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August 4, 2021

Mr. Jeremy Silburt
Smart Living Properties
226 Argyle Avenue
Ottawa, Ontario K2P 1B9

Via Email:
jeremy@smartlivingproperties.ca

Dear Mr. Silburt:

Re: OTT-21013283-A0 **Soil and Groundwater Assessment**
280 Laurier Avenue East, Ottawa, Ontario

At the request of Smart Living Properties, EXP Services Inc. (EXP) investigated the soil and groundwater quality at 280 Laurier Avenue East in Ottawa, Ontario, referred to as the 'site' (Figure 1). The following letter presents the analytical results, conclusions, and recommendations.

1. Background

The subject site is occupied by a six storey residential apartment building and is located at the southeast corner of Laurier Avenue East and Sweetland Avenue. There is a parking lot on the east part of the site. During part of a geotechnical drilling program in the parking lot area by EXP in July 2021, soil with a petroleum odour and staining was unexpectedly observed at a depth of 3.0 m in BHMW-1, located near the northwest corner of the parking lot. The client was contacted and it was found that a Phase I ESA was recently completed at the property by Pinchin Environmental. The report did not identify the potential for impacted soil or groundwater to be present at the site. A former heating oil above ground storage tank (AST) was identified but was not considered to be a concern. The EXP borehole locations are shown on Figure 2 in Appendix A.

Based on the above, it was recommended that a soil and groundwater quality testing be completed to determine if there was subsurface impact on the property. Based on the field observations and the former presence of the AST, the contaminants of concern are benzene, toluene, ethylbenzene, xylenes (BTEX), volatile organic compounds (VOC), and petroleum hydrocarbons (PHC).

2. Objective

The objective of the soil and groundwater quality testing is to determine the presence or absence of subsurface soil and/or groundwater impacts in the area of the hydrocarbon odours and staining. It is not the intent of the assessment to delineate any impacts. Recommendations for soil and groundwater management will be provided if required.

3. Provincial Site Conditions Standards

The assessment criteria, Site Condition Standards (SCS), applicable to a given site in Ontario are established under subsection 168.4(1) of the Environmental Protection Act. Tabulated generic criteria are provided in “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act” (“the SGWS Standards”), MOE, April 2011. These site condition standards are based on site sensitivity (sensitive or non-sensitive), groundwater use (potable or non-potable), property use (residential, parkland, institutional, commercial, industrial,

community and agricultural/other), soil type (coarse or medium to fine textured) and restoration depth (full or stratified restoration). In addition, site specific criteria may be established on the basis of the findings of a Risk Assessment carried out in accordance with Part IX and Schedule C of Ontario Regulation 153/04, as amended.

For assessment of soil and groundwater, EXP selected the 2011 Table 3 Full Depth Generic Site Condition Standards (Table 3 SCS) in a non-potable groundwater situation, medium and fine textured soil and residential land use.

The selection of this category was based on the following factors:

- The current and future land use is residential;
- The site is not considered a sensitive site;
- Water wells were not identified within 200 m of the site;
- The site is not located in an area designated in a municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of groundwater;
- More than two-thirds of the site has an overburden thickness greater than 2 m;
- The soil is considered medium and fine textured based on field observations; and,
- The site is not located within 30 m of a surface water body or an area of natural significance.

4. Soil Sampling

On July 8, 2021, a soil sample from BH/MW-1 (S1) was collected from a depth of 3.0 m to 3.6 m where the hydrocarbon odours and staining were observed. On July 9, 2021, an additional borehole was drilled approximately 2 m south of BH/MW-1 called BH/MW1A. Soil samples were collected from 2.3 m to 2.9 m and from 3.8 m to 4.4 m, below and above the initial soil sample from BH-1 in an attempt to delineate any impact found in the initial soil sample. A fourth soil sample was collected from BH-2 at a depth of 15 m to 15.6 m where slight hydrocarbon odours were observed. The drilling was competed by Marathon Drilling under the supervision of EXP. The borehole locations are shown on Figure 2 (Appendix A). During drilling, soil samples were collected, logged, and inspected for visual and olfactory indications of impact. Soil descriptions are shown on the borehole logs presented in Appendix B.

Soil samples were collected from the tube sampler and placed into pre-cleaned, laboratory-supplied glass sample jars/vials. Four soil samples were selected and submitted to a certified laboratory for analysis of BTEX, VOC, and/or PHC. Samples to be analysed for BTEX, VOC, and PHC F1 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, Paracel Laboratories and Bureau Veritas Limited (BVL), both of Ottawa, Ontario. The samples were transported / submitted to the laboratory following chain of custody protocols for chemical analysis of BTEX, PHC, and/or VOC.

Paracel and BVL are accredited laboratories under the Standards Council of Canada/Canadian Association for Laboratory Accreditation in accordance with ISO/IEC *17025:1999- General Requirements for the Competence of Testing and Calibration Laboratories*.

5. Monitoring Well Installation

A 19 mm diameter standpipe was installed at BH/MW-1 and a groundwater monitoring well was installed at BH/MW-1A to facilitate the collection of groundwater samples. The monitoring wells were installed in general accordance with the Ontario Water Resources Act - R.R.O. 1990, Regulation 903 - Amended to O. Reg. 128/03 and was installed by a licensed well contractor.

The monitoring well was constructed using a 51 mm diameter pipe. The monitoring well was constructed using a 3.0 m long, Schedule 40 PVC screen and appropriate length riser pipe. The well screen has a slot size of approximately 0.25 mm (slot 10) and was sealed at the base with a PVC end cap. The annular space around the well screen was backfilled with silica sand to approximately 0.3 m above the top of the screen. The sand pack was extended above the screen to allow for compaction of the sand pack and expansion of the overlying well seal. A granular bentonite ('Hole Plug') seal was placed in the borehole annulus from the top of the sand pack to approximately 0.3 m below ground surface.

The monitoring well was completed with a flush mount protective steel casing and cemented into place. Lubricants and adhesives were not used when constructing the monitoring well. Details of the well installation is provided on the borehole logs in Appendix B.

When no longer required, the monitoring wells must be decommissioned in accordance with the procedure outlined in the Ontario Water Resources Act - R.R.O. 1990, Regulation 903 - Amended to O. Reg. 128/03.

6. Groundwater Monitoring and Sampling

Monitoring well BH/MW-1A was developed on July 19, 2021. Groundwater sampling activities were subsequently completed using low-flow methodology. Groundwater sampling was completed using the same peristaltic pump and dedicated LDPE tubing that was utilized during the purging process. The groundwater sample was placed directly into the laboratory supplied bottles and vials and placed in a cooler containing ice for sample preservation purposes. The vials were inverted prior to being placed in a cooler to ensure that no head-space was present in the sample. The groundwater sample was submitted for laboratory analysis of BTEX and PHC.

The groundwater sample was transported to Paracel Laboratories of Ottawa, under Chain of Custody protocol, within 24 hours of sample collection for chemical analysis.

7. Field Observations

The detailed soil profiles encountered in the boreholes are provided on the attached borehole logs in Appendix B. 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. A brief description of the soil stratigraphy at the site, in order of depth, is summarized in the following sections.

7.1 Fill Material

A 0.3 to 0.5 m layer of brown sand and gravel fill was observed at BH/MW-1 and BH-3. Approximately 1.7 m of gravelly sand with some brick fragments were observed at BH-2. No indications of impact were observed in the fill samples.

7.2 Native Soil

Silty clay was found below the fill in each of the boreholes and extended to the maximum depth drilled of 16.3 m.

Hydrocarbon staining and odours were observed in BH/MW-1 at a depth of 3.0 m to 3.6 m. Slight hydrocarbon odours were observed in the soil samples collected at BH/MW1A from 3.8 m to 4.4 m and in BH-2 from 15.0 m to 15.6 m. No other indications of impact were observed in the native soil.

7.3 Bedrock

Bedrock was not observed in the boreholes, although penetration cone refusal at BH-2 was noted at a depth of 16.3 m.

7.4 Groundwater

The water level in the monitoring wells were measured on July 19, 2021. Groundwater was encountered at 4.06 m bgs in BH -1A and BH/MW-1 was dry.

8. Soil Analytical Results

A summary of the soil analytical results, along with the provincial standards is presented in Table 1 in Appendix C. The laboratory certificates of analysis are presented in Appendix D.

Based on the analytical results obtained, the concentrations of BTEX, VOC, and PHC measured in the four analysed soil samples were less than the MECP 2011 Table 3 site condition standards. This indicates that the soil is not impacted.

9. Groundwater Analytical Results

A summary of the groundwater analytical results, along with the provincial standards is presented in Table 2 in Appendix C. The laboratory certificates of analysis are presented in Appendix D.

Based on the analytical results obtained, the concentrations of BTEX and PHC measured in the analysed groundwater sample were less than the MECP 2011 Table 3 site condition standards.

10. Quality Assurance and Quality Control

Details regarding quality assurance measures taken in the field, including instrument calibration, decontamination procedures, use of dedicated equipment, sample storage and Chain of Custody documentation were provided in Sections 4 and 6.

The subcontract laboratories used during this investigation, Paracel and BVL, are accredited by the Standards Council of Canada/Canadian Association of Environmental Analytical Laboratories (Accredited Laboratory No.97) in accordance with ISO/IEC 17025:1999 – “General Requirements for the Competence of Testing and Calibration Laboratories” for the analysis of all parameters for all samples in the scope of work for which SCS have been established under Ontario Regulation 153/04. The “Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act” (“the Analytical Protocol”), prepared by the MECP, March 2004 amended as of July 1st, 2011, establishes criteria used in assessing the performance of analytical laboratories when the data are used in support of the filing of Records of Site Condition.

The analytical program conducted by Paracel and BVL included analytical test group specific QA/QC measures to evaluate the accuracy and precision of the analytical results and the efficiency of analyte recovery during solute extraction procedures. The laboratory 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 Certificate of Analysis prepared by Paracel and BVL. The QA/QC results are reported as percent recoveries for matrix spikes, spike blanks and QC standards, relative percent difference for laboratory duplicates and analyte concentrations for method blanks.

The overall assessment indicates that the soil and groundwater samples were analyzed with an acceptable level of precision, and the data is acceptable quality for meeting the objectives of the assessment.

11. Conclusions and Recommendations

Based on the soil and groundwater testing results, the following summary is provided:

- On July 8 and 9, 2021, four (4) boreholes (BH/MW-1, BH/MW-1A, BH-2 and BH-3) were drilled at the site to a maximum depth of 15.6 m. BH/MW-1 was completed with a 19 mm standpipe and BH/MW-1A was instrumented with a monitoring well.
- A 0.3 to 0.5 m layer of brown sand and gravel fill was observed at BH/MW-1 and BH-3. Approximately 1.7 m of gravelly sand with some brick fragments were observed at BH-2. No indications of impact were observed in the fill samples. Silty clay was found below the fill in each of the boreholes and extended to the maximum depth drilled of 16.3 m. Hydrocarbon staining and odours were observed in BH/MW-1 at a depth of 3.0 m to 3.6 m. Slight hydrocarbon odours were observed in the soil samples collected at BH/MW1A from 3.8 m to 4.4 m and in BH-2 from 15.0 m to 15.6 m.
- The water level in the monitoring well was measured on July 19, 2021. Groundwater was encountered at 4.06 m bgs in BH/MW-1A and BH/MW-1 was dry.
- All of the soil samples had concentrations of BTEX, VOC, and PHC that were less than the MECP Table 3 site condition standards. This indicates that the soil is not impacted and can remain on the site.
- The concentrations of BTEX and PHC measured in the two analysed groundwater samples were less than the MECP 2011 Table 3 site condition standards.
- If the well is no longer needed, it should be decommissioned in accordance with Ontario Regulation 903.

12. General Closure

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 Smart Living Properties ("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.

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.

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.

We trust that the information contained in this letter will be satisfactory for your purposes. Should you have any questions, please contact this office.

Sincerely,

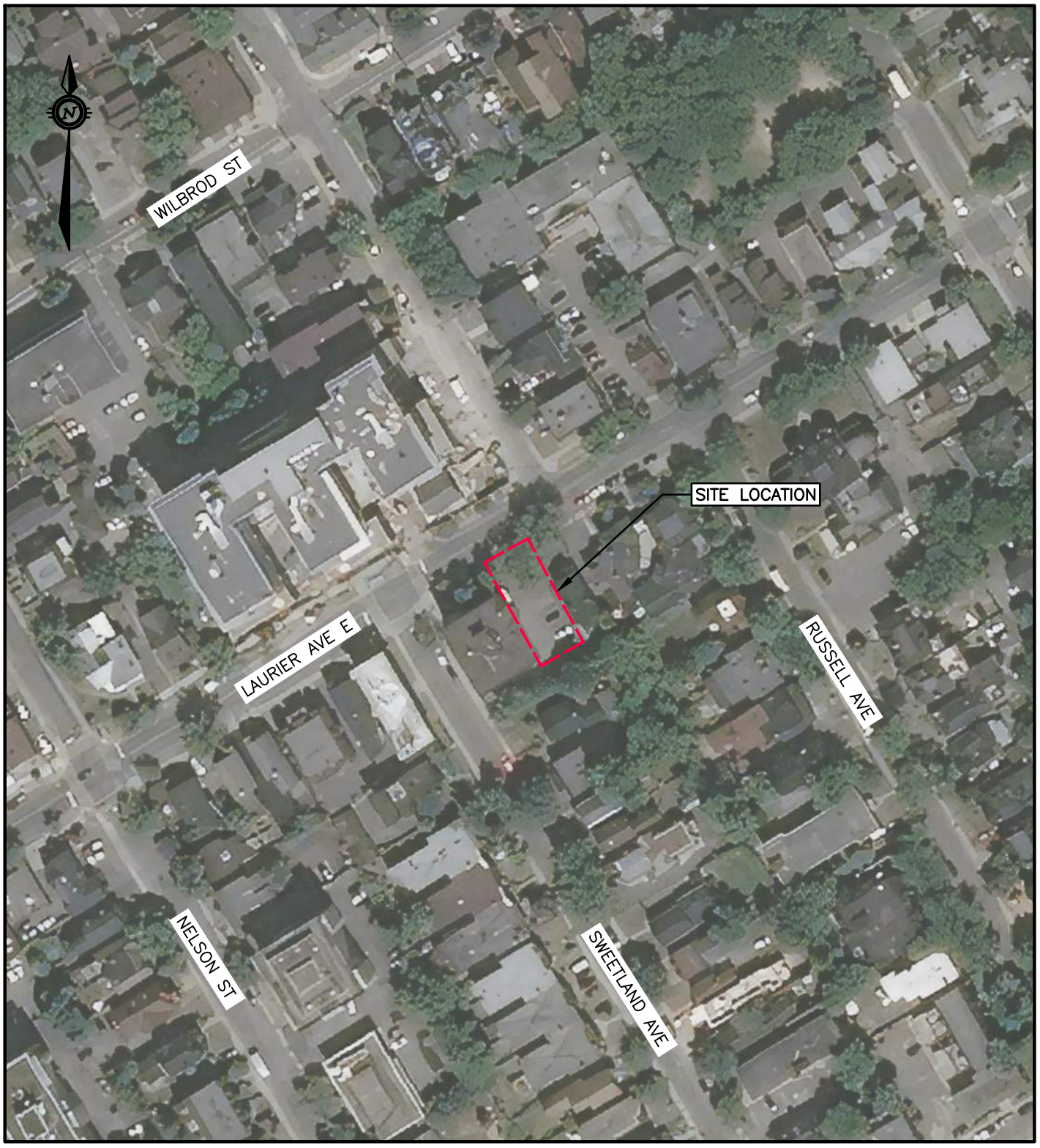
EXP Services Inc.

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

Patricia Stelmack, M.Sc, P.Eng.
Senior Engineer
Earth and Environmental

Attachments: Appendix A: Figures
Appendix B: Borehole Logs
Appendix B: Summary of Analytical Results
Appendix C: Laboratory Certificates of Analysis

APPENDIX A:
Figures



0 15m 30m 60m

HORIZONTAL 1:1500

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DESIGN	A.N.
DRAWN	G.C.
DATE	JULY 2021
FILE NO	OTT-21013283-A0

GEOTECHNICAL INVESTIGATION
PROPOSED BUILDING ADDITION
280 LAURIER AVENUE EAST, OTTAWA, ONTARIO

SITE LOCATION PLAN

SCALE	1:1500
SKETCH NO	FIG 1

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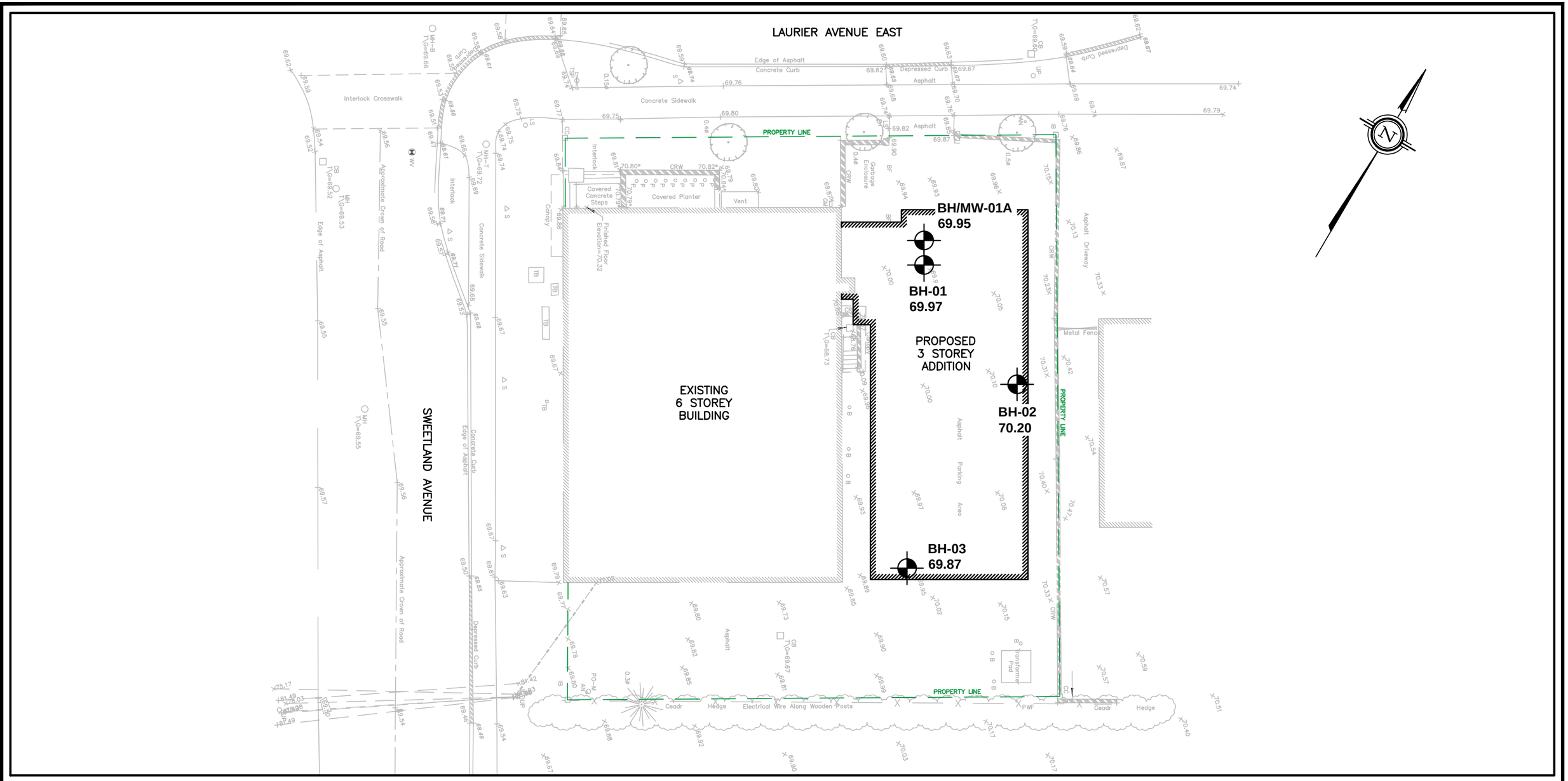

LEGEND

BH-01 BOREHOLE LOCATION
69.97 GROUND SURFACE ELEVATION IN METERS

0 2m 4m 8m
HORIZONTAL 1:200

NOTES:

1. THE BOUNDARIES AND SOIL TYPES HAVE BEEN ESTABLISHED ONLY AT BOREHOLE LOCATIONS. BETWEEN BOREHOLE LOCATIONS THEY ARE ASSUMED AND MAY BE SUBJECT TO CONSIDERABLE ERROR.
2. SOIL SAMPLES WILL BE RETAINED IN STORAGE FOR THREE MONTHS AND THEN DESTROYED UNLESS THE CLIENT ADVISES THAT AN EXTENDED TIME PERIOD IS REQUIRED.
3. ASPHALT QUANTITIES SHOULD NOT BE ESTABLISHED FROM THE INFORMATION PROVIDED AT BOREHOLE LOCATIONS.
4. BOREHOLE ELEVATIONS SHOULD NOT BE USED TO DESIGN BUILDING(S) OR FLOOR SLABS OR PARKING LOT(S) GRADES.
5. THIS DRAWING FORMS PART OF THE REPORT PROJECT NUMBER AS REFERENCED AND SHOULD BE USED ONLY IN CONJUNCTION WITH THIS REPORT.
6. BASE DRAWING OBTAINED FROM EXP DRAWING "21012649 EXISTING TOPO-2021-06-21" DATED JUNE 21, 2021

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DESIGN	A.N.
DRAWN	G.C.
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FILE NO	OTT-21013283-A0

GEOTECHNICAL INVESTIGATION
PROPOSED BUILDING ADDITION
280 LAURIER AVENUE EAST, OTTAWA, ONTARIO

BOREHOLE LOCATION PLAN

SCALE 1:200
SKETCH NO FIG 2

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APPENDIX B:
Borehole Logs

Log of Borehole BH-1

Project No: OTT-21013283-A0

Project: Proposed three Storey Building Addition

Location: 280 Laurier Avenue East, Ottawa, Ontario

Figure No. 3

Page. 1 of 1

Date Drilled: 'July 8, 2021

Drill Type:

Datum: Geodetic Elevation

Logged by: JE Checked by: AN

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 Elevation 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
		ASPHALT PAVEMENT ~50 mm thick	69.97	0				
		FILL	69.9					
		Silty sand with gravel, brown, moist, (compact)	69.6					
		CLAY (CH)						
		High Plasticity, grey, moist to wet, (stiff to very stiff)		1				
				2				
		-Hydrocarbon odour detected in the soil samples retreived from 3.0 m depth		3				
				4				
				5				
				6				
				7				
			61.8	8				
		Borehole Terminated at 8.2 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

SS1: 12
SS2: 14, >250
SS3 17.6: 11, >250, >250
SS4 16.4: 2, 101, s=20.2
SS5: Hammer Weight, 91, s=9.1, 96, s=8.0
SS6: Hammer Weight, 72, s=5.1, 58, s=5.8
SS7: 82, s=5.9, 2

NOTES:
1. Borehole/Test Pit data requires Interpretation by exp. before use by others
2. A 19 mm diameter standpipe with slotted section installed as shown.
3. Field work supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. This Figure is to read with exp. Services Inc. report OTT-21013283-A0

WATER LEVEL RECORDS

Elapsed Time	Water Level (m)	Hole Open To (m)
On Completion	Dry	7.5
'July 19, 2021	Dry	

CORE DRILLING RECORD

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

LOG OF BOREHOLE BH LOGS_21013283-A0_PROPOSED BUILDING ADDITION.GPJ TROW OTTAWA.GDT 8/4/21

Log of Borehole BH-1A

Project No: OTT-21013283-A0

Project: Proposed three Storey Building Addition

Location: 280 Laurier Avenue East, Ottawa, Ontario

Figure No. 4

Page. 1 of 1

Date Drilled: 'July 9, 2021

Drill Type:

Datum: Geodetic Elevation

Logged by: GC Checked by: AN

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 Elevation 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)	SAMPLES	Natural Unit Wt. kN/m³
		Straight drilling with no sampling from ground surface to 2.3 m depth.	69.95	0				
				1				
				2				
			67.7					
		CLAY (CH) High Plasticity, grey, moist		3	4		SS1	
		-Hydrocarbon odour detected in the soil samples retreived from 3.0 m depth	65.85	4	1		SS2	
			65.4					
		Borehole Terminated at 4.6 m Depth						

NOTES:
1. Borehole/Test Pit data requires Interpretation by exp. before use by others
2. A 51 mm diameter monitoring well with screened section installed as shown.
3. Field work supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. This Figure is to read with exp. Services Inc. report OTT-21013283-A0

WATER LEVEL RECORDS

Elapsed Time	Water Level (m)	Hole Open To (m)
'July 19, 2021	4.1	

CORE DRILLING RECORD

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

LOG OF BOREHOLE BH LOGS_21013283-A0_PROPOSED BUILDING ADDITION.GPJ TROW OTTAWA.GDT 8/4/21

Log of Borehole BH-2

Project No: OTT-21013283-A0

Project: Proposed three Storey Building Addition

Location: 280 Laurier Avenue East, Ottawa, Ontario

Figure No. 5

Page. 1 of 2

Date Drilled: 'July 9, 2021

Drill Type:

Datum: Geodetic Elevation

Logged by: GC Checked by: AN

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 Elevation 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
		ASPHALT PAVEMENT ~50 mm thick	70.2	0				
		FILL Sand with gravel, brick fragments, brown, moist, oxidized stains, no odours, (loose to very dense)	70.2	0	9		SS1	
				1	63 for 250 mm		SS2	
			68.5					
		CLAY (CH) High plasticity, grey, moist to wet, no stains, no odours, (firm to very stiff)		2	13		SS3	
				3	6		SS4	
					77 s=11.0			
					3		SS5	
					77 s=7.7			
				4	1		SS6	
					101 s=10.1			
				5	Hammer Weight		SS7	
					72 s=14.4			
				6	Hammer Weight		SS8	
				7	77 s=11.0			
				8	Hammer Weight		SS9	
					43 s=8.6			
				9	Hammer Weight		SS10	
				10	101 s=20.2			

Continued Next Page

NOTES:
1. Borehole/Test Pit data requires Interpretation by exp. before use by others
2. Borehole backfilled upon completion of drilling.
3. Field work supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. This Figure is to read with exp. Services Inc. report OTT-21013283-A0

WATER LEVEL RECORDS

Elapsed Time	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD

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

LOG OF BOREHOLE BH LOGS_21013283-A0_PROPOSED BUILDING ADDITION.GPJ TROW OTTAWA.GDT 8/4/21

Log of Borehole BH-2

Project No: OTT-21013283-A0

Project: Proposed three Storey Building Addition

Figure No. 5

Page. 2 of 2

GWL	SYMBOL	SOIL DESCRIPTION	Geodetic Elevation 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
		CLAY (CH) High plasticity, grey, moist to wet, no stains, no odours, (firm to very stiff) *(continued)*	60.2	10				
		CLAY (CL) Sand seams, low plasticity, grey, wet, no stains, no odours, (very stiff)	59.5	11	Hammer Weight		SS11	
				12	>120		SS12	
		GLACIAL TILL Silty sand with gravel, some clay, slightly cohesive in the upper 3.0 m, shale fragments, grey, wet, very slight hydrocarbon odour, (compact to very dense)	57.8	13	4		SS13	
				14	23		SS14	
				15	62			
		Dynamic Cone Penetration Test (DCPT) conducted from 15.8 m depth to refusal at 16.3 m depth.	54.4	16				
		Cone Refusal at 16.3 m Depth	53.9					

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/Test Pit data requires Interpretation by exp. before use by others
2. Borehole backfilled upon completion of drilling.
3. Field work supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. This Figure is to read with exp. Services Inc. report OTT-21013283-A0

WATER LEVEL RECORDS

Elapsed Time	Water Level (m)	Hole Open To (m)

CORE DRILLING RECORD

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

LOG OF BOREHOLE BH LOGS_21013283-A0_PROPOSED BUILDING ADDITION.GPJ TROW OTTAWA.GDT 8/4/21

Log of Borehole BH-3

Project No: OTT-21013283-A0

Project: Proposed three Storey Building Addition

Location: 280 Laurier Avenue East, Ottawa, Ontario

Figure No. 6

Page. 1 of 1

Date Drilled: 'July 8, 2021

Drill Type:

Datum: Geodetic Elevation

Logged by: JE Checked by: AN

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 Elevation 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
		ASPHALT PAVEMENT ~50 mm thick	69.87	0				
		FILL Sand with gravel, brown to grey, damp to moist, (loose)	69.8					
		CLAY (CH) High plasticity, mottling and organics in the upper 2.0 m, grey, moist to wet, (firm to stiff)	69.6		7		SS1	
				1	9		SS2	
				2	10		SS3	17.6
					6		SS4	17.3
				3	2		SS5	
					29 s=2.9			
				4	82 s=6.8			
				5	1		SS6	
					77 s=7.0			
				6	86 s=6.6			
					1		SS7	
				7	43 s=6.1			
			62.6		82 s=8.2			
		Borehole Terminated at 7.3 m Depth	62.67					

LOG OF BOREHOLE BH LOGS_21013283-A0_PROPOSED BUILDING ADDITION.GPJ TROW OTTAWA.GDT 8/4/21

NOTES:
1. Borehole/Test Pit data requires Interpretation by exp. before use by others
2. A 19 mm diameter standpipe with slotted section installed as shown.
3. Field work supervised by an EXP representative.
4. See Notes on Sample Descriptions
5. This Figure is to read with exp. Services Inc. report OTT-21013283-A0

WATER LEVEL RECORDS

Elapsed Time	Water Level (m)	Hole Open To (m)
'July 19, 2021	7.2	

CORE DRILLING RECORD

Run No.	Depth (m)	% Rec.	RQD %
1	4.5 - 5.1	100	18
2	5.1 - 6.6	100	25

APPENDIX C:
Analytical Summary Tables

TABLE 1 **SOIL ANALYTICAL RESULTS *(µg/g)***
VOLATILE ORGANIC COMPOUNDS and and PETROLEUM HYDROCARBONS
280 Laurier Avenue East, Ottawa

Parameter	MECP Table 3[1]	S1 (BH/MW-1)	BH1-A/SS1	BH1-A/SS2	BH2/SS14
Sample Date (d/m/y)	Residential	8-Jul-21	9-Jul-21	9-Jul-21	9-Jul-21
Sample Depth (mbsg)		3.0 - 3.6	2.3 - 2.9	3.8 - 4.4	15.0 - 15.6
Acetone	28	NA	<0.50	<0.50	<0.50
Benzene	0.17	<0.02	<0.020	<0.020	<0.020
Bromodichloromethane	13	NA	<0.050	<0.050	<0.050
Bromoform	0.26	NA	<0.050	<0.050	<0.050
Bromomethane	0.05	NA	<0.050	<0.050	<0.050
Carbon Tetrachloride	0.12	NA	<0.050	<0.050	<0.050
Chlorobenzene	2.7	NA	<0.050	<0.050	<0.050
Chloroform	0.18	NA	<0.050	<0.050	<0.050
Dibromochloromethane	9.4	NA	<0.050	<0.050	<0.050
1,2-Dichlorobenzene	4.3	NA	<0.050	<0.050	<0.050
1,3-Dichlorobenzene	6	NA	<0.050	<0.050	<0.050
1,4-Dichlorobenzene	0.097	NA	<0.050	<0.050	<0.050
Dichlorodifluoromethane	25	NA	<0.050	<0.050	<0.050
1,1-Dichloroethane	11	NA	<0.050	<0.050	<0.050
1,2-Dichloroethane	0.05	NA	<0.050	<0.050	<0.050
1,1-Dichloroethylene	0.05	NA	<0.050	<0.050	<0.050
Cis-1,2-Dichloroethylene	30	NA	<0.050	<0.050	<0.050
Trans-1,2-Dichloroethylene	0.75	NA	<0.050	<0.050	<0.050
1,2-Dichloropropane	0.085	NA	<0.050	<0.050	<0.050
Cis-1,3-Dichloropropylene	0.083	NA	<0.030	<0.030	<0.030
Trans-1,3-Dichloropropylene		NA			
Ethylbenzene	15	<0.05	<0.020	0.17	<0.020
Ethylene Dibromide	0.05	NA	<0.050	<0.050	<0.050
Hexane	34	NA	<0.050	<0.050	0.18
Methylene Chloride	0.96	NA	<0.050	<0.050	<0.050
Methyl Ethyl Ketone	44	NA	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	4.3	NA	<0.50	<0.50	<0.50
Methyl-t-Butyl Ether	1.4	NA	<0.050	<0.050	<0.050
Styrene	2.2	NA	<0.050	<0.050	<0.050
1,1,1,2-Tetrachloroethane	0.05	NA	<0.050	<0.050	<0.050
1,1,2,2-Tetrachloroethane	0.05	NA	<0.050	<0.050	<0.050
Tetrachloroethylene	2.3	NA	<0.050	<0.050	<0.050
Toluene	6	<0.05	<0.020	<0.020	<0.020
1,1,1-Trichloroethane	3.4	NA	<0.050	<0.050	<0.050
1,1,2-Trichloroethane	0.05	NA	<0.050	<0.050	<0.050
Trichloroethylene	0.52	NA	<0.050	<0.050	<0.050
Trichlorofluoromethane	6	NA	<0.050	<0.050	<0.050
Vinyl Chloride	0.022	NA	<0.020	<0.020	<0.020
Total Xylenes	30	<0.05	<0.020	<0.020	<0.020
PHC F1	65	<7	<10	27	12
PHC F2	150	26	<10	<20	<10
PHC F3	1300	34	<50	<100	<50
PHC F4	5600	<6	<50	<100	<50

NOTES:

1 MECP *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the EPA, April 2011, Table 3 Non-Potable Residential SCS, fine grained soil.*

Shaded Concentration exceeds MECP Table 3 Residential SCS.

TABLE 2 GROUNDWATER ANALYTICAL RESULTS *(µg/L)*
VOLATILE ORGANIC COMPOUNDS and PETROLEUM HYDROCARBONS
280 Laurier Avenue East, Ottawa

Parameter	MECP Table 3[1]	BH/MW1-A
Sample Date (d/m/y)		19-Jul-21
Screened Interval		1.5 - 4.5
Benzene	430	<0.5
Ethylbenzene	2300	<0.5
Toluene	18000	<0.5
Total Xylenes	4200	<0.5
PHC F1	750	<25
PHC F2	150	<100
PHC F3	500	<100
PHC F4	500	<100

NOTES:

1	MECP Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the EPA, April 2011, Table 3, for a non-potable groundwater, fine grained soil.
Shaded	Concentration exceeds MECP Table 3 groundwater quality criterion.
NA	Not applicable

APPENDIX D:
Laboratory Certificates of Analysis

PARACEL LABORATORIES LTD.
TRUSTED. RESPONSIVE. RELIABLE.

300 - 2319 St. Laurent Blvd
Ottawa, ON, K1G 4J8
1-800-749-1947
www.paracellabs.com

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B 8K2
Attn: Chris Kimmerly

Client PO: 280 Laurier Ave. E
Project: OTT21013283A0
Custody: 121562

Report Date: 13-Jul-2021
Order Date: 8-Jul-2021

Order #: 2128598

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2128598-01	S1

Approved By: Mark Foto

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Report Date: 13-Jul-2021

Client: exp Services Inc. (Ottawa)

Order Date: 8-Jul-2021

Client PO: 280 Laurier Ave. E

Project Description: OTT21013283A0

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	12-Jul-21	13-Jul-21
PHC F1	CWS Tier 1 - P&T GC-FID	12-Jul-21	13-Jul-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	9-Jul-21	11-Jul-21
Solids, %	Gravimetric, calculation	12-Jul-21	12-Jul-21

Certificate of Analysis

Report Date: 13-Jul-2021

Client: exp Services Inc. (Ottawa)

Order Date: 8-Jul-2021

Client PO: 280 Laurier Ave. E

Project Description: OTT21013283A0

	Client ID:	S1	-	-	-
	Sample Date:	08-Jul-21 14:00	-	-	-
	Sample ID:	2128598-01	-	-	-
	MDL/Units	Soil	-	-	-
Physical Characteristics					
% Solids	0.1 % by Wt.	63.8	-	-	-
Volatiles					
Benzene	0.02 ug/g dry	<0.02	-	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	-	-	-
Toluene	0.05 ug/g dry	<0.05	-	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	-	-	-
o-Xylene	0.05 ug/g dry	<0.05	-	-	-
Xylenes, total	0.05 ug/g dry	<0.05	-	-	-
Toluene-d8	Surrogate	124%	-	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	-	-	-
F2 PHCs (C10-C16)	4 ug/g dry	26	-	-	-
F3 PHCs (C16-C34)	8 ug/g dry	34	-	-	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
Volatiles									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	*4.23*		*ug/g*		*132*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	29			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	17			NC	30	
Physical Characteristics									
% Solids	91.5	0.1	% by Wt.	90.1			1.5	25	
Volatiles									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	*5.38*		*ug/g dry*		*137*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	184	7	ug/g	ND	91.9	80-120			
F2 PHCs (C10-C16)	95	4	ug/g	ND	94.5	60-140			
F3 PHCs (C16-C34)	308	8	ug/g	29	113	60-140			
F4 PHCs (C34-C50)	201	6	ug/g	17	118	60-140			
Volatiles									
Benzene	3.45	0.02	ug/g	ND	86.2	60-130			
Ethylbenzene	3.75	0.05	ug/g	ND	93.7	60-130			
Toluene	3.67	0.05	ug/g	ND	91.7	60-130			
m,p-Xylenes	6.55	0.05	ug/g	ND	81.9	60-130			
o-Xylene	3.65	0.05	ug/g	ND	91.2	60-130			

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.
NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.

PARACEL LABORATORIES LTD.

TRI RE RE

Paracel ID: 2128598

d Office
2319 St. Laurent Blvd.
wa, Ontario K1G 4J8
800-749-1947
racel@paracellabs.com

Chain of Custody
(Lab Use Only)
Nº 121562

Page 1 of 1

Client Name: EXP Services Inc.	Project Reference: 280 Laurier Ave. E
Contact Name: Accounts Payable	Quote #
Address: 100-2650 Queensview Dr. Ottawa, ON	PO # OTT-21013283-A0
Telephone: 613-688-1899	Email Address: Ismail.taki@exp.com; Chris.Kimmerly@exp.com

Turnaround Time:
☐ 1 Day ☐ 3 Day
☐ 2 Day ☒ Regular
Date Required:

Criteria: ☒ O. Reg. 153/04 (As Amended) Table 3 ☐ RSC Filing ☐ O. Reg. 558/00 ☐ PWQO ☐ CCME ☐ SUB (Storm) ☐ SUB (Sanitary) Municipality: ☐ Other:

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Required Analyses

Paracel Order Number: 2128598					Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)							
	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Date	Time														
1	[redacted] JE	[redacted]																		
2	S1	S		3	2021/07/08	1400	X													
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Comments:

Method of Delivery: Walter

Relinquished By (Sign):	Received by Driver/Depot:	Received at Lab:	Verified By:
Relinquished By (Print): Jeremy Eckert	Date/Time: 07/08/21 3:34pm	Date/Time: JUL 09, 2021 12:42	Date/Time: JUL 9, 2021 12:30
Date/Time: 2021/07/08 15:00	Temperature: 1.1 °C	Temperature: 10.6 °C	pH Verified [ ] By:

Your Project #: OTT-21013283-A0
Site Location: 280 LAURIER E
Your C.O.C. #: 157173

Attention: Chris Kimmerly

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

Report Date: 2021/07/16
Report #: R6722251
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1J1459
Received: 2021/07/09, 17:05

Sample Matrix: Soil
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
1,3-Dichloropropene Sum (1)	1	N/A	2021/07/15		EPA 8260C m
1,3-Dichloropropene Sum (1)	2	N/A	2021/07/16		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Soil (1, 2)	3	2021/07/14	2021/07/15	CAM SOP-00316	CCME CWS m
Moisture (1)	2	N/A	2021/07/13	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture (1)	1	N/A	2021/07/14	CAM SOP-00445	Carter 2nd ed 51.2 m
Volatile Organic Compounds and F1 PHCs (1)	2	N/A	2021/07/14	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds and F1 PHCs (1)	1	N/A	2021/07/16	CAM SOP-00230	EPA 8260C m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga
(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1

Your Project #: OTT-21013283-A0
Site Location: 280 LAURIER E
Your C.O.C. #: 157173

Attention: Chris Kimmerly

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

Report Date: 2021/07/16
Report #: R6722251
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1J1459
Received: 2021/07/09, 17:05
Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Katherine Szozda, Project Manager
Email: Katherine.Szozda@bureauveritas.com
Phone# (613)274-0573 Ext:7063633
==========
This report has been generated and distributed using a secure automated process.
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BV Labs Job #: C1J1459
Report Date: 2021/07/16

exp Services Inc
Client Project #: OTT-21013283-A0
Site Location: 280 LAURIER E
Sampler Initials: GC

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

BV Labs ID		QBF607			QBF607			QBF608		
Sampling Date		2021/07/09			2021/07/09			2021/07/09		
COC Number		157173			157173			157173		
	UNITS	**BH1A/SS1**	**RDL**	**QC Batch**	**BH1A/SS1 Lab-Dup**	**RDL**	**QC Batch**	**BH1A/SS2**	**RDL**	**QC Batch**
Inorganics										
Moisture	%	32	1.0	7461804	32	1.0	7461804	42	1.0	7460238
Calculated Parameters										
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	7459080				<0.050	0.050	7459080
Volatile Organics										
Acetone (2-Propanone)	ug/g	<0.50	0.50	7459798				<0.50	0.50	7459798
Benzene	ug/g	<0.020	0.020	7459798				<0.020	0.020	7459798
Bromodichloromethane	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Bromoform	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Bromomethane	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Carbon Tetrachloride	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Chlorobenzene	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Chloroform	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Dibromochloromethane	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
1,2-Dichlorobenzene	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
1,3-Dichlorobenzene	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
1,4-Dichlorobenzene	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Dichlorodifluoromethane (FREON 12)	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
1,1-Dichloroethane	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
1,2-Dichloroethane	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
1,1-Dichloroethylene	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
cis-1,2-Dichloroethylene	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
trans-1,2-Dichloroethylene	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
1,2-Dichloropropane	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	7459798				<0.030	0.030	7459798
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	7459798				<0.040	0.040	7459798
Ethylbenzene	ug/g	<0.020	0.020	7459798				0.17	0.020	7459798
Ethylene Dibromide	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Hexane	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Methylene Chloride(Dichloromethane)	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.50	0.50	7459798				<0.50	0.50	7459798
Methyl Isobutyl Ketone	ug/g	<0.50	0.50	7459798				<0.50	0.50	7459798
Methyl t-butyl ether (MTBE)	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Styrene	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
1,1,1,2-Tetrachloroethane	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798

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

BV Labs Job #: C1J1459
Report Date: 2021/07/16

exp Services Inc
Client Project #: OTT-21013283-A0
Site Location: 280 LAURIER E
Sampler Initials: GC

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

BV Labs ID		QBF607			QBF607			QBF608		
Sampling Date		2021/07/09			2021/07/09			2021/07/09		
COC Number		157173			157173			157173		
	UNITS	**BH1A/SS1**	**RDL**	**QC Batch**	**BH1A/SS1 Lab-Dup**	**RDL**	**QC Batch**	**BH1A/SS2**	**RDL**	**QC Batch**
1,1,2,2-Tetrachloroethane	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Tetrachloroethylene	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Toluene	ug/g	<0.020	0.020	7459798				<0.020	0.020	7459798
1,1,1-Trichloroethane	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
1,1,2-Trichloroethane	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Trichloroethylene	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Trichlorofluoromethane (FREON 11)	ug/g	<0.050	0.050	7459798				<0.050	0.050	7459798
Vinyl Chloride	ug/g	<0.020	0.020	7459798				<0.020	0.020	7459798
p+m-Xylene	ug/g	<0.020	0.020	7459798				<0.020	0.020	7459798
o-Xylene	ug/g	<0.020	0.020	7459798				<0.020	0.020	7459798
Total Xylenes	ug/g	<0.020	0.020	7459798				<0.020	0.020	7459798
F1 (C6-C10)	ug/g	<10	10	7459798				27	10	7459798
F1 (C6-C10) - BTEX	ug/g	<10	10	7459798				27	10	7459798
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	7462786				<20	20	7462786
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	7462786				<100	100	7462786
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	7462786				<100	100	7462786
Reached Baseline at C50	ug/g	Yes		7462786				Yes		7462786
Surrogate Recovery (%)										
o-Terphenyl	%	92		7462786				94		7462786
4-Bromofluorobenzene	%	91		7459798				104		7459798
D10-o-Xylene	%	106		7459798				118		7459798
D4-1,2-Dichloroethane	%	101		7459798				98		7459798
D8-Toluene	%	95		7459798				93		7459798

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

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

BV Labs ID		QBF608			QBF609		
Sampling Date		2021/07/09			2021/07/09		
COC Number		157173			157173		
	UNITS	**BH1A/SS2 Lab-Dup**	**RDL**	**QC Batch**	**BH2/SS14**	**RDL**	**QC Batch**
Inorganics							
Moisture	%	42	1.0	7460238	11	1.0	7460238
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/g				<0.050	0.050	7459080
Volatile Organics							
Acetone (2-Propanone)	ug/g				<0.50	0.50	7459798
Benzene	ug/g				<0.020	0.020	7459798
Bromodichloromethane	ug/g				<0.050	0.050	7459798
Bromoform	ug/g				<0.050	0.050	7459798
Bromomethane	ug/g				<0.050	0.050	7459798
Carbon Tetrachloride	ug/g				<0.050	0.050	7459798
Chlorobenzene	ug/g				<0.050	0.050	7459798
Chloroform	ug/g				<0.050	0.050	7459798
Dibromochloromethane	ug/g				<0.050	0.050	7459798
1,2-Dichlorobenzene	ug/g				<0.050	0.050	7459798
1,3-Dichlorobenzene	ug/g				<0.050	0.050	7459798
1,4-Dichlorobenzene	ug/g				<0.050	0.050	7459798
Dichlorodifluoromethane (FREON 12)	ug/g				<0.050	0.050	7459798
1,1-Dichloroethane	ug/g				<0.050	0.050	7459798
1,2-Dichloroethane	ug/g				<0.050	0.050	7459798
1,1-Dichloroethylene	ug/g				<0.050	0.050	7459798
cis-1,2-Dichloroethylene	ug/g				<0.050	0.050	7459798
trans-1,2-Dichloroethylene	ug/g				<0.050	0.050	7459798
1,2-Dichloropropane	ug/g				<0.050	0.050	7459798
cis-1,3-Dichloropropene	ug/g				<0.030	0.030	7459798
trans-1,3-Dichloropropene	ug/g				<0.040	0.040	7459798
Ethylbenzene	ug/g				<0.020	0.020	7459798
Ethylene Dibromide	ug/g				<0.050	0.050	7459798
Hexane	ug/g				0.18	0.050	7459798
Methylene Chloride(Dichloromethane)	ug/g				<0.050	0.050	7459798
Methyl Ethyl Ketone (2-Butanone)	ug/g				<0.50	0.50	7459798
Methyl Isobutyl Ketone	ug/g				<0.50	0.50	7459798
Methyl t-butyl ether (MTBE)	ug/g				<0.050	0.050	7459798
Styrene	ug/g				<0.050	0.050	7459798
1,1,1,2-Tetrachloroethane	ug/g				<0.050	0.050	7459798

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

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

BV Labs ID		QBF608			QBF609		
Sampling Date		2021/07/09			2021/07/09		
COC Number		157173			157173		
	UNITS	**BH1A/SS2 Lab-Dup**	**RDL**	**QC Batch**	**BH2/SS14**	**RDL**	**QC Batch**
1,1,2,2-Tetrachloroethane	ug/g				<0.050	0.050	7459798
Tetrachloroethylene	ug/g				<0.050	0.050	7459798
Toluene	ug/g				<0.020	0.020	7459798
1,1,1-Trichloroethane	ug/g				<0.050	0.050	7459798
1,1,2-Trichloroethane	ug/g				<0.050	0.050	7459798
Trichloroethylene	ug/g				<0.050	0.050	7459798
Trichlorofluoromethane (FREON 11)	ug/g				<0.050	0.050	7459798
Vinyl Chloride	ug/g				<0.020	0.020	7459798
p+m-Xylene	ug/g				<0.020	0.020	7459798
o-Xylene	ug/g				<0.020	0.020	7459798
Total Xylenes	ug/g				<0.020	0.020	7459798
F1 (C6-C10)	ug/g				12	10	7459798
F1 (C6-C10) - BTEX	ug/g				12	10	7459798
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g				<10	10	7462786
F3 (C16-C34 Hydrocarbons)	ug/g				<50	50	7462786
F4 (C34-C50 Hydrocarbons)	ug/g				<50	50	7462786
Reached Baseline at C50	ug/g				Yes		7462786
Surrogate Recovery (%)							
o-Terphenyl	%				88		7462786
4-Bromofluorobenzene	%				90		7459798
D10-o-Xylene	%				115		7459798
D4-1,2-Dichloroethane	%				104		7459798
D8-Toluene	%				95		7459798

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

TEST SUMMARY

BV Labs ID: QBF607
Sample ID: BH1A/SS1
Matrix: Soil

Collected: 2021/07/09
Shipped:
Received: 2021/07/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7459080	N/A	2021/07/16	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7462786	2021/07/14	2021/07/15	Anna Stuglik Rolland
Moisture	BAL	7461804	N/A	2021/07/14	Prgya Panchal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7459798	N/A	2021/07/14	Yang (Philip) Yu

BV Labs ID: QBF607 Dup
Sample ID: BH1A/SS1
Matrix: Soil

Collected: 2021/07/09
Shipped:
Received: 2021/07/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7461804	N/A	2021/07/14	Prgya Panchal

BV Labs ID: QBF608
Sample ID: BH1A/SS2
Matrix: Soil

Collected: 2021/07/09
Shipped:
Received: 2021/07/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7459080	N/A	2021/07/15	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7462786	2021/07/14	2021/07/15	Anna Stuglik Rolland
Moisture	BAL	7460238	N/A	2021/07/13	Prgya Panchal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7459798	N/A	2021/07/14	Yang (Philip) Yu

BV Labs ID: QBF608 Dup
Sample ID: BH1A/SS2
Matrix: Soil

Collected: 2021/07/09
Shipped:
Received: 2021/07/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7460238	N/A	2021/07/13	Prgya Panchal

BV Labs ID: QBF609
Sample ID: BH2/SS14
Matrix: Soil

Collected: 2021/07/09
Shipped:
Received: 2021/07/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7459080	N/A	2021/07/16	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	7462786	2021/07/14	2021/07/15	Anna Stuglik Rolland
Moisture	BAL	7460238	N/A	2021/07/13	Prgya Panchal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	7459798	N/A	2021/07/16	Yang (Philip) Yu

GENERAL COMMENTS

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

Package 1	6.3°C

Sample QBF608 [BH1A/SS2] : F2 - F4 Analysis: Detection limits were adjusted for high moisture content.

Sample QBF609 [BH2/SS14] : VOCF1 Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency

Results relate only to the items tested.

BV Labs Job #: C1J1459
Report Date: 2021/07/16

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: OTT-21013283-A0
Site Location: 280 LAURIER E
Sampler Initials: GC

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7459798	4-Bromofluorobenzene	2021/07/14	103	60 - 140	105	60 - 140	91	%		
7459798	D10-o-Xylene	2021/07/14	123	60 - 130	94	60 - 130	106	%		
7459798	D4-1,2-Dichloroethane	2021/07/14	96	60 - 140	102	60 - 140	98	%		
7459798	D8-Toluene	2021/07/14	108	60 - 140	106	60 - 140	97	%		
7462786	o-Terphenyl	2021/07/15	90	60 - 130	94	60 - 130	91	%		
7459798	1,1,1,2-Tetrachloroethane	2021/07/14	92	60 - 140	92	60 - 130	<0.050	ug/g	NC	50
7459798	1,1,1-Trichloroethane	2021/07/14	97	60 - 140	95	60 - 130	<0.050	ug/g	NC	50
7459798	1,1,2,2-Tetrachloroethane	2021/07/14	87	60 - 140	94	60 - 130	<0.050	ug/g	NC	50
7459798	1,1,2-Trichloroethane	2021/07/14	95	60 - 140	99	60 - 130	<0.050	ug/g	NC	50
7459798	1,1-Dichloroethane	2021/07/14	92	60 - 140	93	60 - 130	<0.050	ug/g	NC	50
7459798	1,1-Dichloroethylene	2021/07/14	103	60 - 140	100	60 - 130	<0.050	ug/g	NC	50
7459798	1,2-Dichlorobenzene	2021/07/14	96	60 - 140	94	60 - 130	<0.050	ug/g	NC	50
7459798	1,2-Dichloroethane	2021/07/14	88	60 - 140	95	60 - 130	<0.050	ug/g	NC	50
7459798	1,2-Dichloropropane	2021/07/14	92	60 - 140	95	60 - 130	<0.050	ug/g	NC	50
7459798	1,3-Dichlorobenzene	2021/07/14	99	60 - 140	95	60 - 130	<0.050	ug/g	NC	50
7459798	1,4-Dichlorobenzene	2021/07/14	100	60 - 140	97	60 - 130	<0.050	ug/g	NC	50
7459798	Acetone (2-Propanone)	2021/07/14	97	60 - 140	109	60 - 140	<0.50	ug/g	NC	50
7459798	Benzene	2021/07/14	90	60 - 140	91	60 - 130	<0.020	ug/g	NC	50
7459798	Bromodichloromethane	2021/07/14	93	60 - 140	97	60 - 130	<0.050	ug/g	NC	50
7459798	Bromoform	2021/07/14	86	60 - 140	93	60 - 130	<0.050	ug/g	NC	50
7459798	Bromomethane	2021/07/14	102	60 - 140	101	60 - 140	<0.050	ug/g	NC	50
7459798	Carbon Tetrachloride	2021/07/14	93	60 - 140	92	60 - 130	<0.050	ug/g	NC	50
7459798	Chlorobenzene	2021/07/14	96	60 - 140	95	60 - 130	<0.050	ug/g	NC	50
7459798	Chloroform	2021/07/14	91	60 - 140	93	60 - 130	<0.050	ug/g	NC	50
7459798	cis-1,2-Dichloroethylene	2021/07/14	95	60 - 140	98	60 - 130	<0.050	ug/g	NC	50
7459798	cis-1,3-Dichloropropene	2021/07/14	101	60 - 140	101	60 - 130	<0.030	ug/g	NC	50
7459798	Dibromochloromethane	2021/07/14	88	60 - 140	91	60 - 130	<0.050	ug/g	NC	50
7459798	Dichlorodifluoromethane (FREON 12)	2021/07/14	105	60 - 140	107	60 - 140	<0.050	ug/g	NC	50
7459798	Ethylbenzene	2021/07/14	95	60 - 140	90	60 - 130	<0.020	ug/g	NC	50
7459798	Ethylene Dibromide	2021/07/14	87	60 - 140	93	60 - 130	<0.050	ug/g	NC	50
7459798	F1 (C6-C10) - BTEX	2021/07/14					<10	ug/g	NC	30
7459798	F1 (C6-C10)	2021/07/14	98	60 - 140	100	80 - 120	<10	ug/g	NC	30

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7459798	Hexane	2021/07/14	107	60 - 140	104	60 - 130	<0.050	ug/g	NC	50
7459798	Methyl Ethyl Ketone (2-Butanone)	2021/07/14	101	60 - 140	117	60 - 140	<0.50	ug/g	NC	50
7459798	Methyl Isobutyl Ketone	2021/07/14	100	60 - 140	115	60 - 130	<0.50	ug/g	NC	50
7459798	Methyl t-butyl ether (MTBE)	2021/07/14	94	60 - 140	95	60 - 130	<0.050	ug/g	NC	50
7459798	Methylene Chloride(Dichloromethane)	2021/07/14	91	60 - 140	95	60 - 130	<0.050	ug/g	NC	50
7459798	o-Xylene	2021/07/14	98	60 - 140	94	60 - 130	<0.020	ug/g	NC	50
7459798	p+m-Xylene	2021/07/14	99	60 - 140	94	60 - 130	<0.020	ug/g	NC	50
7459798	Styrene	2021/07/14	86	60 - 140	84	60 - 130	<0.050	ug/g	NC	50
7459798	Tetrachloroethylene	2021/07/14	87	60 - 140	84	60 - 130	<0.050	ug/g	NC	50
7459798	Toluene	2021/07/14	91	60 - 140	89	60 - 130	<0.020	ug/g	NC	50
7459798	Total Xylenes	2021/07/14					<0.020	ug/g	NC	50
7459798	trans-1,2-Dichloroethylene	2021/07/14	95	60 - 140	96	60 - 130	<0.050	ug/g	NC	50
7459798	trans-1,3-Dichloropropene	2021/07/14	114	60 - 140	110	60 - 130	<0.040	ug/g	NC	50
7459798	Trichloroethylene	2021/07/14	97	60 - 140	97	60 - 130	<0.050	ug/g	NC	50
7459798	Trichlorofluoromethane (FREON 11)	2021/07/14	100	60 - 140	98	60 - 130	<0.050	ug/g	NC	50
7459798	Vinyl Chloride	2021/07/14	101	60 - 140	104	60 - 130	<0.020	ug/g	NC	50
7460238	Moisture	2021/07/13							0	20
7461804	Moisture	2021/07/14							0.62	20
7462786	F2 (C10-C16 Hydrocarbons)	2021/07/15	97	50 - 130	98	80 - 120	<10	ug/g	NC	30
7462786	F3 (C16-C34 Hydrocarbons)	2021/07/15	92	50 - 130	96	80 - 120	<50	ug/g	NC	30
7462786	F4 (C34-C50 Hydrocarbons)	2021/07/15	89	50 - 130	93	80 - 120	<50	ug/g	NC	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

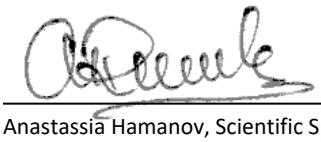
NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

BV Labs Job #: C1J1459
Report Date: 2021/07/16

exp Services Inc
Client Project #: OTT-21013283-A0
Site Location: 280 LAURIER E
Sampler Initials: GC

VALIDATION SIGNATURE PAGE

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



Anastassia Hamanov, Scientific Specialist

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvlabs.com

BUREAU VERITAS

6740 Campobello Road, Mississauga, Ontario L5N 2L8
Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266
CAM FCD-01191/6

CHAIN OF CUSTODY RECORD 157173 Page 1 of 1

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: EXP Services Inc	Company Name:	Quotation #:	[X] Regular TAT (5-7 days) Most analyses
Contact Name: Ismail Taki	Contact Name: Chris Kimberly	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 100-2650 Queensview Dr. Ottawa, ON	Address:	Project #: OTT-21013283-A0	Rush TAT (Surcharges will be applied)
Phone: (613) 688-1899 Fax:	Phone: Fax:	Site Location: 280 Laurier E	[ ] 1 Day [ ] 2 Days [ ] 3-4 Days
Email: ismail.taki@exp.com	Email: chris.kimberly@exp.com	Site #:	Date Required:
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS LABORATORIES' DRINKING WATER CHAIN OF CUSTODY		Site Location Province:	Rush Confirmation #:
		Sampled By:	

Regulation 153	Other Regulations
[ ] Table 1 [X] Res/Park [ ] Med/ Fine	[ ] CCME [ ] Sanitary Sewer Bylaw
[ ] Table 2 [ ] Ind/Comm [ ] Coarse	[ ] MISA [ ] Storm Sewer Bylaw
[X] Table 3 [ ] Agri/ Other	[ ] PWQO Region
[ ] Table	[ ] Other (Specify)
FOR RSC (PLEASE CIRCLE) Y / N	[ ] REG 558 (MIN. 3 DAY TAT REQUIRED)
	[ ] REG 406 Table

Include Criteria on Certificate of Analysis: Y / N

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

	SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED (CIRCLE) Metals / Hg / CrVI	BTEX/ PHC F1	PHCs F2 - F4	VOCs	REG 153 METALS & INORGANICS	REG 153 ICPMS METALS	REG 153 METALS (Hg, Cr VI, ICPMS Metals, HWS - B)	HOLD- DO NOT ANALYZE
1	BH1A/SS1	2021/07/09	AM	S	3		X	X	X				
2	BH1A/SS2	↓	AM	S	3		X	X	X				
3	BH2/SS14	↓	PM	S	3		X	X	X				
4													
5													
6													
7													
8													
9													
10													

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
Y	Y	6.6.7
Y	Y	3/3/5 on ice

COOLING MEDIA PRESENT: Y / N

COMMENTS

RECEIVED IN OTTAWA

Custody Seal Present Yes Intact No
Cooling Media

On ice

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Gary C.	2021/07/09	17:00	ARUNA ARA	2021.07.09	17:05
			DIPIKA SINGH	2021/07/10	08:35

09-Jul-21 17:05
Katherine Szozda
C1J1459
JA5 ENV-1230

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Bureau Veritas Laboratories' standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgment and acceptance and-conditions

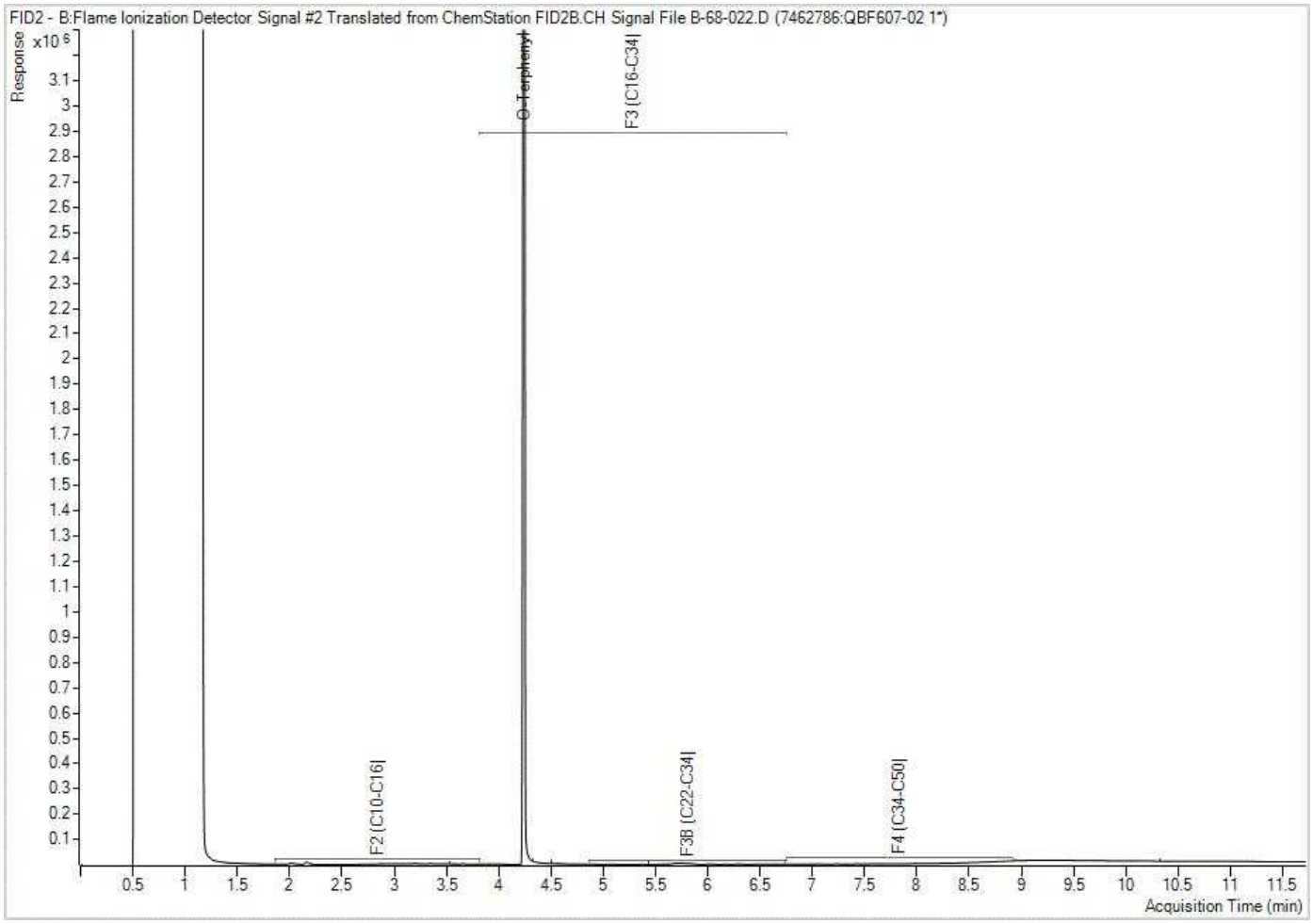
COC-1004 (06/19)

White: BV Labs - Yellow: Client

BV Labs Job #: C1J1459
Report Date: 2021/07/16
BV Labs Sample: QBF607

exp Services Inc
Client Project #: OTT-21013283-A0
Project name: 280 LAURIER E
Client ID: BH1A/SS1

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

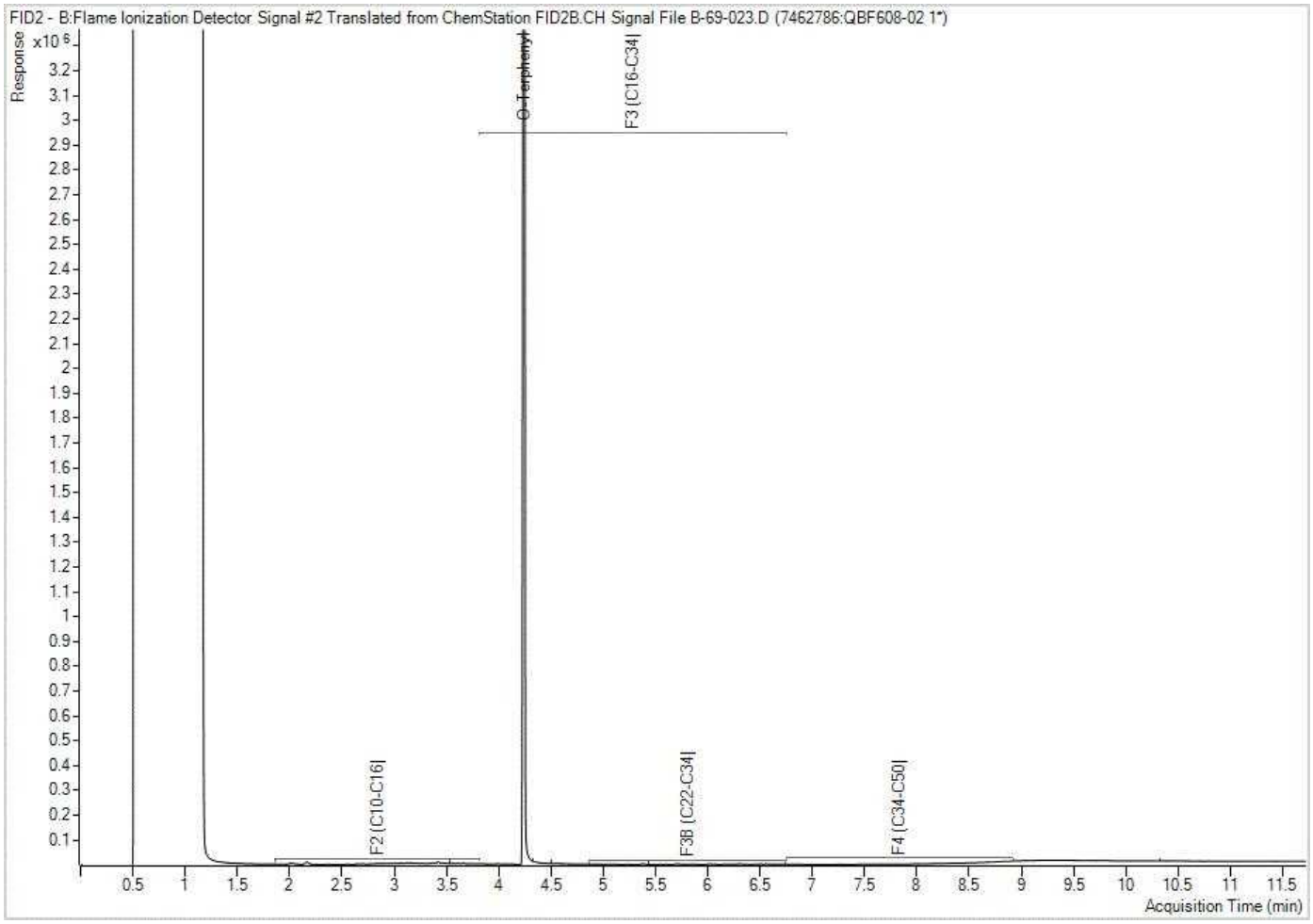


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1J1459
Report Date: 2021/07/16
BV Labs Sample: QBF608

exp Services Inc
Client Project #: OTT-21013283-A0
Project name: 280 LAURIER E
Client ID: BH1A/SS2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

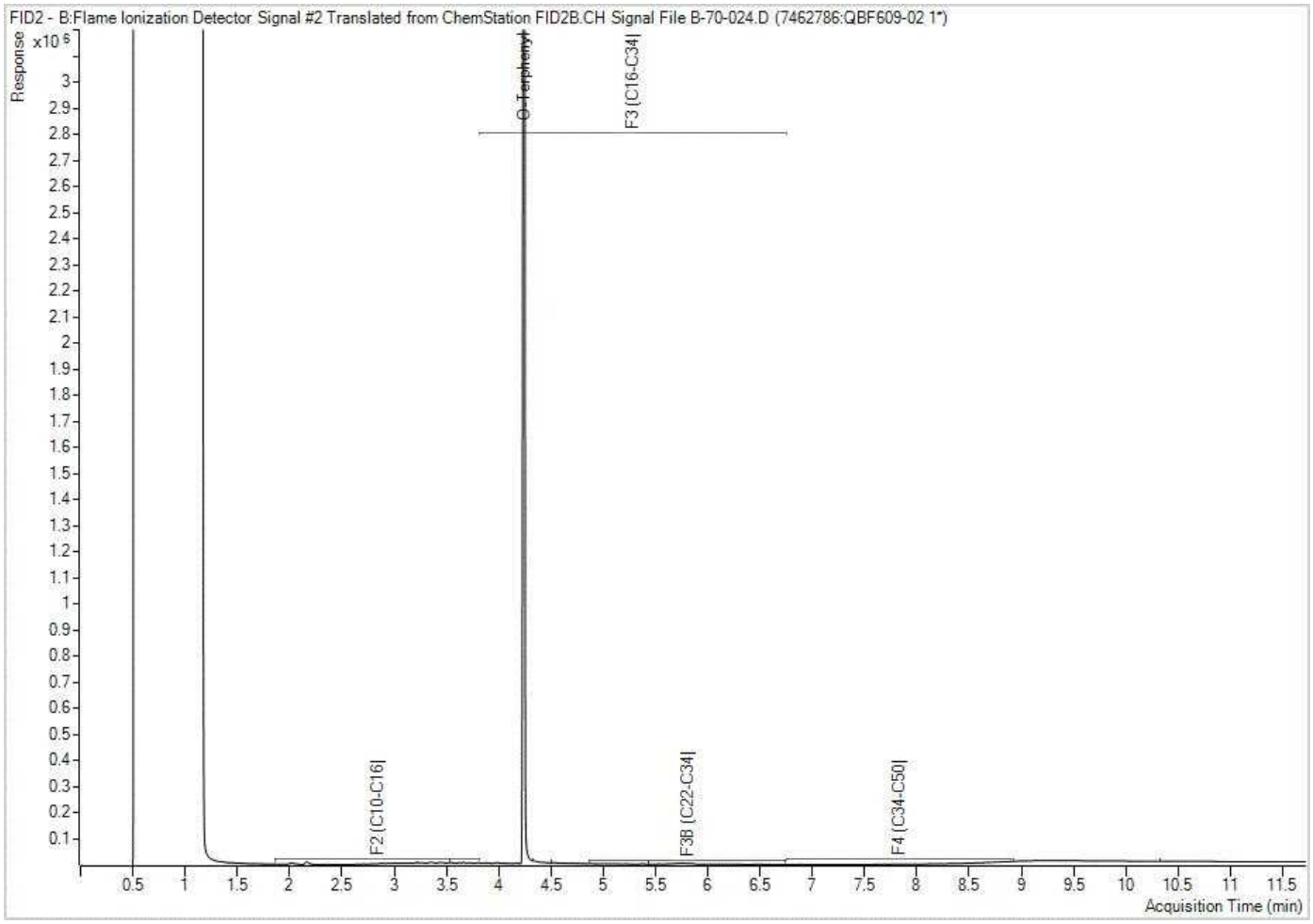


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C1J1459
Report Date: 2021/07/16
BV Labs Sample: QBF609

exp Services Inc
Client Project #: OTT-21013283-A0
Project name: 280 LAURIER E
Client ID: BH2/SS14

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

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300 - 2319 St. Laurent Blvd
Ottawa, ON, K1G 4J8
1-800-749-1947
www.paracellabs.com

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B 8K2
Attn: Chris Kimmerly

Client PO:
Project: OTT0021013283AO
Custody: 61998

Report Date: 22-Jul-2021
Order Date: 19-Jul-2021

Order #: 2130169

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2130169-01	BH/MW-1A

Approved By: Mark Foto

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Report Date: 22-Jul-2021

Client: exp Services Inc. (Ottawa)

Order Date: 19-Jul-2021

Client PO:

Project Description: OTT0021013283AO

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 624 - P&T GC-MS	20-Jul-21	20-Jul-21
PHC F1	CWS Tier 1 - P&T GC-FID	20-Jul-21	20-Jul-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	22-Jul-21	22-Jul-21

Certificate of Analysis

Report Date: 22-Jul-2021

Client: exp Services Inc. (Ottawa)

Order Date: 19-Jul-2021

Client PO:

Project Description: OTT0021013283AO

	Client ID:	BH/MW-1A	-	-	-
	Sample Date:	19-Jul-21 12:25	-	-	-
	Sample ID:	2130169-01	-	-	-
	MDL/Units	Water	-	-	-
Volatiles					
Benzene	0.5 ug/L	<0.5	-	-	-
Ethylbenzene	0.5 ug/L	<0.5	-	-	-
Toluene	0.5 ug/L	<0.5	-	-	-
m,p-Xylenes	0.5 ug/L	<0.5	-	-	-
o-Xylene	0.5 ug/L	<0.5	-	-	-
Xylenes, total	0.5 ug/L	<0.5	-	-	-
Toluene-d8	Surrogate	105%	-	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	25 ug/L	<25	-	-	-
F2 PHCs (C10-C16)	100 ug/L	<100	-	-	-
F3 PHCs (C16-C34)	100 ug/L	<100	-	-	-
F4 PHCs (C34-C50)	100 ug/L	<100	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L						
F2 PHCs (C10-C16)	ND	100	ug/L						
F3 PHCs (C16-C34)	ND	100	ug/L						
F4 PHCs (C34-C50)	ND	100	ug/L						
Volatiles									
Benzene	ND	0.5	ug/L						
Ethylbenzene	ND	0.5	ug/L						
Toluene	ND	0.5	ug/L						
m,p-Xylenes	ND	0.5	ug/L						
o-Xylene	ND	0.5	ug/L						
Xylenes, total	ND	0.5	ug/L						
Surrogate: Toluene-d8	*86.1*		*ug/L*		*108*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L	ND			NC	30	
Volatiles									
Benzene	ND	0.5	ug/L	ND			NC	30	
Ethylbenzene	ND	0.5	ug/L	ND			NC	30	
Toluene	ND	0.5	ug/L	ND			NC	30	
m,p-Xylenes	ND	0.5	ug/L	ND			NC	30	
o-Xylene	ND	0.5	ug/L	ND			NC	30	
Surrogate: Toluene-d8	*85.0*		*ug/L*		*106*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	1810	25	ug/L	ND	90.3	68-117			
F2 PHCs (C10-C16)	1440	100	ug/L	ND	90.0	60-140			
F3 PHCs (C16-C34)	3830	100	ug/L	ND	97.7	60-140			
F4 PHCs (C34-C50)	2390	100	ug/L	ND	96.4	60-140			
Volatiles									
Benzene	40.4	0.5	ug/L	ND	101	60-130			
Ethylbenzene	39.5	0.5	ug/L	ND	98.8	60-130			
Toluene	41.7	0.5	ug/L	ND	104	60-130			
m,p-Xylenes	77.7	0.5	ug/L	ND	97.1	60-130			
o-Xylene	40.5	0.5	ug/L	ND	101	60-130			
Surrogate: Toluene-d8	*81.7*		*ug/L*		*102*	*50-140*			

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.
NC: Not Calculated

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.

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Paracel ID: 2130169

er

Chain Of Custody
(Lab Use Only)
No. 61998

Client Name: EXP Services Inc.	Project Ref: 210/3283-A0
Contact Name: Chris Kimmerly	Quote #:
Address: 2650 QUEENSVIEW DR. OTTAWA	PO #:
Telephone: 613-688-1899	E-mail: Chris.Kimmerly@exp.com ISMAIL.TAKI@exp.com GARY.CUI@exp.com

Page 1 of 1

Turnaround Time
☐ 1 day ☐ 3 day
☐ 2 day ☒ Regular
Date Required: _____

☒ REG 153/04 ☐ REG 406/19	Other Regulation	Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)
☐ Table 1 ☐ Res/Park ☐ Med/Fine	☐ REG,558 ☐ PWQO	
☐ Table 2 ☐ Ind/Comm ☐ Coarse	☐ CCME ☐ MISA	
☐ Table 3 ☐ Agri/Other	☐ SU - Sani ☐ SU - Storm	
☐ Table ___	Mun: ___	
For RSC: ☐ Yes ☐ No	☐ Other:	

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	Required Analysis: BTEX	Required Analysis: PHC F1-F4
1	BH/MW-1A	GW		3	2021-07-19	17h25		
2								
3								
4								
5								
6								
7								
8								
9								
10								

Comments:

Method of Delivery: Drop Box

Relinquished By (Sign): Philip Oliveira	Received By Driver/Depot:	Received at Lab:	Verified By:
Relinquished By (Print): Philip Oliveira	Date/Time: 07/19/21 3:03pm	Date/Time: July 19 2021 5:55	Date/Time: July 20 2021 11:15
Date/Time: 2021-07-19 15h00	Temperature: 18.2 °C	Temperature: 11.4 °C	pH Verified: ☐ By: