

**COMMERCIAL / RESIDENTIAL PROPERTY
2481 BARTON STREET EAST
STONEY CREEK (HAMILTON), ONTARIO
L8E 2X1**

**Phase II
Environmental Site Assessment**

PREPARED FOR:
2454184 Ontario Inc.
12 Chiavatti Dr
Markham, Ontario
L3R 1E2

Rubicon Job Number • R60315.1
Report Date • September 11, 2020



“...Environmental Solutions.”

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Rubicon Environmental (2008) Inc.

September 11, 2020

2454184 Ontario Inc.
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Markham, Ontario
L3R 1E2

R60315.1 PHASE II ENVIRONMENTAL SITE ASSESSMENT
Commercial / Residential Property
2481 Barton St E, Stoney Creek, Ontario

Dear Sir,

Please find enclosed the results for the above-mentioned investigation conducted on your behalf. Please feel free to contact me at 519-924-0003 if you require any additional information.

Sincerely,

RUBICON ENVIRONMENTAL (2008) INC.

Paul Rew, P. Eng., QP

Distribution:

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TABLE OF CONTENTS

1.0	EXECUTIVE SUMMARY	3
2.0	INTRODUCTION	5
3.0	SCOPE OF WORK	5
4.0	SITE DESCRIPTION / BACKGROUND INFORMATION	6
5.0	SITE CONDITIONS	8
6.0	APPLICABLE GOVERNMENT REGULATIONS	9
7.0	PHASE II ENVIRONMENTAL SITE ASSESSMENT	10
8.0	LABORATORY ANALYSIS	12
9.0	CONCLUSIONS	13
10.0	REFERENCES	15
11.0	LIMITATIONS	16

LIST OF FIGURES, TABLES & APPENDICES

FIGURE 1	SITE LOCATION
FIGURE 2	LOCATION OF APEC'S ON SITE
FIGURE 3	SITE INVESTIGATION
FIGURE 4	GROUNDWATER FLOW DIRECTION
TABLE 1:	BOREHOLE & SOIL SAMPLE OBSERVATIONS
TABLE 2:	SUMMARY GROUNDWATER LEVELS & OBSERVATIONS
TABLE 3:	SOIL CHEMICAL ANALYSES –VOCs, BTEX, PHC (F ₁ -F ₄), Lead, pH
TABLE 4:	GROUNDWATER CHEMICAL ANALYSES –VOCs, BTEX & PHC (F ₁ -F ₄)
APPENDIX 1	PHOTOGRAPHS
APPENDIX 2	BOREHOLE LOGS
APPENDIX 3	LABORATORY CERTIFICATES OF ANALYSIS



1.0 EXECUTIVE SUMMARY

Rubicon Environmental (2008) Inc. was retained by 2454184 Ontario Inc. to undertake a Phase II Environmental Site Assessment (ESA) on the commercial / residential property located at 2481 Barton St E in Stoney Creek (Hamilton), Ontario, also referred to as the 'subject property'. The current environmental assessment was completed to ascertain and fully explore areas of potential environmental concern identified by Rubicon Environmental (2008) Inc., in anticipation of a real estate transaction.

The subject property was assessed using the Table 3 Full Depth Generic Site Condition Standards for residential land use, non-potable groundwater condition, coarse textured soil from the Ministry of Environment (MECP) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*" (April 15, 2011), referred to as MECP Table 3 Site Condition Standards (SCS). This assessment was not completed for the purpose of filing a Record of Site Condition.

The subject property is located on the north side of Barton St E, east of Centennial Pkwy N in Stoney Creek (Hamilton), Ontario. The subject property has a rectangular shape with an area of approximately 0.92 acres. There is one (1) two (2) storey detached residential dwelling and one (1) single storey two (2) bay commercial building on site. Reportedly the buildings on site were built in the 1960's. The commercial building formally operated as a tilt and load service operation. The commercial building was always utilized for storage of vehicles and miscellaneous parts / tools. No evidence of former inground hoists was observed inside. According to the current owner, one (1) 1,000 gallon single wall steel underground storage tank (UST) and one (1) fuel pump was located just west of the commercial building. This petroleum equipment was for private use and was reportedly removed by the owner approximately seventeen (17) years ago. At the time of this investigation, both the residential and commercial building were vacant and / or not in operation. Access to the site is from Barton St E. Groundcover on the subject property within the areas investigated consisted of gravelly sand and grass. No significant surface staining was observed throughout the property.

Based on Rubicon's evaluation and interpretation of the background information obtained, four (4) Areas of Potential Environmental Concern was identified on the subject property. APEC #1 is located just west of the commercial building on site and is associated with a former UST and fuel pump. APEC #2 is located north of the commercial building on site and is associated with the former stockpiling of equipment / parts. APEC #3 is located along the eastern property boundary and is associated with an offsite auto garage operation. APEC #4 is located along the western property boundary and is associated with an operating gas station. Four (4) contaminants of potential concern was identified on the subject property with respect to the four (4) areas of potential environmental concern: Volatile Organic Compounds (VOCs), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Petroleum Hydrocarbons (PHC F₁-F₄) and Lead. These contaminants of potential concern were identified using the Method Groups as outlined in the, "Protocol for the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011.

Rubicon Environmental (2008) Inc. completed the borehole drilling program at the subject property on August 25, 2020. Five (5) boreholes to a maximum depth of 6.0 m below grade level were advanced. The location of the five (5) boreholes completed at the subject property was strategically placed to address the Areas of Potential Environmental Concern identified. VOC readings ranged from 0 ppm- 55 ppm within the field screening soil samples. In total, five (5) representative soil samples (Labelled as: BH1-SS6, BH2-SS3, BH3-SS1, BH4-SS6, BH5-SS1) and four (4) representative groundwater samples (Labelled as: MW01, MW02, MW03, MW04) were selected and /or collected for laboratory analysis. Bedrock was not encountered within the boreholes advanced.

The laboratory analytical results for all the soil samples analyzed showed that each of the locations and depths of samples submitted were below the applicable site condition standards. None of the potential contaminants of concerns which included; Volatile Organic Compounds (VOCs), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Petroleum Hydrocarbons (PHC F₁-F₄) and Lead was present at concentrations greater than the applicable site condition standard, at any of the sampling locations.

The laboratory analytical results for the groundwater samples analyzed showed that each of the samples submitted were below the applicable site condition standards. None of the potential contaminants of concerns which included; Volatile Organic Compounds (VOCs), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) and Petroleum Hydrocarbons (PHC F₁-F₄) was present at concentrations greater than the applicable site condition standard, at any of the sampling locations.

Based on the findings of the Phase II ESA, the areas investigated on the subject property meets the applicable Table 3 Full Depth Generic Site Condition Standards for residential land use, non-potable groundwater condition, coarse textured soil from the Ministry of Environment (MECP) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*" (April 15, 2011), referred to as MECP Table 3 Site Condition Standards (SCS). As a result of the findings of the Phase II ESA, it is the opinion of Rubicon Environmental (2008) Inc. that further environmental investigation is not warranted at this time.



2.0 INTRODUCTION

Rubicon Environmental (2008) Inc. was retained by 2454184 Ontario Inc. to undertake a Phase II Environmental Site Assessment (ESA) on the commercial / residential property located at 2481 Barton St E in Stoney Creek (Hamilton), Ontario, also referred to as the 'subject property'. The current environmental assessment was completed to ascertain and fully explore areas of potential environmental concern identified by Rubicon Environmental (2008) Inc., in anticipation of a real estate transaction.

The subject property was assessed using the Table 3 Full Depth Generic Site Condition Standards for residential land use, non-potable groundwater condition, coarse textured soil from the Ministry of Environment (MECP) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*" (April 15, 2011), referred to as MECP Table 3 Site Condition Standards (SCS). This assessment was not completed for the purpose of filing a Record of Site Condition.

3.0 SCOPE OF WORK

The scope of work completed was to ascertain and fully explore areas of potential environmental concern identified by Rubicon Environmental (2008) Inc. on the subject property. The Phase II Environmental Site Assessment consisted of:

- Review any reports made available in order to assist in establishing areas of potential environmental concerns (APECs);
- Advancing five (5) test holes (also referred to as boreholes) to a maximum depth of approximately 6.0 m bgl on the subject property, to ascertain the current subsurface soil and groundwater conditions
- Submitting minimum one (1) representative soil sample from each of the boreholes advanced, to a CALA member laboratory for analysis of VOCs – Volatile Organic Compounds, BTEX - benzene, toluene, ethylbenzene and xylene, PHC - total petroleum hydrocarbons (F₁-F₄) parameters, Lead and pH;
- Submitting representative groundwater samples, if obtainable, from four (4) newly installed temporary groundwater monitoring wells to a CALA member laboratory for analysis of VOCs – Volatile Organic Compounds, BTEX - benzene, toluene, ethylbenzene and xylene, and PHC - total petroleum hydrocarbons (F₁-F₄) parameters;
- Comparing the results of the laboratory chemical analysis to the applicable MECP Regulations for the site;
- Preparing the findings and recommendations of this investigation in an engineering report.



4.0 SITE DESCRIPTION / BACKGROUND INFORMATION

The subject property is located on the north side of Barton St E, east of Centennial Pkwy N in Stoney Creek (Hamilton), Ontario (refer to Figure 1 – Site Location). The subject property has a rectangular shape with an area of approximately 0.92 acres. There is one (1) two (2) storey detached residential dwelling and one (1) single storey two (2) bay commercial building on site. Reportedly the buildings on site were built in the 1960's. The commercial building formally operated as a tilt and load service operation. The commercial building was always utilized for storage of vehicles and miscellaneous parts / tools. No evidence of former inground hoists was observed inside.

According to the current owner, one (1) 1,000 gallon single wall steel underground storage tank (UST) and one (1) fuel pump was located just west of the commercial building. This petroleum equipment was for private use and was reportedly removed by the owner approximately seventeen (17) years ago. At the time of this investigation, both the residential and commercial building were vacant and / or not in operation. Access to the site is from Barton St E. Groundcover on the subject property within the areas investigated consisted of gravelly sand and grass. No significant surface staining was observed throughout the property.

Refer to Figure 2 – Site Plan.

Previous Investigations

At the time of this investigation, no previous environmental investigation reports were available for review.

Rubicon's Evaluation of the Background Information

Based on Rubicon's evaluation and interpretation of the background information obtained, four (4) Areas of Potential Environmental Concern was identified on the subject property (refer to Figure 2 – Location of APEC's).

APEC #1 is located just west of the commercial building on site and is associated with a former UST and fuel pump.

APEC #2 is located north of the commercial building on site and is associated with the former stockpiling of equipment / parts.

APEC #3 is located along the eastern property boundary and is associated with an offsite auto garage operation.

APEC #4 is located along the western property boundary and is associated with an operating gas station.

Four (4) contaminants of potential concern was identified on the subject property with respect to the four (4) areas of potential environmental concern: Volatile Organic Compounds (VOCs), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Petroleum Hydrocarbons (PHC F₁-F₄) and Lead. These contaminants of potential concern were identified using the Method Groups as outlined in the, "Protocol for the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011.



"TABLE OF AREAS OF POTENTIAL ENVIRONMENTAL CONCERN"**(Refer to clause 16(2) (a), Schedule D, O. Reg. 153/04)**

Refer to Figure 2 for the location of areas of potential environmental concern.

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Location of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
<u>APEC #1</u> Former UST and fuel pump	Just west of the commercial building	(28) Gasoline and associated products storage in fixed tanks	On-site	PHC BTEX LEAD	Soil Groundwater
<u>APEC #2</u> Former stockpile of equipment / parts	North of the commercial building	(n/a) small quantity equipment / tools being stored outdoors	On-site	PHC BTEX VOCs	Soil Groundwater
<u>APEC #2</u> Offsite auto garage	Along the eastern property boundary	(27) Garage	Off-site	PHC BTEX VOCs	Groundwater
<u>APEC #2</u> Offsite gas station	Along the western property boundary	(28) Gasoline and associated products storage in fixed tanks	Off-site	PHC BTEX VOCs	Groundwater

*Refer to Figure 2 for the location of areas of potential environmental concern. **This table was referenced from clause 16(2) (a), Schedule D, O. Reg. 153/04 to illustrate Rubicon Environmental (2008) Inc.'s evaluation and interpretation of site specific APECs and potential associated Contaminants of Concern on the subject property based on limited background site information and site visit observations.



5.0 SITE CONDITIONS

5.1 Geology and Physiography

Based on the sub surface investigations conducted by Rubicon Environmental (2008) Inc. during the Phase II ESA, the overburden at the site is generally characterized as follows; sand with gravel to approximately 1.52 m followed by clayey silt soils to a maximum depth of 6.0 m below grade level (mbgl); within the boreholes advanced on the subject property. Bedrock was not encountered within the boreholes advanced.

Ministry of Northern Development and Mines "Bedrock Geology of Ontario, Southern Sheet, Map 2544"

This survey identifies the site to be within a region characterized by the following: Middle and Lower Silurian; Sandstone, shale, dolostone, siltstone; Lockport Fm.

Ministry of Northern Development and Mines, "Quaternary Geology of Ontario; Southern Sheet. 1991. Map 2556"

This survey identifies the site to be within a region of Halton till (Ontario – Erie lobe): predominately silt to silty clay matrix, high in matrix carbonate content and clast poor.

Based on a site visit and Natural Resources Canada Topographic Map the site is relatively level with an elevation of 85 m asl. Refer to Appendix 1.

5.2 Groundwater and Surface Water

The site relies on non-potable water supply from City of Hamilton. There is no body of water within 30m of the site. Based on a Natural Resources Canada Interactive Topographic Map, the nearest surface bodies of water appears to be the following: a tributary of the Stoney Creek is approx. 0.6 km east, Redhill Creek approx. 1.2 km west and Lake Ontario 1.25 km north. Refer to topographic map.

5.3 Other Services

The subject property is serviced with natural gas, hydro and communication.



6.0 APPLICABLE GOVERNMENT REGULATIONS

The subject property was assessed using the Table 3 Full Depth Generic Site Condition Standards for residential land use, non-potable groundwater condition, coarse textured soil from the Ministry of Environment (MECP) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*" (April 15, 2011), referred to as MECP Table 3 Site Condition Standards (SCS). This assessment was not completed for the purpose of filing a Record of Site Condition. The following rationale was used to determine the applicable criteria for use at this site:

Site Sensitivity: No water body was identified within 30 m of the subject property. Based on the information gathered during the investigation, there is greater than 2 m overburden at the site. During the current investigation, the pH of the soils ranged from 8.42-8.98 which is within the acceptable range.

Land Use: The subject site has had both commercial and residential land uses. The more conservative residential criteria was applied.

Surrounding Land Use

Direction	Land Uses	Observations
North	Commercial	Across a parking lot is a car dealership with the nearest building being approx. 30m in distance. Due to the distance and/or buffer of greater than 30m, this property does not represent an area of potential environmental concern (APEC) on the subject property.
East	Commercial	Across a laneway is a garage, windshield repair, used car dealer and restaurant. This property represents an APEC on the subject property.
South	Commercial	Across Barton St E is a grocery store, restaurants and a gas station (SW). Due to the distance and/or buffer of greater than 30m, this property does represent an area of potential environmental concern (APEC) on the subject property.
West	Commercial	Directly west is a gas station with an automated car wash. Reportedly this property had a major environmental cleanup occur approx. 17 years ago. This property represents an APEC on the subject property.

Groundwater Use: The subject site and surrounding area relies on municipal water supply from the City of Hamilton. The non-potable criteria was applied.

Depth and Soil Texture Criteria Selection: Although the soil conditions observed during the field screening had medium to fine textured soils, the more conservative coarse textured criteria was applied.

Based on the above information and assumptions, the site condition standard for this site was evaluated to Table 3 Full Depth Generic Site Condition Standards for residential land use, non-potable groundwater condition (Table 3, O. Regulation 511/09).



7.0 PHASE II ENVIRONMENTAL SITE ASSESSMENT

7.1.1 General Investigation Method

Based on Rubicon's evaluation and interpretation of the background information obtained, a judgemental sampling approach was implemented based on the potentially contaminating activities and areas of environmental concern identified on the subject property. The Phase II ESA investigation was conducted with reference to O. Reg. 153/04, as amended by O. Reg. 511/09.

The subject property was assessed using the Table 3 Full Depth Generic Site Condition Standards for residential land use, non-potable groundwater condition, coarse textured soil from the Ministry of Environment (MECP) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*" (April 15, 2011), referred to as MECP Table 3 Site Condition Standards (SCS).

The Chemical analysis was conducted by PH Quantum Laboratory of Mississauga, Ontario. PH Quantum is a member (Member # 2969) of the Canadian Association for Laboratory Accreditation Inc. (CALA) and holds a Certificate of Laboratory Proficiency which states that PH Quantum has been evaluated by the Canadian Association for Laboratory Accreditation Inc. for specific tests registered with the Association and has been found to comply with the criteria and standards established by the Association.

7.1.2 Drilling and Soil Sampling Equipment

The borehole program was completed on August 25, 2020 with the use of a *LST1A* trailer mounted drill rig. A combination of solid stem augers and 0.75 m long, 5 cm diameter split spoon samplers was utilized. All of the equipment that came into contact with subsurface conditions (split spoon samplers) during the drilling program were thoroughly cleansed with 'Alconox' powder mixed with water between each sampling interval to prevent possible cross contamination.

7.1.3 Quality Assurance and Quality Control

(i) No deviation from the sampling and analysis plan was necessary. It should be noted that the sampling plan was developed with a cautionary approach towards the location of underground utilities onsite and private services. Each sample selected for analysis were placed in the laboratory provided containers/vials/jars and labelled according to the borehole/monitoring well location and/or split spoon sample ID, as per the proposed investigation and analysis plan.

(ii) All field screening soil samples were collected with the use of dedicated nitrile gloves and were placed in 1 litre dedicated sterile bags as part of the field sampling procedure. All representative soil samples selected for laboratory analysis were placed in dedicated sterile sample jars / vials with the use of dedicated sampling syringes, all provided in advance by the laboratory, and placed in ice packed coolers at a temperature of approximately 3-10 degrees Celsius.

7.1.4 Field Screening Method

The headspace vapours of each sample were tested for petroleum vapour concentrations using a RKI Eagle 2 portable handheld VOC instrument, calibrated against hexane. The RKI Eagle 2 was calibrated on August 18, 2020. As part of the field screening method, all soils encountered were also examined for olfactory and visual indicators of impairment such as petroleum odours and staining. No deviations from standard operating procedures relating to the proposed field-screening methods were necessary.

7.2 Site Investigation

Rubicon Environmental (2008) Inc. completed the borehole drilling program at the subject property on August 25, 2020. On August 25, 2020 five (5) boreholes to a maximum depth of 6.0 m below grade level were advanced. The location of the five (5) boreholes completed at the subject property was strategically placed to address of the Area of Potential Environmental Concern. Refer to Figure 3 for the location of the boreholes and monitoring wells. Soil samples were collected at ~0.75 m intervals using a 75 cm long, 5 cm diameter split spoon sampler. Each soil sample was logged with respect to nature, depth, thickness of the subsurface material, and evidence of petroleum or other impairment. Refer to Appendix 2 for Borehole Logs.

The headspace vapours of each field screening sample were tested for petroleum vapour concentrations using a RKI Eagle 2 portable handheld VOC instrument, calibrated against hexane. As part of the field screening method, all soils encountered were also examined for olfactory and visual indicators of impairment such as petroleum odours and staining. VOC readings ranged from 0 ppm- 55 ppm within the field screening soil samples. In total, five (5) representative soil samples were selected (Labelled as: BH1-SS6, BH2-SS3, BH3-SS1, BH4-SS6, BH5-SS1 for laboratory analysis. Observations during the soil sample selection process is outlined in Table 1 Borehole and Soil Sample Observations.

7.3 Groundwater Investigation

7.3.1 Groundwater Sampling and Observations

Prior to commencing the groundwater sampling program, approximately three (3) well water volumes were purged from four (4) groundwater monitoring wells with the use of dedicated disposable bailers. No visual or olfactory evidence of Light Non-Aqueous Phase Liquid (LNAPL) was observed during the purging event. On September 03, 2020 with the use of dedicated disposable bailers, a total of four (4) groundwater samples were collected (labelled as: MW01, MW02, MW03, MW04). All representative groundwater samples collected for laboratory analysis were placed in specified sampling bottles/vials provided by the laboratory and placed in ice packed coolers at a temperature of approximately 3-10 degrees Celsius. Refer to Table 2 for a summary of the groundwater levels and observations. Refer to Figure 3 for the location of the groundwater monitoring wells sampled as part of the Phase II investigation.

7.3.2 Groundwater Depth

On September 03, 2020, with the use of a Solinst 101 Water Level Meter - P7 Probe with PVDF flat tape, the depth measured from the grade level to the top of the groundwater in the groundwater monitoring wells on the subject property were recorded as; MW01 at 5.36 m bgl, MW02 at 2.53 m bgl, MW03 at 2.46 m bgl, MW04 at 4.81 m bgl. Only one aquifer was encountered and investigated during the Phase II ESA.

7.3.3 Groundwater Flow Direction

Three (3) onsite monitoring wells (MW01, MW03, MW04) were used for interpreting the groundwater flow direction on the Phase II property. The groundwater levels were determined by use of a Solinst 101 Water Level Meter with P7 Probe with PVDF flat tape and were measured from the grade level to the top of the groundwater in the monitoring well water volume. The inferred groundwater flow direction was calculated using triangulation modelling using data from three available monitoring wells onsite. The groundwater flow direction on the subject property was calculated to be northerly for the sub-surface groundwater aquifer that was encountered and investigated at depths not exceeding 6.0 m below grade level. Refer to Figure 4 –Groundwater Flow Direction.

Groundwater flow direction can be influenced by various utility trenches or services and other subsurface structures that are present on or near the subject property. The groundwater flow direction can be confirmed with accurate ground elevations on the subject property and the long-term logging and measurement of groundwater elevations at the site. Due to the timeframe of this investigation, groundwater flow direction was calculated using limited groundwater elevation data.



8.0 LABORATORY ANALYSIS

The Chemical analysis was conducted by PH Quantum Laboratory of Mississauga, Ontario. PH Quantum is a member (Member # 2969) of the Canadian Association for Laboratory Accreditation Inc. (CALA) and holds a Certificate of Laboratory Proficiency which states that PH Quantum has been evaluated by the Canadian Association for Laboratory Accreditation Inc. for specific tests registered with the Association and has been found to comply with the criteria and standards established by the Association. Appendix 3 contains all laboratory Certificates of Analysis.

8.1 Soil Chemical Analysis

The location of soil sampling points and the depths of soil samples is presented in Figure 3 – Site Investigation and Appendix 2 - Borehole Logs.

The subject property was assessed using the Table 3 Full Depth Generic Site Condition Standards for residential land use, non-potable groundwater condition, coarse textured soil from the Ministry of Environment (MECP) document “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*” (April 15, 2011), referred to as MECP Table 3 Site Condition Standards (SCS).

The laboratory analytical results for all the soil samples analyzed showed that each of the locations and depths of samples submitted were below the applicable site condition standards. None of the potential contaminants of concerns which included; Volatile Organic Compounds (VOCs), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Petroleum Hydrocarbons (PHC F₁-F₄) and Lead was present at concentrations greater than the applicable site condition standard at any of the sampling locations. Refer to Table 3.

8.2 Groundwater Chemical Analysis

The locations of the groundwater monitoring wells and groundwater sample locations are outlined in Figure 3 – Site Investigation.

The subject property was assessed using the Table 3 Full Depth Generic Site Condition Standards for residential land use, non-potable groundwater condition, coarse textured soil from the Ministry of Environment (MECP) document “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*” (April 15, 2011), referred to as MECP Table 3 Site Condition Standards (SCS).

The laboratory analytical results for the groundwater samples analyzed showed that each of the samples submitted were below the applicable site condition standards. None of the potential contaminants of concerns which included; Volatile Organic Compounds (VOCs), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) and Petroleum Hydrocarbons (PHC F₁-F₄) was present at concentrations greater than the applicable site condition standard at any of the sampling locations. Refer to Table 4.

9.0 CONCLUSIONS

Rubicon Environmental (2008) Inc. was retained by 2454184 Ontario Inc. to undertake a Phase II Environmental Site Assessment (ESA) on the commercial / residential property located at 2481 Barton St E in Stoney Creek (Hamilton), Ontario, also referred to as the 'subject property'. The current environmental assessment was completed to ascertain and fully explore areas of potential environmental concern identified by Rubicon Environmental (2008) Inc., in anticipation of a real estate transaction.

The subject property was assessed using the Table 3 Full Depth Generic Site Condition Standards for residential land use, non-potable groundwater condition, coarse textured soil from the Ministry of Environment (MECP) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*" (April 15, 2011), referred to as MECP Table 3 Site Condition Standards (SCS). This assessment was not completed for the purpose of filing a Record of Site Condition.

Based on Rubicon's evaluation and interpretation of the background information obtained, four (4) Areas of Potential Environmental Concern was identified on the subject property. APEC #1 is located just west of the commercial building on site and is associated with a former UST and fuel pump. APEC #2 is located north of the commercial building on site and is associated with the former stockpiling of equipment / parts. APEC #3 is located along the eastern property boundary and is associated with an offsite auto garage operation. APEC #4 is located along the western property boundary and is associated with an operating gas station.

Four (4) contaminants of potential concern was identified on the subject property with respect to the four (4) areas of potential environmental concern: Volatile Organic Compounds (VOCs), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Petroleum Hydrocarbons (PHC F₁-F₄) and Lead. These contaminants of potential concern were identified using the Method Groups as outlined in the, "Protocol for the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011.

Rubicon Environmental (2008) Inc. completed the borehole drilling program at the subject property on August 25, 2020. Five (5) boreholes to a maximum depth of 6.0 m below grade level were advanced. The location of the five (5) boreholes completed at the subject property was strategically placed to address the Areas of Potential Environmental Concern identified. VOC readings ranged from 0 ppm- 55 ppm within the field screening soil samples. In total, five (5) representative soil samples (Labelled as: BH1-SS6, BH2-SS3, BH3-SS1, BH4-SS6, BH5-SS1) and four (4) representative groundwater samples (Labelled as: MW01, MW02, MW03, MW04) were selected and /or collected for laboratory analysis. Bedrock was not encountered within the boreholes advanced.

The laboratory analytical results for all the soil samples analyzed showed that each of the locations and depths of samples submitted were below the applicable site condition standards. None of the potential contaminants of concerns which included; Volatile Organic Compounds (VOCs), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Petroleum Hydrocarbons (PHC F₁-F₄) and Lead was present at concentrations greater than the applicable site condition standard, at any of the sampling locations.

The laboratory analytical results for the groundwater samples analyzed showed that each of the samples submitted were below the applicable site condition standards. None of the potential contaminants of concerns which included; Volatile Organic Compounds (VOCs), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) and Petroleum Hydrocarbons (PHC F₁-F₄) was present at concentrations greater than the applicable site condition standard, at any of the sampling locations.

Based on the findings of the Phase II ESA, the areas investigated on the subject property meets the applicable Table 3 Full Depth Generic Site Condition Standards for residential land use, non-potable groundwater condition, coarse textured soil from the Ministry of Environment (MECP) document "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*" (April 15, 2011), referred to as MECP Table 3 Site Condition Standards (SCS).

As a result of the findings of the Phase II ESA, it is the opinion of Rubicon Environmental (2008) Inc. that further environmental investigation is not warranted at this time.

Respectfully submitted,

RUBICON ENVIRONMENTAL (2008) INC.



Paul D. Rew, P.Eng. QP



10.0 REFERENCES

Google Maps URL: <http://maps.google.ca/maps>

Ministry of Northern Development and Mines "*Bedrock Geology of Ontario, Southern Sheet, Map 2544*"

Ontario Geological Survey, "*Quaternary Geology of Ontario. 1991. Map 2556*"

Ontario Ministry of the Environment, Ontario Regulation 153/04, as amended by Ontario Regulation 511/09.

Topographic Map referenced from Natural Resources Canada:
<http://www.atlas.nrcan.gc.ca/site/english/toporama/index.html>



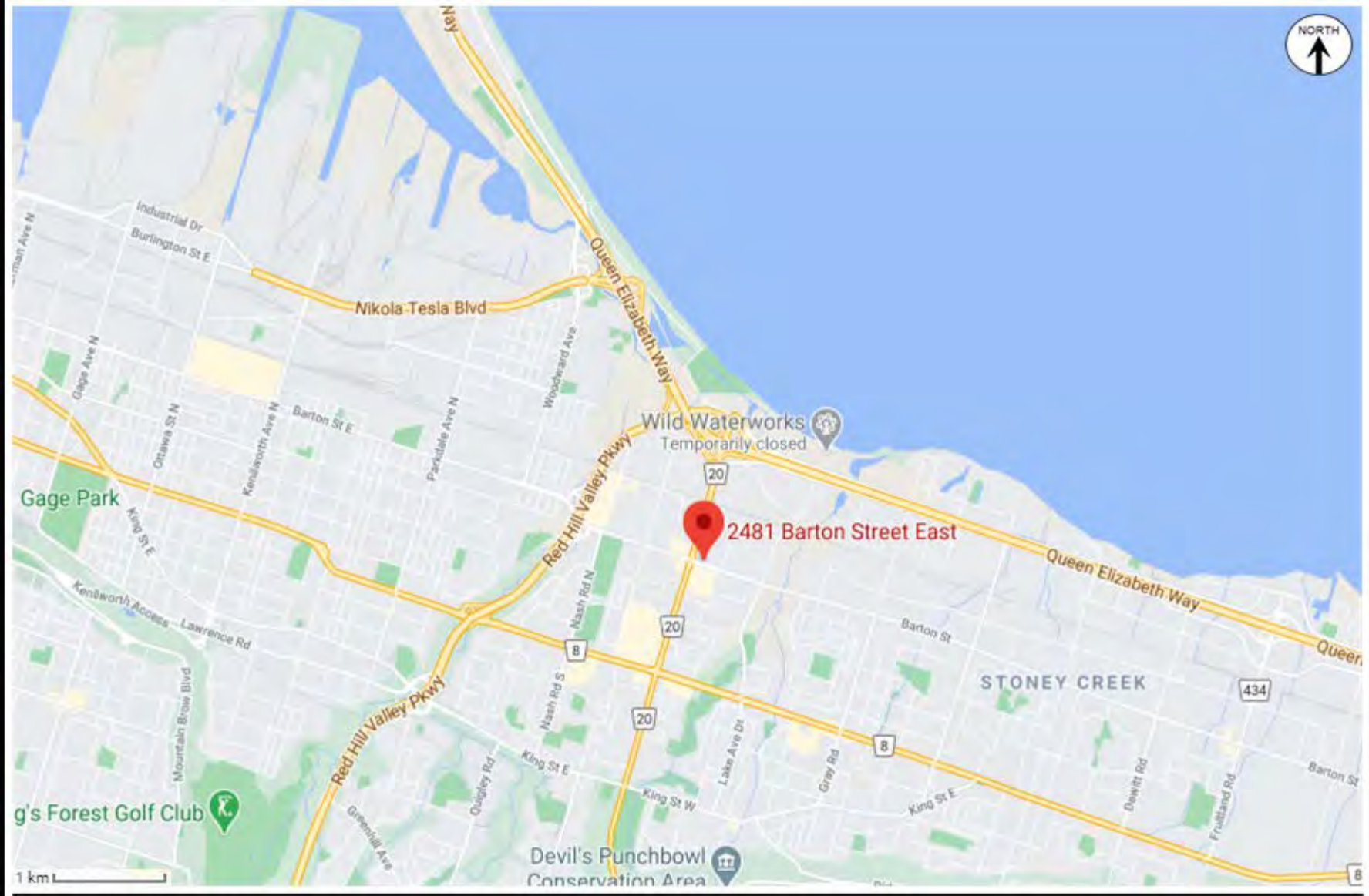
11.0 LIMITATIONS

1. This assessment was conducted in accordance with generally accepted engineering standards. It is possible that materials other than those described in this report are present at the site. The client acknowledges that no assessment can necessarily identify the existence of all contaminants, potential contaminants or environmental conditions;
2. This report was prepared for the sole and exclusive use of 2454184 Ontario Inc. Rubicon Environmental (2008) Inc. accepts no responsibility or liability for any loss, damage, expense, fine or any other claim of any nature or type, including any liability or potential liability arising from its own negligence, for any use of this report or reliance on it, in whole or in part, by anyone other than 2454184 Ontario Inc.;
3. There is no representation, warranty or condition, express or implied, by Rubicon Environmental (2008) Inc. or its officers, directors, employees or agents that this assessment has identified all contaminants, potential contaminants or environmental conditions at the site or that the site is free from contamination, potential contaminants or environmental conditions other than those noted in this report;
4. This assessment has been completed from information and documentation described in this report as well as the results of limited chemical analysis of soil samples collected from accessible locations on the date(s) specified. We have assumed that any such information and documentation is accurate and complete. We can accept no responsibility or liability for any errors, deficiencies or inaccuracies in this report arising from errors or omissions in the information and documentation provided by others;
5. This assessment was based on information and the results of investigation(s) obtained on the date(s) specified. Rubicon Environmental (2008) Inc. accepts no responsibility or liability for any changes or potential changes in the condition of the site subsequent to the date of our investigation(s);
6. The conditions between sampling locations have been inferred, to the best of our ability, based on the conditions observed at sampling locations. Conditions between and beyond sampling locations may vary. This assessment pertains, only, to the site specifically described in this report and not to any adjacent or other property;
7. This assessment does not include, nor is it intended to include, any opinion regarding the suitability of any structure on the site for any particular function, the integrity of the on-site buildings or the geotechnical conditions on the site, with the exception of how they may identify with environmental concerns. Inspections of buildings do not include compliance with building, gas, electrical or boiler codes, or any other federal, provincial or municipal codes not associated with environmental concerns. Should concerns regarding any parameters other than environmental concerns arise as a result of our investigation(s), they should be addressed by appropriately qualified professionals; and,
8. This report is not to be reproduced or released to any other party, in whole or in part, without the express written consent of Rubicon Environmental (2008) Inc.



FIGURES





PROJECT #:	NAME	DATE
R60315.1	NL	SEPTEMBER 2020
DRAWN BY:	PR	SEPTEMBER 2020
CHECKED BY:		
REVISIONS:		



FIGURE 1
SITE LOCATION



APEC #3
ASSOCIATED WITH OFF SITE
GARAGE

APEC #4
ASSOCIATED WITH OFF SITE
GAS STATION

VACANT COMMERCIAL

APEC #2
FORMER STOCKPILE OF
EQUIPMENT / TOOLS

GAS STATION

GARAGE

FORMER 1,000 GALLON
UST & FUEL PUMP

VACANT
HOUSE

APEC #1
FORMER UST AND FUEL PUMP

20 m

Google

PROJECT #:	R60315.1	NAME	NL	DATE	SEPTEMBER 2020
DRAWN BY:		NAME	PR	DATE	SEPTEMBER 2020
CHECKED BY:					
REVISIONS:					



FIGURE 2
SITE PLAN - APECs



LEGEND

- LOCATION OF RUBICON BOREHOLE AND SAMPLE ID (BH-SS)
- LOCATION OF RUBICON BOREHOLE / GROUNDWATER MONITORING WELL AND SAMPLE ID (BH-SS, MW)



10 m

Google

PROJECT #: R60315.1	NAME	DATE
DRAWN BY: NL	NL	SEPTEMBER 2020
CHECKED BY: PR	PR	SEPTEMBER 2020
REVISIONS:		



FIGURE 3
SITE INVESTIGATION



MW01
79.64

MW04
80.19

MW03
82.54

GROUNDWATER FLOW DIRECTION

10 m

Google

PROJECT #:	NAME	DATE
R60315.1	NL	SEPTEMBER 2020
DRAWN BY:	PR	SEPTEMBER 2020
CHECKED BY:		
REVISIONS:		



FIGURE 4
GROUNDWATER FLOW DIRECTION

TABLES



TABLE 1: BOREHOLE & SOIL SAMPLE OBSERVATIONS

BOREHOLE	MAX DEPTH	COMMENTS
BH1	6.0 m	<ul style="list-style-type: none"> Location of BH1 is located along the western boundary within APEC#4 No petroleum odours present Maximum hydrocarbon vapour readings of 25 ppm using field instruments Soil sample BH1 SS6 (3.75-4.5 m) analyzed for VOCs, PHC (F₁-F₄), BTEX, pH
BH2	6.0 m	<ul style="list-style-type: none"> Location of BH2 is located where the former UST was within APEC#1 No petroleum odours present Maximum hydrocarbon vapour readings of 45 ppm using field instruments Soil sample BH2 SS3 (1.5-2.25 m) analyzed for PHC (F₁-F₄), BTEX, Lead, pH
BH3	6.0 m	<ul style="list-style-type: none"> Location of BH3 is located where a former pump was within APEC#1 No petroleum odours present Maximum hydrocarbon vapour readings of 55 ppm using field instruments Soil sample BH3 SS1 (0-0.75 m) analyzed for PHC (F₁-F₄), BTEX, Lead, pH
BH4	6.0 m	<ul style="list-style-type: none"> Location of BH4 is located west of manual washing bays within APEC#3 No petroleum odours present Maximum hydrocarbon vapour readings of 5 ppm using field instruments Soil sample BH4 SS6 (3.75-4.5 m) analyzed for VOCs, PHC (F₁-F₄), BTEX, pH
BH5	6.0 m	<ul style="list-style-type: none"> Location of BH5 is located west of manual washing bays within APEC#2 & #3 No petroleum odours present Maximum hydrocarbon vapour readings of 20 ppm using field instruments Soil sample BH5 SS1 (0-0.75 m) analyzed for VOCs, PHC (F₁-F₄), BTEX, pH

*Refer to Appendix 2 - Borehole Logs

Table 2: Summary of Groundwater Levels and Observations

MW ID (date constructed)	Observations	Well Headspace VOC Readings	SURFACE ELEVATION (masl)*	GW Depth (Sept 2020) m	GW Elev. (Sept 2020) m
MW01 (Aug 25/20)	-no LNAPL observed -no odours	0 ppm	85	5.36	79.64
MW02 (Aug 25/20)	-no LNAPL observed -no odours	0 ppm	85	2.53	82.47
MW03 (Aug 25/20)	-no LNAPL observed -no odours	0 ppm	85	2.46	82.54
MW04 (Aug 25/20)	-no LNAPL observed -no odours	0 ppm	85	4.81	80.19

*elevations referenced from a Natural Resources Canada Topographic Map



TABLE 3: SOIL CHEMICAL ANALYSIS – VOCs, BTEX, PHC (F₁-F₄) and pH

PARAMETER			Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
	Table 3*	MDL	BH1	BH2	BH3	BH4	BH5
			SS6	SS3	SS1	SS6	SS1
Acetone	16	0.001	<0.001			<0.001	<0.001
Benzene	0.21	0.001	0.001	<0.001	<0.001	<0.001	<0.001
Bromodichloromethane	13	0.001	<0.001			<0.001	<0.001
Bromoform	0.27	0.001	<0.001			<0.001	<0.001
Bromomethane	0.05	0.001	<0.001			<0.001	<0.001
Carbon tetrachloride	0.05	0.001	<0.001			<0.001	<0.001
Chlorobenzene	2.4	0.001	<0.001			<0.001	<0.001
Chloroform	0.05	0.001	<0.001			<0.001	<0.001
Dibromochloromethane	9.4	0.001	<0.001			<0.001	<0.001
1,2-Dibromoethane	0.05	0.001	<0.001			<0.001	<0.001
1,2-Dichlorobenzene	3.4	0.01	<0.01			<0.01	<0.01
1,3-Dichlorobenzene	4.8	0.01	<0.01			<0.01	<0.01
1,4-Dichlorobenzene	0.083	0.01	<0.01			<0.01	<0.01
Dichlorodifluoromethane	16	0.001	<0.001			<0.001	<0.001
1,1-Dichloroethane	3.5	0.001	<0.001			<0.001	<0.001
1,2-Dichloroethane	0.05	0.001	<0.001			<0.001	<0.001
1,1-Dichloroethylene	0.05	0.001	<0.001			<0.001	<0.001
cis-1,2-Dichloroethylene	3.4	0.001	<0.001			<0.001	<0.001
trans-1,2-Dichloroethylene	0.084	0.001	<0.001			<0.001	<0.001
1,3-Dichloropropene (cis & trans)	0.18	0.001	<0.001			<0.001	<0.001
Methylene Chloride	0.1	0.001	<0.001			<0.001	<0.001
1,2-Dichloropropane	0.05	0.001	<0.001			<0.001	<0.001
cis-1,3-Dichloropropene	-	0.001	<0.001			<0.001	<0.001
trans-1,3-Dichloropropene	-	0.001	<0.001			<0.001	<0.001
Ethyl Benzene	2	0.001	0.011	<0.001	0.001	<0.001	0.007
n-Hexane	2.8	0.001	<0.001			<0.001	<0.001
Methyl Ethyl Ketone	16	0.001	<0.001			<0.001	<0.001
Methyl Isobutyl Ketone	1.7	0.001	<0.001			<0.001	<0.001
MTBE	0.75	0.001	<0.001			<0.001	<0.001
Styrene	0.7	0.001	<0.001			<0.001	<0.001
1,1,1,2-Tetrachloroethane	0.058	0.001	<0.001			<0.001	<0.001
1,1,2,2-Tetrachloroethane	0.05	0.001	<0.001			<0.001	<0.001
Tetrachloroethylene	0.28	0.001	<0.001			<0.001	<0.001
Toluene	2.3	0.001	0.009	0.01	0.01	<0.001	0.009
1,1,1-Trichloroethane	0.38	0.001	<0.001			<0.001	<0.001
1,1,2-Trichloroethane	0.05	0.001	<0.001			<0.001	<0.001
Trichloroethylene	0.61	0.001	<0.001			<0.001	<0.001
Trichlorofluoromethane	4	0.001	<0.001			<0.001	<0.001
Vinyl chloride	0.02	0.001	<0.001			<0.001	<0.001
o-Xylene	-	0.001	0.004	0.01	0.02	<0.001	0.005
m+p-Xylenes	-	0.001	0.027	0.02	0.03	<0.001	0.020
Xylenes (Total)	3.1	0.001	0.031	0.003	0.05	<0.001	0.027
F ₁ (C ₆ – C ₁₀)	55	10	<10	<10	<10	<10	<10
F ₂ (C ₁₀ – C ₁₆)	98	10	<10	<10	<10	<10	<10
F ₃ (C ₁₆ – C ₃₄)	300	10	80	<10	30	20	20
F ₄ (C ₃₄ – C ₅₀)	2800	50	<50	<50	<50	<50	<50
pH			8.45	8.84	8.82	8.90	8.98
LEAD	120			10			



TABLE 4: GROUNDWATER CHEMICAL ANALYSIS – VOCs, BTEX, PHC (F₁-F₄)

PARAMETER			Sample ID	Sample ID	Sample ID	Sample ID
			MW01	MW02	MW03	MW04
	Table 3**	MDL				
Acetone	130000	0.1	<0.1		<0.1	<0.1
Benzene	44	0.1	<0.1	<0.1	<0.1	<0.1
Bromodichloromethane	85000	0.1	<0.1		<0.1	<0.1
Bromoform	380	0.1	<0.1		<0.1	<0.1
Bromomethane	5.6	0.1	<0.1		<0.1	<0.1
Carbon tetrachloride	0.79	0.1	<0.1		<0.1	<0.1
Chlorobenzene	630	0.1	<0.1		<0.1	<0.1
Dibromochloromethane	82000	0.1	<0.1		<0.1	<0.1
Chloroform	2.4	0.1	<0.1		<0.1	<0.1
1,2-Dichlorobenzene	4600	0.1	<0.1		<0.1	<0.1
1,3-Dichlorobenzene	9600	0.1	<0.1		<0.1	<0.1
1,4-Dichlorobenzene	8	0.1	<0.1		<0.1	<0.1
Dichlorodifluoromethane	4400	0.1	<0.1		<0.1	<0.1
1,1-Dichloroethane	320	0.1	<0.1		<0.1	<0.1
1,2-Dichloroethane	1.6	0.1	<0.1		<0.1	<0.1
1,1-Dichloroethylene	1.6	0.1	<0.1		<0.1	<0.1
cis-1,2-Dichloroethylene	1.6	0.1	<0.1		<0.1	<0.1
trans-1,2-Dichloroethylene	1.6	0.1	<0.1		<0.1	<0.1
1,3-Dichloropropene (cis & trans)	1.6	0.1	<0.1		<0.1	<0.1
Methylene Chloride	610	0.1	<0.1		<0.1	<0.1
1,2-Dichloropropane	16	0.1	<0.1		<0.1	<0.1
cis-1,3-Dichloropropene	-	0.1	<0.1		<0.1	<0.1
trans-1,3-Dichloropropene	-	0.1	<0.1		<0.1	<0.1
Ethyl Benzene	2300	0.1	<0.1	<0.1	<0.1	<0.1
n-Hexane	51	0.1	<0.1		<0.1	<0.1
Methyl Ethyl Ketone	470000	0.1	<0.1		<0.1	<0.1
Methyl Isobutyl Ketone	140000	0.1	<0.1		<0.1	<0.1
MTBE	190	0.1	<0.1		<0.1	<0.1
Styrene	1300	0.1	<0.1		<0.1	<0.1
1,1,1,2-Tetrachloroethane	3.3	0.1	<0.1		<0.1	<0.1
1,1,1,2,2-Tetrachloroethane	3.2	0.1	<0.1		<0.1	<0.1
Tetrachloroethylene	1.6	0.1	<0.1		<0.1	<0.1
Toluene	18000	0.1	<0.1	<0.1	<0.1	<0.1
1,1,1-Trichloroethane	640	0.1	<0.1		<0.1	<0.1
1,1,2-Trichloroethane	4.7	0.1	<0.1		<0.1	<0.1
Trichloroethylene	1.6	0.1	<0.1		<0.1	<0.1
Trichlorofluoromethane	2500	0.1	<0.1		<0.1	<0.1
Vinyl chloride	0.5	0.1	<0.1		<0.1	<0.1
o-Xylene	-	0.1	<0.1	<0.1	<0.1	<0.1
m+p-Xylenes	-	0.1	<0.1	<0.1	<0.1	<0.1
Xylenes (Total)	4200	0.1	<0.1	<0.1	<0.1	<0.1
PHC F ₁ (C ₆ – C ₁₀)	750	10	<10	<10	<10	<10
PHC F ₂ (C ₁₀ – C ₁₆)	150	50	<50	<50	<50	<50
PHC F ₃ (C ₁₆ – C ₃₄)	500	100	<100	<100	<100	<100
PHC F ₄ (C ₃₄ – C ₅₀)	500	500	<500	<500	<500	<500



Soil Analysis: *All Values in ug/g – ppm – parts per million, MDL – method detection limit (<), **Bold** – Exceeds Criteria. MOE O.Reg. 153/04(amended by O. Reg. 511/09) – Table 3 –Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for residential Property Use with coarse Textured Soil.

Groundwater Analysis: **All Values in ug/L– ppm – parts per million, MDL – method detection limit (<), **Bold** – Exceeds Criteria. MOE O.Reg. 153/04(amended by O. Reg. 511/09) – Table 3 –Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for all Property Uses with coarse Textured Soil.



APPENDIX 1 PHOTOGRAPHS





PHOTOGRAPH 1: VIEW OF VACANT RESIDENCE ONSITE



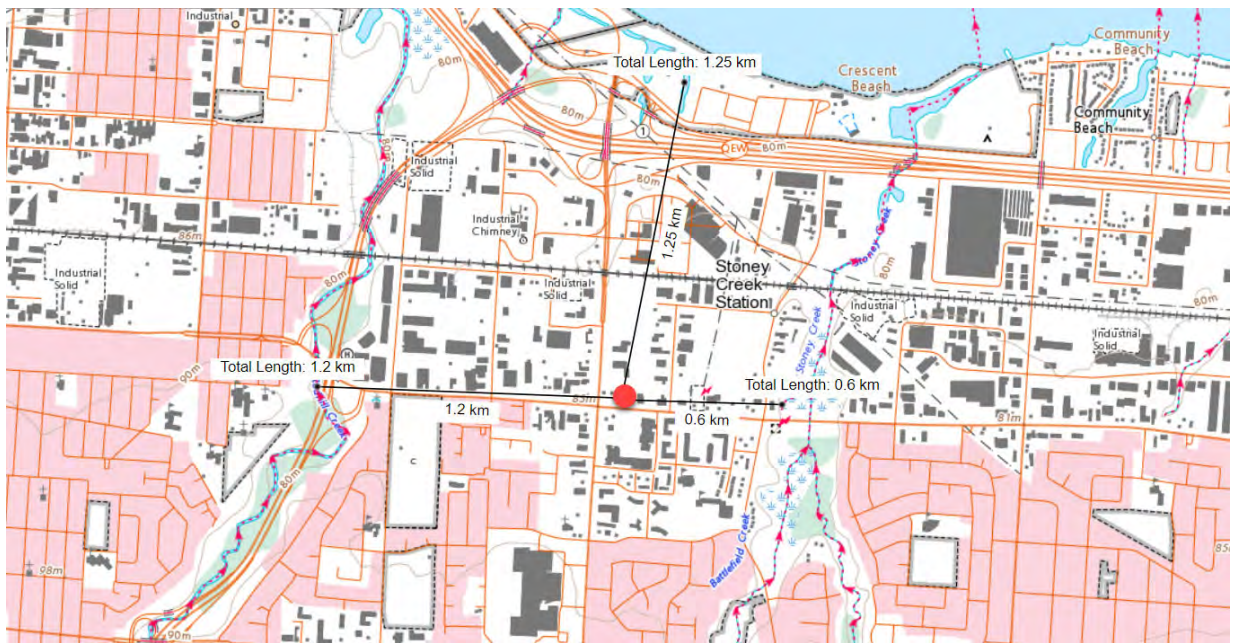
PHOTOGRAPH 2: VIEW OF VACANT COMMERCIAL BUILDING ONSITE



PHOTOGRAPH 3: ADVANCING BH2/MW02



PHOTOGRAPH 4: ADVANCING BH5/MW04



TOPOGRAPHIC MAP OF SUBJECT PROPERTY AND SURROUNDING AND DISTANCES FROM NEAREST BODIES OF WATER



APPENDIX 2 BOREHOLE LOGS



Project No: R60315.1

Log of: BH1/MW01

Project: Phase II ESA

Client: 2454184 Ontario Inc.

Location: 2481 Barton St E, Stoney Creek

Logged by: PDR

SUBSURFACE PROFILE			SAMPLE		Volatile Organic Concentration ppm 100 300 500 700 900	Well Data	Lab Analysis
Depth	Symbol	Description	Number	Type			
0		Ground Surface					
1		Sand and Gravel Sand / Gravel	1	SS	●		SS1-Soil Sample Collected No odours present
2							
3							
4		Clayey Silt Clayey silt	2	SS	●		SS2-Soil Sample Collected No odours present
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							

Drill Method: Auger / Split Spoon Sampler

Datum: Local

Drill Date: August 25, 2020

Hole Size: 6"

Drilled By: Rubicon Environmental (2008) Inc.

Sheet: 1 of 1

Project No: R60315.1

Log of: BH2/MW02

Project: Phase II ESA

Client: 2454184 Ontario Inc.

Location: 2481 Barton St E, Stoney Creek

Logged by: PDR

SUBSURFACE PROFILE			SAMPLE		Volatile Organic Concentration ppm 100 300 500 700 900	Well Data	Lab Analysis	
Depth	Symbol	Description	Number	Type				
0		Ground Surface						
1		Sand and Gravel Sand / Gravel	1	SS	●		SS1-Soil Sample Collected No odours present	
2				2	SS		●	SS2-Soil Sample Collected No odours present
3				3	SS		●	SS3-Soil Sample Collected No odours present Analysis: PHC, BTEX, pH
4				4	SS		●	SS4-Soil Sample Collected No odours present
5				5	SS		●	SS5-Soil Sample Collected No odours present
6				6	SS		●	SS6-Soil Sample Collected No odours present
7				7	SS		●	SS7-Soil Sample Collected No odours present
8				8	SS		●	SS8-Soil Sample Collected No odours present
9		Clayey Silt Clayey silt						
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20		Base of Borehole						
21								
22								
23								
24								

Drill Method: Auger / Split Spoon Sampler

Datum: Local

Drill Date: August 25, 2020

Hole Size: 6"

Drilled By: Rubicon Environmental (2008) Inc.

Sheet: 1 of 1

Project No: R60315.1

Log of: BH3

Project: Phase II ESA

Client: 2454184 Ontario Inc.

Location: 2481 Barton St E, Stoney Creek

Logged by: PDR

SUBSURFACE PROFILE			SAMPLE		Volatile Organic Concentration ppm 100 300 500 700 900	Well Data	Lab Analysis
Depth	Symbol	Description	Number	Type			
0		Ground Surface					
1		Sand and Gravel Sand / Gravel	1	SS			SS1-Soil Sample Collected No odours present Analysis: PHC, BTEX, pH
2			2	SS		SS2-Soil Sample Collected No odours present	
3		Clayey Silt Clayey silt	3	SS		SS3-Soil Sample Collected No odours present	
4			4	SS		SS4-Soil Sample Collected No odours present	
5			5	SS		SS5-Soil Sample Collected No odours present	
6			6	SS		SS6-Soil Sample Collected No odours present	
7			7	SS		SS7-Soil Sample Collected No odours present	
8			8	SS		SS8-Soil Sample Collected No odours present	
9		Base of Borehole					

Drill Method: Auger / Split Spoon Sampler

Datum: Local

Drill Date: August 25, 2020

Hole Size: 6"

Drilled By: Rubicon Environmental (2008) Inc.

Sheet: 1 of 1

Project No: R60315.1

Log of: BH4/MW03

Project: Phase II ESA

Client: 2454184 Ontario Inc.

Location: 2481 Barton St E, Stoney Creek

Logged by: PDR

SUBSURFACE PROFILE			SAMPLE		Volatile Organic Concentration ppm 100 300 500 700 900	Well Data	Lab Analysis
Depth	Symbol	Description	Number	Type			
0		Ground Surface					
1		Sand and Gravel Sand / Gravel	1	SS	●		SS1-Soil Sample Collected No odours present
2			2	SS	●		SS2-Soil Sample Collected No odours present
3		Clayey Silt Clayey silt	3	SS	●		SS3-Soil Sample Collected No odours present
4			4	SS	●		SS4-Soil Sample Collected No odours present
5			5	SS	●		SS5-Soil Sample Collected No odours present
6			6	SS	●		SS6-Soil Sample Collected No odours present Analysis: PHC, VOCs, pH
7			7	SS	●		SS7-Soil Sample Collected No odours present
8			8	SS	●		SS8-Soil Sample Collected No odours present
9		Base of Borehole					

Drill Method: Auger / Split Spoon Sampler

Datum: Local

Drill Date: August 25, 2020

Hole Size: 6"

Drilled By: Rubicon Environmental (2008) Inc.

Sheet: 1 of 1

Project No: R60315.1

Log of: BH5/MW04

Project: Phase II ESA

Client: 2454184 Ontario Inc.

Location: 2481 Barton St E, Stoney Creek

Logged by: PDR

SUBSURFACE PROFILE			SAMPLE		Volatile Organic Concentration ppm 100 300 500 700 900	Well Data	Lab Analysis
Depth	Symbol	Description	Number	Type			
0		Ground Surface					
1		Sand and Gravel Sand / Gravel	1	SS			SS1-Soil Sample Collected No odours present Analysis: PHC, VOCs, pH SS2-Soil Sample Collected No odours present SS3-Soil Sample Collected No odours present SS4-Soil Sample Collected No odours present SS5-Soil Sample Collected No odours present SS6-Soil Sample Collected No odours present SS7-Soil Sample Collected No odours present SS8-Soil Sample Collected No odours present
2			2	SS			
3		Clayey Silt Clayey silt	3	SS			
4			4	SS			
5			5	SS			
6			6	SS			
7			7	SS			
8			8	SS			
9		Base of Borehole					

Drill Method: Auger / Split Spoon Sampler

Datum: Local

Drill Date: August 25, 2020

Hole Size: 6"

Drilled By: Rubicon Environmental (2008) Inc.

Sheet: 1 of 1

APPENDIX 3 LABORATORY CERTIFICATES OF ANALYSIS





PH Quantum

Member of Canadian Association for Laboratory Accreditation Inc (CALA)

August 31, 2020

Dear Mr. Rew,

Please find attached the Report of Analysis for your project No. R60315 .

Sincerely,


Victor Hurem Bs.C.Chem.

REPORT OF ANALYSIS

LABORATORY I.D. :	13423-20	CLIENT:	Rubicon Environmental
SAMPLE MATRIX :	soil	JOB\PROJECT No. :	R60315
REPORT NUMBER :	13423	DATE SUBMITTED:	August-26-20
REPORT TO :	Mr. Paul Rew	DATE REPORTED:	August-31-20

PARAMETER	UNIT	M.D.L.	CONTROL SAMPLE			SAMPLE DATA		
			expected conc.	found conc.	recovery %	<i>BH1-SS6</i>	<i>BH4-SS6</i>	<i>BH5-SS1</i>
VOCs - EPA 8260								
Dichlorofluoromethane	µg/g	0.001	1.000	0.968	97	<M.D.L.	<M.D.L.	<M.D.L.
Dichlorodifluoromethane	µg/g	0.001	1.000	0.973	97	<M.D.L.	<M.D.L.	<M.D.L.
Chloromethane	µg/g	0.001	1.000	0.948	95	<M.D.L.	<M.D.L.	<M.D.L.
Vinyl Chloride	µg/g	0.001	1.000	0.950	95	<M.D.L.	<M.D.L.	<M.D.L.
Bromomethane	µg/g	0.001	1.000	0.963	96	<M.D.L.	<M.D.L.	<M.D.L.
Chloroethane	µg/g	0.001	1.000	0.973	97	<M.D.L.	<M.D.L.	<M.D.L.
Trichlorofluoromethane	µg/g	0.001	1.000	0.977	98	<M.D.L.	<M.D.L.	<M.D.L.
Acetone	µg/g	0.001	1.000	0.968	97	<M.D.L.	<M.D.L.	<M.D.L.
1,1-Dichloroethylene	µg/g	0.001	1.000	0.966	97	<M.D.L.	<M.D.L.	<M.D.L.
Methyl-tert. Butyl Ether	µg/g	0.001	1.000	0.954	95	<M.D.L.	<M.D.L.	<M.D.L.
Dichloromethane	µg/g	0.001	1.000	0.969	97	<M.D.L.	<M.D.L.	<M.D.L.
t-1,2-Dichloroethylene	µg/g	0.001	1.000	0.960	96	<M.D.L.	<M.D.L.	<M.D.L.
n- Hexane	µg/g	0.001	1.000	0.975	98	<M.D.L.	<M.D.L.	<M.D.L.
1,1-Dichloroethane	µg/g	0.001	1.000	0.965	97	<M.D.L.	<M.D.L.	<M.D.L.
2,2-Dichloropropane	µg/g	0.001	1.000	0.961	96	<M.D.L.	<M.D.L.	<M.D.L.
c-1,2-Dichloroethylene	µg/g	0.001	1.000	0.963	96	<M.D.L.	<M.D.L.	<M.D.L.
Methyl Ethyl Ketone	µg/g	0.001	1.000	0.958	96	<M.D.L.	<M.D.L.	<M.D.L.
Chloroform	µg/g	0.001	1.000	0.959	96	<M.D.L.	<M.D.L.	<M.D.L.
Bis(2-Chloroethyl)ether	µg/g	0.001	1.000	0.980	98	<M.D.L.	<M.D.L.	<M.D.L.
Bis(2-Chloroisopropyl) ether	µg/g	0.001	1.000	0.971	97	<M.D.L.	<M.D.L.	<M.D.L.
1,4-Dioxane	µg/g	0.001	1.000	0.968	97	<M.D.L.	<M.D.L.	<M.D.L.
Bromochloromethane	µg/g	0.001	1.000	0.953	95	<M.D.L.	<M.D.L.	<M.D.L.
1,1,1-Trichloroethane	µg/g	0.001	1.000	0.975	98	<M.D.L.	<M.D.L.	<M.D.L.
1,1-Dichloropropene	µg/g	0.001	1.000	0.963	96	<M.D.L.	<M.D.L.	<M.D.L.
Carbon Tetrachloride	µg/g	0.001	1.000	0.959	96	<M.D.L.	<M.D.L.	<M.D.L.
1,2-Dichloroethane	µg/g	0.001	1.000	0.961	96	<M.D.L.	<M.D.L.	<M.D.L.
Benzene	µg/g	0.001	1.000	0.963	96	0.001	<M.D.L.	<M.D.L.
Trichloroethylene	µg/g	0.001	1.000	0.955	96	<M.D.L.	<M.D.L.	<M.D.L.
Metyl Isobutyl Ketone	µg/g	0.001	1.000	0.970	97	<M.D.L.	<M.D.L.	<M.D.L.
1,2-Dichloropropane	µg/g	0.001	1.000	0.965	97	<M.D.L.	<M.D.L.	<M.D.L.

M.D.L. = Method Detection Limit

REPORT OF ANALYSIS

LABORATORY I.D. :	13423-20	CLIENT:	Rubicon Environmental
SAMPLE MATRIX :	soil	JOB\PROJECT No. :	R60315
REPORT NUMBER :	13423	DATE SUBMITTED:	August-26-20
REPORT TO :	Mr. Paul Rew	DATE REPORTED:	August-31-20

PARAMETER	UNIT	M.D.L.	CONTROL SAMPLE			SAMPLE DATA		
			expected conc.	found conc.	recovery %	<i>BH1-SS6</i>	<i>BH4-SS6</i>	<i>BH5-SS1</i>
VOCs - EPA 8260								
Bromodichloromethane	µg/g	0.001	1.000	0.963	96	<M.D.L.	<M.D.L.	<M.D.L.
Dibromomethane	µg/g	0.001	1.000	0.958	96	<M.D.L.	<M.D.L.	<M.D.L.
Toluene	µg/g	0.001	1.000	0.959	96	0.009	<M.D.L.	0.009
t-1,3-Dichloropropene	µg/g	0.001	1.000	0.980	98	<M.D.L.	<M.D.L.	<M.D.L.
1,1,2-Trichloroethane	µg/g	0.001	1.000	0.971	97	<M.D.L.	<M.D.L.	<M.D.L.
1,3-Dichloropropane	µg/g	0.001	1.000	0.968	97	<M.D.L.	<M.D.L.	<M.D.L.
Tetrachloroethylene	µg/g	0.001	1.000	0.953	95	<M.D.L.	<M.D.L.	<M.D.L.
Dibromochloromethane	µg/g	0.001	1.000	0.978	98	<M.D.L.	<M.D.L.	<M.D.L.
1,2-Dibromoethane	µg/g	0.001	1.000	0.962	96	<M.D.L.	<M.D.L.	<M.D.L.
c-1,3-Dichloropropene	µg/g	0.001	1.000	0.974	97	<M.D.L.	<M.D.L.	<M.D.L.
Chlorobenzene	µg/g	0.001	1.000	0.961	96	<M.D.L.	<M.D.L.	<M.D.L.
1,1,1,2-Tetrachloroethane	µg/g	0.001	1.000	0.960	96	<M.D.L.	<M.D.L.	<M.D.L.
Ethylbenzene	µg/g	0.001	1.000	0.968	97	0.011	<M.D.L.	0.007
m/p-Xylene	µg/g	0.001	1.000	0.974	97	0.027	<M.D.L.	0.020
o-Xylene	µg/g	0.001	1.000	0.974	97	0.004	<M.D.L.	0.005
styrene	µg/g	0.001	1.000	0.977	98	<M.D.L.	<M.D.L.	<M.D.L.
Bromoform	µg/g	0.001	1.000	0.975	98	<M.D.L.	<M.D.L.	<M.D.L.
1,1,2,2-Tetrachloroethane	µg/g	0.001	1.000	0.978	98	<M.D.L.	<M.D.L.	<M.D.L.
1,2,3-Trichloropropane	µg/g	0.001	1.000	0.974	97	<M.D.L.	<M.D.L.	<M.D.L.
Bromobenzene	µg/g	0.01	10.00	9.81	98	<M.D.L.	<M.D.L.	<M.D.L.
2-Chlorotoluene	µg/g	0.01	10.00	9.72	97	<M.D.L.	<M.D.L.	<M.D.L.
4-Chlorotoluene	µg/g	0.01	10.00	9.64	96	<M.D.L.	<M.D.L.	<M.D.L.
1,3-Dichlorobenzene	µg/g	0.01	10.00	9.47	95	<M.D.L.	<M.D.L.	<M.D.L.
1,4-Dichlorobenzene	µg/g	0.01	10.00	9.58	96	<M.D.L.	<M.D.L.	<M.D.L.
1,2-Dichlorobenzene	µg/g	0.01	10.00	9.73	97	<M.D.L.	<M.D.L.	<M.D.L.
1,2-Dibromo 3-Chloropropane	µg/g	0.01	10.00	9.59	96	<M.D.L.	<M.D.L.	<M.D.L.
1,2,4-Trichlorobenzene	µg/g	0.01	10.00	9.62	96	<M.D.L.	<M.D.L.	<M.D.L.
Hexachlorobutadiene	µg/g	0.01	10.00	9.68	97	<M.D.L.	<M.D.L.	<M.D.L.
1,2,3-Trichlorobenzene	µg/g	0.01	10.00	9.74	97	<M.D.L.	<M.D.L.	<M.D.L.

M.D.L. = Method Detection Limit

REPORT OF ANALYSIS

LABORATORY I.D. :	13423-20	CLIENT:	Rubicon Environmental
SAMPLE MATRIX :	soil	JOB\PROJECT No. :	R60315
REPORT NUMBER :	13423	DATE SUBMITTED:	August-26-20
REPORT TO :	Mr. Paul Rew	DATE REPORTED:	August-31-20

PARAMETER	UNITS	M.D.L.	CONTROL SAMPLE			SAMPLE DATA	
			expected conc.	found conc.	recovery %	<i>BH2-SS3</i>	<i>BH3-SSI</i>
Petroleum Hydrocarbons							
Benzene	µg/g	0.01	1.00	0.95	95	<M.D.L.	<M.D.L.
Toluene	µg/g	0.01	1.00	0.96	96	0.01	0.01
Ethylbenzene	µg/g	0.01	1.00	0.97	97	<M.D.L.	0.01
m/p-Xylene	µg/g	0.01	1.00	0.96	96	0.02	0.03
o-Xylene	µg/g	0.01	1.00	0.95	95	0.01	0.02
F1, PHC range C6 - C10 * (Volatile Petroleum Hydrocarbon)	µg/g	10	50	48	96	<M.D.L.	<M.D.L.
F2, PHC range C10 - C16** (Extractable Hydrocarbons)	µg/g	10	100	96	96	<M.D.L.	<M.D.L.
F3, PHC range C16 - C34** (Heavy Extractable Hydrocarbons)	µg/g	10	500	482	96	<M.D.L.	30
F4, PHC range C34 - C50 (Hot Extractable Hydrocarbons)	µg/g	50	500	485	97	<M.D.L.	<M.D.L.
pH	pH Unit	0.01	7.00	7.00	100	8.84	8.82
Lead	µg/g	1	100	97	97	10	11

M.D.L. = Method Detection Limit

* - excludes BTEX

** - includes PAH

REPORT OF ANALYSIS

LABORATORY I.D. :	13423-20	CLIENT:	Rubicon Environmental
SAMPLE MATRIX :	soil	JOB\PROJECT No. :	R60315
REPORT NUMBER :	13423	DATE SUBMITTED:	August-26-20
REPORT TO :	Mr. Paul Rew	DATE REPORTED:	August-31-20

PARAMETER	UNITS	M.D.L.	CONTROL SAMPLE			SAMPLE DATA		
			expected conc.	found conc.	recovery %	<i>BH1-SS6</i>	<i>BH4-SS6</i>	<i>BH5-SS1</i>
Petroleum Hydrocarbons								
F1, PHC range C6 - C10 * (Volatile Petroleum Hydrocarbon)	µg/g	10	50	48	96	<M.D.L.	<M.D.L.	<M.D.L.
F2, PHC range C10 - C16** (Extractable Hydrocarbons)	µg/g	10	100	96	96	<M.D.L.	<M.D.L.	<M.D.L.
F3, PHC range C16 - C34** (Heavy Extractable Hydrocarbons)	µg/g	10	500	482	96	80	20	20
F4, PHC range C34 - C50 (Hot Extractable Hydrocarbons)	µg/g	50	500	485	97	<M.D.L.	<M.D.L.	<M.D.L.
pH	pH Unit	0.01	7.00	7.00	100	8.42	8.90	8.98

M.D.L. = Method Detection Limit

* - excludes BTEX

** - includes PAH


 Certified by,
Victor Hurem B.Sc. Chem.



PH Quantum

Member of Canadian Association for Laboratory Accreditation Inc (CALA)

September 08, 2020

Dear Mr. Rew,

Please find attached the Report of Analysis for your project No. R60315 .

Sincerely,

A handwritten signature in black ink, appearing to read 'Victor Hurem'.

Victor Hurem Bs.C.Chem.

REPORT OF ANALYSIS

LABORATORY I.D. :	13431-20	CLIENT:	Rubicon Environmental
SAMPLE MATRIX :	water	JOB\PROJECT No. :	R60315
REPORT NUMBER :	13431	DATE SUBMITTED:	September-03-20
REPORT TO :	Mr. Paul Rew	DATE REPORTED:	September-08-20

PARAMETER	UNIT	M.D.L.	CONTROL SAMPLE			SAMPLE DATA		
			expected conc.	found conc.	recovery %	MW01	MW03	MW04
VOCs - EPA 624								
Dichlorofluoromethane	µg/l	0.1	42.7	40.8	96	<M.D.L.	<M.D.L.	<M.D.L.
Chloromethane	µg/l	0.1	42.2	41.2	98	<M.D.L.	<M.D.L.	<M.D.L.
Vinyl Chloride	µg/l	0.1	28.9	27.8	96	<M.D.L.	<M.D.L.	<M.D.L.
Bromomethane	µg/l	0.1	71.4	70.2	98	<M.D.L.	<M.D.L.	<M.D.L.
Chloroethane	µg/l	0.1	43.1	41.5	96	<M.D.L.	<M.D.L.	<M.D.L.
Trichlorofluoromethane	µg/l	0.1	40.7	39.5	97	<M.D.L.	<M.D.L.	<M.D.L.
Acetone	µg/l	0.1	75.2	71.2	95	<M.D.L.	<M.D.L.	<M.D.L.
1,1 Dichloroethylene	µg/l	0.1	26.1	25.1	96	<M.D.L.	<M.D.L.	<M.D.L.
Methyl-tert. Butyl Ether	µg/l	0.1	70.8	66.2	94	<M.D.L.	<M.D.L.	<M.D.L.
Methylene chloride	µg/l	0.1	42.2	41.2	98	<M.D.L.	<M.D.L.	<M.D.L.
t-1,2 Dichloroethylene	µg/l	0.1	41.1	39.4	96	<M.D.L.	<M.D.L.	<M.D.L.
1,1 Dichloroethane	µg/l	0.1	40.8	38.8	95	<M.D.L.	<M.D.L.	<M.D.L.
2,2 Dichloropropane	µg/l	0.1	41.5	38.5	93	<M.D.L.	<M.D.L.	<M.D.L.
c-1,2 Dichloroethylene	µg/l	0.1	42.3	39.8	94	<M.D.L.	<M.D.L.	<M.D.L.
Methyl Ethyl Ketone	µg/l	0.1	73.8	68.9	93	<M.D.L.	<M.D.L.	<M.D.L.
Chloroform	µg/l	0.1	40.8	38.6	95	<M.D.L.	<M.D.L.	<M.D.L.
Bis(2-Chloroethyl)ether	µg/l	0.1	100	93.8	94	<M.D.L.	<M.D.L.	<M.D.L.
Bis(2-Chloroisopropyl)ether	µg/l	0.1	100	94.2	94	<M.D.L.	<M.D.L.	<M.D.L.
1,4 Dioxane	µg/l	0.1	100	94.5	95	<M.D.L.	<M.D.L.	<M.D.L.
Bromochloromethane	µg/l	0.1	68.9	65.7	95	<M.D.L.	<M.D.L.	<M.D.L.
1,1,1 Trichloroethane	µg/l	0.1	40.6	38.1	94	<M.D.L.	<M.D.L.	<M.D.L.
1,1 Dichloropropene	µg/l	0.1	43.2	40.8	94	<M.D.L.	<M.D.L.	<M.D.L.
Carbon Tetrachloride	µg/l	0.1	40.6	37.9	93	<M.D.L.	<M.D.L.	<M.D.L.
1,2 Dichloroethane	µg/l	0.1	44.1	41.3	94	<M.D.L.	<M.D.L.	<M.D.L.
Benzene	µg/l	0.1	45.2	41.8	92	<M.D.L.	<M.D.L.	<M.D.L.
Trichloroethylene	µg/l	0.1	40.7	37.9	93	<M.D.L.	<M.D.L.	<M.D.L.
Metyl Isobutyl Ketone	µg/l	0.1	75.2	70.6	94	<M.D.L.	<M.D.L.	<M.D.L.
1,2 Dichloropropane	µg/l	0.1	40.7	37.9	93	<M.D.L.	<M.D.L.	<M.D.L.

M.D.L. = Method Detection Limit

REPORT OF ANALYSIS

LABORATORY I.D. :	13431-20	CLIENT:	Rubicon Environmental
SAMPLE MATRIX :	water	JOB/PROJECT No. :	R60315
REPORT NUMBER :	13431	DATE SUBMITTED:	September-03-20
REPORT TO :	Mr. Paul Rew	DATE REPORTED:	September-08-20

PARAMETER	UNIT	M.D.L.	CONTROL SAMPLE			SAMPLE DATA		
			expected conc.	found conc.	recovery %	MW01	MW03	MW04
VOCs - EPA 624								
Dichlorobromomethane	µg/l	0.1	72.1	70.3	98	<M.D.L.	<M.D.L.	<M.D.L.
Dibromomethane	µg/l	0.1	69.8	66.9	96	<M.D.L.	<M.D.L.	<M.D.L.
Toluene	µg/l	0.1	45.8	43.2	94	<M.D.L.	<M.D.L.	<M.D.L.
1,3 Dichloropropene	µg/l	0.1	42.6	40.1	94	<M.D.L.	<M.D.L.	<M.D.L.
1,1,2 Trichloroethane	µg/l	0.1	40.8	39.1	96	<M.D.L.	<M.D.L.	<M.D.L.
1,3 Dichloropropane	µg/l	0.1	40.1	37.9	95	<M.D.L.	<M.D.L.	<M.D.L.
Tetrachloroethylene	µg/l	0.1	40.6	38.2	94	<M.D.L.	<M.D.L.	<M.D.L.
Dibromochloromethane	µg/l	0.1	69.3	66.4	96	<M.D.L.	<M.D.L.	<M.D.L.
1,2 Dibromoethane	µg/l	0.1	69.8	66.3	95	<M.D.L.	<M.D.L.	<M.D.L.
c-1,3 Dichloropropene	µg/l	0.1	40.3	38.1	95	<M.D.L.	<M.D.L.	<M.D.L.
Chlorobenzene	µg/l	0.1	28.3	26.9	95	<M.D.L.	<M.D.L.	<M.D.L.
1,1,1,2 Tetrachloroethane	µg/l	0.1	42.6	40.2	94	<M.D.L.	<M.D.L.	<M.D.L.
Ethylbenzene	µg/l	0.1	45.1	42.8	95	<M.D.L.	<M.D.L.	<M.D.L.
m/p-Xylene	µg/l	0.1	72.4	69.8	96	<M.D.L.	<M.D.L.	<M.D.L.
o-Xylene	µg/l	0.1	44.8	42.4	95	<M.D.L.	<M.D.L.	<M.D.L.
Bromoform	µg/l	0.1	78.2	73.5	94	<M.D.L.	<M.D.L.	<M.D.L.
1,1,2,2 Tetrachloroethane	µg/l	0.1	46.2	42.8	93	<M.D.L.	<M.D.L.	<M.D.L.
1,2,3 Trichloropropane	µg/l	0.1	43.8	41.6	95	<M.D.L.	<M.D.L.	<M.D.L.
Bromobenzene	µg/l	0.1	43.2	40.7	94	<M.D.L.	<M.D.L.	<M.D.L.
2-Chlorotoluene	µg/l	0.1	41.6	40.2	97	<M.D.L.	<M.D.L.	<M.D.L.
4-Chlorotoluene	µg/l	0.1	41.2	40.1	97	<M.D.L.	<M.D.L.	<M.D.L.
1,3 Dichlorobenzene	µg/l	0.1	42.8	40.8	95	<M.D.L.	<M.D.L.	<M.D.L.
1,4 Dichlorobenzene	µg/l	0.1	42.3	40.3	95	<M.D.L.	<M.D.L.	<M.D.L.
1,2 Dichlorobenzene	µg/l	0.1	42.1	40.2	95	<M.D.L.	<M.D.L.	<M.D.L.
1,2 Dibromo 3 Chloropropane	µg/l	0.1	43.1	41.4	96	<M.D.L.	<M.D.L.	<M.D.L.
1,2,4 Trichlorobenzene	µg/l	0.1	68.8	64.1	93	<M.D.L.	<M.D.L.	<M.D.L.
Hexachlorobutadiene	µg/l	0.1	70.2	66.1	94	<M.D.L.	<M.D.L.	<M.D.L.
1,2,3 Trichlorobenzene	µg/l	0.1	75.1	70.8	94	<M.D.L.	<M.D.L.	<M.D.L.

M.D.L. = Method Detection Limit

REPORT OF ANALYSIS

LABORATORY I.D. :	13431-20	CLIENT:	Rubicon Environmental
SAMPLE MATRIX :	water	JOB\PROJECT No. :	R60315
REPORT NUMBER :	13431	DATE SUBMITTED:	September-03-20
REPORT TO :	Mr. Paul Rew	DATE REPORTED:	September-08-20

PARAMETER	UNITS	M.D.L.	CONTROL SAMPLE			SAMPLE DATA		
			expected conc.	found conc.	recovery %	MW01	MW03	MW04
Petroleum Hydrocarbons								
F1, PHC range C6 - C10 * (Volatile Petroleum Hydrocarbon)	µg/l	10	500	485	97	<M.D.L.	<M.D.L.	<M.D.L.
F2, PHC range C10 - C16** (Extractable Hydrocarbons)	µg/l	50	5000	4880	98	<M.D.L.	<M.D.L.	<M.D.L.
F3, PHC range C16 - C34** (Heavy Extractable Hydrocarbons)	µg/l	100	5000	4843	97	<M.D.L.	<M.D.L.	<M.D.L.
F4, PHC range C34 - C50 (Hot Extractable Hydrocarbons)	µg/l	500	5000	4835	97	<M.D.L.	<M.D.L.	<M.D.L.

M.D.L. = Method Detection Limit

* - excludes BTEX

** - includes PAH

REPORT OF ANALYSIS

LABORATORY I.D. :	13431-20	CLIENT:	Rubicon Environmental
SAMPLE MATRIX :	water	JOB/PROJECT No. :	R60315
REPORT NUMBER :	13431	DATE SUBMITTED:	September-03-20
REPORT TO :	Mr. Paul Rew	DATE REPORTED:	September-08-20

PARAMETER	UNITS	M.D.L.	CONTROL SAMPLE			SAMPLE DATA		
			expected conc.	found conc.	recovery %			
Petroleum Hydrocarbons						<i>MW02</i>		
Benzene	µg/l	0.1	20.0	19.6	98	<M.D.L.		
Toluene	µg/l	0.1	20.0	19.5	98	<M.D.L.		
Ethylbenzene	µg/l	0.1	20.0	19.6	98	<M.D.L.		
m/p-Xylene	µg/l	0.1	20.0	19.5	98	<M.D.L.		
o-Xylene	µg/l	0.1	20.0	19.6	98	<M.D.L.		
F1, PHC range C6 - C10 * (Volatile Petroleum Hydrocarbon)	µg/l	10	500	485	97	<M.D.L.		
F2, PHC range C10 - C16** (Extractable Hydrocarbons)	µg/l	50	5000	4880	98	<M.D.L.		
F3, PHC range C16 - C34** (Heavy Extractable Hydrocarbons)	µg/l	100	5000	4843	97	<M.D.L.		
F4, PHC range C34 - C50 (Hot Extractable Hydrocarbons)	µg/l	500	5000	4835	97	<M.D.L.		

M.D.L. = Method Detection Limit

* - excludes BTEX

** - includes PAH

Certified by 
Victor Hurem B.Sc. Chem.