Renimmod Properties Ltd.
2069 Lakeshore Road
Burlington, ON L7R 1E2

File No. 21-016-209
February 26, 2021

Attention Mark Bales

Re: Remedial Action Plan
535-551 Brant Street, Burlington, Ontario

Grounded Engineering Inc. ("Grounded") is pleased to provide you with this Remedial Action Plan for the site known as 535-551 Brant Street, in Burlington, Ontario.

1 Introduction

Grounded Engineering was retained to create a Remedial Action Plan for the above site for the purposes of soil and groundwater characterization for redevelopment purposes. The Property will be redeveloped with a 26-storey mixed use residential/commercial use building with 4 levels of below grade parking. The site is located at 535-551 Brant Street in Burlington, Ontario. The Property is rectangular in shape, with a total area of approximately 0.28 ha. The Property is considered to be commercial land use by the Ontario Ministry of the Environment, Conservation and Parks (MECP). Both a Phase One ESA and a Phase Two ESA have previously been prepared by Terraprobe in accordance with Ontario Regulation 153/04 (O.Reg. 153/04).

2 Previous Investigations Summary

The following reports were previously completed by Terraprobe for the Property:

- Terraprobe Inc., November 2020. Phase One Environmental Site Assessment, 535-551 Brant Street, Burlington, Ontario. File: 1-18-0718-41.
- Terraprobe Inc., May 2020. Phase Two Environmental Site Assessment, 535-551 Brant Street, Burlington, Ontario. File: 1-18-0718-42.

2.1 Phase One ESA, November 2020

The Phase One ESA was conducted for the entire Property, the site consists of a multi-tenant commercial 2-storey building directly adjacent to a commercial 1-story building to the east. The investigation was conducted in accordance with O.Reg.153/04 and included a site inspection, and historical records review. The findings are summarized below:

- Based on a review of historic maps, the site has only been used for commercial purposes. The surrounding area has also been primarily used for residential or commercial purposes.
- Historical placement of earthen fill of unknown quality during the initial development of the Property throughout the entire Property.

- Historic records of a commercial autobody shop with above grade storage tanks, dry cleaners, and waste disposal bins within the Property boundaries deemed areas of potential environmental concern.
- Further investigation in the form of a Phase Two ESA was recommended.

2.2 Phase Two ESA, May 2020

The Phase Two ESA was conducted for the entire Property. The investigation was conducted in accordance with O.Reg.153/04 and included advancing boreholes with monitoring wells, soil and groundwater sampling and chemical analysis and reporting the findings of the investigation. The findings are summarized below:

- Terraprobe (2018-2019): Advanced 8 boreholes to depth ranging from 2 to 18.5 m below ground surface (mbgs)
- Installation of 5 monitoring wells in boreholes
- The analysis was conducted for specific parameters groups, as specified in Ministry of the Environment, Conservation and Parks (MECP) "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act", July 1, 2011.
- The following parameter groups were investigated in soil and groundwater based on APECs identified in the Phase One ESA:
    - Metals (M)
    - Hydride-forming Metals (H-M): Antimony (Sb), Arsenic (As), Selenium (Se)
    - Selected Other Regulated Parameters (ORPs): Electrical Conductivity (EC), Sodium Adsorption Ratio (SAR), Boron-hot water soluble (B-HWS), Cyanide (CN-), Mercury (Hg), Hexavalent Chromium (Cr (VI)), low or high pH
    - Polycyclic Aromatic Hydrocarbons (PAHs)
    - Polychlorinated Biphenyls (PCB)
    - Petroleum Hydrocarbons (PHCs)
    - Volatile Organic Compounds I (VOCs)
    - Volatile Organic Compounds II (BTEX)

3 Results of Analysis

3.1 Applicable Site Condition Standards

The results of the chemical analysis were compared to the MECP Standards as found in the *"Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act"*, April 15, 2011. The results were compared to the following Standards:

- Table 3 Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential, Parkland and Institutional Land Use, Medium and Fine textured Soil (Table 3 RPI)

The Standards were chosen for the following reasons:

- The results were compared to the Table 3 RPI MFT Standards as those are the applicable Site Condition Standards (SCS) for the site. Those are the applicable SCS for the following reasons:
    - The site is used for a proposed Residential Land Use.
    - Bedrock is located at a depth of greater than 2 m.
    - The site is located in an urban setting, which obtains its potable water from municipal water supply.
    - The site not located within 30 m of a surface water body.
    - The site not located in or adjacent to or within 30 m of an area of natural significance.

3.2 Soil & Groundwater Analysis

The results of the soil chemical analysis by Terraprobe indicate exceedances for metals parameters within the fill material. . Within BH104, 107, and 108 the soil was found to be impacted by Beryllium and Lead soil impacts within the fill material at a depth up to 0.8 mbgs. The native soils located beneath the earth fill did not exceed standards.

The results of the previous groundwater chemical analysis by Terraprobe indicate exceedances for PHC parameters (F2 and/or F3 fractions) at BH104, 106, and 107. However, the most recent groundwater sampling event by Terraprobe (February 21, 2019) of BH104 and the supplemental groundwater sampling by Grounded (February 4, 2021) of BH106 & 107, have recorded no detectable concentrations of PHCs within the groundwater on the Property. The QP has determined that the previously recorded PHC exceedances in groundwater were likely artificially biased by sediment concentrations and are not representative of actual groundwater conditions onsite. Therefore, all groundwater onsite is deemed to meet the applicable SCS.

The distribution of each soil contaminant of concern (COC) are as follows.

Contaminants	Distribution
Beryllium	Identified in the fill material on the eastern portion of the property
Lead	Identified in the fill material on the western and southern portions of the property

3.3 Phase Two ESA Conclusions

The location and concentration of contamination is provided below:

Soil	There were exceedances of the applicable Site Condition Standards noted in the earth fill for Beryllium and Lead. There were no exceedances of the applicable Site Condition Standards noted in the native soils.
Groundwater	No exceedances of the applicable Site Condition Standards were identified in the groundwater on the Property following the most recent sampling events.

The Property has recorded soil exceedances of the applicable SCS, identified in the earth fill. As such a remediation program of the impacted soil will be required to restore the Property to the applicable SCS for residential use.

4 Remedial Action Plan

A Remedial Action Plan (RAP) for soils is required to restore the Property to the MECP Table 3 RPI MFT Standards. The following discussion summarizes the proposed methodology:

- The redevelopment of the Property will require shoring and excavation to facilitate construction of the four-level underground parking garage.
- Fill material with various soil impacts exist across the eastern, western, and southern portions of the Property to depths varying from approximately 0 to 0.8 mbgs.
- The limits of the excavation will fully extend to the Property line in all directions.
- All impacted soils within the shored excavation will be removed offsite and disposed of at an MECP licensed waste disposal site accepting non-hazardous waste and will not be stockpiled on site.
- Once all impacted soils are removed from the Property, soil verification samples will be collected from the base of the excavation to confirm that all remaining soils onsite meet the applicable residential standards. At this time, a Record of Site Condition (RSC) can be filed with the MECP.

5 Terms and Conditions

This preliminary plan is not intended as, and does not represent, an independent verification, warranty or representation by Grounded of the site conditions or conclusions as stated or predicted in the documents provided.

Any comments and analysis by Grounded relies on the assumption that the factual data presented in the reports and documents reviewed for use in this preliminary plan are complete and accurate. Grounded has not been retained to carry out any independent verification of actual site conditions.

Grounded accepts no responsibility or liability in negligence, contract or on any other basis for damages of any kind or nature whatsoever suffered by anyone, or for indemnification, as a result of decisions or actions based on this opinion letter or on the documents reviewed.

Additional subsurface investigation will provide additional information. This information should be incorporated into the plan as required. Modification of the plan based upon this additional information is possible.

6 Closure

We trust that the information contained in this letter is sufficient for your present requirements. If we can be of further assistance, please do not hesitate to contact us.

GROUNDED ENGINEERING

Jason Ngo, B.Sc

Jeremy Bobro, M_{ENVM}
Senior Consultant



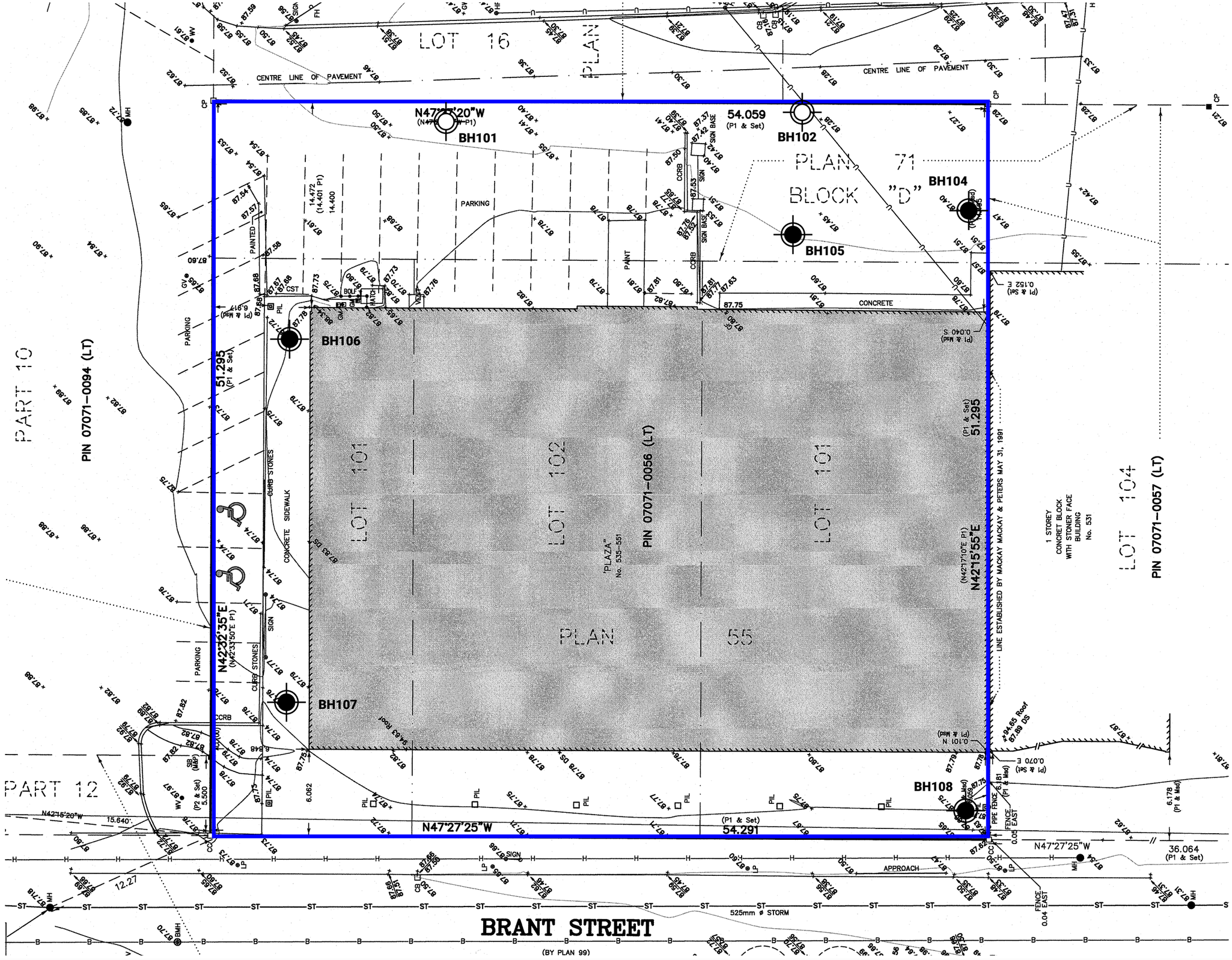
Matthew Bielaski, P.Eng., QP_{ESA-RA}
Principal

Enclosed:

Figure 1 – Sampling Locations
Appendix A – Borehole Logs
Appendix B – Laboratory Certificate of Analysis

FIGURES





GROUNDED ENGINEERING

12 Banigan Drive, Toronto, Ont., M4H 1E9
www.groundedeng.ca

LEGEND

- PROPERTY BOUNDARY
- MONITORING WELL (TERRAPROBE 2019)
- BOREHOLE (TERRAPROBE 2019)

Note

Reference

Topographic Survey, A.T. McLaren Limited, Dec 2018 (Drawing #35815)

Project

535-551 BRANT STREET BURLINGTON, ONTARIO

Figure Title

BOREHOLE LOCATION PLAN (EXISTING CONDITION)

North

Date

FEBRUARY 9, 2021

Scale

NOT TO SCALE

Job No

21-016

Figure No

FIGURE 1

APPENDIX A



LOG OF BOREHOLE 101

Terraprobe

Project No. : 1-18-0718	Client : Carriage Gate Homes	Originated by : TG
Date started : November 26, 2018	Project : 535-551 Brant Street	Compiled by : JK
Sheet No. : 1 of 1	Location : Burlington, ON	Checked by : MD

Position : E: 597162, N: 4798043 (UTM 17T) Elevation Datum : Geodetic

Rig type : Truck-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa)	Moisture / Plasticity	Headspace Vapour (ppm)	Instrument Details	Unstabilized Water Level	Lab Data and Comments
0	87.5	**GROUND SURFACE**											
	87.2	115mm **ASPHALTIC CONCRETE**											
	0.3	150mm **AGGREGATE**											
		FILL, clayey silt, trace sand, trace gravel, trace asphalt, stiff, red with black pockets, moist		1	SS	15	87						SS1 Analysis: M&I
1				2	SS	12							SS2 Analysis: PAH
	86.0						86						
	1.5	**SILT**, some clay, trace sand, trace gravel, hard, reddish brown, moist (HALTON TILL)		3	SS	92 / 275mm							SS3 Analysis: PHC
	85.5												
	2.0	**END OF BOREHOLE**											

Penetration Test Values (Blows / 0.3m): × Dynamic Cone; 10 20 30 40

Undrained Shear Strength (kPa): ○ Unconfined + Field Vane ● Pocket Penetrometer ■ Lab Vane; 40 80 120 160

Moisture / Plasticity: Plastic Limit (PL) Natural Water Content (MC) Liquid Limit (LL); 10 20 30

Lab Data and Comments: GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Borehole was dry and open upon completion of drilling.

file: 1-18-0718 bh logs.gpj

LOG OF BOREHOLE 102

Terraprobe

Project No. : 1-18-0718	Client : Carriage Gate Homes	Originated by : TG
Date started : November 26, 2018	Project : 535-551 Brant Street	Compiled by : JK
Sheet No. : 1 of 1	Location : Burlington, ON	Checked by : MD

Position : E: 597181, N: 4798028 (UTM 17T) Elevation Datum : Geodetic

Rig type : Truck-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa)	Moisture / Plasticity	Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments
0	87.3	**GROUND SURFACE**										
		120mm **ASPHALTIC CONCRETE**										
	86.9	260mm **AGGREGATE**										
	0.4	**FILL**, clayey silt, some sand, trace to some gravel, trace asphalt, trace rock fragments, firm to stiff, dark brown, moist		1	SS	7	87					SS1 Analysis: PAH
1		...at 0.6 m, red, stiff		2	SS	13						SS2 Analysis: VOC, PHC
	85.8						86					
	1.5	**SILT**, some silt, trace sand, trace gravel, hard, reddish brown, moist		3	SS	59						SS3 Analysis: M&I
	85.3	(HALTON TILL)										
	2.0	**END OF BOREHOLE**										

Penetration Test Values (Blows / 0.3m): × Dynamic Cone; 10 20 30 40

Undrained Shear Strength (kPa): ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane; 40 80 120 160

Moisture / Plasticity: Plastic Limit (PL) Natural Water Content (MC) Liquid Limit (LL); 10 20 30

Unstabilized Water Level

GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Unstabilized water level measured at 0.3 m below ground surface; borehole caved to 0.9 m below ground surface upon completion of drilling.

file: 1-18-0718 bh logs.gpj

LOG OF BOREHOLE 103

Terraprobe

Project No. : 1-18-0718	Client : Carriage Gate Homes	Originated by : TG
Date started : November 26, 2018	Project : 535-551 Brant Street	Compiled by : JK
Sheet No. : 1 of 1	Location : Burlington, ON	Checked by : MD

Position : E: 597202, N: 4798017 (UTM 17T) Elevation Datum : Geodetic

Rig type : Truck-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa)	Moisture / Plasticity	Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments
0	87.3	**GROUND SURFACE**										
	87.0	95mm **ASPHALTIC CONCRETE**					87					
	0.3	240mm **AGGREGATE**										
		FILL, clayey silt, some sand, trace to some gravel, trace asphalt, trace rock fragments, stilff to very stiff, red with black pockets, moist		1	SS	26						SS1 Analysis: VOC, PHC
1				2	SS	12						SS2 Analysis: M&I
	85.8						86					
	1.5	**SILT**, some clay, trace sand, trace gravel, very stiff, reddish brown, moist (HALTON TILL)		3	SS	17						SS3 Analysis: PAH
	85.3											
	2.0	**END OF BOREHOLE**										

Penetration Test Values (Blows / 0.3m): Dynamic Cone; 10 20 30 40

Undrained Shear Strength (kPa): Unconfined, Pocket Penetrometer, Field Vane, Lab Vane; 40 80 120 160

Moisture / Plasticity: Plastic Limit, Natural Water Content, Liquid Limit; PL MC LL; 10 20 30

Unstabilized Water Level

Lab Data and Comments: GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Borehole was dry and open upon completion of drilling.

file: 1-18-0718 bh logs.gpj

LOG OF BOREHOLE 104

Terraprobe

Project No. : 1-18-0718	Client : Carriage Gate Homes	Originated by : TG
Date started : January 22, 2019	Project : 535-551 Brant Street	Compiled by : JK
Sheet No. : 1 of 2	Location : Burlington, ON	Checked by : MD

Position : E: 597190, N: 4798010 (UTM 17T) | Elevation Datum : Geodetic | Core Diameter : **HQ**, OD=96mm, ID=64mm

Rig type : Truck-mounted | Drilling Method : Hollow stem augers, HQ rock coring

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
0	87.4	**GROUND SURFACE**				
	87.2	80mm **ASPHALTIC CONCRETE**				
	0.2	80mm **AGGREGATE**				
		FILL, clayey silt, trace to some gravel, trace sand, trace asphalt, hard, red with grey and black pockets, moist		1	SS	34
1		...at 0.8 m, some sand, trace concrete, dark brown to black, firm		2	SS	5
		...at 1.5 m, brown with red staining		3	SS	6
2	85.1					
	2.3	**SILT**, some clay, trace sand, trace gravel, firm, reddish brown, moist (HALTON TILL)		4A	SS	6
		...at 2.6 m, silty clay, trace shale fragments		4B		
3	84.4					
	3.0			5	SS	50 / 125mm
	84.1	**INFERRED BEDROCK**, shale, red				
	3.3	**QUEENSTON FORMATION** (See rock core log for details)		1	RUN	
4		...at 3.5 m, transition to sound bedrock		2	RUN	
5				3	RUN	
6				4	RUN	
7				5	RUN	
8						
9				6	RUN	
10						
11				7	RUN	

Elevation Scale (m): 87, 86, 85, 84, 83, 82, 81, 80, 79, 78, 77, 76

Penetration Test Values (Blows / 0.3m): Dynamic Cone 10 20 30 40

Undrained Shear Strength (kPa): Unconfined, Pocket Penetrometer, Field Vane, Lab Vane — 40 80 120 160

Moisture / Plasticity: Plastic Limit (PL) | Natural Water Content (MC) | Liquid Limit (LL) — 10 20 30

Headspace Vapour (ppm): PID: <5 | PID: 5 | PID: 10 | PID: <5 | PID: <5 | PID: <5

Instrument Details: Unstabilized Water Level

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT) — GR SA SI CL

SS1 Analysis: M&I

SS2 Analysis: PAH

SS3 Analysis: VOC, PHC

17 11 47 25

4B Analysis: M&I, PAH, VOC, PHC

(continued next page)

LOG OF BOREHOLE 104

Terraprobe

Project No. : 1-18-0718	Client : Carriage Gate Homes	Originated by : TG
Date started : January 22, 2019	Project : 535-551 Brant Street	Compiled by : JK
Sheet No. : 2 of 2	Location : Burlington, ON	Checked by : MD

Position : E: 597190, N: 4798010 (UTM 17T) | Elevation Datum : Geodetic | Core Diameter : **HQ**, OD=96mm, ID=64mm

Rig type : Truck-mounted | Drilling Method : Hollow stem augers, HQ rock coring

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value
12		*(continued)*				
		QUEENSTON FORMATION (See rock core log for details) *(continued)*		7	RUN	
13				8	RUN	
14						
15				9	RUN	
16						
17				10	RUN	
18				11	RUN	
	68.9 / 18.5	**END OF BOREHOLE**				

Elevation Scale (m): 75, 74, 73, 72, 71, 70, 69

Penetration Test Values (Blows / 0.3m): × Dynamic Cone; 10, 20, 30, 40

Undrained Shear Strength (kPa): ○ Unconfined, ● Pocket Penetrometer, + Field Vane, ■ Lab Vane; 40, 80, 120, 160

Moisture / Plasticity: Plastic Limit, Natural Water Content, Liquid Limit; PL, MC, LL; 10, 20, 30

Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT): GR SA SI CL

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Mar 15, 2019	3.3	84.2
Mar 22, 2019	3.2	84.2

file: 1-18-0718 bh logs.gpj

ROCK CORE LOG 104

Terraprobe

Project No. : 1-18-0718 | Client : Carriage Gate Homes | Originated by : TG

Date started : January 22, 2019 | Project : 535-551 Brant Street | Compiled by : JK

Sheet No. : 1 of 1 | Location : Burlington, ON | Checked by : MD

Position : E: 597190, N: 4798010 (UTM 17T) | Elevation Datum : Geodetic | Core Diameter : **HQ**, OD=96mm, ID=64mm

Rig type : Truck-mounted | Drilling Method : Hollow stem augers, HQ rock coring

Depth (m)	GENERAL DESCRIPTION	Run / Elev Depth (m)	Recovery	Elevation (m)	Comments
	Rock coring started at 3.3m below grade	**84.1**			
4	**QUEENSTON FORMATION** **calcareous Shale**, red, medium bedded, weak; joints are horizontal, closed to gapped, clean;	3.3 R1 83.3	TCR = **103%** SCR = **87%** RQD = **45%**	84	**3.3m:** *highly weathered* **3.8m:** *dipping joint, closed, clean, smooth, planar* **4.1m:** *vertilcal joint, closed, clean, smooth, planar*
5	interbedded with **limestone**, grey, thinly bedded, medium strong ...at 3.5m, transition to sound bedrock *Run 1 : 0% limestone 100% shale*	4.1 R2 81.8	TCR = **100%** SCR = **97%** RQD = **83%**	83 82	
6	*Run 2 : 10% limestone 90% shale*	5.6 R3 80.2	TCR = **100%** SCR = **93%** RQD = **68%**	81	**5.6-5.7m:** *50mm rubblized*
7	*Run 3 : 7% limestone 93% shale*	7.2 R4 78.7	TCR = **98%** SCR = **98%** RQD = **95%**	80 79	
8	*Run 4 : 16% limestone 84% shale*	8.7 R5 77.2	TCR = **93%** SCR = **88%** RQD = **60%**	78	**8.8-8.8m:** *rubble* **8.9m:** *dipping joint, clean, smooth, closed, planar* **9.6-9.7m:** *horizontal joint, clay infilled, gapped, smooth, planar*
10	*Run 5 : 29% limestone 71% shale*	10.2 R6 75.7	TCR = **100%** SCR = **97%** RQD = **85%**	77 76	**10.3m:** *dipping joint, closed, smooth, planar, clean*
11	*Run 6 : 17% limestone 83% shale*	11.7 R7 74.3	TCR = **98%** SCR = **98%** RQD = **98%**	75	
13	*Run 7 : 8% limestone 92% shale*	13.1 R8 72.7	TCR = **100%** SCR = **100%** RQD = **100%**	74 73	**13.0m:** *cacium deposits*
14	*Run 8 : 9% limestone 91% shale*	14.7 R9 71.2	TCR = **97%** SCR = **97%** RQD = **97%**	72	
16	*Run 9 : 9% limestone 91% shale*	16.2 R10 69.6	TCR = **95%** SCR = **94%** RQD = **87%**	71	**16.5m:** *vertical joint, clean, closed, smooth, undulating*
17	*Run 10 : 6% limestone 94% shale*			70	
18	*Run 11 : 4% limestone 96% shale*	17.8 R11 68.9 **18.5m**	TCR = **100%** SCR = **96%** RQD = **96%**	69	

Shale Weathering Zones: Z1 Z2 Z3 Z4

UCS (MPa) 5 25 50 100 250 — Estimated Strength: R1 R2 R3 R4 R5 R6

Natural Fractures — Frequency / Spacing

Frequency	Spacing
5	
2	
6	
2	
2	
1	
2	
2	
WZ	
3	
1	
0	
1	
1	
1	
0	
1	
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>10	
3	
1	
5	
2	
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1	
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2	
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0	
0	

Laboratory Testing

END OF COREHOLE

file: 1-18-0718 bh logs.gpj

LOG OF BOREHOLE 105

Terraprobe

Project No. : 1-18-0718	Client : Carriage Gate Homes	Originated by : TG
Date started : January 25, 2019	Project : 535-551 Brant Street	Compiled by : JK
Sheet No. : 1 of 1	Location : Burlington, ON	Checked by : MD

Position : E: 597175, N: 4798018 (UTM 17T) Elevation Datum : Geodetic

Rig type : Big Beaver Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa)	Moisture / Plasticity	Headspace Vapour (ppm)	Instrument Details	Unstabilized Water Level	Lab Data and Comments / GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL
0	87.6	**GROUND SURFACE**											
		50mm **ASPHALTIC CONCRETE**											
		50mm **AGGREGATE**											
		FILL, clayey silt, trace to some sand, trace to some gravel, trace asphalt, trace wood fragments, trace rock fragments, stiff, reddish brown, moist		1	SS	9				PID: <5			14 22 46 18 SS1 Analysis: M&I
1				2	SS	13	87			PID: <5			SS2 Analysis: PAH, VOC, PHC
	86.1												
	1.5	**SILT**, some clay, trace sand, trace gravel, very stiff, reddish brown, moist (HALTON TILL)		3	SS	28	86			PID: <5			SS3 Analysis: M&I, PAH, VOC, PHC
2		...at 2.3 m, trace shale fragments, hard, grey with red		4	SS	81 / 200mm				PID: <5			21 18 41 20
	85.0						85						
	2.6	**END OF BOREHOLE**											

Penetration Test Values (Blows / 0.3m): × Dynamic Cone; 10 20 30 40

Undrained Shear Strength (kPa): ○ Unconfined + Field Vane ● Pocket Penetrometer ■ Lab Vane; 40 80 120 160

Moisture / Plasticity: Plastic Limit (PL) Natural Water Content (MC) Liquid Limit (LL); 10 20 30

Borehole was dry and open upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Mar 15, 2019	dry	n/a
Mar 22, 2019	dry	n/a

file: 1-18-0718 bh logs.gpj

LOG OF BOREHOLE 106

Terraprobe

Project No. : 1-18-0718	Client : Carriage Gate Homes	Originated by : TG
Date started : January 23, 2019	Project : 535-551 Brant Street	Compiled by : JK
Sheet No. : 1 of 2	Location : Burlington, ON	Checked by : MD

Position : E: 597147, N: 4798038 (UTM 17T) | Elevation Datum : Geodetic | Core Diameter : **HQ**, OD=96mm, ID=64mm

Rig type : Truck-mounted | Drilling Method : Hollow stem augers, HQ rock coring

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value
0	87.7	**GROUND SURFACE**				
	87.5	80mm **ASPHALTIC CONCRETE**				
	0.2	80mm **AGGREGATE**		1	SS	7
		FILL, sandy silt, trace gravel, trace asphalt, loose, brown to dark brown, moist		2	SS	7
	86.2					
	1.5	**SILT**, some clay, trace sand, trace gravel, very stiff to hard, reddish brown, moist (HALTON TILL)		3	SS	24
				4	SS	54
	84.7					
	3.0	**INFERRED BEDROCK**, shale, red		5	SS	50 / 125mm
	84.5	**QUEENSTON FORMATION** (See rock core log for details)		1	RUN	
	3.2	..at 3.2 m, transition to sound bedrock		2	RUN	
				3	RUN	
				4	RUN	
				5	RUN	
				6	RUN	
				7	RUN	

Elevation Scale (m): 87, 86, 85, 84, 83, 82, 81, 80, 79, 78, 77, 76

Penetration Test Values (Blows / 0.3m): × Dynamic Cone; 10 20 30 40

Undrained Shear Strength (kPa): ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane; 40 80 120 160

Moisture / Plasticity: Plastic Limit | Natural Water Content | Liquid Limit; PL MC LL; 10 20 30

Headspace Vapour (ppm): PID: <5 (SS1); PID: <5 (SS2); PID: <5 (SS3); PID: <5 (SS4); PID: <5 (5)

Instrument Details: Unstabilized Water Level

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT)

GR SA SI CL

SS1 Analysis: PAH

SS2 Analysis: M&I, VOC, PHC

SS3 Analysis: M&I, PAH

0 10 74 16

SS4 Analysis: VOC, PHC

file: 1-18-0718 bh logs.gpj

(continued next page)

LOG OF BOREHOLE 106

Terraprobe

Project No. : 1-18-0718	Client : Carriage Gate Homes	Originated by : TG
Date started : January 23, 2019	Project : 535-551 Brant Street	Compiled by : JK
Sheet No. : 2 of 2	Location : Burlington, ON	Checked by : MD

Position : E: 597147, N: 4798038 (UTM 17T) | Elevation Datum : Geodetic | Core Diameter : **HQ**, OD=96mm, ID=64mm

Rig type : Truck-mounted | Drilling Method : Hollow stem augers, HQ rock coring

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
12		*(continued)*				
		QUEENSTON FORMATION (See rock core log for details) *(continued)*		7	RUN	
13						
				8	RUN	
14						
				9	RUN	
15						
16						
				10	RUN	
17						
	69.7					
	18.0	**END OF BOREHOLE**				

Elevation Scale (m): 75, 74, 73, 72, 71, 70

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10, 20, 30, 40

Undrained Shear Strength (kPa) — Unconfined, Pocket Penetrometer, Field Vane, Lab Vane: 40, 80, 120, 160

Moisture / Plasticity — Plastic Limit (PL), Natural Water Content (MC), Liquid Limit (LL): 10, 20, 30

Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT) — GR SA SI CL

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Mar 15, 2019	4.5	83.2
Mar 22, 2019	4.5	83.3

file: 1-18-0718 bh logs.gpj

ROCK CORE LOG 106

Terraprobe

Project No. : 1-18-0718 | Client : Carriage Gate Homes | Originated by : TG

Date started : January 23, 2019 | Project : 535-551 Brant Street | Compiled by : JK

Sheet No. : 1 of 1 | Location : Burlington, ON | Checked by : MD

Position : E: 597147, N: 4798038 (UTM 17T) | Elevation Datum : Geodetic | Core Diameter : **HQ**, OD=96mm, ID=64mm

Rig type : Truck-mounted | Drilling Method : Hollow stem augers, HQ rock coring

Depth (m)	Graphic Log	GENERAL DESCRIPTION Rock coring started at 3.2m below grade	Run / Elev Depth (m)	Recovery	Elevation (m)	Shale Weathering Zones (Z1 Z2 Z3 Z4)	UCS (MPa) 5 25 50 100 250 / Estimated Strength (R1 R2 R3 R4 R5 R6)	Natural Fractures: Frequency	Natural Fractures: Spacing	Laboratory Testing	Comments	Elevation (m)
			84.5									
		QUEENSTON FORMATION **calcareous Shale**, red, medium bedded, weak; joints are horizontal, closed to gapped, clean;	3.2 R1 83.4	TCR = **98%** SCR = **88%** RQD = **77%**	84			4 0 1 1			**3.4m:** *dipping joint, clean, smooth, planar, closed*	84
4		interbedded with **limestone**, grey, thinly bedded, medium strong ...at 3.2m, transition to sound bedrock	4.3 R2 81.9	TCR = **95%** SCR = **93%** RQD = **92%**	83			2 2 1 2				83
5		*Run 1 : 16% limestone* *84% shale*	5.8 R3 80.4	TCR = **100%** SCR = **95%** RQD = **92%**	82			0 >10 1 1			**5.8m:** *approx. 75mm core loss* **6.1-6.2m:** *approx. 25mm rubblized* **6.2m:** *orange colour in joint (oxidation)*	82
6		*Run 2 : 16% limestone* *84% shale*										
7		*Run 3 : 21% limestone* *79% shale*	7.3 R4 78.9	TCR = **100%** SCR = **100%** RQD = **100%**	81			0 1 1 1 1				81
8		*Run 4 : 32% limestone* *68% shale*			80			0				80
9			8.8 R5 77.3	TCR = **97%** SCR = **90%** RQD = **62%**	79			5 4 2 3				79
10		*Run 5 : 17% limestone* *83% shale*			78			0 0				78
11			10.4 R6 75.8	TCR = **95%** SCR = **95%** RQD = **95%**	77			0 1 0 0				77
12		*Run 6 : 3% limestone* *97% shale*			76			0 0 0				76
13			11.9 R7 74.3	TCR = **100%** SCR = **98%** RQD = **94%**	75			2 0 0				75
14		*Run 7 : 18% limestone* *82% shale*	13.4 R8 72.8	TCR = **100%** SCR = **100%** RQD = **87%**	74			0 0 4 1			**14.2-14.3m:** *approx. 25mm dipping joint, clean*	74
15		*Run 8 : 8% limestone* *92% shale*			73			3 0				73
16			14.9 R9 71.2	TCR = **100%** SCR = **100%** RQD = **100%**	72			0 0 1				72
17		*Run 9 : 17% limestone* *83% shale*			71			0 0 1				71
		Run 10 : 5% limestone *95% shale*	16.5 R10 69.7	TCR = **98%** SCR = **98%** RQD = **98%**	70			0 0				70
			18.0m									
		END OF COREHOLE										

file: 1-18-0718 bh logs.gpj

LOG OF BOREHOLE 107

Terraprobe

Project No. : 1-18-0718	Client : Carriage Gate Homes	Originated by : TG
Date started : January 24, 2019	Project : 535-551 Brant Street	Compiled by : JK
Sheet No. : 1 of 2	Location : Burlington, ON	Checked by : MD

Position : E: 597128, N: 4798019 (UTM 17T) | Elevation Datum : Geodetic | Core Diameter : **HQ**, OD=96mm, ID=64mm

Rig type : Truck-mounted | Drilling Method : Hollow stem augers, HQ rock coring

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
0	**87.8**	**GROUND SURFACE**				
	87.6	75mm **ASPHALTIC CONCRETE**				
	0.2	75mm **AGGREGATE**		1	SS	11
		FILL, clayey silt, sandy, trace to some gravel, trace asphalt, trace concrete fragments, trace brick, very loose/very soft to stiff/compact, black to dark brown, moist		2	SS	2
1	86.3					
	1.5	**SILT**, some clay, trace sand, trace gravel, very stiff to hard, reddish brown, moist (HALTON TILL)		3	SS	16
2				4	SS	50 / 125mm
	84.8					
3	3.0	**INFERRED BEDROCK**, shale, red		5	SS	50 / 25mm
	84.7	**QUEENSTON FORMATION**		1	RUN	
	3.1	(See rock core log for details) ...at 3.6 m, transition to sound bedrock		2	RUN	
4						
5				3	RUN	
6				4	RUN	
7						
8				5	RUN	
9						
10				6	RUN	
11				7	RUN	

Elevation Scale (m): 87, 86, 85, 84, 83, 82, 81, 80, 79, 78, 77, 76

Penetration Test Values (Blows / 0.3m) — Dynamic Cone: 10, 20, 30, 40

Undrained Shear Strength (kPa) — Unconfined, Pocket Penetrometer, Field Vane, Lab Vane: 40, 80, 120, 160

Moisture / Plasticity — Plastic Limit (PL), Natural Water Content (MC), Liquid Limit (LL): 10, 20, 30

Headspace Vapour (ppm)

Instrument Details — Unstabilized Water Level

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT) — GR SA SI CL

SS1 Analysis: M&I, PAH

SS2 Analysis: VOC, PHC

SS3 Analysis: M&I, PAH

SS4 Analysis: VOC, PHC

(continued next page)

LOG OF BOREHOLE 107

Terraprobe

Project No. : 1-18-0718	Client : Carriage Gate Homes	Originated by : TG
Date started : January 24, 2019	Project : 535-551 Brant Street	Compiled by : JK
Sheet No. : 2 of 2	Location : Burlington, ON	Checked by : MD

Position : E: 597128, N: 4798019 (UTM 17T) | Elevation Datum : Geodetic | Core Diameter : **HQ**, OD=96mm, ID=64mm

Rig type : Truck-mounted | Drilling Method : Hollow stem augers, HQ rock coring

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
12		*(continued)*				
		QUEENSTON FORMATION (See rock core log for details) *(continued)*		7	RUN	
13				8	RUN	
14						
15				9	RUN	
16				10	RUN	
17						
18	69.7			11	RUN	
	18.1	**END OF BOREHOLE**				

Elevation Scale (m): 75, 74, 73, 72, 71, 70

Penetration Test Values (Blows / 0.3m): × Dynamic Cone (10, 20, 30, 40)

Undrained Shear Strength (kPa): ○ Unconfined, ● Pocket Penetrometer, + Field Vane, ■ Lab Vane (40, 80, 120, 160)

Moisture / Plasticity: Plastic Limit (PL) | Natural Water Content (MC) | Liquid Limit (LL) (10, 20, 30)

Headspace Vapour (ppm)

Instrument Details

Unstabilized Water Level

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT): GR SA SI CL

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Mar 15, 2019	4.3	83.5
Mar 22, 2019	4.1	83.7

file: 1-18-0718 bh logs.gpj

ROCK CORE LOG 107

Terraprobe

Project No. : 1-18-0718 | Client : Carriage Gate Homes | Originated by : TG

Date started : January 24, 2019 | Project : 535-551 Brant Street | Compiled by : JK

Sheet No. : 1 of 1 | Location : Burlington, ON | Checked by : MD

Position : E: 597128, N: 4798019 (UTM 17T) | Elevation Datum : Geodetic | Core Diameter : **HQ**, OD=96mm, ID=64mm

Rig type : Truck-mounted | Drilling Method : Hollow stem augers, HQ rock coring

Rock coring started at 3.1m below grade

QUEENSTON FORMATION

calcareous Shale, red, medium bedded, weak; joints are horizontal, closed to gapped, clean;

interbedded with **limestone**, grey, thinly bedded, medium strong

...at 3.6m, transition to sound bedrock

Run 1 : 9% limestone, 91% shale

Run 2 : 33% limestone, 67% shale

Run 3 : 10% limestone, 90% shale

Run 4 : 19% limestone, 81% shale

Run 5 : 30% limestone, 70% shale

Run 6 : 28% limestone, 72% shale

Run 7 : 25% limestone, 75% shale

Run 8 : 9% limestone, 91% shale

Run 9 : 19% limestone, 81% shale

Run 10 : 0% limestone, 100% shale

Run 11 : 8% limestone, 92% shale

END OF COREHOLE

Run	Elev Depth (m)	Recovery	Elevation (m)
	84.7		
R1	3.1 – 83.5	TCR = **100%** SCR = **72%** RQD = **43%**	84
R2	4.3 – 82.0	TCR = **97%** SCR = **92%** RQD = **68%**	83
R3	5.8 – 80.5	TCR = **100%** SCR = **98%** RQD = **97%**	82
R4	7.3 – 79.6	TCR = **100%** SCR = **89%** RQD = **78%**	81
R5	8.2 – 78.0	TCR = **100%** SCR = **97%** RQD = **93%**	80
R6	9.8 – 76.5	TCR = **95%** SCR = **95%** RQD = **90%**	79
R7	11.3 – 75.0	TCR = **95%** SCR = **95%** RQD = **92%**	78
R8	12.8 – 73.6	TCR = **100%** SCR = **100%** RQD = **100%**	77
R9	14.2 – 72.0	TCR = **98%** SCR = **98%** RQD = **81%**	76
R10	15.8 – 70.4	TCR = **100%** SCR = **100%** RQD = **100%**	75
R11	17.4 – 69.7	TCR = **100%** SCR = **100%** RQD = **100%**	74
	18.1m		73
			72
			71
			70

Shale Weathering Zones: Z1 Z2 Z3 Z4

UCS (MPa): 5 25 50 100 250

Estimated Strength: R1 R2 R3 R4 R5 R6

Natural Fractures: Frequency / Spacing

Depth (m)	Frequency
4	>10
5	>10
6	2
7	2
8	1
9	4
10	6
11	>10
12	2
13	0
14	12
15	3
16	2
17	1
18	>10
	1
	2
	1
	1
	1
	0
	4
	0
	2
	2
	1
	0
	0
	0
	0
	1
	2
	0
	0
	0
	1
	0
	0
	0
	3
	2
	1
	0
	0
	0
	0
	0
	0
	0
	0
	0

Laboratory Testing

Comments

- **3.1-3.3m:** *approx. 200mm rubble*
- **3.4-3.5m:** *approx. 25mm rubblized zone*
- **3.5m:** *vertical joint, clean, gapped, smooth, planar*
- **3.5-3.6m:** *approx. 100mm weathered zone, clay with angular blocks*
- **7.3-7.4m:** *approx. 100mm rubblized zone probably caved material*
- **12.5-12.6m:** *approx. 150mm calcium layer*
- **13.4m:** *calcium deposits*
- **15.0m:** *dipping joint, gapped, smooth, planar, clean*
- **15.1-15.1m:** *approx. 40mm dipping joint, smooth, undulating, open, clay infilled*

file: 1-18-0718 bh logs.gpj

LOG OF BOREHOLE 108

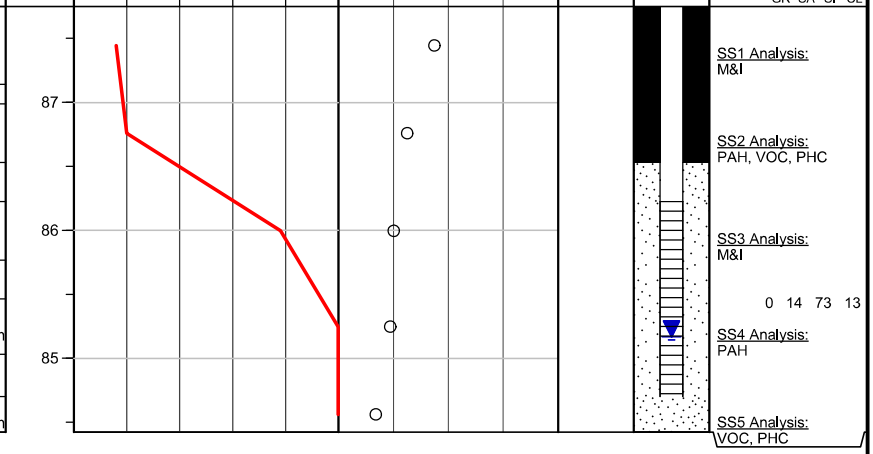
Terraprobe

Project No. : 1-18-0718	Client : Carriage Gate Homes	Originated by : TG
Date started : January 25, 2019	Project : 535-551 Brant Street	Compiled by : JK
Sheet No. : 1 of 1	Location : Burlington, ON	Checked by : MD

Position : E: 597160, N: 4797980 (UTM 17T) Elevation Datum : Geodetic

Rig type : Big Beaver Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Number	Type	SPT 'N' Value
	87.7	**GROUND SURFACE**				
0	87.5	150mm **PC CONCRETE**				
	0.2	**FILL**, sandy silt, trace gravel, trace rock fragments, loose to compact, dark brown, moist		1	SS	8
1				2	SS	10
	86.2					
	1.5	**SILT**, some clay, trace sand, trace gravel, hard, reddish brown, moist (HALTON TILL)		3	SS	39
2				4	SS	78 / 275mm
	84.7					
3	3.0	**INFERRED BEDROCK**, shale, red		5	SS	50 / 125mm
	84.4					
	3.3	**END OF BOREHOLE**				



Borehole was dry and open upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Mar 15, 2019	dry	n/a
Mar 22, 2019	2.6	85.2

file: 1-18-0718 bh logs.gpj

APPENDIX B



Your Project #: 21-016
Site Location: 535-551 BRANT STREET
Your C.O.C. #: 812312-03-01

Attention: Jason Ngo

Grounded Engineering Inc.
12 Banigan Drive
Toronto, ON
CANADA M4H 1E9

Report Date: 2021/02/09
Report #: R6511495
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C131457
Received: 2021/02/04, 17:25

Sample Matrix: Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Petroleum Hydro. CCME F1 & BTEX in Water	3	N/A	2021/02/06	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2021/02/08	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	4	2021/02/08	2021/02/08	CAM SOP-00316	CCME PHC-CWS m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following “Alberta Environment’s Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003”. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Your Project #: 21-016
Site Location: 535-551 BRANT STREET
Your C.O.C. #: 812312-03-01

Attention: Jason Ngo

Grounded Engineering Inc.
12 Banigan Drive
Toronto, ON
CANADA M4H 1E9

Report Date: 2021/02/09
Report #: R6511495
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C131457
Received: 2021/02/04, 17:25

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Marijane Cruz, Senior Project Manager
Email: Marijane.Cruz@bureauveritas.com
Phone# (905)817-5756

==========

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 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C131457
Report Date: 2021/02/09

Grounded Engineering Inc.
Client Project #: 21-016
Site Location: 535-551 BRANT STREET
Sampler Initials: LJ

O.REG 153 PHCS, BTEX/F1-F4 (WATER)

BV Labs ID			OTT609	OTT610	OTT611	OTT612		
Sampling Date			2021/02/04 13:00	2021/02/04	2021/02/04 15:00			
COC Number			812312-03-01	812312-03-01	812312-03-01	812312-03-01		
	UNITS	Criteria	BH106	DUP	BH107	TRIP BLANK	RDL	QC Batch
BTEX & F1 Hydrocarbons								
Benzene	ug/L	430	<0.20	<0.20	<0.20	<0.20	0.20	7188109
Toluene	ug/L	18000	<0.20	<0.20	<0.20	<0.20	0.20	7188109
Ethylbenzene	ug/L	2300	<0.20	<0.20	<0.20	<0.20	0.20	7188109
o-Xylene	ug/L	-	<0.20	<0.20	<0.20	<0.20	0.20	7188109
p+m-Xylene	ug/L	-	<0.40	<0.40	<0.40	<0.40	0.40	7188109
Total Xylenes	ug/L	4200	<0.40	<0.40	<0.40	<0.40	0.40	7188109
F1 (C6-C10)	ug/L	750	<25	<25	<25	<25	25	7188109
F1 (C6-C10) - BTEX	ug/L	750	<25	<25	<25	<25	25	7188109
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/L	150	<100	<100	<100	<100	100	7189454
F3 (C16-C34 Hydrocarbons)	ug/L	500	<200	<200	<200	<200	200	7189454
F4 (C34-C50 Hydrocarbons)	ug/L	500	<200	<200	<200	<200	200	7189454
Reached Baseline at C50	ug/L	-	Yes	Yes	Yes	Yes		7189454
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	-	101	102	108	104		7188109
4-Bromofluorobenzene	%	-	79	78	87	84		7188109
D10-o-Xylene	%	-	93	90	96	96		7188109
D4-1,2-Dichloroethane	%	-	107	106	111	106		7188109
o-Terphenyl	%	-	97	98	97	97		7189454

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition
Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soil

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C131457
Report Date: 2021/02/09

Grounded Engineering Inc.
Client Project #: 21-016
Site Location: 535-551 BRANT STREET
Sampler Initials: LJ

TEST SUMMARY

BV Labs ID: OTT609
Sample ID: BH106
Matrix: Water

Collected: 2021/02/04
Shipped:
Received: 2021/02/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	7188109	N/A	2021/02/06	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7189454	2021/02/08	2021/02/08	Dennis Ngondu

BV Labs ID: OTT610
Sample ID: DUP
Matrix: Water

Collected: 2021/02/04
Shipped:
Received: 2021/02/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	7188109	N/A	2021/02/06	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7189454	2021/02/08	2021/02/08	Dennis Ngondu

BV Labs ID: OTT611
Sample ID: BH107
Matrix: Water

Collected: 2021/02/04
Shipped:
Received: 2021/02/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	7188109	N/A	2021/02/08	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7189454	2021/02/08	2021/02/08	Dennis Ngondu

BV Labs ID: OTT612
Sample ID: TRIP BLANK
Matrix: Water

Collected:
Shipped:
Received: 2021/02/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	7188109	N/A	2021/02/06	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7189454	2021/02/08	2021/02/08	Dennis Ngondu

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

GENERAL COMMENTS

Results relate only to the items tested.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C131457
Report Date: 2021/02/09

QUALITY ASSURANCE REPORT

Grounded Engineering Inc.
Client Project #: 21-016
Site Location: 535-551 BRANT STREET
Sampler Initials: LJ

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7188109	1,4-Difluorobenzene	2021/02/05	92	70 - 130	99	70 - 130	103	%		
7188109	4-Bromofluorobenzene	2021/02/05	103	70 - 130	100	70 - 130	92	%		
7188109	D10-o-Xylene	2021/02/05	106	70 - 130	90	70 - 130	86	%		
7188109	D4-1,2-Dichloroethane	2021/02/05	97	70 - 130	95	70 - 130	100	%		
7189454	o-Terphenyl	2021/02/08	99	60 - 130	99	60 - 130	97	%		
7188109	Benzene	2021/02/05	NC	50 - 140	101	50 - 140	<0.20	ug/L	2.8	30
7188109	Ethylbenzene	2021/02/05	NC	50 - 140	115	50 - 140	<0.20	ug/L	4.2	30
7188109	F1 (C6-C10) - BTEX	2021/02/05					<25	ug/L	2.7	30
7188109	F1 (C6-C10)	2021/02/05	97	60 - 140	86	60 - 140	<25	ug/L	3.5	30
7188109	o-Xylene	2021/02/05	112	50 - 140	113	50 - 140	<0.20	ug/L	3.9	30
7188109	p+m-Xylene	2021/02/05	114	50 - 140	112	50 - 140	<0.40	ug/L	4.7	30
7188109	Toluene	2021/02/05	99	50 - 140	103	50 - 140	<0.20	ug/L	3.4	30
7188109	Total Xylenes	2021/02/05					<0.40	ug/L	4.7	30
7189454	F2 (C10-C16 Hydrocarbons)	2021/02/08	100	60 - 130	103	60 - 130	<100	ug/L	NC	30
7189454	F3 (C16-C34 Hydrocarbons)	2021/02/08	105	60 - 130	109	60 - 130	<200	ug/L	NC	30
7189454	F4 (C34-C50 Hydrocarbons)	2021/02/08	109	60 - 130	112	60 - 130	<200	ug/L	NC	30

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

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

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

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

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

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

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

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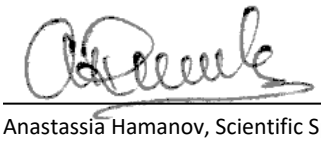
Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

BV Labs Job #: C131457
Report Date: 2021/02/09

Grounded Engineering Inc.
Client Project #: 21-016
Site Location: 535-551 BRANT STREET
Sampler Initials: LJ

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



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.

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Page 1 of 1

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#36876 Grounded Engineering Inc.	Company Name:		Quotation #:	C04975	BV Labs Job #:	Bottle Order #: 812312
Attention:	Accounts Payable	Attention:	Jason Ngo	P.O. #:			
Address:	12 Banigan Drive Toronto ON M4H 1E9	Address:		Project:	21-016		
Tel:	(647) 264-7909 Fax:	Tel:	Fax:	Project Name:	535-551 Brant St.	COC #: C#812312-03-01	Project Manager: Marjane Cruz
Email:	stavares@groundedeng.ca	Email:	jngo@groundedeng.ca	Site #:			
				Sampled By:	LJ/GM		

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BV LABS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011): ☐ Table 1 ☑ Res/Park ☑ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☑ Table 3 ☐ Agri/Other ☐ For RSC ☐ Table ___

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Reg 406 Table ☐ Other

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? Y

Field Filtered (please circle): Metals / Hg / Cr VI

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Halton Sanitary & Combined Sewer (2-03)	O Reg 153 PHCs, BTEX/F1-F4	E.coli, (CFU/100mL)	OC Pesticides (Selected) & PCB	# of Bottles	Comments
1	812312	BH 106	21/02/04	1 PM	GW		✓			4	
2	↓	DUP	↓		↓		✓			4	
3		BH107		3PM			✓			4	
4		Trip Blank					✓			4	
5											
6											
7											
8											
9											
10											

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☑
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required: ☐
Rush Confirmation Number: *(call lab for #)*

04-Feb-21 17:25
Marjane Cruz
C131457
AE2 ENV-065

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Leland Johnston	21/02/04	4PM	[illegible]	21/02/04	17:25	
Leland Johnston	21/02/04	4PM				

Laboratory Use Only: Time Sensitive | Temperature (°C) on Recei 12/10/10 | Custody Seal Present ☐ Intact ☐ | Yes | No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVLABS.COM/RESOURCES/CHAIN-OF-CUSTODY-FORMS.

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

White: BV Labs Yellow: Client

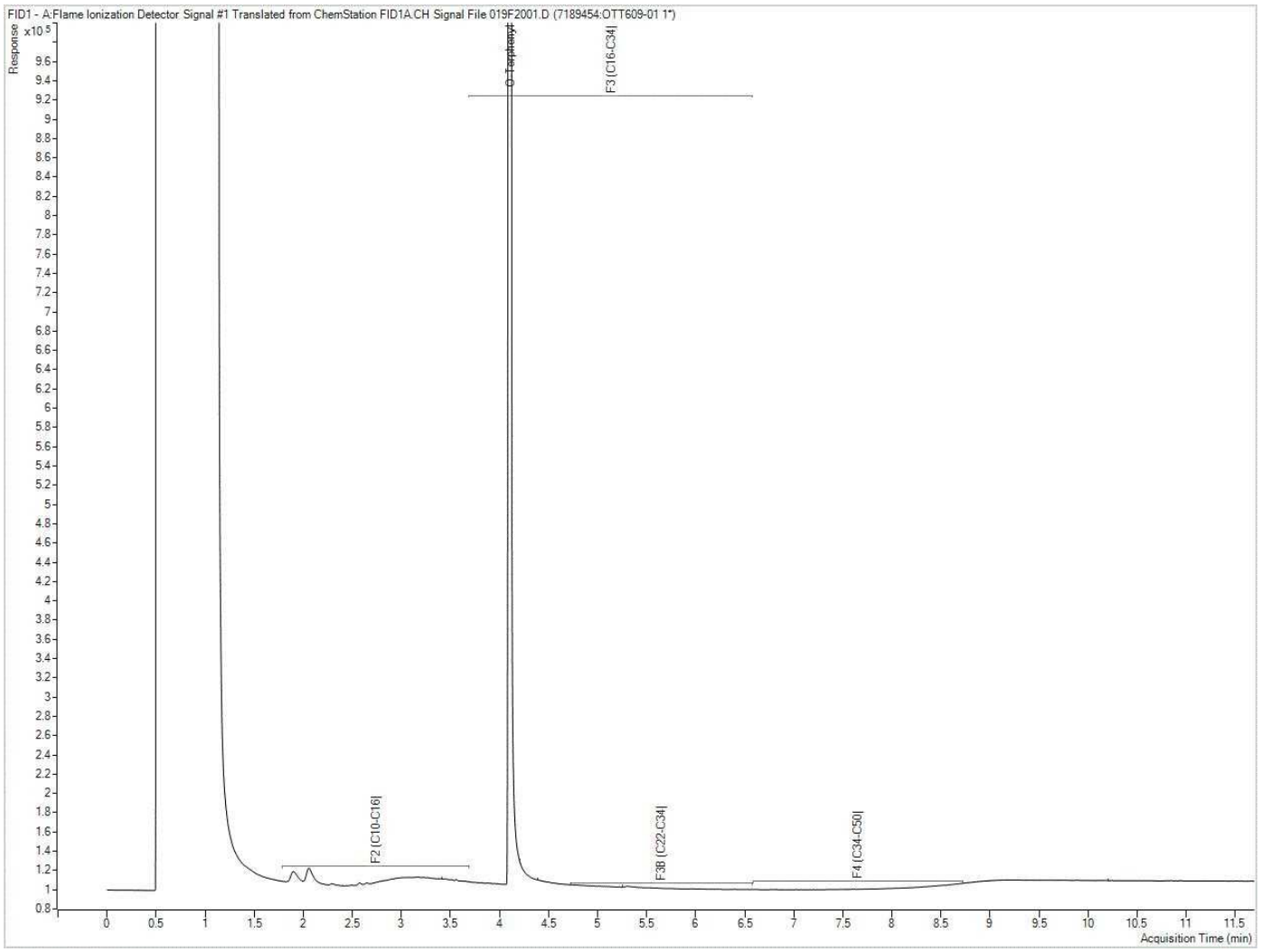
Bureau Veritas Canada (2019) Inc.

no ice

BV Labs Job #: C131457
Report Date: 2021/02/09
BV Labs Sample: OTT609

Grounded Engineering Inc.
Client Project #: 21-016
Project name: 535-551 BRANT STREET
Client ID: BH106

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

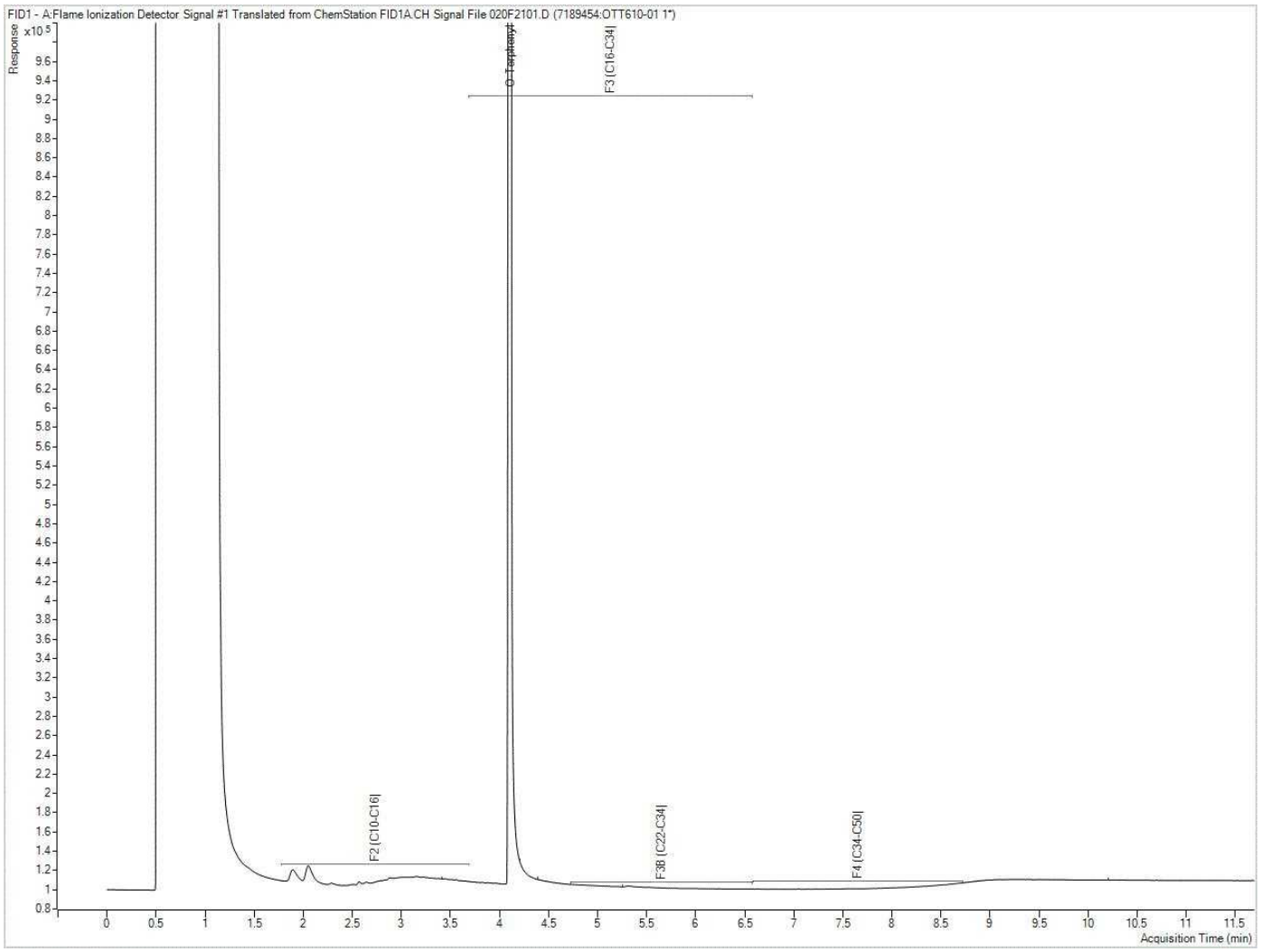


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C131457
Report Date: 2021/02/09
BV Labs Sample: OTT610

Grounded Engineering Inc.
Client Project #: 21-016
Project name: 535-551 BRANT STREET
Client ID: DUP

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

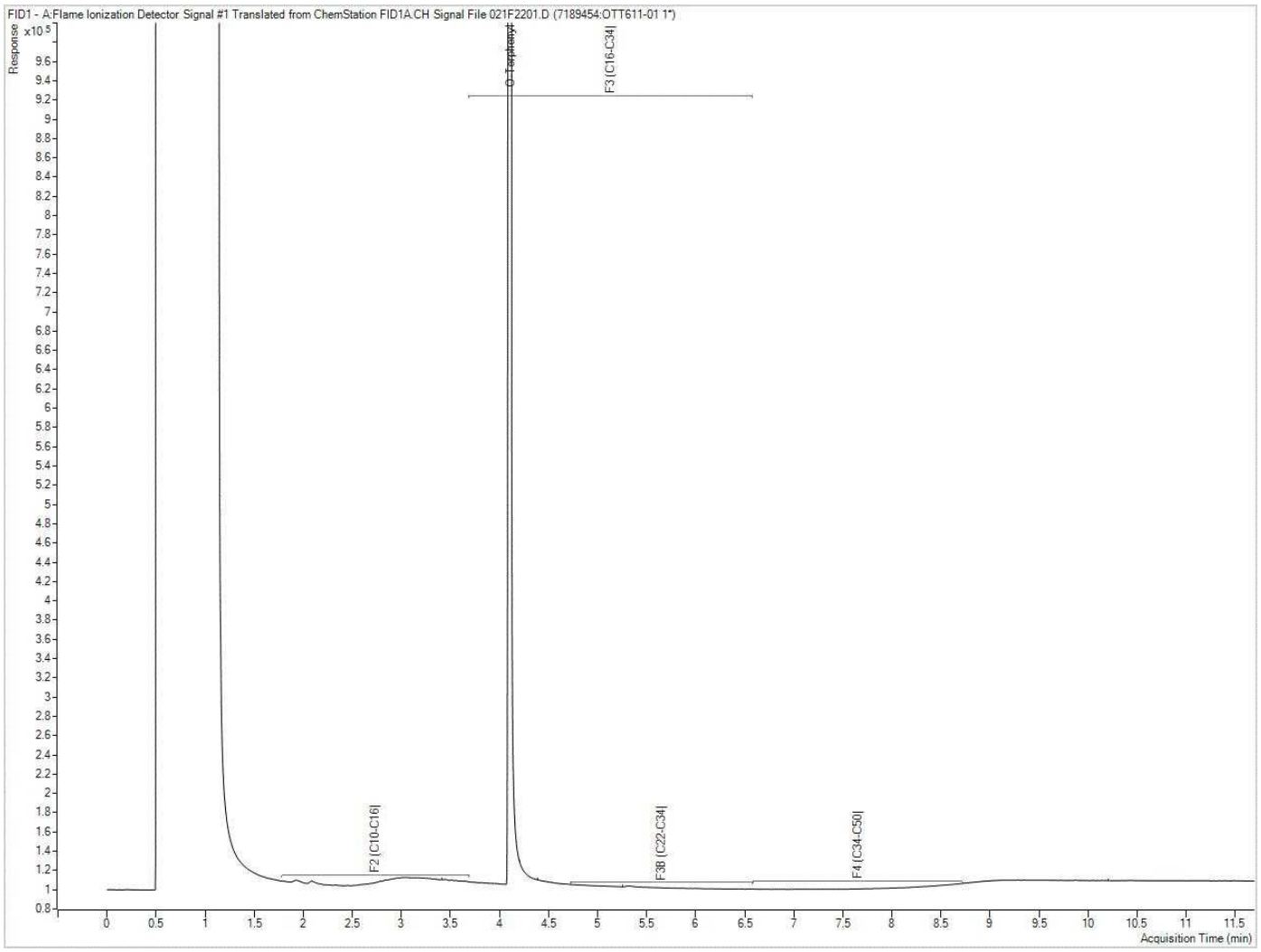


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C131457
Report Date: 2021/02/09
BV Labs Sample: OTT611

Grounded Engineering Inc.
Client Project #: 21-016
Project name: 535-551 BRANT STREET
Client ID: BH107

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

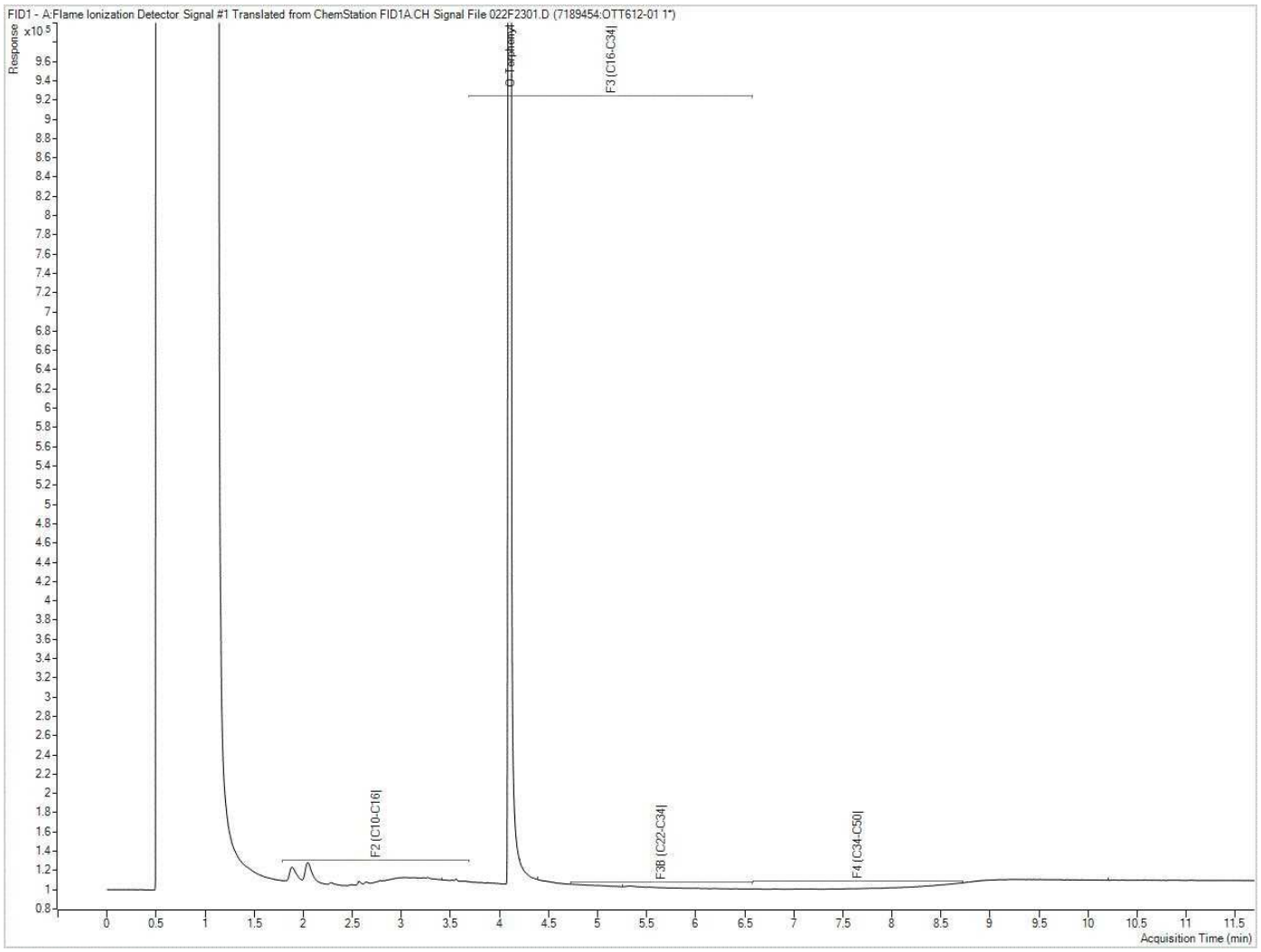


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

BV Labs Job #: C131457
Report Date: 2021/02/09
BV Labs Sample: OTT612

Grounded Engineering Inc.
Client Project #: 21-016
Project name: 535-551 BRANT STREET
Client ID: TRIP BLANK

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



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

BV Labs Job #: C131457
Report Date: 2021/02/09

Grounded Engineering Inc.
Client Project #: 21-016
Site Location: 535-551 BRANT STREET
Sampler Initials: LJ

Exceedance Summary Table – Reg153/04 T3-GW-F/M

Result Exceedances

Sample ID	BV Labs ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.

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