
1,2-Dichloroethane	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	640	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.79	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	44	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	16	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	85000	0.20	<0.20	<0.20	<0.20	0.99	0.87	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	140000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	4.7	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	18000	0.20	0.60	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	82000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.25	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	1.6	0.20	0.93	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	3.3	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	630	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	2300	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Certified By: NPopowich

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z078628

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:Mackenzie R.

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2023-10-06 **DATE REPORTED: 2023-10-11**

				SAMPLE DESCRIPTION:	MW2	MW5	MW6	MW9	DUP	Trip Blank	Field Blank
				SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water
				DATE SAMPLED:	2023-10-06 12:40	2023-10-06 11:50	2023-10-06 11:10	2023-10-06 10:20	2023-10-06 10:20	2023-10-06	2023-10-06 13:00
Parameter	**Unit**	**G / S**	**RDL**		**5352206**	**5352211**	**5352212**	**5352213**	**5352214**	**5352215**	**5352216**
m & p-Xylene	µg/L		0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	380	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	1300	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	3.2	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	9600	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	8	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	4600	0.10		<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	5.2	0.30		<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	4200	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	51	0.20		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	% Recovery	50-140			98	98	99	92	100	95	98
4-Bromofluorobenzene	% Recovery	50-140			75	75	71	72	72	68	77

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5352206-5352216 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popnikolof

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Exceedance Summary

AGAT WORK ORDER: 23Z078628

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark McCalla

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5352213	MW9	ON T3 NPGW CT	O. Reg. 153(511) - VOCs (with PHC) (Water)	Chloroform	µg/L	2.4	15.0
5352214	DUP	ON T3 NPGW CT	O. Reg. 153(511) - VOCs (with PHC) (Water)	Chloroform	µg/L	2.4	13.2

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Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z078628

PROJECT: OTT-22010865

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:Mackenzie R.

Trace Organics Analysis

RPT Date:			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)															
F1 (C6 - C10)	5352944		<25	<25	NA	< 25	106%	60%	140%	90%	60%	140%	79%	60%	140%
F2 (C10 to C16)	5352211	5352211	< 100	< 100	NA	< 100	115%	60%	140%	69%	60%	140%	84%	60%	140%
F3 (C16 to C34)	5352211	5352211	< 100	< 100	NA	< 100	116%	60%	140%	69%	60%	140%	80%	60%	140%
F4 (C34 to C50)	5352211	5352211	< 100	< 100	NA	< 100	82%	60%	140%	70%	60%	140%	79%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5352944		<0.40	<0.40	NA	< 0.40	105%	50%	140%	108%	50%	140%	117%	50%	140%
Vinyl Chloride	5352944		3.38	3.05	10.3%	< 0.17	101%	50%	140%	106%	50%	140%	118%	50%	140%
Bromomethane	5352944		<0.20	<0.20	NA	< 0.20	112%	50%	140%	83%	50%	140%	112%	50%	140%
Trichlorofluoromethane	5352944		<0.40	<0.40	NA	< 0.40	93%	50%	140%	91%	50%	140%	113%	50%	140%
Acetone	5352944		<1.0	<1.0	NA	< 1.0	96%	50%	140%	115%	50%	140%	113%	50%	140%
1,1-Dichloroethylene	5352944		<0.30	<0.30	NA	< 0.30	81%	50%	140%	112%	60%	130%	100%	50%	140%
Methylene Chloride	5352944		<0.30	<0.30	NA	< 0.30	114%	50%	140%	115%	60%	130%	108%	50%	140%
trans- 1,2-Dichloroethylene	5352944		2.11	2.02	4.4%	< 0.20	88%	50%	140%	103%	60%	130%	99%	50%	140%
Methyl tert-butyl ether	5352944		<0.20	<0.20	NA	< 0.20	74%	50%	140%	113%	60%	130%	79%	50%	140%
1,1-Dichloroethane	5352944		<0.30	<0.30	NA	< 0.30	74%	50%	140%	107%	60%	130%	83%	50%	140%
Methyl Ethyl Ketone	5352944		<1.0	<1.0	NA	< 1.0	98%	50%	140%	90%	50%	140%	87%	50%	140%
cis- 1,2-Dichloroethylene	5352944		13.4	13.1	2.3%	< 0.20	100%	50%	140%	118%	60%	130%	119%	50%	140%
Chloroform	5352944		1.33	1.33	0.0%	< 0.20	85%	50%	140%	95%	60%	130%	97%	50%	140%
1,2-Dichloroethane	5352944		<0.20	<0.20	NA	< 0.20	104%	50%	140%	115%	60%	130%	118%	50%	140%
1,1,1-Trichloroethane	5352944		<0.30	<0.30	NA	< 0.30	77%	50%	140%	106%	60%	130%	71%	50%	140%
Carbon Tetrachloride	5352944		<0.20	<0.20	NA	< 0.20	78%	50%	140%	102%	60%	130%	77%	50%	140%
Benzene	5352944		0.84	0.81	NA	< 0.20	91%	50%	140%	118%	60%	130%	104%	50%	140%
1,2-Dichloropropane	5352944		<0.20	<0.20	NA	< 0.20	78%	50%	140%	110%	60%	130%	88%	50%	140%
Trichloroethylene	5352944		2.19	2.21	0.9%	< 0.20	86%	50%	140%	93%	60%	130%	112%	50%	140%
Bromodichloromethane	5352944		<0.20	<0.20	NA	< 0.20	85%	50%	140%	95%	60%	130%	74%	50%	140%
Methyl Isobutyl Ketone	5352944		<1.0	<1.0	NA	< 1.0	86%	50%	140%	90%	50%	140%	87%	50%	140%
1,1,2-Trichloroethane	5352944		<0.20	<0.20	NA	< 0.20	119%	50%	140%	116%	60%	130%	105%	50%	140%
Toluene	5352944		0.33	0.33	NA	< 0.20	98%	50%	140%	117%	60%	130%	98%	50%	140%
Dibromochloromethane	5352944		<0.10	<0.10	NA	< 0.10	89%	50%	140%	97%	60%	130%	89%	50%	140%
Ethylene Dibromide	5352944		<0.10	<0.10	NA	< 0.10	107%	50%	140%	98%	60%	130%	109%	50%	140%
Tetrachloroethylene	5352944		<0.20	<0.20	NA	< 0.20	92%	50%	140%	110%	60%	130%	107%	50%	140%
1,1,1,2-Tetrachloroethane	5352944		<0.10	<0.10	NA	< 0.10	78%	50%	140%	96%	60%	130%	84%	50%	140%
Chlorobenzene	5352944		<0.10	<0.10	NA	< 0.10	106%	50%	140%	113%	60%	130%	115%	50%	140%
Ethylbenzene	5352944		<0.10	<0.10	NA	< 0.10	80%	50%	140%	92%	60%	130%	79%	50%	140%
m & p-Xylene	5352944		<0.20	<0.20	NA	< 0.20	87%	50%	140%	117%	60%	130%	89%	50%	140%
Bromoform	5352944		<0.10	<0.10	NA	< 0.10	71%	50%	140%	92%	60%	130%	69%	50%	140%
Styrene	5352944		<0.10	<0.10	NA	< 0.10	77%	50%	140%	119%	60%	130%	76%	50%	140%
1,1,2,2-Tetrachloroethane	5352944		<0.10	<0.10	NA	< 0.10	106%	50%	140%	109%	60%	130%	112%	50%	140%
o-Xylene	5352944		<0.10	<0.10	NA	< 0.10	94%	50%	140%	103%	60%	130%	98%	50%	140%

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: EXP SERVICES INC
PROJECT: OTT-22010865
SAMPLING SITE:Bank & Nepean

AGAT WORK ORDER: 23Z078628
ATTENTION TO: Mark McCalla
SAMPLED BY:Mackenzie R.

Trace Organics Analysis (Continued)

RPT Date:			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5352944		<0.10	<0.10	NA	< 0.10	115%	50%	140%	119%	60%	130%	111%	50%	140%
1,4-Dichlorobenzene	5352944		<0.10	<0.10	NA	< 0.10	118%	50%	140%	117%	60%	130%	112%	50%	140%
1,2-Dichlorobenzene	5352944		<0.10	<0.10	NA	< 0.10	116%	50%	140%	115%	60%	130%	99%	50%	140%
n-Hexane	5352944		<0.20	<0.20	NA	< 0.20	90%	50%	140%	97%	60%	130%	80%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: N Popnikolof

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z078628

PROJECT: OTT-22010865

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:Mackenzie R.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 - C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Sediment			N/A
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z078628

PROJECT: OTT-22010865

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:Mackenzie R.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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AGAT Laboratories

Have feedback? Scan here for a quick survey!

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Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Laboratory Use Only
Work Order #: 2320786 28

Cooler Quantity: one ice packs
Arrival Temperatures: 5.7 | 6.7 | 6.4 / 9.8 | 9.9 | 10.0
Custody Seal Intact: ☐ Yes ☐ No ☑ N/A
Notes: melted ice

Report Information:
Company: EXP Services Inc
Contact: Mark McCalla
Address: 2650 Queensview dr.
Ottawa, ON
Phone: 613 688 1899 Fax:
Reports to be sent to:
1. Email: mark.mccalla@exp.com
2. Email: mackenzie.russell@exp.com

Project Information:
Project: OTT-22010865
Site Location: Bank & Nepean
Sampled By: Mackenzie Russell
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:
Bill To Same: Yes ☑ No ☐
Company: EXP Services Inc
Contact: Mark McCalla
Address: 2650 Queensview dr.
Email: mark.mccalla@exp.com

Regulatory Requirements:
(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 *Indicate One*
☐ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☐ Fine

☐ Regulation 406
Table _____ *Indicate One*

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
_____ *Region*

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
_____ *Indicate One*

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Turnaround Time (TAT) Required:
Regular TAT ☑ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply):
_____
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CPM

Sample Matrix Legend
GW Ground Water
O Oil
P Paint
S Soil
SD Sediment
SW Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. MW 2	10/06/2023	12:40 AM/PM	5	GW	limited sample				✓	✓								
2. MW 5		11:50 AM/PM							✓	✓								
3. MW 6		11:10 AM/PM							✓	✓								
4. MW 9		10:20 AM/PM							✓	✓								
5. DUP		10:20 AM/PM							✓	✓								
6. Trip Blk	—	—							✓	✓								
7. Field blank	10/06/23	1:00 AM/PM							✓	✓								
8.		AM/PM																
9.		AM/PM																
10.		AM/PM																
11.		AM/PM																

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Mackenzie Russell	10/06/2023	14:50	[illegible]	2023/10/06	14h49
[illegible]	2023/10/06	15h15	[illegible]	Oct 10	12:30p

Page 1 of 1
N°: T-148927

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

Document ID: DIV-79-1511.022
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CLIENT NAME: **EXP SERVICES INC**
2650 QUEENSVIEW DRIVE, UNIT 100
OTTAWA, ON K2B8H6
(613) 688-1899
ATTENTION TO: **Mark McCalla**
PROJECT: **OTT-22010865**
AGAT WORK ORDER: **23Z096557**
TRACE ORGANICS REVIEWED BY: **Radhika Chakraberty, Trace Organics Lab Manager**
DATE REPORTED: **Nov 30, 2023**
PAGES (INCLUDING COVER): **10**
VERSION*: **1**

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

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Western Enviro-Agricultural Laboratory Association (WEALA)
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Certificate of Analysis

AGAT WORK ORDER: 23Z096557

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark McCalla

SAMPLING SITE:231 Bank St.

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - PHCs F1/BTEX (Water)

DATE RECEIVED: 2023-11-23

DATE REPORTED: 2023-11-30

				SAMPLE DESCRIPTION:	MW1
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-11-21 15:30
Parameter	**Unit**	**G / S**	**RDL**	**5489389**	
Benzene	µg/L	44	0.20	<0.20	
Toluene	µg/L	18000	0.20	<0.20	
Ethylbenzene	µg/L	2300	0.10	<0.10	
m & p-Xylene	µg/L		0.20	<0.20	
o-Xylene	µg/L		0.10	<0.10	
Xylenes (Total)	µg/L	4200	0.20	<0.20	
F1 (C6-C10)	µg/L	750	25	<25	
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	
Surrogate	**Unit**	**Acceptable Limits**			
Toluene-d8	% Recovery	60-140		87	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5489389 The C6-C10 fraction is calculated using Toluene response factor.
Total C6-C10 results are corrected for BTEX contributions.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
Extraction and holding times were met for this sample.
NA = Not Applicable

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z096557

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark McCalla

SAMPLING SITE:231 Bank St.

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - PHCs F2 - F4 (Water)

DATE RECEIVED: 2023-11-23 **DATE REPORTED: 2023-11-30**

				SAMPLE DESCRIPTION:	MW1
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-11-22 10:40
Parameter	**Unit**	**G / S**	**RDL**	**5489499**	
F2 (C10 to C16)	µg/L		100	462	
F3 (C16 to C34)	µg/L		100	384	
F4 (C34 to C50)	µg/L		100	<100	
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	
Sediment				1	
Surrogate	**Unit**	**Acceptable Limits**			
Terphenyl	%	60-140		71	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5489499 The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 2-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

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Certificate of Analysis

AGAT WORK ORDER: 23Z096557

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE:231 Bank St.

ATTENTION TO: Mark McCalla

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2023-11-23 **DATE REPORTED: 2023-11-30**

		SAMPLE DESCRIPTION:		MW1
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2023-11-21 15:30
Parameter	Unit	G / S	RDL	5489389
Dichlorodifluoromethane	µg/L	4400	0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17
Bromomethane	µg/L	5.6	0.20	<0.20
Trichlorofluoromethane	µg/L	2500	0.40	<0.40
Acetone	µg/L	130000	1.0	<1.0
1,1-Dichloroethylene	µg/L	1.6	0.30	<0.30
Methylene Chloride	µg/L	610	0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Methyl tert-butyl ether	µg/L	190	0.20	<0.20
1,1-Dichloroethane	µg/L	320	0.30	<0.30
Methyl Ethyl Ketone	µg/L	470000	1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20
Chloroform	µg/L	2.4	0.20	<0.20
1,2-Dichloroethane	µg/L	1.6	0.20	<0.20
1,1,1-Trichloroethane	µg/L	640	0.30	<0.30
Carbon Tetrachloride	µg/L	0.79	0.20	<0.20
Benzene	µg/L	44	0.20	<0.20
1,2-Dichloropropane	µg/L	16	0.20	<0.20
Trichloroethylene	µg/L	1.6	0.20	<0.20
Bromodichloromethane	µg/L	85000	0.20	<0.20
Methyl Isobutyl Ketone	µg/L	140000	1.0	<1.0
1,1,2-Trichloroethane	µg/L	4.7	0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20
Dibromochloromethane	µg/L	82000	0.10	<0.10
Ethylene Dibromide	µg/L	0.25	0.10	<0.10
Tetrachloroethylene	µg/L	1.6	0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	3.3	0.10	<0.10
Chlorobenzene	µg/L	630	0.10	<0.10
Ethylbenzene	µg/L	2300	0.10	<0.10

Certified By: R. Chakraberty

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z096557

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

SAMPLING SITE:231 Bank St.

ATTENTION TO: Mark McCalla

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2023-11-23 **DATE REPORTED: 2023-11-30**

				SAMPLE DESCRIPTION:	MW1
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-11-21 15:30
Parameter	**Unit**	**G / S**	**RDL**	**5489389**	
m & p-Xylene	µg/L		0.20	<0.20	
Bromoform	µg/L	380	0.10	<0.10	
Styrene	µg/L	1300	0.10	<0.10	
1,1,2,2-Tetrachloroethane	µg/L	3.2	0.10	<0.10	
o-Xylene	µg/L		0.10	<0.10	
1,3-Dichlorobenzene	µg/L	9600	0.10	<0.10	
1,4-Dichlorobenzene	µg/L	8	0.10	<0.10	
1,2-Dichlorobenzene	µg/L	4600	0.10	<0.10	
1,3-Dichloropropene	µg/L	5.2	0.30	<0.30	
Xylenes (Total)	µg/L	4200	0.20	<0.20	
n-Hexane	µg/L	51	0.20	<0.20	
Surrogate	**Unit**	**Acceptable Limits**			
Toluene-d8	% Recovery	50-140		97	
4-Bromofluorobenzene	% Recovery	50-140		66	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5489389 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

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Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z096557

PROJECT: OTT-22010865

ATTENTION TO: Mark McCalla

SAMPLING SITE:231 Bank St.

SAMPLED BY:Mackenzie Russell

Trace Organics Analysis

RPT Date: Nov 30, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1/BTEX (Water)															
Benzene	5486798		<0.20	<0.20	NA	< 0.20	107%	60%	140%	91%	60%	140%	84%	60%	140%
Toluene	5486798		<0.20	<0.20	NA	< 0.20	113%	60%	140%	109%	60%	140%	78%	60%	140%
Ethylbenzene	5486798		<0.10	<0.10	NA	< 0.10	100%	60%	140%	102%	60%	140%	85%	60%	140%
m & p-Xylene	5486798		<0.20	<0.20	NA	< 0.20	100%	60%	140%	101%	60%	140%	89%	60%	140%
o-Xylene	5486798		<0.10	<0.10	NA	< 0.10	100%	60%	140%	100%	60%	140%	79%	60%	140%
F1 (C6-C10)	5486798		<25	<25	NA	< 25	112%	60%	140%	103%	60%	140%	102%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5498816		<0.40	<0.40	NA	< 0.40	81%	50%	140%	101%	50%	140%	119%	50%	140%
Vinyl Chloride	5498816		<0.17	<0.17	NA	< 0.17	92%	50%	140%	89%	50%	140%	119%	50%	140%
Bromomethane	5498816		<0.20	<0.20	NA	< 0.20	105%	50%	140%	97%	50%	140%	116%	50%	140%
Trichlorofluoromethane	5498816		<0.40	<0.40	NA	< 0.40	107%	50%	140%	116%	50%	140%	112%	50%	140%
Acetone	5498816		<1.0	<1.0	NA	< 1.0	99%	50%	140%	116%	50%	140%	88%	50%	140%
1,1-Dichloroethylene	5498816		<0.30	<0.30	NA	< 0.30	92%	50%	140%	105%	60%	130%	114%	50%	140%
Methylene Chloride	5498816		<0.30	<0.30	NA	< 0.30	110%	50%	140%	98%	60%	130%	100%	50%	140%
trans- 1,2-Dichloroethylene	5498816		<0.20	<0.20	NA	< 0.20	107%	50%	140%	94%	60%	130%	118%	50%	140%
Methyl tert-butyl ether	5498816		<0.20	<0.20	NA	< 0.20	96%	50%	140%	103%	60%	130%	104%	50%	140%
1,1-Dichloroethane	5498816		<0.30	<0.30	NA	< 0.30	115%	50%	140%	106%	60%	130%	99%	50%	140%
Methyl Ethyl Ketone	5498816		<1.0	<1.0	NA	< 1.0	107%	50%	140%	95%	50%	140%	91%	50%	140%
cis- 1,2-Dichloroethylene	5498816		<0.20	<0.20	NA	< 0.20	118%	50%	140%	118%	60%	130%	99%	50%	140%
Chloroform	5498816		<0.20	<0.20	NA	< 0.20	111%	50%	140%	117%	60%	130%	119%	50%	140%
1,2-Dichloroethane	5498816		<0.20	<0.20	NA	< 0.20	94%	50%	140%	86%	60%	130%	96%	50%	140%
1,1,1-Trichloroethane	5498816		<0.30	<0.30	NA	< 0.30	114%	50%	140%	120%	60%	130%	94%	50%	140%
Carbon Tetrachloride	5498816		<0.20	<0.20	NA	< 0.20	113%	50%	140%	103%	60%	130%	94%	50%	140%
Benzene	5498816		<0.20	<0.20	NA	< 0.20	108%	50%	140%	105%	60%	130%	108%	50%	140%
1,2-Dichloropropane	5498816		<0.20	<0.20	NA	< 0.20	99%	50%	140%	108%	60%	130%	97%	50%	140%
Trichloroethylene	5498816		<0.20	<0.20	NA	< 0.20	88%	50%	140%	91%	60%	130%	90%	50%	140%
Bromodichloromethane	5498816		<0.20	<0.20	NA	< 0.20	110%	50%	140%	110%	60%	130%	102%	50%	140%
Methyl Isobutyl Ketone	5498816		<1.0	<1.0	NA	< 1.0	111%	50%	140%	98%	50%	140%	106%	50%	140%
1,1,2-Trichloroethane	5498816		<0.20	<0.20	NA	< 0.20	115%	50%	140%	107%	60%	130%	108%	50%	140%
Toluene	5498816		0.48	0.39	NA	< 0.20	109%	50%	140%	113%	60%	130%	95%	50%	140%
Dibromochloromethane	5498816		<0.10	<0.10	NA	< 0.10	105%	50%	140%	111%	60%	130%	117%	50%	140%
Ethylene Dibromide	5498816		<0.10	<0.10	NA	< 0.10	105%	50%	140%	100%	60%	130%	101%	50%	140%
Tetrachloroethylene	5498816		<0.20	<0.20	NA	< 0.20	92%	50%	140%	100%	60%	130%	117%	50%	140%
1,1,1,2-Tetrachloroethane	5498816		<0.10	<0.10	NA	< 0.10	113%	50%	140%	118%	60%	130%	103%	50%	140%
Chlorobenzene	5498816		<0.10	<0.10	NA	< 0.10	104%	50%	140%	109%	60%	130%	103%	50%	140%
Ethylbenzene	5498816		<0.10	<0.10	NA	< 0.10	103%	50%	140%	103%	60%	130%	115%	50%	140%
m & p-Xylene	5498816		<0.20	<0.20	NA	< 0.20	108%	50%	140%	118%	60%	130%	114%	50%	140%
Bromoform	5498816		<0.10	<0.10	NA	< 0.10	108%	50%	140%	112%	60%	130%	119%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z096557

PROJECT: OTT-22010865

ATTENTION TO: Mark McCalla

SAMPLING SITE:231 Bank St.

SAMPLED BY:Mackenzie Russell

Trace Organics Analysis (Continued)

RPT Date: Nov 30, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Styrene	5498816		<0.10	<0.10	NA	< 0.10	85%	50%	140%	118%	60%	130%	90%	50%	140%
1,1,2,2-Tetrachloroethane	5498816		<0.10	<0.10	NA	< 0.10	108%	50%	140%	113%	60%	130%	113%	50%	140%
o-Xylene	5498816		<0.10	<0.10	NA	< 0.10	96%	50%	140%	103%	60%	130%	115%	50%	140%
1,3-Dichlorobenzene	5498816		<0.10	<0.10	NA	< 0.10	104%	50%	140%	106%	60%	130%	108%	50%	140%
1,4-Dichlorobenzene	5498816		<0.10	<0.10	NA	< 0.10	105%	50%	140%	105%	60%	130%	102%	50%	140%
1,2-Dichlorobenzene	5498816		<0.10	<0.10	NA	< 0.10	103%	50%	140%	103%	60%	130%	95%	50%	140%
n-Hexane	5498816		<0.20	<0.20	NA	< 0.20	78%	50%	140%	105%	60%	130%	80%	50%	140%
O. Reg. 153(511) - PHCs F2 - F4 (Water)															
F2 (C10 to C16)	5486951		<100	<100	NA	< 100	96%	60%	140%	63%	60%	140%	94%	60%	140%
F3 (C16 to C34)	5486951		<100	<100	NA	< 100	104%	60%	140%	82%	60%	140%	118%	60%	140%
F4 (C34 to C50)	5486951		<100	<100	NA	< 100	102%	60%	140%	111%	60%	140%	109%	60%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: R. Chakraberty

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z096557

PROJECT: OTT-22010865

ATTENTION TO: Mark McCalla

SAMPLING SITE:231 Bank St.

SAMPLED BY:Mackenzie Russell

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Toluene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F1 (C6-C10)	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC E3421	GC/FID
Sediment			N/A
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z096557

PROJECT: OTT-22010865

ATTENTION TO: Mark McCalla

SAMPLING SITE:231 Bank St.

SAMPLED BY:Mackenzie Russell

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Results relate only to the items tested. Results apply to samples as received.

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Have feedback? Scan here for a quick survey!

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webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: EXP Services Inc.
Contact: Mark McCalla
Address: 2650 Queensview dr.
Ottawa, ON
Phone: 613 688 1899 Fax:
Reports to be sent to:
1. Email: mark.mccalla@exp.com
2. Email: Mackenzie.russell@exp.com

Project Information:

Project: OTT-22010865
Site Location: 231 Bank st
Sampled By: Mackenzie Russell
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 *Indicate One*
☐ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☐ Fine

☐ Regulation 406
Table *Indicate One*

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
Region

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
Indicate One

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Sample Matrix Legend

GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Laboratory Use Only

Work Order #: 23Z096557

Cooler Quantity: one - ice packs
Arrival Temperatures: 9.8 | 9.6 | 9.6
3.1 | 3.0 | 3.2
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: bagged.u

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CPM

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. MW1	11/21/2023	15:30 AM PM	4	GW	& limited sample → F2-F4 bottle sampled 11/22/2023 10:40 am				✓	✓								
2.		AM PM																
3.		AM PM																
4.		AM PM																
5.		AM PM																
6.		AM PM																
7.		AM PM																
8.		AM PM																
9.		AM PM																
10.		AM PM																
11.		AM PM																

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Mackenzie Russell /	11/22/2023	17:00	C. Griffith	11/23/23	08h00
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
C to Amo	11/23/23	15h30		NOV 24	9:20
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1

N°: T - 143815

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

Document ID: DW-78-1511-022

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Date Issued: Mar 30, 2023

AGAT Laboratories

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CLIENT NAME: EXP SERVICES INC
2650 QUEENSVIEW DRIVE, UNIT 100
OTTAWA, ON K2B8H6
(613) 688-1899
ATTENTION TO: Mark McCalla
PROJECT: OTT-22010865
AGAT WORK ORDER: 23Z104014
TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor
DATE REPORTED: Dec 20, 2023
PAGES (INCLUDING COVER): 9
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
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- *All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

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Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 23Z104014

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

DATE RECEIVED: 2023-12-13

DATE REPORTED: 2023-12-20

		SAMPLE DESCRIPTION:		BH12-SS2	BH13-SS2
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2023-12-12	2023-12-12
Parameter	**Unit**	**G / S**	**RDL**	**5544249**	**5544251**
F1 (C6 to C10)	µg/g		5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g		5	<5	<5
F2 (C10 to C16)	µg/g		10	<10	<10
F3 (C16 to C34)	µg/g		50	<50	<50
F4 (C34 to C50)	µg/g		50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA
Moisture Content	%		0.1	8.0	9.4
Surrogate	**Unit**	**Acceptable Limits**			
Toluene-d8	%	50-140		106	108
Terphenyl	%	60-140		88	95

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5544249-5544251 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

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Certificate of Analysis

AGAT WORK ORDER: 23Z104014

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-12-13

DATE REPORTED: 2023-12-20

		SAMPLE DESCRIPTION:		BH12-SS2	BH13-SS2
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2023-12-12	2023-12-12
Parameter	Unit	G / S	RDL	5544249	5544251
Dichlorodifluoromethane	µg/g		0.05	<0.05	<0.05
Vinyl Chloride	ug/g		0.02	<0.02	<0.02
Bromomethane	ug/g		0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g		0.05	<0.05	<0.05
Acetone	ug/g		0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g		0.05	<0.05	<0.05
Methylene Chloride	ug/g		0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g		0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g		0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g		0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g		0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g		0.02	<0.02	<0.02
Chloroform	ug/g		0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g		0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g		0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g		0.05	<0.05	<0.05
Benzene	ug/g		0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g		0.03	<0.03	<0.03
Trichloroethylene	ug/g		0.03	<0.03	<0.03
Bromodichloromethane	ug/g		0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g		0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g		0.04	<0.04	<0.04
Toluene	ug/g		0.05	<0.05	<0.05
Dibromochloromethane	ug/g		0.05	<0.05	<0.05
Ethylene Dibromide	ug/g		0.04	<0.04	<0.04
Tetrachloroethylene	ug/g		0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g		0.04	<0.04	<0.04
Chlorobenzene	ug/g		0.05	<0.05	<0.05
Ethylbenzene	ug/g		0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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CANADA L4Z 1Y2
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Certificate of Analysis

AGAT WORK ORDER: 23Z104014

PROJECT: OTT-22010865

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:Mackenzie Russell

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-12-13

DATE REPORTED: 2023-12-20

		SAMPLE DESCRIPTION:		BH12-SS2	BH13-SS2
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2023-12-12	2023-12-12
Parameter	**Unit**	**G / S**	**RDL**	**5544249**	**5544251**
Bromoform	ug/g		0.05	<0.05	<0.05
Styrene	ug/g		0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g		0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g		0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g		0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g		0.05	<0.05	<0.05
Xylenes (Total)	ug/g		0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g		0.05	<0.05	<0.05
n-Hexane	µg/g		0.05	<0.05	<0.05
Moisture Content	%		0.1	8.0	9.4
Surrogate	**Unit**	**Acceptable Limits**			
Toluene-d8	% Recovery	50-140		106	108
4-Bromofluorobenzene	% Recovery	50-140		83	83

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5544249-5544251 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z104014

PROJECT: OTT-22010865

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:Mackenzie Russell

Trace Organics Analysis

RPT Date: Dec 20, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)															
F1 (C6 to C10)	5545300		<5	<5	NA	< 5	124%	60%	140%	111%	60%	140%	90%	60%	140%
F2 (C10 to C16)	5545294		< 10	< 10	NA	< 10	116%	60%	140%	96%	60%	140%	95%	60%	140%
F3 (C16 to C34)	5545294		< 50	< 50	NA	< 50	119%	60%	140%	102%	60%	140%	109%	60%	140%
F4 (C34 to C50)	5545294		< 50	< 50	NA	< 50	90%	60%	140%	93%	60%	140%	103%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	5545300		<0.05	<0.05	NA	< 0.05	101%	50%	140%	105%	50%	140%	102%	50%	140%
Vinyl Chloride	5545300		<0.02	<0.02	NA	< 0.02	101%	50%	140%	110%	50%	140%	90%	50%	140%
Bromomethane	5545300		<0.05	<0.05	NA	< 0.05	102%	50%	140%	93%	50%	140%	89%	50%	140%
Trichlorofluoromethane	5545300		<0.05	<0.05	NA	< 0.05	101%	50%	140%	99%	50%	140%	101%	50%	140%
Acetone	5545300		<0.50	<0.50	NA	< 0.50	94%	50%	140%	95%	50%	140%	97%	50%	140%
1,1-Dichloroethylene	5545300		<0.05	<0.05	NA	< 0.05	96%	50%	140%	92%	60%	130%	79%	50%	140%
Methylene Chloride	5545300		<0.05	<0.05	NA	< 0.05	74%	50%	140%	96%	60%	130%	101%	50%	140%
Trans- 1,2-Dichloroethylene	5545300		<0.05	<0.05	NA	< 0.05	95%	50%	140%	92%	60%	130%	98%	50%	140%
Methyl tert-butyl Ether	5545300		<0.05	<0.05	NA	< 0.05	84%	50%	140%	82%	60%	130%	72%	50%	140%
1,1-Dichloroethane	5545300		<0.02	<0.02	NA	< 0.02	87%	50%	140%	88%	60%	130%	97%	50%	140%
Methyl Ethyl Ketone	5545300		<0.50	<0.50	NA	< 0.50	88%	50%	140%	103%	50%	140%	106%	50%	140%
Cis- 1,2-Dichloroethylene	5545300		<0.02	<0.02	NA	< 0.02	93%	50%	140%	79%	60%	130%	86%	50%	140%
Chloroform	5545300		<0.04	<0.04	NA	< 0.04	102%	50%	140%	96%	60%	130%	85%	50%	140%
1,2-Dichloroethane	5545300		<0.03	<0.03	NA	< 0.03	106%	50%	140%	85%	60%	130%	83%	50%	140%
1,1,1-Trichloroethane	5545300		<0.05	<0.05	NA	< 0.05	86%	50%	140%	89%	60%	130%	91%	50%	140%
Carbon Tetrachloride	5545300		<0.05	<0.05	NA	< 0.05	101%	50%	140%	95%	60%	130%	93%	50%	140%
Benzene	5545300		<0.02	<0.02	NA	< 0.02	85%	50%	140%	94%	60%	130%	89%	50%	140%
1,2-Dichloropropane	5545300		<0.03	<0.03	NA	< 0.03	110%	50%	140%	95%	60%	130%	92%	50%	140%
Trichloroethylene	5545300		<0.03	<0.03	NA	< 0.03	95%	50%	140%	84%	60%	130%	103%	50%	140%
Bromodichloromethane	5545300		<0.05	<0.05	NA	< 0.05	78%	50%	140%	98%	60%	130%	95%	50%	140%
Methyl Isobutyl Ketone	5545300		<0.50	<0.50	NA	< 0.50	90%	50%	140%	101%	50%	140%	100%	50%	140%
1,1,2-Trichloroethane	5545300		<0.04	<0.04	NA	< 0.04	89%	50%	140%	101%	60%	130%	89%	50%	140%
Toluene	5545300		<0.05	<0.05	NA	< 0.05	97%	50%	140%	93%	60%	130%	80%	50%	140%
Dibromochloromethane	5545300		<0.05	<0.05	NA	< 0.05	85%	50%	140%	94%	60%	130%	91%	50%	140%
Ethylene Dibromide	5545300		<0.04	<0.04	NA	< 0.04	98%	50%	140%	82%	60%	130%	101%	50%	140%
Tetrachloroethylene	5545300		<0.05	<0.05	NA	< 0.05	93%	50%	140%	88%	60%	130%	95%	50%	140%
1,1,1,2-Tetrachloroethane	5545300		<0.04	<0.04	NA	< 0.04	88%	50%	140%	79%	60%	130%	76%	50%	140%
Chlorobenzene	5545300		<0.05	<0.05	NA	< 0.05	88%	50%	140%	89%	60%	130%	102%	50%	140%
Ethylbenzene	5545300		<0.05	<0.05	NA	< 0.05	94%	50%	140%	100%	60%	130%	92%	50%	140%
m & p-Xylene	5545300		<0.05	<0.05	NA	< 0.05	117%	50%	140%	102%	60%	130%	102%	50%	140%
Bromoform	5545300		<0.05	<0.05	NA	< 0.05	91%	50%	140%	102%	60%	130%	96%	50%	140%
Styrene	5545300		<0.05	<0.05	NA	< 0.05	94%	50%	140%	88%	60%	130%	78%	50%	140%
1,1,2,2-Tetrachloroethane	5545300		<0.05	<0.05	NA	< 0.05	85%	50%	140%	90%	60%	130%	101%	50%	140%
o-Xylene	5545300		<0.05	<0.05	NA	< 0.05	102%	50%	140%	94%	60%	130%	99%	50%	140%

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Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

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Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z104014

PROJECT: OTT-22010865

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:Mackenzie Russell

Trace Organics Analysis (Continued)

RPT Date: Dec 20, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5545300		<0.05	<0.05	NA	< 0.05	98%	50%	140%	101%	60%	130%	99%	50%	140%
1,4-Dichlorobenzene	5545300		<0.05	<0.05	NA	< 0.05	95%	50%	140%	93%	60%	130%	99%	50%	140%
1,2-Dichlorobenzene	5545300		<0.05	<0.05	NA	< 0.05	86%	50%	140%	101%	60%	130%	98%	50%	140%
n-Hexane	5545300		<0.05	<0.05	NA	< 0.05	90%	50%	140%	82%	60%	130%	95%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By:

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Results relate only to the items tested. Results apply to samples as received.

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z104014

PROJECT: OTT-22010865

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:Mackenzie Russell

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z104014

PROJECT: OTT-22010865

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:Mackenzie Russell

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

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AGAT Laboratories

Have feedback? Scan here for a quick survey!

5835 Coopers Avenue
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webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: EXP Services Inc
Contact: Mark McCalla
Address: 2650 Queensview dr
Ottawa, ON
Phone: 613 688 1899 Fax:
Reports to be sent to:
1. Email: mark.mccalla@exp.com
2. Email: Mackenzie.russell@exp.com

Regulatory Requirements:

(Please check all applicable boxes)

- [x] Regulation 153/04 — Table 3 (Indicate One) — [ ] Ind/Com [ ] Res/Park [ ] Agriculture
- Soil Texture (Check One): [ ] Coarse [ ] Fine
- [ ] Regulation 406 — Table (Indicate One)
- [ ] Regulation 558
- [ ] CCME
- [ ] Sewer Use [ ] Sanitary [ ] Storm — (Region)
- [ ] Prov. Water Quality Objectives (PWQO)
- [ ] Other (Indicate One)

Project Information:

Project: OTT-22010565
Site Location: Bank & Nepean
Sampled By: Mackenzie Russell
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Is this submission for a **Record of Site Condition?** [x] Yes [ ] No

Report Guideline on *Certificate of Analysis* [x] Yes [ ] No

Invoice Information:

Bill To Same: Yes [x] No [ ]

Company:
Contact:
Address:
Email:

Sample Matrix Legend

GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Laboratory Use Only

Work Order #: 23210401 4

Cooler Quantity: one - ice packs
Arrival Temperatures: 10.0 | 9.8 | 9.7
2.1 | 2.5 | 2.9
Custody Seal Intact: [ ] Yes [ ] No [ ] N/A
Notes: bagged ice

Turnaround Time (TAT) Required:

Regular TAT [x] 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

[ ] 3 Business Days [ ] 2 Business Days [ ] Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CPM

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. BH12-SS2	12/12/23	AM PM	2	S					✓	✓								
2. BH13-SS2	↓	AM PM	2	S					✓	✓								
3.		AM PM																
4.		AM PM																
5.		AM PM																
6.		AM PM																
7.		AM PM																
8.		AM PM																
9.		AM PM																
10.		AM PM																
11.		AM PM																

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Mackenzie Russell	12/13/23	15:03	C. Griffith	12/13/23	15:04
C. to Driver	12/13/23	15:30		Dec 14	8:45

Page 1 of 1

N°: T-147992

Pink Copy - Client I Yellow Copy - AGAT I White Copy - AGAT

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AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: EXP SERVICES INC
2650 QUEENSVIEW DRIVE, UNIT 100
OTTAWA, ON K2B8H6
(613) 688-1899
ATTENTION TO: Mark McCalla
PROJECT: OTT-22010805-A0
AGAT WORK ORDER: 23Z106017
TRACE ORGANICS REVIEWED BY: Radhika Chakraberty, Trace Organics Lab Manager
DATE REPORTED: Dec 28, 2023
PAGES (INCLUDING COVER): 9
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

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Certificate of Analysis

AGAT WORK ORDER: 23Z106017

PROJECT: OTT-22010805-A0

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:McKenzie Russell

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

DATE RECEIVED: 2023-12-19 **DATE REPORTED: 2023-12-28**

		SAMPLE DESCRIPTION:		BH14-SS3
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2023-12-19
Parameter	**Unit**	**G / S**	**RDL**	**5557076**
F1 (C6 to C10)	µg/g		5	<5
F1 (C6 to C10) minus BTEX	µg/g		5	<5
F2 (C10 to C16)	µg/g		10	<10
F3 (C16 to C34)	µg/g		50	<50
F4 (C34 to C50)	µg/g		50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA
Moisture Content	%		0.1	34.8
Surrogate	**Unit**	**Acceptable Limits**		
Toluene-d8	%	50-140		108
Terphenyl	%	60-140		81

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5557076 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

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AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z106017

PROJECT: OTT-22010805-A0

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:McKenzie Russell

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-12-19

DATE REPORTED: 2023-12-28

		SAMPLE DESCRIPTION:		BH14-SS3
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2023-12-19
Parameter	Unit	G / S	RDL	5557076
Dichlorodifluoromethane	µg/g		0.05	<0.05
Vinyl Chloride	ug/g		0.02	<0.02
Bromomethane	ug/g		0.05	<0.05
Trichlorofluoromethane	ug/g		0.05	<0.05
Acetone	ug/g		0.50	<0.50
1,1-Dichloroethylene	ug/g		0.05	<0.05
Methylene Chloride	ug/g		0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g		0.05	<0.05
Methyl tert-butyl Ether	ug/g		0.05	<0.05
1,1-Dichloroethane	ug/g		0.02	<0.02
Methyl Ethyl Ketone	ug/g		0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g		0.02	<0.02
Chloroform	ug/g		0.04	<0.04
1,2-Dichloroethane	ug/g		0.03	<0.03
1,1,1-Trichloroethane	ug/g		0.05	<0.05
Carbon Tetrachloride	ug/g		0.05	<0.05
Benzene	ug/g		0.02	<0.02
1,2-Dichloropropane	ug/g		0.03	<0.03
Trichloroethylene	ug/g		0.03	<0.03
Bromodichloromethane	ug/g		0.05	<0.05
Methyl Isobutyl Ketone	ug/g		0.50	<0.50
1,1,2-Trichloroethane	ug/g		0.04	<0.04
Toluene	ug/g		0.05	<0.05
Dibromochloromethane	ug/g		0.05	<0.05
Ethylene Dibromide	ug/g		0.04	<0.04
Tetrachloroethylene	ug/g		0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g		0.04	<0.04
Chlorobenzene	ug/g		0.05	<0.05
Ethylbenzene	ug/g		0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05

Certified By: R. Chakraberty

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Certificate of Analysis

AGAT WORK ORDER: 23Z106017

PROJECT: OTT-22010805-A0

CLIENT NAME: EXP SERVICES INC

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:McKenzie Russell

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-12-19

DATE REPORTED: 2023-12-28

		SAMPLE DESCRIPTION:		BH14-SS3
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2023-12-19
Parameter	**Unit**	**G / S**	**RDL**	**5557076**
Bromoform	ug/g		0.05	<0.05
Styrene	ug/g		0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g		0.05	<0.05
o-Xylene	ug/g		0.05	<0.05
1,3-Dichlorobenzene	ug/g		0.05	<0.05
1,4-Dichlorobenzene	ug/g		0.05	<0.05
1,2-Dichlorobenzene	ug/g		0.05	<0.05
Xylenes (Total)	ug/g		0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g		0.05	<0.05
n-Hexane	µg/g		0.05	<0.05
Moisture Content	%		0.1	34.8
Surrogate	**Unit**	**Acceptable Limits**		
Toluene-d8	% Recovery	50-140		108
4-Bromofluorobenzene	% Recovery	50-140		88

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5557076 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: R. Chakraberty

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Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z106017

PROJECT: OTT-22010805-A0

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:McKenzie Russell

Trace Organics Analysis

RPT Date: Dec 28, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)															
F1 (C6 to C10)	5559338		<5	<5	NA	< 5	125%	60%	140%	107%	60%	140%	84%	60%	140%
F2 (C10 to C16)	5556387		<10	<10	NA	< 10	104%	60%	140%	105%	60%	140%	91%	60%	140%
F3 (C16 to C34)	5556387		<50	<50	NA	< 50	107%	60%	140%	108%	60%	140%	98%	60%	140%
F4 (C34 to C50)	5556387		<50	<50	NA	< 50	69%	60%	140%	80%	60%	140%	90%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	5559338		<0.05	<0.05	NA	< 0.05	112%	50%	140%	114%	50%	140%	105%	50%	140%
Vinyl Chloride	5559338		<0.02	<0.02	NA	< 0.02	112%	50%	140%	100%	50%	140%	97%	50%	140%
Bromomethane	5559338		<0.05	<0.05	NA	< 0.05	111%	50%	140%	103%	50%	140%	106%	50%	140%
Trichlorofluoromethane	5559338		<0.05	<0.05	NA	< 0.05	94%	50%	140%	108%	50%	140%	89%	50%	140%
Acetone	5559338		<0.50	<0.50	NA	< 0.50	99%	50%	140%	113%	50%	140%	107%	50%	140%
1,1-Dichloroethylene	5559338		<0.05	<0.05	NA	< 0.05	90%	50%	140%	80%	60%	130%	98%	50%	140%
Methylene Chloride	5559338		<0.05	<0.05	NA	< 0.05	103%	50%	140%	93%	60%	130%	80%	50%	140%
Trans- 1,2-Dichloroethylene	5559338		<0.05	<0.05	NA	< 0.05	91%	50%	140%	84%	60%	130%	79%	50%	140%
Methyl tert-butyl Ether	5559338		<0.05	<0.05	NA	< 0.05	61%	50%	140%	74%	60%	130%	61%	50%	140%
1,1-Dichloroethane	5559338		<0.02	<0.02	NA	< 0.02	81%	50%	140%	80%	60%	130%	78%	50%	140%
Methyl Ethyl Ketone	5559338		<0.50	<0.50	NA	< 0.50	98%	50%	140%	104%	50%	140%	111%	50%	140%
Cis- 1,2-Dichloroethylene	5559338		<0.02	<0.02	NA	< 0.02	88%	50%	140%	87%	60%	130%	87%	50%	140%
Chloroform	5559338		<0.04	<0.04	NA	< 0.04	79%	50%	140%	81%	60%	130%	87%	50%	140%
1,2-Dichloroethane	5559338		<0.03	<0.03	NA	< 0.03	92%	50%	140%	83%	60%	130%	94%	50%	140%
1,1,1-Trichloroethane	5559338		<0.05	<0.05	NA	< 0.05	89%	50%	140%	85%	60%	130%	96%	50%	140%
Carbon Tetrachloride	5559338		<0.05	<0.05	NA	< 0.05	101%	50%	140%	93%	60%	130%	92%	50%	140%
Benzene	5559338		<0.02	<0.02	NA	< 0.02	79%	50%	140%	83%	60%	130%	90%	50%	140%
1,2-Dichloropropane	5559338		<0.03	<0.03	NA	< 0.03	83%	50%	140%	80%	60%	130%	85%	50%	140%
Trichloroethylene	5559338		<0.03	<0.03	NA	< 0.03	98%	50%	140%	94%	60%	130%	102%	50%	140%
Bromodichloromethane	5559338		<0.05	<0.05	NA	< 0.05	96%	50%	140%	87%	60%	130%	83%	50%	140%
Methyl Isobutyl Ketone	5559338		<0.50	<0.50	NA	< 0.50	96%	50%	140%	103%	50%	140%	105%	50%	140%
1,1,2-Trichloroethane	5559338		<0.04	<0.04	NA	< 0.04	97%	50%	140%	91%	60%	130%	99%	50%	140%
Toluene	5559338		<0.05	<0.05	NA	< 0.05	95%	50%	140%	96%	60%	130%	94%	50%	140%
Dibromochloromethane	5559338		<0.05	<0.05	NA	< 0.05	99%	50%	140%	95%	60%	130%	100%	50%	140%
Ethylene Dibromide	5559338		<0.04	<0.04	NA	< 0.04	68%	50%	140%	69%	60%	130%	68%	50%	140%
Tetrachloroethylene	5559338		<0.05	<0.05	NA	< 0.05	101%	50%	140%	104%	60%	130%	97%	50%	140%
1,1,1,2-Tetrachloroethane	5559338		<0.04	<0.04	NA	< 0.04	90%	50%	140%	94%	60%	130%	98%	50%	140%
Chlorobenzene	5559338		<0.05	<0.05	NA	< 0.05	105%	50%	140%	90%	60%	130%	92%	50%	140%
Ethylbenzene	5559338		<0.05	<0.05	NA	< 0.05	78%	50%	140%	86%	60%	130%	100%	50%	140%
m & p-Xylene	5559338		<0.05	<0.05	NA	< 0.05	103%	50%	140%	101%	60%	130%	114%	50%	140%
Bromoform	5559338		<0.05	<0.05	NA	< 0.05	86%	50%	140%	79%	60%	130%	92%	50%	140%
Styrene	5559338		<0.05	<0.05	NA	< 0.05	93%	50%	140%	82%	60%	130%	97%	50%	140%
1,1,2,2-Tetrachloroethane	5559338		<0.05	<0.05	NA	< 0.05	78%	50%	140%	94%	60%	130%	99%	50%	140%
o-Xylene	5559338		<0.05	<0.05	NA	< 0.05	99%	50%	140%	83%	60%	130%	86%	50%	140%

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. RPDs calculated using raw data. The RPD may not be reflective of duplicate values shown, due to rounding of final results.

Results relate only to the items tested. Results apply to samples as received.

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Quality Assurance

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z106017

PROJECT: OTT-22010805-A0

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:McKenzie Russell

Trace Organics Analysis (Continued)

RPT Date: Dec 28, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5559338		<0.05	<0.05	NA	< 0.05	99%	50%	140%	107%	60%	130%	90%	50%	140%
1,4-Dichlorobenzene	5559338		<0.05	<0.05	NA	< 0.05	101%	50%	140%	97%	60%	130%	99%	50%	140%
1,2-Dichlorobenzene	5559338		<0.05	<0.05	NA	< 0.05	100%	50%	140%	103%	60%	130%	103%	50%	140%
n-Hexane	5559338		<0.05	<0.05	NA	< 0.05	97%	50%	140%	102%	60%	130%	96%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: R. Chakraberty

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z106017

PROJECT: OTT-22010805-A0

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:McKenzie Russell

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: EXP SERVICES INC

AGAT WORK ORDER: 23Z106017

PROJECT: OTT-22010805-A0

ATTENTION TO: Mark McCalla

SAMPLING SITE:Bank & Nepean

SAMPLED BY:McKenzie Russell

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

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AGAT Laboratories

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Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Laboratory Use Only

Work Order #: 23210601 7

Cooler Quantity: one - ice pack

Arrival Temperatures: 8.0 | 7.8 | 7.9
4.2 | 4.5 | 4.0

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: B/I

Report Information:

Company: EXP Services Inc.
Contact: Mark McCalla
Address: 2650 Queensview dr
Ottawa ON
Phone: 613 688 1899 Fax:
Reports to be sent to:
1. Email: Mark.mccalla@exp.com
2. Email: Mackenzie.russell@exp.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 (Indicate One)
☐ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture (Check One)
☐ Coarse
☐ Fine

☐ Excess Soils R406
Table (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
(Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
(Indicate One)

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

Project Information:

Project: OTT-22010805-A0
Site Location: Bank & McLean
Sampled By: Mackenzie Russell
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company:
Contact:
Address:
Email:

Sample Matrix Legend

B	Biota
GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs Analyze F4G if required ☐ Yes ☐ No	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
BH14-SS3	12/19/23	AM PM	2	S					✓			✓					
		AM PM															
		AM PM															
		AM PM															
		AM PM															
		AM PM															
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		AM PM															
		AM PM															

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Mackenzie Russell	12/19/2023	13:04	C. Gauthier	12/19/23	15h30
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
	12/19/23	15h30	DL 20	DL	8:35
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1

N°: T 129317

Appendix G: Hydraulic Conductivity Data

231 Bank Street, Ottawa **MW2 (overburden)** **13-Dec-23**

Rising Head Test Analysis Test 1

Hvorslev Method (1951)

H_0 3.33 m

(static water level in metres)

Time (sec)	Water Level (m)	Drawdown (m)	H-h/H-h0
0	3.47	0.14	1.00
30	3.47	0.14	1.00
300	3.46	0.13	0.93
600	3.45	0.12	0.86
1200	3.45	0.12	0.86
1800	3.45	0.12	0.86

To constant= 0.37

L/R	ln(L/R)
3.4	1.223775

input

r= 0.019 (pipe radius)

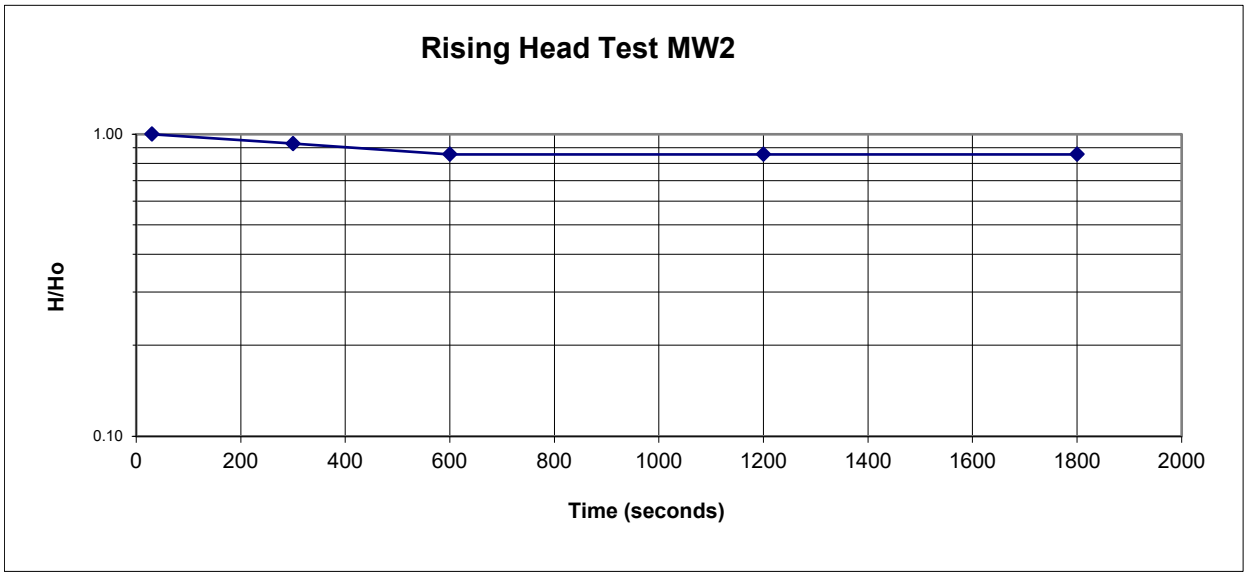
L= 0.17 (effective screen length

R= 0.05 (hole radius)

To= 10000

$$K = \frac{r^2(\ln(L/R))}{2(To)(L)}$$

K= 1.30E-07 m/sec or **1.30E-05 cm/sec**



231 Bank Street, Ottawa **MW9 (overburden)** **13-Dec-23**
Rising Head Test Analysis Test 1
Hvorslev Method (1951)

H_0 0.60 m
(static water level in metres)

Time (sec)	Water Level (m)	Drawdown (m)	H-h/H-h0	
0	1.91	1.31	1.00	
30	1.68	1.08	0.82	
60	1.59	0.99	0.76	
90	1.55	0.95	0.73	
120	1.52	0.92	0.70	
150	1.48	0.88	0.67	
180	1.46	0.86	0.66	
240	1.41	0.81	0.62	
270	1.38	0.78	0.60	2.40
300	1.36	0.76	0.58	
420	1.29	0.69	0.53	
600	1.22	0.62	0.47	
900	1.11	0.51	0.39	
1200	1.02	0.42	0.32	
1500	0.96	0.36	0.27	
1860	0.89	0.29	0.22	
2700	0.79	0.19	0.15	
3660	0.7	0.10	0.08	
	To constant=	0.37		

L/R	ln(L/R)
30.0	3.401197

input

r= 0.019 (pipe radius)
L= 1.50 (effective screen length)
R= 0.05 (hole radius)
To= 1000

$$K = \frac{r^2(\ln(L/R))}{2(To)(L)}$$

K= 4.09E-07 m/sec or **4.09E-05 cm/sec**