



Azure Group

TOWN OF CALEDON  
PLANNING  
RECEIVED  
July 20, 2020

**PHASE TWO  
ENVIRONMENTAL SITE ASSESSMENT – RECORD OF SITE  
CONDITION**

**1 RUSSELL MASON COURT  
2 Russell Mason court  
6142 Old Church Road  
6126 Old Church Road  
6120, 6122, 6124 Old Church Road  
6110, 6112, 6114 Old Church Road  
6098 Old Church Road  
CALEDON, ONTARIO**

**PREPARED FOR: STYLUX CALEDON  
INC.**

**PROJECT NO: 2005-001  
DATE: JUNE 19, 2020**



## **GLOSSARY OF ABBREVIATIONS**

### **ENVIRONMENTAL MINISTRY TERMS**

- ESA** – Environmental Site Assessment  
**EPA** – Environmental Protection Act  
**RSC** – Record of Site Condition  
**MOECC** – Ministry of the Environment and Climate Change  
**MOE** – Ministry of the Environment (name of Ministry prior to 2015)  
**PCA** – Potentially Contaminating Activity  
**APEC** – Areas of Potential Environmental Concern  
**MNR** – Ontario Ministry of Natural Resources  
**OGS** – Ontario Geological Society  
**ACMs** – Asbestos-containing materials  
**PCBs** – Polychlorinated Byphenols  
**AST** – Above-ground Storage Tank  
**UST** – Underground Storage Tank  
**CSM** – Conceptual Site Model  
**ANSI** – Areas of Natural or Scientific Interest  
**COPC** – Contaminants of Potential Concern  
**WWIS** – Water Well Information System  
**OBM** – Ontario Base Map  
**SCC** – Standards Council of Canada  
**CALA** – Canadian Association for Laboratory Accreditation Inc.  
**QA/QC** – Quality Assurance/Quality Control



## GLOSSARY OF ABBREVIATIONS

### MEASUREMENT OR CHEMICAL TERMS

**VOCs** – Volatile Organic Compounds  
**PHCs** – Petroleum Hydrocarbons, Fractions 1-4  
**PAHs** – Polycyclic Aromatic Hydrocarbons  
**BTEX** – Benzene, Toluene, Ethylbenzene and Xylenes  
**BH** – Borehole  
**MW** – Monitoring Well  
**ppm** – parts per million  
**mbgs** – metres below ground surface  
**SAR** – Sodium Adsorption Ratio  
**EC** – Electrical Conductivity  
**mamsl** – metres above mean sea level  
**ml/min** – millilitres per minute  
**PID** – Photo-Ionization Detector  
**LEL** – Lower Explosive Limit  
**LNAPL** – Light Non Aqueous Phase Liquids  
**DNAPL** – Dense Non Aqueous Phase Liquids  
**CFCs** – Chlorofluorocarbons  
**IFS** – Infrared Sensor  
**µS/cm** – micro Siemens per centimetre  
**ORP** – Oxidation-Reduction Potential  
**DO** – Dissolved Oxygen  
**RPD** - Relative Percent Differences



## EXECUTIVE SUMMARY

Azure Group Inc. (Azure) was retained by Stylux Caledon Inc. to conduct a Phase Two ESA on a land package of seven (7) parcels owned by the client, which are presently part of a residential redevelopment plan. The RSC Properties are located along Old Church Road, approximately 275 m east, north east of its intersection with Airport Road in Caledon (Caledon East / ON).

This Phase Two ESA report has been produced to address the findings from the previous Phase One ESA conducted by Azure.

At the time of the investigation the property was developed with multiple residential slab-on-grade dwellings between the 1940s and 1960s. The sites' have currently and historically been developed as residential.

It is understood that this Phase Two ESA is being carried out for various Planning Act Applications purposes with the The Municipality of Caledon, Ontario and that an RSC pursuant to O. Reg. 153/04, as amended for the Subject Property is anticipated to be filed.

The following PCAs resulting in APECs were identified as part of the Phase One ESA completed regarding the Subject Property and documented in our Azure Phase One ESA report dated May 15, 2020:

Area of Potential Environmental Concern (APECs)	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity <sup>2</sup>	Location of PCA (on-site or off-site)	Contaminants of Potential Concern <sup>3</sup>	Media Potentially Impacted (Ground water, soil and/or sediment)
1	Southern edge of the residence located at 1 Russell Mason Court.	28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs	Soil Groundwater
2	Eastern edge of workshop located at 1 Russell Mason Court	28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs	Soil Groundwater
3	Area surrounding the shed/barn located on the northern portion of 1 Russell Mason Court	Other – Vehicle Storage, Tool Storage	On-site	VOCs BTEX PHCs	Soil Groundwater
4	Northern edge of the residence located at 2 Russell Mason Court.	28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs	Soil Groundwater
5	Northern edge of northern residence located at 6110 Old Church Road.	28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs	Soil Groundwater
6	Southern edge of Southern residence located at 6110 Old Church Road.	28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs	Soil Groundwater



	Fill identified within Golder Geotech/HydroBoreholes: BH19-1, BH19-3, BH19-4 to depths of a maximum of 0.61 mbgl. Horizontal extent of fill not fully identified	30. Importation of Fill Material of Unknown Quality	On-site	VOCs BTEX PHCs PAHs Metals CN- Cr (VI) Hg B-HWS EC SAR	Soil
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The Phase Two ESA consisted of advancing eight (8) boreholes (BH1, BH2, BH3, BH4, BH5, BH6, BH7, BH8) at the Subject Property, six (6) of which were completed as monitoring wells to address the above-noted PCAs and APECs from the On-Site and/or Of-Site land uses for residential purposes, as identified in our Phase One ESA report.

Boreholes BH1 to BH8 were drilled on June 3 – June 4, 2020. Six (6) of the boreholes (MW1 to MW6) were completed as groundwater monitoring wells. Installation of all monitoring wells was in accordance with O. Reg. 903.

Soil and groundwater samples from each borehole/monitoring well were collected and submitted for laboratory analysis of concentrations of the chemical parameters identified in our Phase One. The following table outlines the parameters analyzed in each borehole

Borehole ID (total depth mbgl)	Sample ID	Sample Depth	Comments / Rationale
BH1 (9.144)	BH1 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand</li> <li>APEC: 1</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMs, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH1 – SS7	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand and trace silt</li> <li>APEC: 1</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMs, BTEX, PHCs, pH</li> </ul>
BH2 (9.144)	BH2 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand</li> <li>APEC: 2, 3</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMs, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH2 – SS8 + Dup 1	5.334 – 6.096 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand and trace silt</li> <li>APEC: 2, 3</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMs, BTEX, PHCs</li> <li>Dup 1 Analyses: VOCs, THMs, BTEX, PHCs</li> </ul>
BH3 (9.144)	BH3 – SS1 + Dup 2	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Brown sand and gravel fill, trace organics</li> <li>APEC: 3, 7</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMs, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> <li>Dup 2 Analyses: Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH3 – SS7	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand and trace silt</li> <li>APEC: 3</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOC, THMs, BTEX, PHCs</li> </ul>
BH4 (9.144)	BH4 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Brown sand and gravel fill, trace organics</li> <li>APEC: 4, 7</li> <li>No irregular odours or soil staining present</li> </ul>



Borehole ID (total depth mbgl)	Sample ID	Sample Depth	Comments / Rationale
			<ul style="list-style-type: none"> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMs, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH4 – SS9	6.096 – 6.858 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand and trace silt</li> <li>APEC: 4</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOC, THMS, BTEX, PHCs</li> </ul>
BH5 (9.144)	BH5 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand</li> <li>APEC: 6</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH5 – SS7	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand and trace silt</li> <li>APEC: 6</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOC, THMS, BTEX, PHCs</li> </ul>
BH6 (9.144)	BH6 – SS1 + Dup 3	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Fine Sand</li> <li>APEC: 5</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> <li>Dup 3 Analyses: PAHs</li> </ul>
	BH6 – SS7 + Dup 4	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand and trace silt</li> <li>APEC: 5</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMs, BTEX, PHCs</li> <li>Dup 4 Analyses: VOCs, THMs, BTEX, PHCs</li> </ul>
BH7 (2.286)	BH7 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Brown sand and gravel fill, trace organics</li> <li>APEC: 7</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMs, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
BH8 (2.286)	BH8 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Brown sand and gravel fill, trace organics</li> <li>APEC: 7</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	Trip Blank	-	<ul style="list-style-type: none"> <li>Trip Blank Submitted with Laboratory Submission</li> </ul>

Monitoring Well ID (Sample ID)	COMMENTS / RATIONALE
MW1 + Dup 1	<ul style="list-style-type: none"> <li>Located within APEC 1</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, BTEX, PHCs</li> <li>Dup 1 groundwater samples analyzed for VOCs, THMs, BTEX, PHCs</li> </ul>
MW2	<ul style="list-style-type: none"> <li>Located within APEC 2, 3</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, THMs, BTEX, PHCs</li> </ul>
MW3	<ul style="list-style-type: none"> <li>Located within APEC 3</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, THMs, BTEX, PHCs</li> </ul>
MW4	<ul style="list-style-type: none"> <li>Located within APEC 4</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, THMs, BTEX, PHCs</li> </ul>
MW5	<ul style="list-style-type: none"> <li>Located within APEC 6</li> <li>No unusual sheen or odour identified in sample</li> </ul>



Monitoring Well ID (Sample ID)	COMMENTS / RATIONALE
	<ul style="list-style-type: none"><li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li><li>Groundwater sample analyzed for VOCs, THMs, BTEX, PHCs</li></ul>
MW6	<ul style="list-style-type: none"><li>Located within APEC 5</li><li>No unusual sheen or odour identified in sample</li><li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li><li>Groundwater sample analyzed for VOCs, THMS, BTEX, PHCs</li></ul>
(Trip Blank)	<ul style="list-style-type: none"><li>VOCs Trip Blank Submitted with laboratory submission</li></ul>

In accordance with the requirements of O. Reg. 153/04, based on the most sensitive expected residential use of the subject property, laboratory analysis of grain size (coarse), a laboratory-determined pH of Surficial: 7.77 to Subsurface: 8.08 on recovered soil samples from BH1 and BH8, Azure determined the appropriate standards for the Subject Property are Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the EPA, dated April 15, 2011, Table 2 Full Depth Generic Site Condition Standards in a potable groundwater condition for residential/parkland/institutional property use for coarse textured soils – MECP Standard.

Based on the results of laboratory analyses, the measured concentrations of the submitted soil surficial and subsurface soil, as well as, groundwater samples did not exceed the applicable MECP Standards. Therefore, at this time, no further investigations are recommended in the areas investigated at the Subject Property.

The Executive Summary statements are subject to the same limitations included in the Closure, Section 7.0, and are to be read in conjunction with the rest of this report.



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## 1.0 INTRODUCTION

Azure was retained by Stylux Caledon Inc. to conduct a Phase Two ESA on a package of seven (7) residential properties located in Caledon, ON. The cumulative package of properties will hereby be referred to as the “RSC Properties”. Each property is approximately rectangular in shape and all are currently utilized under residential land use.

According to the current redevelopment plan for the site, all current buildings are to be demolished and multiple residences (townhomes and detached dwellings) are to be erected as part of the redevelopment, certain portions of the RSC Properties will be conveyed to the Town of Caledon and the Region of Peel as part of the creation of roads and road widening as part of the new development. Therefore as recommended by the Clients’ retained planner (KLM Planning); Azure intends to file an RSC for the entire land package including all seven (7) parcels and the future conveyed lands. Therefore the current investigation was conducted in anticipation of filing an RSC with The Ministry of The Environment, Conservation and Parks (MECP). A site plan showing the proposed redevelopment can be found in Figure 10.

### 1.1 Site Description

As previously discussed, the RSC Properties are located on the northern edge of Old Church Road approximately 275 m east of Airport Road in the Town of Caledon, Ontario. The Phase One Study Area consists of the neighbouring properties located totally or partially within 250 m from the RSC Properties’ boundaries.

The RSC Properties are all currently developed with single-storey (bungalow) site buildings some of which are occupied by residential tenants and some are vacant. The Phase One study Area (a 250 m buffer surrounding the Phase One Properties) consists of residential properties to the north and west; community/parkland properties to the south, east and commercial along Airport Road (250 m west). All of the structures on the RSC properties are slab on grade.

Refer to Figures 1, 2, 3 & 4 for all current land-use information pertaining to the RSC Properties, Phase One Properties, Phase One Study Area and Phase Two Properties.

The RSC consists of seven (7) separate parcels making up the entire RSC property. All properties are adjacent to one another and will all be redeveloped under continued residential land use.

Based on a review of aerial photographs, the first developed use of the property was between 1946 – 1964 when the sites were developed as residential upon acquisition by Russell and Patricia Mason. A review of aerial photographs found the following information:



**Table 1 – Aerial Photograph Analysis**

<b>Aerial Photograph</b>	<b>Details</b>
2018	<ul style="list-style-type: none"> <li>The aerial shows the properties and surrounding area developed as present, the photograph was taken on May 7, 2018 and predates the demolition of the properties located at 6110 Old Church Road and 6122/6124 Old Church Road.</li> </ul>
2015	<ul style="list-style-type: none"> <li>The aerial shows the properties to have been developed as present with five buildings. The surrounding lands are residential with a park area to the south west.</li> </ul>
1985	<ul style="list-style-type: none"> <li>The aerial shows the properties to have been developed as present with five buildings. The surrounding lands are residential with some undeveloped area to the south west.</li> </ul>
1964	<ul style="list-style-type: none"> <li>The aerial shows the properties to have been developed with one building at the north end and a road way to Old Church Road. The surrounding lands were undeveloped.</li> </ul>
1946	<ul style="list-style-type: none"> <li>The aerial photograph shows the subject properties and the surrounding lands to be undeveloped.</li> </ul>

Based on a review of aerial photographs, the first developed use of the property was between 1946 – 1964 when the sites were developed as residential upon acquisition by Russell and Patricia Mason. Please refer to the Table of Current and Past Land Uses submitted with the RSC filing for property ownership information.

**Table 2 – Property Details**

<b>RSC Properties</b>	
Municipal Address	<b>6098 Old Church Road:</b> Lot 6 Plan 519 ALBION; CALEDON (PIN: 14336-0171)
Legal Description	<b>6142 Old Church Road:</b> Part Lot 21 Concession 1 ALBION PT 7, 43R19033; CALEDON (PIN: 14336-0189)
PIN	<b>1 Russell Mason Court:</b> Part Lot 21 Concession 1 ALBION PTS 1, 2 & 4, 43R19033; S/T RO998815; CALEDON (PIN: 14336-0190)
	<b>2 Russell Mason Court:</b> Part Lot 21 Concession 1 ALBION PTS 3 & 5, 43R19033; T/W VS69845, RO998814; CALEDON (PIN: 14336-0191)
	<b>6126 Old Church Road:</b> Part Lot 21 CON 1 ALBION PT 6, 43R19033; CALEDON (PIN: 14336-0192)
	<b>6122/6124 Old Church Road:</b>



	Part Lot 21 Concession 1 ALBION as in RO585800; CALEDON (PIN: 14336-0193)  <b>6110 (6120, 6112 &amp; 6114) Old Church Road:</b> Part Lot 21 Concession 1 ALBION AS IN RO549336; CALEDON (PIN: 14336-0194)
Max Length, Max Width	120 m x 176m
Area	17,805 m <sup>2</sup> (1.7805 Ha)
Physical Structures	Residential dwellings located on: 1,2 Russell Mason Court, Shed/barn located on 1 Russell Mason Court and Residential Dwellings located on: 6098 Old Church Road, 6126 Old Church Road, 6142 Old Church Road. 6110 and 6122/6124 Old Church Road used to have site buildings however they were demolished in 2018.
Basement or below grade structures	All dwellings are slab on grade
Utility services	Telecom: Below ground Water: municipal, below ground, Storm/ Sanitary sewer: below ground HVAC: below ground natural gas at 6142, 6126, 6098 Old Church Road and Furnace oil at 1,2 Russell Mason Court and at former dwellings at 6110, 6122/6144 Old Church Road
Exit and entry points	Each residential dwelling has a front and rear entry point, the shed/barn located on the northern portion of 1 Russell Mason Court has an entry door on the southwest corner of the building and a Bay door on the northeast portion of the building
UTM Centroid	17 T 591228 4858423

### 1.1.1 Ownership Details

The ownership and Client details for the Subject Property are shown in Table 2.

**Table 3 – Client and Property Ownership Details**

<b>Client</b>	
Client Name and Company	Stylux Caledon Inc. (A subsidiary of Stylux Homes)
Client Address and Contact Information	40 Vogell Road #51 Richmond Hill / ON
Property Owner, if different from above	--
Site Contact	Mr. Anas Khattani, Project Coordinator

## 1.2 Historical, Current and Proposed Future Uses

According to the current redevelopment plan for the site, all current buildings are to be demolished and multiple residences (town homes, and detached dwellings) are to be erected as part of the redevelopment, certain portions of the RSC Properties are anticipated to be



conveyed to the Town of Caledon and the Region of Peel as part of the creation of roads and road widening within the new development.

Based on a review of aerial photographs, the first developed use of the property was between 1946 – 1964 when the sites were developed as residential upon acquisition by Russell and Patricia Mason.

For more information pertaining to the historical land use of the property, please refer to the following Table:

**Table 4 – Table of Current and Past Land Uses**

**6120, 6122, 6124 Old Church Road:**

Part Lot 21 Concession 1 ALBION as in RO585800; CALEDON (PIN: 14336-0193)

Year	Name of owner	Description of property use	Property use	Other observations from aerial photographs, fire insurance plans, etc
-				
Prior to 1838	Crown	Agricultural use and/or vacant	Agricultural or Other Use	No records from specific time period
1838 to 1863	Kings College			No records from specific time period
1863 to 1865	Rebecca Greer			No records from specific time period
1865 to 1871	John Bracken			No records from specific time period
1871 to 1877	W.M Bracken			No records from specific time period
1877 to 1878	W.M Judge			No records from specific time period
1878 to 1947	Edith Cranston, Thomas cranston			1946 Aerial Photograph shows the site and study area as vacant and/or agricultural land
1947 to 1949	William J Atchison			No records from specific time period
1949 to 1951	Richard McNamara			No records from specific time period
1951 To 1955	Annie Naiman			No records from specific time period
1955 to 1965	Henry Riba			1964 Aerial shows site as vacant/undeveloped
1965 to 1981	Douglas Grant Shawn Sinkeldham Olga Grant			Residential Dwellings
1981 to 1995 (charge)	Joseph Shrei Carole Lapham	1985 Aerial Photographs show site and study area developed relatively as present		
To 2017	Lorenzo & Tracey Denneny and Paul Gedge	2004, 2006, 2009, 2015, 2017 Aerial Photographs show site developed as present		
2017 to Present	Stylux Caledon Inc.	2018 Aerial Photographs show site		



				developed as present
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**6110, 6112, 6114 Old Church Road**

Part Lot 21 Concession 1 ALBION AS IN RO549336; CALEDON (PIN: 14336-0194)

Year	Name of owner	Description of property use	Property use	Other observations from aerial photographs, fire insurance plans, etc
-				
Prior to 1838	Crown	Agricultural use and/or vacant	Agricultural or Other Use	No records from specific time period
1838 to 1863	Kings College			No records from specific time period
1863 t 1865	Rebecca Greer			No records from specific time period
1865 to 1871	John Bracken			No records from specific time period
1871 to 1877	W.M Bracken			No records from specific time period
1877 to 1878	W.M Judge			No records from specific time period
1878 to 1947	Edith Cranston, Thomas cranston			1946 Aerial Photograph shows the site and study area as vacant and/or agricultural land
1947 to 1949	William J Atchison			No records from specific time period
1949 to 1951	Richard McNamara			No records from specific time period
1951 To 1955	Anie Naiman			No records from specific time period
1955 to 1965	Henry Riba			1964 Aerial shows site as vacant/undeveloped
1965 to 1978	James Snyder & Gertrude Snyder	Residential Dwellings	Residential Use	1974 show properties developed as residential
1978 to 1980	Gertrude Synder			No records from specific time period
1980 to 2001	Lilly & Orvis Hunter			1985 Aerial Photographs show site and study area developed relatively as present
2001 to 2018	Bryan Arthur			2004, 2006, 2009, 2015, 2017 Aerial Photographs show site developed as present
2018 to present	Stylux Caledon Inc.			2018 Aerial Photographs show site developed as present

**6126 Old Church Road:**

Part Lot 21 Concession 1 ALBION Part 6, 43R19033; CALEDON (PIN: 14336-0192)

Year	Name of owner	Description of property use	Property use	Other observations from aerial photographs, fire insurance plans, etc
Part 6				



Prior to 1838	Crown	Agricultural use and/or vacant	Agricultural or Other Use	No records from specific time period
1838 to 1863	Kings College			No records from specific time period
1863 t 1865	Rebecca Greer			No records from specific time period
1865 to 1871	John Bracken			No records from specific time period
1871 to 1877	W.M Bracken			No records from specific time period
1877 to 1878	W.M Judge			No records from specific time period
1878 to 1947	Edith Cranston, Thomas Cranston			1946 Aerial Photograph shows the site and study area as vacant and/or agricultural land
1947 to 1948	William J Atichison			No records from specific time period
1948 to 1954	Charles A Kenny			No records from specific time period
1954 to 1955	Oscar siliro			No records from specific time period
1955 to 1968	Patricia Mason Russell Mason			1964 Aerial shows site as vacant/undeveloped
1968 to 1974	Henry Simpson & Isabel Simpson	Residential Dwellings	Residential Use	1974 show properties developed as residential
1974 to 2007	Henry Simpson			1985 Aerial Photographs show site and study area developed relatively as present
2007 to 2017	Bradley Simpson			2004, 2006, 2009, 2015 Aerial Photographs show site developed as present
2017 to Present	Stylux Caledon Inc.			2017, 2018 Aerial Photographs show site developed as present

**6142 Old Church Road:**

Part lot 21 Concession 1 ALBION Part 7, 43R19033; CALEDON (PIN: 14336-0189)

Year	Name of owner	Description of property use	Property use	Other observations from aerial photographs, fire insurance plans, etc
Part 7				
Prior to 1838	Crown	Agricultural use and/or vacant	Agricultural or Other Use	No records from specific time period
1838 to 1863	Kings College			No records from specific time period
1863 t 1865	Rebecca Greer			No records from specific time period
1865 to 1871	John Bracken			No records from specific time period
1871 to 1877	W.M Bracken			No records from specific time period
1877 to 1878	W.M Judge			No records from specific time period
1878 to 1947	Edith Cranston,			1946 Aerial Photograph shows the





	Thomas cranston			site and study area as vacant and/or agricultural land
1947 to 1948	William J Atichison			No records from specific time period
1948 to 1954	Charles A Kenny			No records from specific time period
1954 to 1955	Oscar Siliro			No records from specific time period
1955 to 1967	Patricia Mason & Russell Mason			1964 Aerial shows site as vacant/undeveloped
1967 to 2017	Patricia Mason	Residential Dwellings	Residential Use	1974 show properties developed as residential  1985 Aerial Photographs show site and study area developed relatively as present  2004, 2006, 2009, 2015 Aerial Photographs show site developed as present
2017 to Present	Stylux Caledon Inc.			2017, 2018 Aerial Photographs show site developed as present

**6098 Old Church Road:**

LT 6 PL 519 ALBION; CALEDON (PIN: 14336-0171)

Year	Name of owner	Description of property use	Property use	Other observations from aerial photographs, fire insurance plans, etc
Prior to 1838	Crown	Agricultural use and/or vacant	Agricultural or Other Use	No records from specific time period
1838 to 1863	Kings College			No records from specific time period
1863 t 1865	Rebecca Greer			No records from specific time period
1865 to 1871	John Bracken			No records from specific time period
1871 to 1877	W.M Bracken			No records from specific time period
1877 to 1878	W.M Judge			No records from specific time period
1878 to 1947	Edith Cranston, Thomas cranston			1946 Aerial Photograph shows the site and study area as vacant and/or agricultural land
1947 to 1948	William J Atichison			No records from specific time period
1948 to 1954	Charles A Kenny			No records from specific time period
1954 to 1956	Oscar Siliro			No records from specific time period
1956 to 1963	Beatrice Bile			1964 Aerial shows site as vacant/undeveloped
1963 to 1966	Thomas Byrne			No records from specific time



1966 to 1967	William J Stephens			period No records from specific time period
1967 to 2010	John Bot	Residential Dwellings	Residential Dwellings	1974 show properties developed as residential  1985 Aerial Photographs show site and study area developed relatively as present
2010 to 2018	Karen lee Bot			2004, 2006, 2009, 2015, 2017 Aerial Photographs show site developed as present
2018 to present	Stylux Caledon Inc.			2018 Aerial Photograph show site developed as present

**1 Russell Mason Court:**

Part Lot 21 Concession 1 ALBION Parts 1, 2 & 4, 43R19033; S/T RO998815; CALEDON

(PIN: 14336-0190)

Year	Name of owner	Description of property use	Property use	Other observations from aerial photographs, fire insurance plans, etc
Parts 1, 2, 4				
Prior to 1838	Crown	Agricultural use and/or vacant	Agricultural or Other Use	No records from specific time period
1838 to 1863	Kings College			No records from specific time period
1863 t 1865	Rebecca Greer			No records from specific time period
1865 to 1871	John Bracken			No records from specific time period
1871 to 1877	W.M Bracken			No records from specific time period
1877 to 1878	W.M Judge			No records from specific time period
1878 to 1947	Edith Cranston, Thomas cranston			1946 Aerial Photograph shows the site and study area as vacant and/or agricultural land
1947 to 1949	William J Atchison			No records from specific time period
1949 to 1956	Richard McNamara			No records from specific time period
1956 to 1992	Russell Mason & Patricia Mason			Residential Dwellings
1992 to 2017	Robert Carl Mason			2004, 2006, 2009, 2015 Aerial Photographs show site developed as present
2017 to 2017	Jason Mason			



	(son of Robert Carl Mason)			
2017 to present	Stylux Caledon Inc.			2017, 2018 Aerial Photographs show site developed as present

**2 Russell Mason Court:**

Part Lot 21 Concession 1 ALBION Parts 3 & 5, 43R19033; T/W VS69845, RO998814 ; CALEDON

(PIN: 14336-0191)

Year	Name of owner	Description of property use	Property use	Other observations from aerial photographs, fire insurance plans, etc
Part 3				
Prior to 1838	Crown	Agricultural use and/or vacant	Agricultural or Other Use	No records from specific time period
1838 to 1863	Kings College			No records from specific time period
1863 t 1865	Rebecca Greer			No records from specific time period
1865 to 1871	John Bracken			No records from specific time period
1871 to 1877	W.M Bracken			No records from specific time period
1877 to 1878	W.M Judge			No records from specific time period
1878 to 1947	Edith Cranston, Thomas cranston			1946 Aerial Photograph shows the site and study area as vacant and/or agricultural land
1947 to 1949	William J Atchison			No records from specific time period
1949 to 1956	Richard McNamara			No records from specific time period
1956 to 1992	Russel Mason & Patricia Mason	Residential Dwellings	Residential Use	1964 Aerial shows site as vacant/undeveloped
				1974 show properties developed as residential
				1985 Aerial Photographs show site and study area developed relatively as present
1992 to 2017	Rowley Candice Patrick			2004, 2006, 2009, 2015 Aerial Photographs show site developed as present
2017 to Present	Stylux Caledon Inc.			2017, 2018 Aerial Photographs show site developed as present

Year	Name of owner	Description of property use	Property use	Other observations from aerial photographs, fire insurance plans, etc
Part 5				
Prior to 1838	Crown	Agricultural use and/or vacant	Agricultural or Other Use	No records from specific time period



1838 to 1863	Kings College			No records from specific time period
1863 t 1865	Rebecca Greer			No records from specific time period
1865 to1871	John Bracken			No records from specific time period
1871 to 1877	W.M Bracken			No records from specific time period
1877 to 1878	W.M Judge			No records from specific time period
1878 to 1947	Edith Cranston, Thomas cranston			1946 Aerial Photograph shows the site and study area as vacant and/or agricultural land
1947 to 1949	William J Atchison			No records from specific time period
1949 to 1956	Richard McNamara			No records from specific time period
1956 to 1968	Russel Mason & Patricia Mason	Residential Dwellings	Residential Use	1964 Aerial shows site as vacant/undeveloped
1968 - 2017	Candice P.Rowley			1974 show properties developed as residential  1985 Aerial Photographs show site and study area developed relatively as present  2004, 2006, 2009, 2015 Aerial Photographs show site developed as present
2017 to Present	Stylux Caledon Inc.			2017, 2018 Aerial Photographs show site developed as present

### 1.3 Selection of Site Condition Standards

In accordance with the requirements of the amended O. Reg. 153/04, Azure selected applicable site condition standards. The rationale for the selection of these site condition standards is provided in this section and the reasoning to support the determination of the appropriate site condition standards is presented below.

#### 1.3.1 Environmentally Sensitive Areas

The Subject Property was not considered to be environmentally sensitive based on the following details:

- The Subject Property was neither located within an area of natural significance nor adjacent to such an area, as defined below:
  - A provincial park designated by a regulation under the Provincial Parks Act;
  - A conservation area established under the Public Lands Act;
  - An ANSI identified by the MNR as having provincial significance;
  - A wetland identified by the MNR as having provincial significance;



- An area designated by Caledon in its Official Plan as environmentally significant, however expressed, including designations of environmentally sensitive areas, being of environmental concern and being ecologically significant;
- An area designated as an escarpment natural area or an escarpment protection area by the Niagara Escarpment Plan under the Niagara Escarpment and Development Act;
- A endangered or threatened species habitat identified by the MNR; and,
- A property within an area designated as a natural core area or natural linkage area within the area to which the Oak Ridges Moraine Conservation Plan under the Oak Ridges Moraine Conservation Act, 2001, applies.
- The soil pH is within 5 and 9 for subsurface soils; and
- The Subject Property is not a “shallow soil property”.

### 1.3.2 Land Use

The site is currently utilized for residential land use. Due to the plans for continued residential land-use as redeveloped town homes and detached dwellings. The residential standards shall be applied to determine the sites’ suitability for the filing of Record of Site Condition.

### 1.3.3 Soil Grain Size Analysis

Grain size analyses were conducted and the results determined that the soils on site were comprised of fine sand, with increased silt content at depth. Therefore; The coarse grained soil classification shall be used for comparison of analytical data.

### 1.3.4 Potable Water

Water is supplied via municipal services, provided by Caledon/ Caledon East. The municipality derives its potable water from municipally drilled wells. A municipal well is located approximately 200m southeast of the subject property and the site is located within a class-B wellhead protection area. Based on the given information the potable water standards should be applied to the subject property.

### 1.3.5 Applicable Site Condition Standards

Based on the above information and assumptions, the restoration criteria for this site corresponded to residential/parkland/institutional land use for coarse textured soil using the full depth generic site condition standards in a potable ground water condition (Table 2, O. Regulation 511/09).



## 2.0 BACKGROUND INFORMATION

### 2.1 Physical Setting

The physical setting of the Subject Property was also described in further detail in the Phase One ESA report, prepared by Azure, provided under separate cover. A summary of the site topography, hydrology and regional geology is described below.

#### 2.1.1. Site Topography, Hydrology, and Regional Geology

At the time of the initial site visit by Azure, the Subject Property was operating under on-going residential land-use.

The Natural Resource Canada Topographic Map was reviewed. The map indicates that the RSC Properties are relatively flat, (approx elevation 295 masl) with the grade descending slightly to the northeast as the land dips towards the nearest watercourse.

The groundwater flow direction in the area, based on the topography, is inferred to be southeast in the direction of the nearest water-course. Groundwater is likely influenced by the presence of the nearby potable municipal water well.

According to the Physiography of the Southern Ontario, the Properties are located within the Physiography region of Kame Moraines, developed due to the deposition of sand and gravels, as well as till from the retreating glacier.

Map 2544 “Bedrock Geology of Ontario – Southern Sheet identifies the bedrock formations underlying the subject property to be Upper Ordovician aged, Shale, limestone, dolostone and siltstone of the Queenston Formation.

Map 2556 Quaternary Geology of Ontario – Southern Sheet identifies the sediment below the property to be classified as Glaciofluvial Ice-contact deposits; gravel and sand, minor till, includes esker, kame, end moraine, ice marginal delta and sub-aqueous fan deposits.

Well ID: 4907554 indicated that bedrock was not identified at 73.5 mbgl (241 feet).

Well ID: 4903815 also did not encounter bedrock at 75.6 mbgl (248 feet)

Well ID: 4900223 did not encounter bedrock at 100.3 mbgl (329 feet)

Well ID: 4905008 did not encounter bedrock at 111.3 mbgl (365 feet). This is the deepest well located in the vicinity of the site.

There was no evidence of pits, potable wells, standing water, lagoons, watercourses or stressed vegetation observed on the Subject Property.



## 2.2 Previous Environmental Investigations

Azure Group Inc conducted a Phase One ESA prior to the initiation of the current investigation. The Phase One is dated May 15, 2020. APECs identified in the Phase One report are as follows:

**Table 5 – APEC Table**

Area of Potential Environmental Concern (APECs)	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity <sup>2</sup>	Location of PCA (on-site or off-site)	Contaminants of Potential Concern <sup>3</sup>	Media Potentially Impacted (Ground water, soil and/or sediment)
1	Southern edge of the residence located at 1 Russell Mason Court.	28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs	Soil Groundwater
2	Eastern edge of workshop located at 1 Russell Mason Court	28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs	Soil Groundwater
3	Area surrounding the shed/barn located on the northern portion of 1 Russell Mason Court	Other – Vehicle Storage, Tool Storage	On-site	VOCs BTEX PHCs	Soil Groundwater
4	Northern edge of the residence located at 2 Russell Mason Court.	28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs	Soil Groundwater
5	Northern edge of northern residence located at 6110 Old Church Road.	28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs	Soil Groundwater
6	Southern edge of Southern residence located at 6110 Old Church Road.	28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs	Soil Groundwater
7	Fill identified within Golder Geotech/HydroG Borheole: BH19-1, BH19-3, BH19-4 to depths of a maximum of 0.61 mbgl. Horizontal extent of fill not fully identified	30. Importation of Fill Material of Unknown Quality	On-site	VOCs BTEX PHCs PAHs Metals CN- Cr (VI) Hg B-HWS EC SAR	Soil



It should be noted that the current investigation and the Phase One ESA were conducted in conjunction with one another.

Therefore the scope of the current Phase Two ESA was to thoroughly investigate all APECs identified by Azure in the aforementioned Phase One ESA.





## **3.0 SCOPE OF SUBSURFACE INVESTIGATION**

### **3.1 Overview of the Site Investigation**

This Phase Two ESA was carried out for the RSC Properties in general accordance with O. Reg. 153/04, as amended, to assess the subsurface conditions associated with the PCAs and APECs from the on-site and off-site land as identified in our Phase One ESA report.

#### **3.3.1 Scope of Work**

The scope of work for the Phase Two ESA consisted of the following:

- Conduct public and private utilities locate, and clear individual borehole locations;
- Retain a drilling company licensed for monitoring well installation, and advance a total of eight (8) boreholes.
- Install monitoring wells in six (6) of the eight boreholes;
- Conduct vapour measurements, and collect representative soil samples based on the vapour reading for VOCs, BTEX, PHCs, PAHs, metals, EC, SAR, Hg, CN-, Cr (VI), B-HWS pH, and/or grain size analysis (The CoCs);
- Collect groundwater samples from the monitoring wells for laboratory analysis of VOCs, BTEX, PHCs;
- Conduct elevation surveying and ground water monitoring in order to determine the groundwater flow direction; and,
- Review the data and prepare the Phase Two ESA, in accordance with O.Reg. 153/04.

### **3.2 Media Investigated**

The media investigated during this Phase Two ESA included soil and/or groundwater. There is no surface water or sediment on the Subject Property. As such, no surface water or sediment samples were collected.

### **3.3 Conceptual Site Model**

The Conceptual Site Model (CSM) is incorporated into the Phase Two CSM, presented in Appendix G.

### **3.4 Sampling and Analysis Plan**

To determine the extent and nature of the environmental contaminant concerns related to the APECs associated with the PCAs identified in the CSM, a sampling and analysis plan for the Subject Property investigation areas was developed; it is shown in the table below. The sampling and analysis plan included the following:



- Eight (8) Boreholes (Six (6) completed as monitoring wells) were drilled to collect soil and groundwater samples for laboratory analyses to determine contaminant concentrations across the investigated areas; and

A sampling and analyses rationale table which summarizes the locations of the boreholes and monitoring wells and sampling and analyses conducted (not including deviations or impediments, discussed in the following sections) is presented in Table 4 & 5 below.

**Table 6 - Sampling and Analysis Plan (Soil)**

Borehole ID (total depth mbgl)	Sample ID	Sample Depth	Comments / Rationale
BH1 (9.144)	BH1 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand</li> <li>• APEC: 1</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH1 – SS7	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand and trace silt</li> <li>• APEC: 1</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOCs, THMs, BTEX, PHCs, pH</li> </ul>
BH2 (9.144)	BH2 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand</li> <li>• APEC: 2, 3</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOCs, THMs, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH2 – SS8 + Dup 1	5.334 – 6.096 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand and trace silt</li> <li>• APEC: 2, 3</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOCs, THMs, BTEX, PHCs</li> <li>• Dup 1 Analyses: VOCs, THMs, BTEX, PHCs</li> </ul>
BH3 (9.144)	BH3 – SS1 + Dup 2	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>• Soil: Brown sand and gravel fill, trace organics</li> <li>• APEC: 3, 7</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOCs, THMs, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> <li>• Dup 2 Analyses: Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH3 – SS7	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand and trace silt</li> <li>• APEC: 3</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOC, THMs, BTEX, PHCs</li> </ul>
BH4 (9.144)	BH4 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>• Soil: Brown sand and gravel fill, trace organics</li> <li>• APEC: 4, 7</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOCs, THMs, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH4 – SS9	6.096 – 6.858 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand and trace silt</li> <li>• APEC: 4</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOC, THMS, BTEX, PHCs</li> </ul>
BH5 (9.144)	BH5 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand</li> <li>• APEC: 6</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH5 – SS7	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand and trace silt</li> <li>• APEC: 6</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> </ul>



Borehole ID (total depth mbgl)	Sample ID	Sample Depth	Comments / Rationale
			<ul style="list-style-type: none"> <li>Analyses: VOC, THMS, BTEX, PHCs</li> </ul>
BH6 (9.144)	BH6 – SS1 + Dup 3	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Fine Sand</li> <li>APEC: 5</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> <li>Dup 3 Analyses: PAHs</li> </ul>
	BH6 – SS7 + Dup 4	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand and trace silt</li> <li>APEC: 5</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMS, BTEX, PHCs</li> <li>Dup 4 Analyses: VOCs, THMS, BTEX, PHCs</li> </ul>
BH7 (2.286)	BH7 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Brown sand and gravel fill, trace organics</li> <li>APEC: 7</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
BH8 (2.286)	BH8 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Brown sand and gravel fill, trace organics</li> <li>APEC: 7</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	Trip Blank	-	<ul style="list-style-type: none"> <li>Trip Blank Submitted with Laboratory Submission</li> </ul>

To investigate all APECs located on the Subject Property, six (6) of the boreholes were completed as monitoring wells on June 3 & 4, 2020. The locations of the monitoring wells can be found in Figure 8a.

**Table 7 - Sampling and Analysis Plan (Groundwater)**

Monitoring Well ID (Sample ID)	COMMENTS / RATIONALE
MW1 + Dup 1	<ul style="list-style-type: none"> <li>Located within APEC 1</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, BTEX, PHCs</li> <li>Dup 1 groundwater samples analyzed for VOCs, THMS, BTEX, PHCs</li> </ul>
MW2	<ul style="list-style-type: none"> <li>Located within APEC 2, 3</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, THMS, BTEX, PHCs</li> </ul>
MW3	<ul style="list-style-type: none"> <li>Located within APEC 3</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, THMS, BTEX, PHCs</li> </ul>
MW4	<ul style="list-style-type: none"> <li>Located within APEC 4</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, THMS, BTEX, PHCs</li> </ul>
MW5	<ul style="list-style-type: none"> <li>Located within APEC 6</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, THMS, BTEX, PHCs</li> </ul>
MW6	<ul style="list-style-type: none"> <li>Located within APEC 5</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, THMS, BTEX, PHCs</li> </ul>
(Trip Blank)	<ul style="list-style-type: none"> <li>VOCs Trip Blank Submitted with laboratory submission</li> </ul>



#### 3.4.1 Deviations

No deviations to the sampling and analysis plan were made based on field observations during the assessment.

#### 3.4.2 Impediments

No physical impediments or denial of access were encountered during the implementation of the sampling and analysis plan.



## **4.0 SUBSURFACE INVESTIGATION METHODOLOGY**

### **4.1 General**

The investigation methodology was conducted in general accordance with O. Reg. 153/04 (including amendments up to O. Reg. 333/13) RSCs, Part XV.1 of the EPA, the former Ministry of the Environment and Energy (now MECP) Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario, December 1996 document (MECP Sampling Guideline), and Azure standard field procedures (collectively referred to as Standard Protocols).

### **4.2 Borehole Investigation**

Azure retained Sonic Soil Sampling Inc. (SSSI) of Vaughan, Ontario, to advance a total of eight (8) boreholes (BH1 to BH8) at the Subject Property on the following dates: June 3, 2020 and June 4, 2020.

#### **4.2.1 Soil Sampling**

Soil samples from all Boreholes were obtained continuously using 0.75 m split spoon soil sampling equipment. The split spoon samplers were washed with Alconox powder and Deionized and Distilled water before each use. Subsurface conditions encountered in the boreholes were logged by Azure personnel at the time of drilling. Soil samples were recovered from the boreholes at regular intervals, visually classified, and collected in laboratory prepared bottles, preserved at approximately 4°C and submitted for laboratory analyses. A portion of each soil sample was placed in a disposable plastic bag and analyzed in the field for petroleum derived headspace vapour concentrations (where possible) using an RKI Model Eagle 2 portable gas monitor equipped with a dual sensor for hydrocarbons (i.e., in the ppm and LEL range) and for volatile compounds (i.e., PID sensor in the ppm range). The hydrocarbon sensor was set to methane elimination mode and calibrated with hexane (for petroleum-derived vapours) and the PID sensor was calibrated with isobutylene (for solvent-derived vapours).

Soil samples were recovered, classified, collected and preserved in accordance with Standard Protocols to minimize the potential for cross-contamination. Disposable nitrile gloves were worn and changed between samples, and sampling tools were washed with Alconox Powder detergent and rinsed with Deionized and Distilled water prior to use and between samples.

Following the collection of soil samples, the boreholes were completed using 100 mm solid stem augers to facilitate the installation of monitoring wells.

Geologic descriptions of the subsurface soils encountered at the Subject Property are discussed in Section 5.1; the borehole logs are presented in Appendix B.



### 4.3 Monitoring Well Installation

Six (6) of boreholes (MW1, MW2, MW3, MW4, MW5, MW6) were completed as monitoring wells to facilitate groundwater monitoring and sampling. The monitoring wells consisted of a 50 mm (2 inch) diameter PVC riser pipe fitted with a 50 mm diameter threaded PVC well screen (10 slotted). The annuli of the monitoring wells were filled with silica sand around the well screen (to approximately 0.3 m above the top of the well screen), with the remainder of the well being sealed with hydrated Bentonite pellets. The monitoring wells (MW1, MW2 and MW3) were completed with a flush metal casing at existing grade. The monitoring wells (MW5 and MW6) were completed with a monument casing at existing grade.

On June 5, 2020 the monitoring wells were purged a total of three water volumes as part of the well development process. The average water column in each well was 2.5 m and at least 40L (2 x 20L bucket) was purged from each well.

#### 4.3.1 Groundwater Sampling

On June 8, 2020, the monitoring wells were monitored for groundwater levels and for the presence of LNAPL/DNAPL accumulations using a water level equipped with oil/water inter-phase probe.

On June 8, 2020 Groundwater samples were collected from the monitoring wells in MW1 to MW6. Following purging or development of the monitoring wells, once the groundwater had recovered to at least 80 percent of static levels, indicating that the observed groundwater was likely to be the formation groundwater. Groundwater samples were collected using dedicated polyethylene bailers transferred directly into laboratory-supplied sample containers.

Samples of groundwater submitted for analysis of concentrations of VOCs, BTEX, PHCs, were collected under zero headspace conditions, while other samples were collected under minimal headspace conditions. The groundwater samples were collected in accordance with standard field practices, placed in laboratory prepared bottles, preserved at approximately 4°C and submitted for laboratory analyses.

Groundwater samples were collected and preserved in accordance with Standard Protocols to minimize the potential for cross-contamination. Disposable nitrile gloves were worn and changed between samples, and sampling tools were washed with Alconox powder and rinsed with deionized water prior to use and between samples.

The above noted analyses on the soil and groundwater samples were conducted by ALS Laboratories of Waterloo, Ontario. ALS is accredited by the SCC in co-operation with CALA.



## 4.4 Field Screening Measurements

As noted in Section 4.2 – Borehole Investigation, field screening of the collected soil samples were completed based on visual and olfactory evidence of impact, and analyzed for petroleum- and solvent-derived headspace vapour concentrations (where possible) using an RKI Model Eagle 2, manufactured by RKI Instruments. The Eagle 2 was equipped with PID with a 10.6 eV standard lamp, and calibrated on site with 100 ppm isobutylene gas for detection of solvent-derived vapours, as well as an IRS calibrated on-site with 15% LEL hexane for detection of petroleum-derived vapours. The Eagle 2 was selected for field screening purposes since it can be used to field screen for solvent derived headspace vapour concentrations from BTEX compounds, chlorinated hydrocarbons, CFCs, and some semi-volatiles, as well as petroleum-derived vapours from PHCs. The Eagle 2 is reportedly accurate to within 5% of the displayed reading or 25 ppm, whichever is greater.

Groundwater levels in the monitoring wells at the time of the drilling program were monitored using a Solinst Model 122 Interface Meter, which identifies the presence of product (non-conductive liquid) with a steady state light and tone and the presence of water (conductive liquid) with an intermittent tone and light. The conductive liquid must have an EC that is greater than 50  $\mu\text{S}/\text{cm}$ . The conductive and non-conductive sensors have a reported accuracy of 1/200 feet or 1.0 mm. The conductive sensor has a reported accuracy of 1/100 feet or 1.0 mm.

## 4.5 Laboratory Analyses

ALS Environmental of Waterloo, Ontario, conducted all chemical analyses. ALS is a member of the Canadian Association for Laboratory Accreditation Inc. (CALA) and meets the requirements of Section 47 of O. Reg. 153/04 certifying that the analytical laboratory be accredited in accordance with the International Standard ISO/IEC 17025 and with standards developed by the Standards Council of Canada.

### 4.5.1 Soil

Soil samples were collected during the drilling investigation on the Subject Property and submitted for laboratory analyses of the contaminants of potential concern (COPCs) based on the sampling plan. No deviations from the sampling plan occurred during the investigation.

### 4.5.2 Groundwater

Groundwater samples were collected from permanent monitoring wells on the Subject Property and submitted for laboratory analysis of the COPCs based on the sampling plan. No deviations from the sampling plan occurred during the investigation.



#### **4.6 Residue Management Practices**

Soil cuttings and purged groundwater were collected in soil drums and stored at the Subject Property for subsequent off-site disposal by an MECP approved waste hauler, as per the scope of work.

#### **4.7 Elevation Surveying**

Elevations of the boreholes were surveyed by Azure representative on June 4, 2020 by using an electronic elevation laser surveyor. An arbitrary benchmark of 295 masl was assigned to MW2 and all other surface elevations were measured relative to the arbitrary benchmark.

#### **4.8 Quality Assurance and Quality Control Measures**

The Quality Assurance and Quality Control (QA/QC) Measures are conducted following the Sampling and Analysis Plan, which detailed the procedures of sample collection, storage, transportation in order to meet the requirements of O.Reg. 153/04 to properly assess the soil and groundwater quality at the Site. The QA/QC program included decontamination procedures to minimize the potential of cross contamination, the selection of worst case samples, and collection of QA/QC samples. The QA/QC details are documented in Appendix E.

Four (4) duplicate soil samples (DUP1, DUP2, DUP3, DUP4) were collected during the drilling program and submitted for analysis of PHC, BTEX, VOC and PAHs, Metals and inorganic parameters respectively, for QA/QC purposes. One (1) duplicate groundwater samples (DUP1) was collected from monitoring well and submitted for analysis of PHC, BTEX, VOC parameters, respectively, for QA/QC purposes. One (1) trip blank sample for soil and one for water was also submitted and analyzed for VOCs per laboratory submission. There were no significant deviations between the results and the sampling and analysis plan.





## 5.0 RESULTS OF THE PHASE TWO ESA

### 5.1 Site Geology and Stratigraphy

#### Desktop Review

The Natural Resource Canada Topographic Map was reviewed. The map indicates that the RSC Properties are relatively flat, (approx elevation 295 masl) with the grade descending slightly to the northeast as the land dips towards the nearest watercourse.

According to the Physiography of the Southern Ontario, the Properties are located within the Physiography region of Kame Moraines, developed due to the deposition of sand and gravels, as well as till from the retreating glacier.

Map 2544 “Bedrock Geology of Ontario – Southern Sheet identifies the bedrock formations underlying the subject property to be Upper Ordovician aged, Shale, limestone, dolostone and siltstone of the Queenston Formation.

Map 2556 Quaternary Geology of Ontario – Southern Sheet identifies the sediment below the property to be classified as Glaciofluvial Ice-contact deposits; gravel and sand, minor till, includes esker, kame, end moraine, ice marginal delta and sub-aqueous fan deposits.

Well ID: 4907554 indicated that bedrock was not identified at 73.5 mbgl (241 feet).

Well ID: 4903815 also did not encounter bedrock at 75.6 mbgl (248 feet)

Well ID: 4900223 did not encounter bedrock at 100.3 mbgl (329 feet)

Well ID: 4905008 did not encounter bedrock at 111.3 mbgl (365 feet). This is the deepest well located in the vicinity of the site.

The OGS bedrock topography and overburden thickness map was reviewed in order to determine the approximate depth to bedrock. Based on the approximate overburden thickness provided in the map; Azure estimates that the depth to bedrock is approximately 150 – 175 mbgl.

#### Field Observations

Quaternary clasts and bedrock encountered during the Phase Two drilling investigation consisted of the following stratigraphical layers:

**Granular Fill material:** Gravel and Sand, granular fill material with trace organic content to maximum depths of 0.60 mbgl. This Fill material was found in Azure Boreholes: BH3, BH4, BH7, BH8 & Golder Boreholes: BH19-1, BH19-3, BH19-4.

**Native Sand:** Uniform Fine Native coarse sand containing medium clast content is located throughout the entire RSC property (properties) at surface or underlying fill material to investigated depth of 9.144 mbgl. Increased silt content was found in the native sands near 5



– 7 mbgl as moisture increased and soils appeared grey due to lack of oxidation.

## 5.2 Groundwater Monitoring

### 5.2.1 Groundwater Flow Direction

The shallow unconfined aquifer was estimated to exist between 6.16 – 7.04 mbgl throughout the Subject property.

**Table 8 – Groundwater Monitoring Data**

Monitoring Well ID Record # (Surface Elevation)	Construction	Depth to water table (mbgl)	Water table elevation <sup>1</sup>
MW1 A289556 (294.812)	Riser: 5.597 m Screen: 3.048 m	7.04	287.772
MW2 A289639 (295 masl*)	Riser: 5.722 Screen: 3.048	6.88	288.12
MW3 A289682 (294.868)	Riser: 5.762 Screen: 3.048	6.94	287.928
MW4 A289680 (294.853)	Riser: 5.702 Screen: 3.048	6.98	287.873
MW5 A289683 (294.041)	Riser: 5.592 Screen: 3.048	6.41	287.631
MW6 A296692 (294.192)	Riser: 5.252 Screen: 3.048	6.16	288.032

The overall groundwater flow for the area is southeast towards the nearest watercourse.

### 5.2.2 Groundwater Hydraulic Gradient

The site hydrogeological conditions exhibited an unconfined aquifer at the study site. Hydraulic gradient for the Subject Property, measured through the onsite wells, was estimated to be approximately 0.01 m/m across the site. Surface water drainage is diverted to municipal storm ditches along the southeastern property boundary on Old Church Road. The overall groundwater flow for the area is southeast. Please refer to Figure 9 for GW Flow Direction.



### 5.2.3 Subsurface Non-Aqueous Phase Liquids

LNAPL/DNAPLs were not encountered in the boreholes during drilling and during monitoring, purging (development) and sampling of the monitoring wells.

## 5.3 **Soil Results**

### 5.3.1 Subsurface Vapour Concentrations

Headspace vapour concentrations that were measured during recovery of the soil samples during drilling are presented on the borehole logs in Appendix B. As shown, soil headspace vapour concentrations in the soil samples recovered from the boreholes at the Subject Property were relatively low; the soil samples did not exhibit odours/staining, and the concentrations did not exceed 10 ppm by PID or 100 ppm by IRS.

No regulatory criteria for PHC- or solvent-derived soil vapour concentrations was observed; however, soil vapour concentrations are often used as a field screening tool to practically identify soils which are impacted with combustible liquids or PHCs. Elevated soil vapour concentrations are generally indicative of the presence of volatile combustible products, i.e., gasoline, methane, solvents and, to a lesser extent, diesel and fuel oil. Especially in the absence of visual or olfactory evidence of impact, it should be noted that elevated soil vapour concentrations may also be associated with the presence of moisture, microbial activity or decaying organic matter.

### 5.3.2 Soil Quality

Soil samples were collected during the drilling investigation on the Subject Property and submitted for laboratory analyses of the contaminants of potential concern (COPCs). The analytical results for tested soil samples were all below the MECP Table 2 SCSs.

Laboratory certificates for the soil analytical results are included in Appendix C.

## 5.4 **Groundwater Results**

### 5.4.1 Groundwater Quality

Groundwater samples were collected from permanent monitoring wells on the Phase Two Property and submitted for laboratory analysis of the COPCs. The analytical results for tested groundwater samples were all below the MECP Table 2 SCSs.

The laboratory certificates for the groundwater analytical results are included in Appendix D.

## 5.5 **Quality Assurance/Quality Control Results**

Azure staff with experience in both intrusive field investigation techniques and the COPCs



that were encountered at the Subject Property supervised and/or performed the soil and groundwater sampling under the guidance of the QP<sub>ESA</sub>. As previously mentioned, the field program maintained QA/QC using all appropriate equipment-cleaning procedures and duplicate sampling. Appropriate measures (such as field staff wearing disposable gloves, using dedicated sampling equipment, decontaminating non-dedicated sampling equipment, using pre-cleaned laboratory supplied sample containers, labelling samples and completing laboratory-supplied chain of custody records) were used to ensure data quality.

Azure collected soil and groundwater samples in conformance with our Standard Operating Procedures, developed in accordance with O. Reg. 153/04, as amended.

Samples were shipped in ice-filled coolers (to maintain temperatures at less than 10°C) along with a chain of custody to ALS. ALS performed chemical analysis in compliance with the MECP, Laboratory Services Branch, Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the EPA, as amended.

Field Duplicate samples were collected for a minimum of 10% of the submitted samples in order to evaluate sample precision related to the analysis of all submitted soil and groundwater samples. RPDs were calculated for each compound detected if it was present in both samples of the Duplicate pair, at concentrations above 5 times of the method detection limits of each parameter.

To assess any potential contamination introduced during sample transport or from field handling procedures and the sampling process, one laboratory-supplied trip blank would be submitted per groundwater submission for laboratory analysis.

Field Duplicate samples were collected to evaluate sample precision related to the analysis of all submitted soil and groundwater samples. RPD calculations were determined for each compound if it was measured in both the result of the submitted sample and the corresponding Duplicate sample and it was more than 5 times the method detection limit for the respective parameter.

#### 5.5.1 Data Quality Objectives

The analytical data received from the laboratory was reviewed for the following:

- To verify samples were analyzed for the methods requested in the chain of custody;
- To verify the requested analyses were conducted as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the EPA, as amended;
- To review any laboratory QA/QC issues with respect to laboratory Duplicates, matrix spikes, spiked blanks, method blanks or surrogate; and
- Comparability of the data. Standard analytical procedures and standard units for reporting were used to ensure comparability of the data. The results obtained are comparable to industry standards as the collection and analytical techniques that followed approved documented procedures.



The laboratory certificates for the field QA/QC analytical results are included in Appendix C and D.

### 5.5.2 Standard Operating Procedures

Azure standard field procedures were developed in compliance with O. Reg. 153/04, as amended, for borehole drilling, soil sampling, field screening measurements, monitoring well installation, monitoring well development, field measurement of water quality indicators and ground water sampling (collectively referred to as Standard Protocols). These Standard Protocols were adhered to in completing the field activities for this Phase Two ESA.

In consultation with Azure field staff, other Azure team members and upon review of ALS laboratory certificates; the QP<sub>ESA</sub> concluded that the data met the data quality objectives of this investigation and, therefore, the overall objectives of the Phase Two ESA investigation and assessment were met.

## 5.6 Phase Two Conceptual Site Model

Based on the Phase Two ESA completed for the Subject Property, a Phase Two CSM was derived and presented in Appendix G. The Phase Two CSM shall be submitted to the MECP for review, as part of the filing for a record of site condition.

## 6.0 CONCLUSIONS

This Phase Two ESA was carried out for the Subject Property located at a package of seven (7) residential properties located in Caledon, Ontario, in general accordance with O. Reg. 153/04, as amended, to assess the subsurface conditions associated with the PCAs and APECs from both the on-site and off-site land uses, as identified in our Phase One ESA report, dated May 15, 2020.

The Phase Two ESA consisted of the following:

1. Drilling of boreholes BH1 to BH8 was completed on June 3 and June 4, 2020. Six (6) of the boreholes (MW1 to MW6) were completed as groundwater monitoring wells. Installation of all monitoring wells was in accordance with O. Reg. 903
2. Soil and groundwater samples from each borehole/monitoring well were collected and submitted for laboratory analysis of concentrations of one or more of the following parameters: VOC, PHC/BTEX, metals and inorganics, PAHs, pH, and/or grain size analysis;
3. In accordance with the requirements of O. Reg. 153/04, based on the most sensitive expected use of the Subject Property (residential land use), laboratory analysis of grain size on soil sample indicating coarse textured soil), a laboratory-determined pH of Surface 7.77 to 8.08 on recovered soil samples from BH1 and BH8, Azure



determined that the appropriate standards for the Subject Property would be the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the EPA dated April 15, 2011, Table 2 Full Depth Generic Site Condition Standards in a potable Groundwater Condition (or residential/ parkland/ institutional property use and coarse textured soils – Table 2 SCS.

4. Based on the results of laboratory analyses, none of the measured concentrations in submitted soil and groundwater samples exceeded the applicable Table 2 SCS.

Therefore, there are no further investigations recommended in the areas investigated at the Subject Property at this time.

## **7.0 CLOSURE**

This report has been prepared for the sole benefit of Stylux Caledon Inc. Reliance is also provided to the MECP, The Regional Municipality of Peel and the Town of Caledon, for the purposes of evaluating this report with respect to a RSC.

This report may not be relied upon by any other person or entity without the express written consent of Azure Group Inc. and Stylux Caledon Inc. Any use that a third party makes of this report, or any reliance on decisions made based on it, is the responsibility of such parties. Azure Group Inc. accepts no responsibility for damages, if any, suffered by any party as a result of decisions made or actions based on this report.

Azure Group Inc. makes no other representation whatsoever, including those concerning the legal significance of its findings or as to the other legal matters addressed incidentally in this report, including but not limited to, ownership of any property or the application of any law to the facts set forth herein. With respect to any regulatory compliance issues, regulatory statutes are subject to interpretation. These interpretations may change over time, thus the Client should review such issues with appropriate legal counsel.

An environmental site characterization is a limited sampling of a site. The conclusions given herein are based on information gathered at specific borehole locations and, therefore, these conclusions can only be interpreted to an undefined limited area around these locations. The extent of that limited area depends on the soil and groundwater conditions, as well as the history of the site reflecting natural, construction and other activities. In addition, since analyses have been carried out for a limited number of chemical parameters, it should not be inferred that other chemical groups are not present. Due to the nature of the investigation and the limited data available, Azure Group Inc. cannot warrant against undiscovered environmental liabilities. No other warranty or representation, either expressed or implied, is included or intended in this report.

If any conditions at the site are encountered which differ from those at the borehole locations and/or additional site information become available, Azure Group Inc. requests that this information be brought to our attention so that we may re-evaluate the conclusions presented



herein. It should also be noted that current environmental Regulations, Guidelines, Policies, Standards, Protocols and Objectives are subject to change, and when and if such changes are then put into effect, this may alter the conclusions and recommendations noted throughout this report.

The undersigned Qualified Person, Ahmed Al-Temimi, P.Eng., QP<sub>ESA</sub>, confirms that he/she was responsible for conducting and/or supervising this Phase Two ESA and the associated findings and conclusions.

**AZURE GROUP INC.**

A handwritten signature in black ink, appearing to read 'A. Tope', written over the printed name.

Andrew Tope B.Sc, M.Env.Sc., P.Geo., QP<sub>ESA</sub>  
Senior Project Manager

A handwritten signature in black ink, appearing to read 'A. Temimi', written over the printed name.

Ahmed Al-Temimi, M.Sc., P.Eng., QP<sub>ESA</sub>  
President, Environmental Engineer



## **TABLES**





**TABLE 9: Soil Chemical Analyses – VOCs, BTEX, PHCs**

Parameter	2011 MECP Table 2 Res. Coarse	BH1 – SS1	BH1 – SS7	BH2 – SS1	BH2 – SS8	Dup 1 (BH2 – SS8)	BH3 – SS1	BH3 – SS7	BH4 – SS1
		June 3, 2020	June 3, 2020	June 3, 2020	June 3, 2020	June 3, 2020	June 3, 2020	June 3, 2020	June 3, 2020
		June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020
Date of Collection									
Date Reported									
Sampling Depth (mbl)		0.00 – 0.762	4.572 – 5.334	0.00 – 0.762	5.334 – 6.096	5.334 – 6.096	0.00 – 0.762	4.572 – 5.334	0.00 – 0.762
Analytical report reference number		L2456477	L2456477	L2456477	L2456477	L2456477	L2456477	L2456477	L2456477
Acetone	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	0.21	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068
Bromodichloromethane	1.5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bromoform	0.27	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bromoethane	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Carbon Tetrachloride	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chlorobenzene	2.4	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibromochloromethane	2.3	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chloroform	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2 – Dibromoethane	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2 – Dichlorobenzene	1.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,3 – Dichlorobenzene	4.8	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,4 – Dichlorobenzene	0.083	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dichlorodifluoromethane	16	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1 – Dichloroethane	0.47	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2 – Dichloroethane	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1 – Dichloroethylene	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cis – 1,2 – Dichloroethylene	1.9	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Trans – 1,2 – Dichloroethylene	0.084	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methylene Chloride	0.1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2 – Dichloropropane	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cis, Trans – 1,3 Dichloropropene	0.05	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
Ethylbenzene	1.1	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018
n-Hexane	2.8	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methyl Ethyl Ketone	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	1.7	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MTBE	0.75	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Styrene	0.7	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,1,2 Tetrachloroethane	0.058	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2,2 Tetrachloroethane	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Tetrachloroethylene	0.28	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	2.3	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1,1 Trichloroethane	0.38	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2 Trichloroethane	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Trichloroethylene	0.061	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Trichlorofluoromethane	4	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Vinyl Chloride	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Xylenes (total)	3.1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
PHC F1	55	<5	<5	<5	<5	<5	<5	<5	<5
PHC F2	98	<10	<10	<10	<10	<10	<10	<10	<10
PHC F3	300	<50	<50	<50	<50	<50	<50	<50	<50
PHC F4	2800	<50	<50	<50	<50	<50	<50	<50	<50

All values in ug/g – ppm – parts per million MDL – method detection limit. D- Duplicate Sample \*MOE O. Reg. – Table 2 – Full Depth, Generic Site Condition Standard in a potable groundwater condition, Residential Property Use and coarse textured soil criteria applied.

Orange – MDL exceeds applicable SCS

Red – Measured Conc. exceeds applicable SCS



Parameter	2011 MECP Table 2 Res. Coarse	BH4 – SS9	BH5 – SS1	BH5 – SS7	BH6 – SS1	BH6 – SS7	BH7 – SS1	BH8 – SS1	Dup 4 (BH8 – SS1)
		June 3, 2020	June 3, 2020	June 3, 2020	June 4, 2020	June 4, 2020	June 3, 2020	June 3, 2020	June 3, 2020
		June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020
Date of Collection									
Date Reported									
Sampling Depth (m bgl)		6.096 – 6.858	0.00 – 0.762	4.572 – 5.334	0.00 – 0.762	4.572 – 5.334	0.00 – 0.762	0.00 – 0.762	0.00 – 0.762
Analytical report reference number		L2456477	L2456477	L2456477	L2456477	L2456477	L2456477	L2456477	L2456477
Acetone	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	0.21	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068
Bromodichloromethane	1.5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bromoform	0.27	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bromoethane	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Carbon Tetrachloride	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chlorobenzene	2.4	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibromochloromethane	2.3	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chloroform	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2 – Dibromoethane	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2 – Dichlorobenzene	1.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,3 – Dichlorobenzene	4.8	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,4 – Dichlorobenzene	0.083	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dichlorodifluoromethane	16	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1 – Dichloroethane	0.47	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2 – Dichloroethane	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1 – Dichloroethylene	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cis – 1,2 – Dichloroethylene	1.9	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Trans – 1,2 – Dichloroethylene	0.084	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methylene Chloride	0.1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2 – Dichloropropane	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Cis, Trans – 1,3 Dichloropropene	0.05	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
Ethylbenzene	1.1	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018
n-Hexane	2.8	<0.050	<0.050	<0.050	<0.050	<0.050	0.353	<0.050	<0.050
Methyl Ethyl Ketone	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	1.7	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MTBE	0.75	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Styrene	0.7	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,1,2 Tetrachloroethane	0.058	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2,2 Tetrachloroethane	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Tetrachloroethylene	0.28	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	2.3	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1,1 Trichloroethane	0.38	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2 Trichloroethane	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Trichloroethylene	0.061	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Trichlorofluoromethane	4	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Vinyl Chloride	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Xylenes (total)	3.1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
PHC F1	55	<5	<5	<5	<5	<5	13.6	<5	<5
PHC F2	98	<10	<10	<10	<10	<10	<10	<10	<10
PHC F3	300	<50	<50	<50	<50	<50	<50	<50	<50
PHC F4	2800	<50	<50	<50	<50	<50	<50	<50	<50

All values in ug/g – ppm – parts per million MDL – method detection limit. D- Duplicate Sample \*MOE O. Reg. – Table 2 – Full Depth, Generic Site Condition Standard in a potable groundwater condition, Residential Property Use and coarse textured soil criteria applied.

Orange – MDL exceeds applicable SCS

Red – Measured Conc. exceeds applicable SCS



Parameter	2011 MECP Table 2 Res. Coarse	Trip Blank
Date of Collection		-
Date Reported		-
Sampling Depth (mbgl)		-
Analytical report reference number		-
Acetone	16	<0.50
Benzene	0.21	<0.0068
Bromodichloromethane	1.5	<0.050
Bromoform	0.27	<0.050
Bromoethane	0.05	<0.050
Carbon Tetrachloride	0.05	<0.050
Chlorobenzene	2.4	<0.050
Dibromochloromethane	2.3	<0.050
Chloroform	0.05	<0.050
1,2 – Dibromoethane	0.05	<0.050
1,2 – Dichlorobenzene	1.2	<0.050
1,3 – Dichlorobenzene	4.8	<0.050
1,4 – Dichlorobenzene	0.083	<0.050
Dichlorodifluoromethane	16	<0.050
1,1 – Dichloroethane	0.47	<0.050
1,2 – Dichloroethane	0.05	<0.050
1,1 – Dichloroethylene	0.05	<0.050
Cis – 1,2 – Dichloroethylene	1.9	<0.050
Trans – 1,2 – Dichloroethylene	0.084	<0.050
Methylene Chloride	0.1	<0.050
1,2 – Dichloropropane	0.05	<0.050
Cis, Trans – 1,3 Dichloropropene	0.05	<0.042
Ethylbenzene	1.1	<0.018
n-Hexane	2.8	<0.050
Methyl Ethyl Ketone	16	<0.50
Methyl Isobutyl Ketone	1.7	<0.50
MTBE	0.75	<0.050
Styrene	0.7	<0.050
1,1,1,2 Tetrachloroethane	0.058	<0.050
1,1,2,2 Tetrachloroethane	0.05	<0.050
Tetrachloroethylene	0.28	<0.050
Toluene	2.3	<0.080
1,1,1 Trichloroethane	0.38	<0.050
1,1,2 Trichloroethane	0.05	<0.050
Trichloroethylene	0.061	<0.010
Trichlorofluoromethane	4	<0.050
Vinyl Chloride	0.02	<0.020
Xylenes (total)	3.1	<0.050
PHC F1	55	-
PHC F2	98	-
PHC F3	300	-
PHC F4	2800	-

All values in ug/g – ppm – parts per million MDL – method detection limit. D- Duplicate Sample \*MOE O. Reg. – Table 2 – Full Depth, Generic Site Condition Standard in a potable groundwater condition, Residential Property Use and coarse textured soil criteria applied.

Orange – MDL exceeds applicable SCS

Red – Measured Conc. exceeds applicable SCS



**TABLE 10: Soil Chemical Analyses – PAHs**

Parameter	2011 MECP Table 2 Res. Coarse	BH1 – SS1	BH2 – SS1	BH3 – SS1	BH4 – SS1	BH5 – SS1	BH6 – SS1	Dup 3 (BH6 – SS1)
		June 3, 2020	June 3, 2020	June 3, 2020	June 3, 2020	June 3, 2020	June 4, 2020	June 4, 2020
Date of Collection		June 3, 2020	June 3, 2020	June 3, 2020	June 3, 2020	June 3, 2020	June 4, 2020	June 4, 2020
Date Reported		June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020
Sampling Depth (mbgl)		0.00 – 0.762	0.00 – 0.762	0.00 – 0.762	0.00 – 0.762	0.00 – 0.762	0.00 – 0.762	0.00 – 0.762
Analytical report reference number		L2456477	L2456477	L2456477	L2456477	L2456477	L2456477	L2456477
Acenaphthene	7.9	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	0.67	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)anthracene	0.5	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)Pyrene	0.3	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(b)fluoranthene	0.78	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(ghi)perylene	6.6	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	0.78	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chrysene	7	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenzo(ah)anthracene	0.1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluoranthene	0.69	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	62	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(123-cd)Pyrene	0.38	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1+2 Methylnaphthalene	0.99	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
1 Methylnaphthalene	0.99	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
2 Methylnaphthalene	0.99	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Naphthalene	0.6	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
Phenanthrene	6.2	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046
Pyrene	78	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

All values in ug/g – ppm – parts per million MDL – method detection limit. D- Duplicate Sample \*MOE O. Reg. – Table 2 – Full Depth, Generic Site Condition Standard in a potable groundwater condition, Residential Property Use and coarse textured soil criteria applied.

Orange – MDL exceeds applicable SCS

Red – Measured Conc. exceeds applicable SCS



Parameter	2011 MECP Table 2 Res. Coarse	BH7 – SS1	BH8 – SS1
Date of Collection		June 3, 2020	June 3, 2020
Date Reported		June 12, 2020	June 12, 2020
Sampling Depth (mbgl)		0.00 – 0.762	0.00 – 0.762
Analytical report reference number	L2456477	L2456477	
Acenaphthene	7.9	<0.050	<0.050
Acenaphthylene	0.15	<0.050	<0.050
Anthracene	0.67	<0.050	<0.050
Benzo(a)anthracene	0.5	<0.050	<0.050
Benzo(a)Pyrene	0.3	<0.050	<0.050
Benzo(b)fluoranthene	0.78	<0.050	<0.050
Benzo(ghi)perylene	6.6	<0.050	<0.050
Benzo(k)fluoranthene	0.78	<0.050	<0.050
Chrysene	7	<0.050	<0.050
Dibenzo(ah)anthracene	0.1	<0.050	<0.050
Fluoranthene	0.69	<0.050	<0.050
Fluorene	62	<0.050	<0.050
Indeno(123-cd)Pyrene	0.38	<0.050	<0.050
1+2 Methylnaphthalene	0.99	<0.042	<0.042
1 Methylnaphthalene	0.99	<0.030	<0.030
2 Methylnaphthalene	0.99	<0.030	<0.030
Naphthalene	0.6	<0.013	<0.013
Phenanthrene	6.2	<0.046	<0.046
Pyrene	78	<0.050	<0.050

All values in ug/g – ppm – parts per million MDL – method detection limit. D- Duplicate Sample \*MOE O. Reg. – Table 2 – Full Depth, Generic Site Condition Standard in a potable groundwater condition, Residential Property Use and coarse textured soil criteria applied.

Orange – MDL exceeds applicable SCS

Red – Measured Conc. exceeds applicable SCS



**TABLE 11: Soil Chemical Analyses – Metals & Inorganics**

Parameter	2011 MECP Table 2 Res. Coarse	BH1 – SS1	BH2 – SS1	BH3 – SS1	Dup 2 (BH3 – SS1)	BH4 – SS1	BH5 – SS1	BH6 – SS1
Date of Collection		June 3, 2020	June 3, 2020	June 3, 2020	June 3, 2020	June 3, 2020	June 3, 2020	June 4, 2020
Date Reported		June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020	June 12, 2020
Sampling Depth (mbgl)		0.00 – 0.762	0.00 – 0.762	0.00 – 0.762	0.00 – 0.762	0.00 – 0.762	0.00 – 0.762	0.00 – 0.762
Analytical report reference number		L2456477	L2456477	L2456477	L2456477	L2456477	L2456477	L2456477
Antimony	7.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	18	<1.0	<1.0	<1.0	<1.0	1.2	1.0	1.3
Barium	390	7.3	6.4	7.3	8.6	24.9	8.3	15.0
Beryllium	4	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Boron - HWS	120	<0.10	<0.10	<0.10	<0.10	0.13	<0.10	0.13
Boron	1.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Cadmium	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chromium	160	3.7	4.2	5.5	5.1	8.8	5.6	6.4
Cobalt	22	1.3	1.2	1.5	1.5	2.4	1.5	1.9
Copper	140	3.4	3.6	3.5	4.1	3.7	3.3	3.9
Lead	120	1.6	1.7	2.1	2.6	3.5	1.9	3.8
Mercury	0.27	<0.0050	<0.0050	<0.0050	<0.0050	0.0175	0.0061	0.0162
Molybdenum	6.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Nickel	100	2.8	2.7	2.8	3.3	4.6	3.0	3.8
Selenium	2.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Uranium	23	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vanadium	86	6.9	7.7	14.0	10.3	20.9	12.7	14.5
Zinc	340	6.8	6.4	8.2	9.1	16.0	7.4	11.6
Cyanide	0.051	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
SAR	5	<0.10	0.15	0.23	0.24	<0.10	0.16	0.52
EC	0.7	0.0618	0.0765	0.0690	0.0717	0.115	0.0743	0.0956
Cr 6	8	<0.20	<0.20	<0.20	<0.20	0.40	<0.20	0.26

All values in ug/g – ppm – parts per million MDL – method detection limit. D- Duplicate Sample \*MOE O. Reg. – Table 2 – Full Depth, Generic Site Condition Standard in a potable groundwater condition, Residential Property Use and coarse textured soil criteria applied.

Orange – MDL exceeds applicable SCS

Red – Measured Conc. exceeds applicable SCS



Parameter	2011 MECP Table 2 Res. Coarse	BH7 – SS1	BH8 – SS1
Date of Collection		June 3, 2020	June 3, 2020
Date Reported		June 12, 2020	June 12, 2020
Sampling Depth (mbgl)		0.00 – 0.762	0.00 – 0.762
Analytical report reference number		L2456477	L2456477
Antimony	7.5	<1.0	<1.0
Arsenic	18	2.2	1.2
Barium	390	29.0	20.1
Beryllium	4	<0.50	<0.50
Boron - HWS	120	0.11	<0.10
Boron	1.5	<5.0	<5.0
Cadmium	1.2	<0.50	<0.50
Chromium	160	9.9	7.7
Cobalt	22	2.4	2.1
Copper	140	7.2	3.5
Lead	120	8.9	3.0
Mercury	0.27	0.0101	0.0131
Molybdenum	6.9	<1.0	<1.0
Nickel	100	4.8	4.5
Selenium	2.4	<1.0	<1.0
Silver	20	<0.20	<0.20
Thallium	1	<0.50	<0.50
Uranium	23	<1.0	<1.0
Vanadium	86	22.4	17.2
Zinc	340	21.1	9.4
Cyanide	0.051	<0.050	<0.050
SAR	5	2.28	0.84
EC	0.7	0.121	0.0436
Cr 6	8	<0.20	<0.20

All values in ug/g – ppm – parts per million MDL – method detection limit. D- Duplicate Sample \*MOE O. Reg. – Table 2 – Full Depth, Generic Site Condition Standard in a potable groundwater condition, Residential Property Use and coarse textured soil criteria applied.

Orange – MDL exceeds applicable SCS

Red – Measured Conc. exceeds applicable SCS



**TABLE 12: Groundwater Chemical Analyses – VOC, BTEX, PHCs**

Parameter	2011 MECP Table 2 Res. Coarse	MW1	Dup 1	MW2	MW3	MW4	MW5	MW6	Trip Blank
Date of Collection		June 8, 2020	June 8, 2020	June 8, 2020	June 8, 2020	June 8, 2020	June 8, 2020	June 8, 2020	June 8, 2020
Date Reported		June 15, 2020	June 15, 2020	June 15, 2020	June 15, 2020	June 15, 2020	June 15, 2020	June 15, 2020	June 15, 2020
Sampling Depth (mbgl)		-	-	-	-	-	-	-	-
Analytical report reference number		L2457656	L2457656	L2457656	L2457656	L2457656	L2457656	L2457656	L2457656
Acetone	2700	<30	<30	<30	<30	<30	<30	<30	<30
Benzene	5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane	16	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromoform	25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Bromoethane	0.89	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride	0.79	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	30	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dibromochloromethane	25	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform	2.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2 – Dibromoethane	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2 – Dichlorobenzene	3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3 – Dichlorobenzene	59	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4 – Dichlorobenzene	1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	590	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1 – Dichloroethane	5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2 – Dichloroethane	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1 – Dichloroethylene	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis – 1,2 – Dichloroethylene	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trans – 1,2 – Dichloroethylene	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	50	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2 – Dichloropropane	5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis, Trans – 1,3 Dichloropropene	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	2.4	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
n-Hexane	51	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Ethyl Ketone	1800	<20	<20	<20	<20	<20	<20	<20	<20
Methyl Isobutyl Ketone	640	<20	<20	<20	<20	<20	<20	<20	<20
MTBE	15	<20	<20	<20	<20	<20	<20	<20	<20
Styrene	5.4	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1,2 Tetrachloroethane	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2 Tetrachloroethane	1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	24	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1 Trichloroethane	200	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2 Trichloroethane	4.7	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichlorofluoromethane	150	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl Chloride	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Xylenes (total)	300	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
PHC F1	750	<25	<25	<25	<25	<25	<25	<25	<25
PHC F2	150	<100	<100	<100	<100	<100	<100	<100	<100
PHC F3	500	<250	<250	<250	<250	<250	<250	<250	<250
PHC F4	500	<250	<250	<250	<250	<250	<250	<250	<250

All values in ug/L – ppb – parts per billion MDL – method detection limit. D- Duplicate Sample \*MOE O. Reg. – Table 2 – Full Depth, Generic Site Condition Standard in a potable groundwater condition, Residential Property Use and coarse textured soil criteria applied.

Orange – MDL exceeds applicable SCS

Red – Measured Conc. exceeds applicable SCS





## **APPENDIX A**

### **DRAWINGS**

### Legend



-  Phase One Properties
-  Phase Study Area

FIGURE 1:  
Site Location &  
Study Area



Source: Google Earth

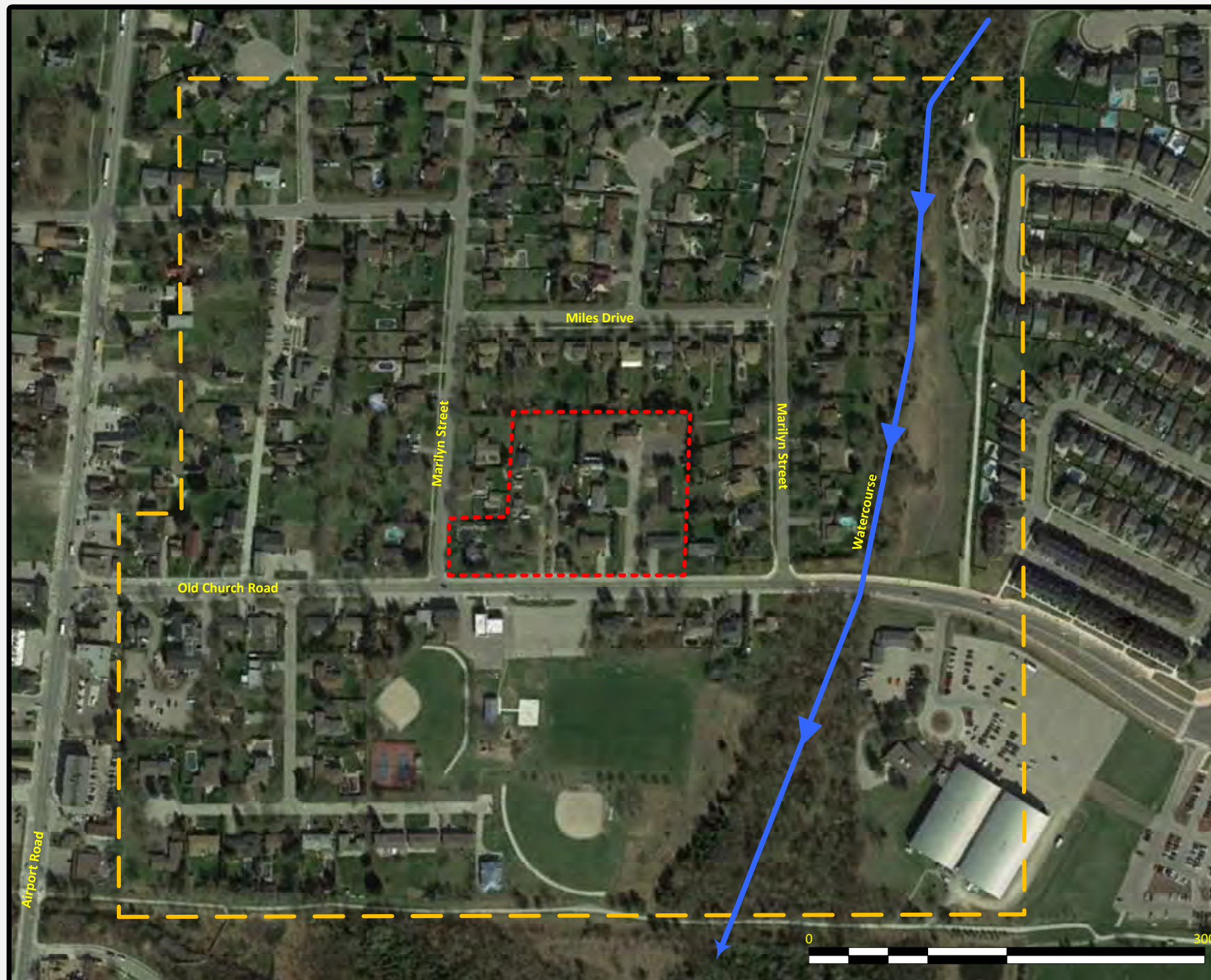
**SITE ADDRESS:**  
1 RUSSELL MASON COURT  
2 Russell Mason Court  
6142 Old Church Road  
6126 Old Church Road  
6120, 6122, 6124 Old Church Road  
6110, 6112 & 6114 Old Church Road  
6098 Old Church Road  
CALEDON, ONTARIO

Drawn by: **ADT**

Reviewer: **AAT**

Project #: **2005-001**

Date: **MAY 2020**



### Legend


 Phase One Property



FIGURE 2:  
Site Plan: Addresses



Source: Google Earth

#### SITE ADDRESS:

1 RUSSELL MASON COURT  
2 Russell Mason court  
6142 Old Church Road  
6126 Old Church Road  
6120, 6122, 6124 Old Church Road  
6110, 6112 & 6114 Old Church Road  
6098 Old Church Road  
CALEDON, ONTARIO

Drawn by: **ADT**

Reviewer: **AAT**

Project #: **2005-001**

Date: **MAY 2020**

Legend

- Phase One Property
- Structure / former structure
- Present AST
- Removed AST
- Proposed Conveyance Lands
- Golder Geotech, HydroG Borehole (2020)
- Golder Geotech, HydroG Well (2020)

FIGURE 3:  
Site Plan



Source: Google Earth

**SITE ADDRESS:**  
 1 RUSSELL MASON COURT  
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 6110, 6112 & 6114 Old Church Road  
 6098 Old Church Road  
 CALEDON, ONTARIO

Drawn by: **ADT**



Reviewer: **AAT**

Project #: **2005-001**

Date: **MAY 2020**



**Legend**

-  Phase One Properties
-  Phase Study Area
-  Residential
-  Parkland
-  Commercial
-  Watercourse
-  Watercourse (30m buffer)



**FIGURE 4:**  
Study Area: Land Uses



Source: Google Earth

**SITE ADDRESS:**  
 1 RUSSELL MASON COURT  
 2 Russell Mason court  
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 CALEDON, ONTARIO





Drawn by: **ADT**

Reviewer: **AAT**

Project #: **2005-001**

Date: **MAY 2020**

**Legend**

-  Phase One Properties
-  Phase Study Area
-  Contributing PCA
-  Non-contributing PCA

**FIGURE 5:**  
Study Area: PCAs



Source: Google Earth

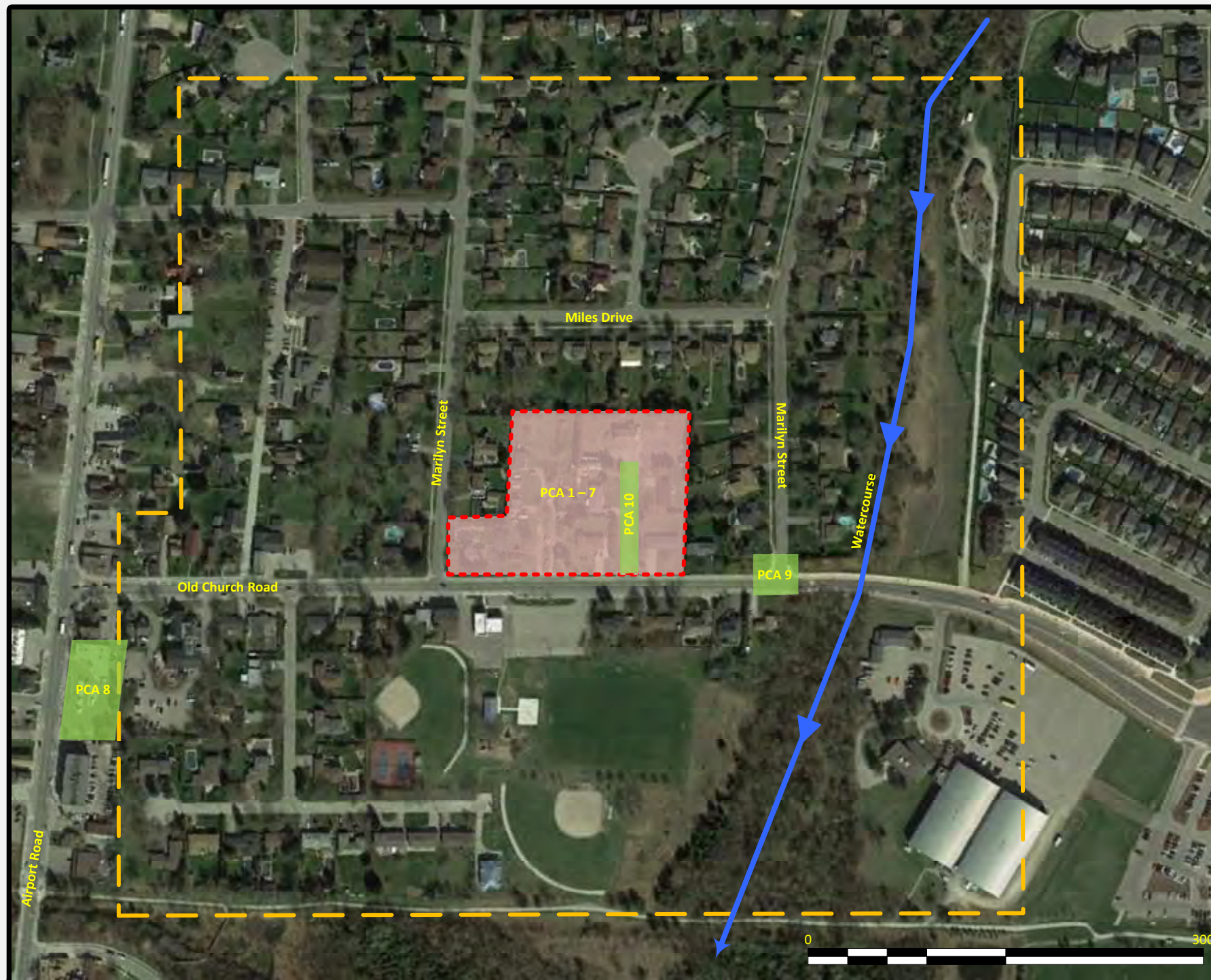
**SITE ADDRESS:**  
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 6120, 6122, 6124 Old Church Road  
 6110, 6112 & 6114 Old Church Road  
 6098 Old Church Road  
 CALEDON, ONTARIO

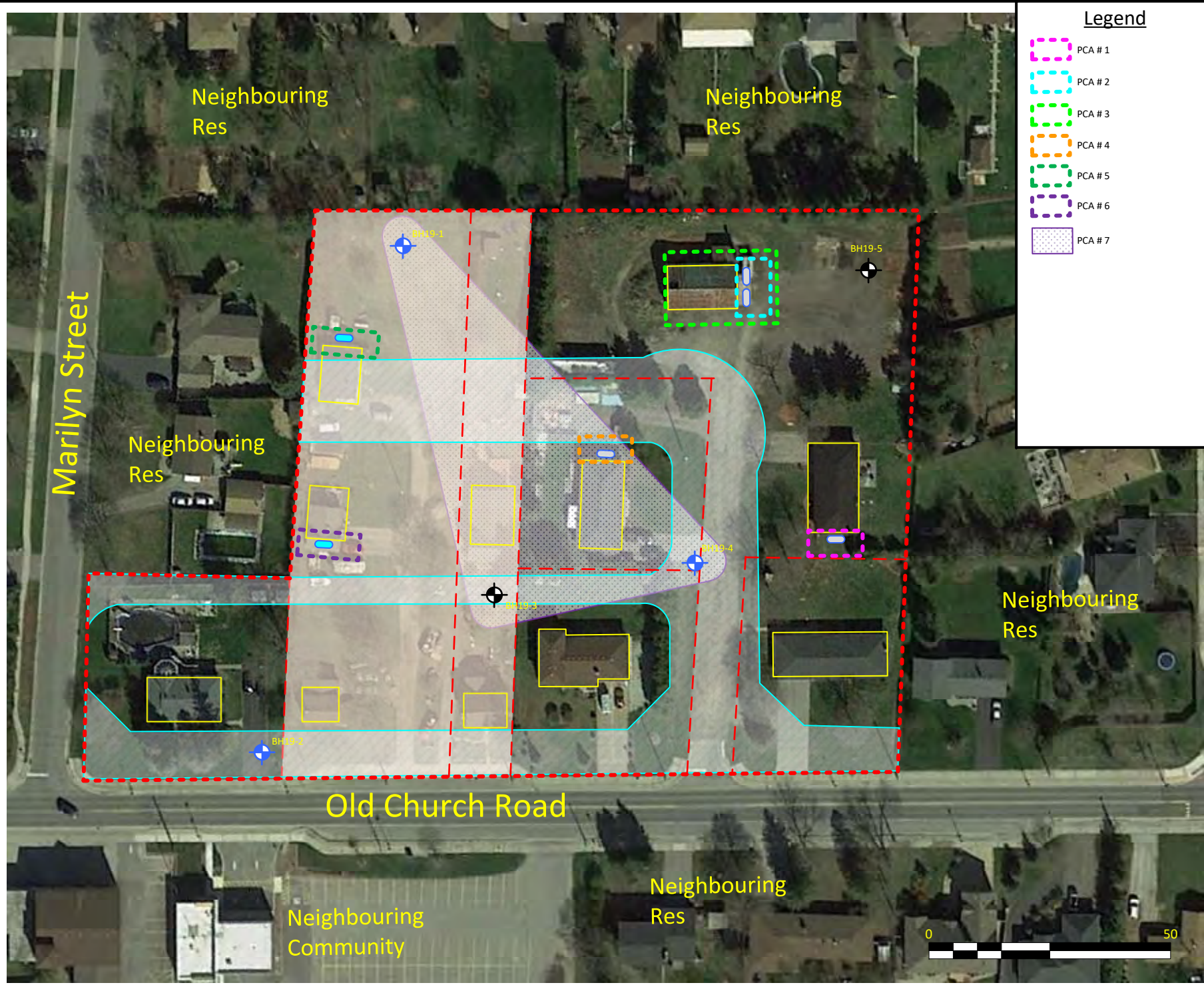
Drawn by: **ADT**

Reviewer: **AAT**

Project #: **2005-001**

Date: **MAY 2020**





**Legend**

- PCA # 1
- PCA # 2
- PCA # 3
- PCA # 4
- PCA # 5
- PCA # 6
- PCA # 7



**Legend**

- Phase One, Two, RSC Property
- Structure / former structure
- AST – Steel Single Walled
- Proposed Conveyance Lands
- Golder Geotech, HydroG Borehole (2020)
- Golder Geotech, HydroG Well (2020)

**FIGURE 6:**  
Site Plan:  
PCAs



Source: Google Earth

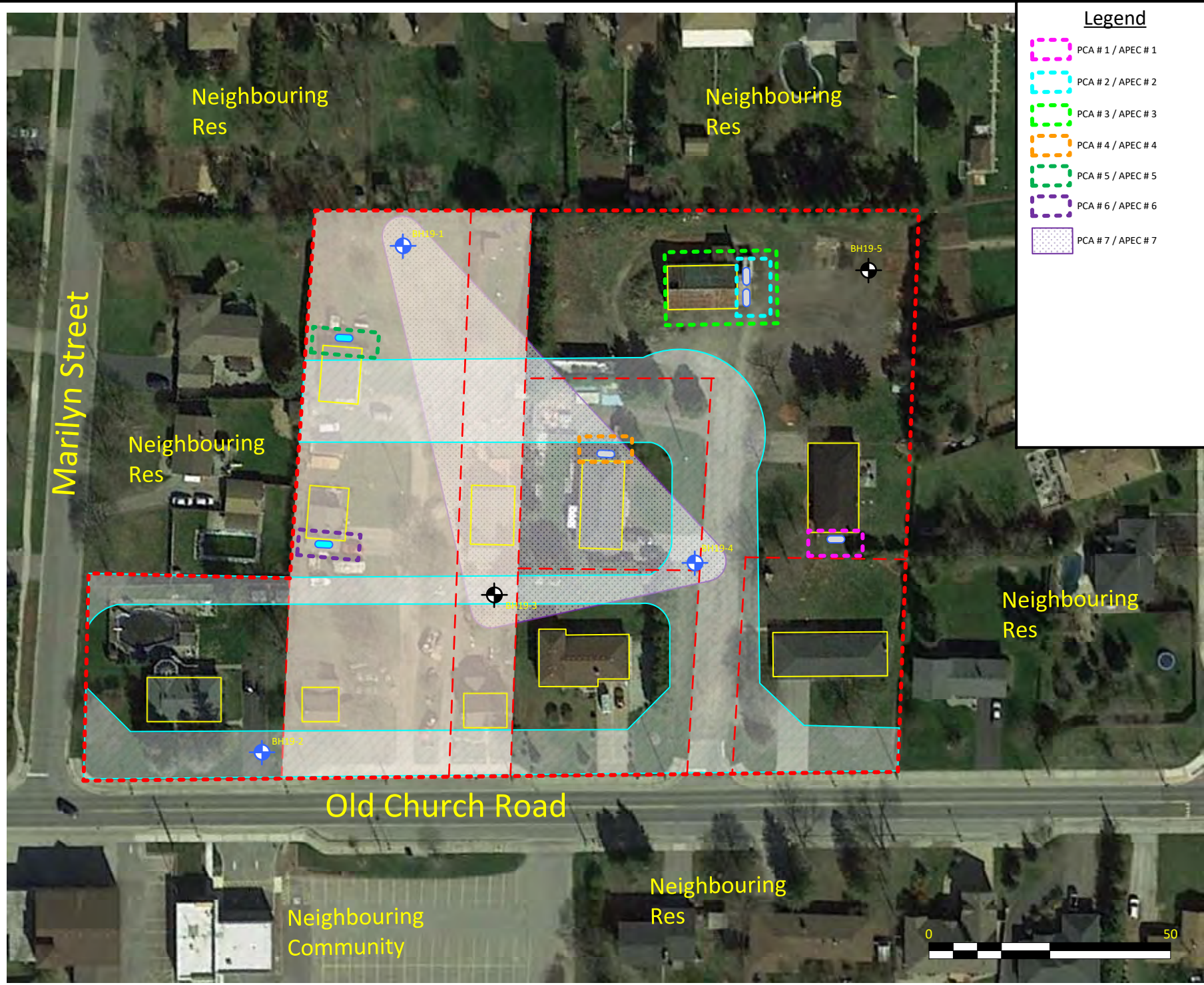
**SITE ADDRESS:**  
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6120, 6122, 6124 Old Church Road  
6110, 6112 & 6114 Old Church Road  
6098 Old Church Road  
CALEDON, ONTARIO

Drawn by: **ADT**

Reviewer: **AAT**

Project #: **2005-001**

Date: **MAY 2020**



**Legend**

- PCA # 1 / APEC # 1
- PCA # 2 / APEC # 2
- PCA # 3 / APEC # 3
- PCA # 4 / APEC # 4
- PCA # 5 / APEC # 5
- PCA # 6 / APEC # 6
- PCA # 7 / APEC # 7



**Legend**

- Phase One, Two, RSC Property
- Structure / former structure
- AST – Steel Single Walled
- Proposed Conveyance Lands
- ⊕ Golder Geotech, HydroG Borehole (2020)
- ⊕ Golder Geotech, HydroG Well (2020)
- ⊕ Azure Env Borehole (2020)
- ⊕ Azure Env Well (2020)

**FIGURE 7:**  
Site Plan:  
APECs



Source: Google Earth

**SITE ADDRESS:**  
1 RUSSELL MASON COURT  
2 Russell Mason court  
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6126 Old Church Road  
6120, 6122, 6124 Old Church Road  
6110, 6112 & 6114 Old Church Road  
6098 Old Church Road  
CALEDON, ONTARIO

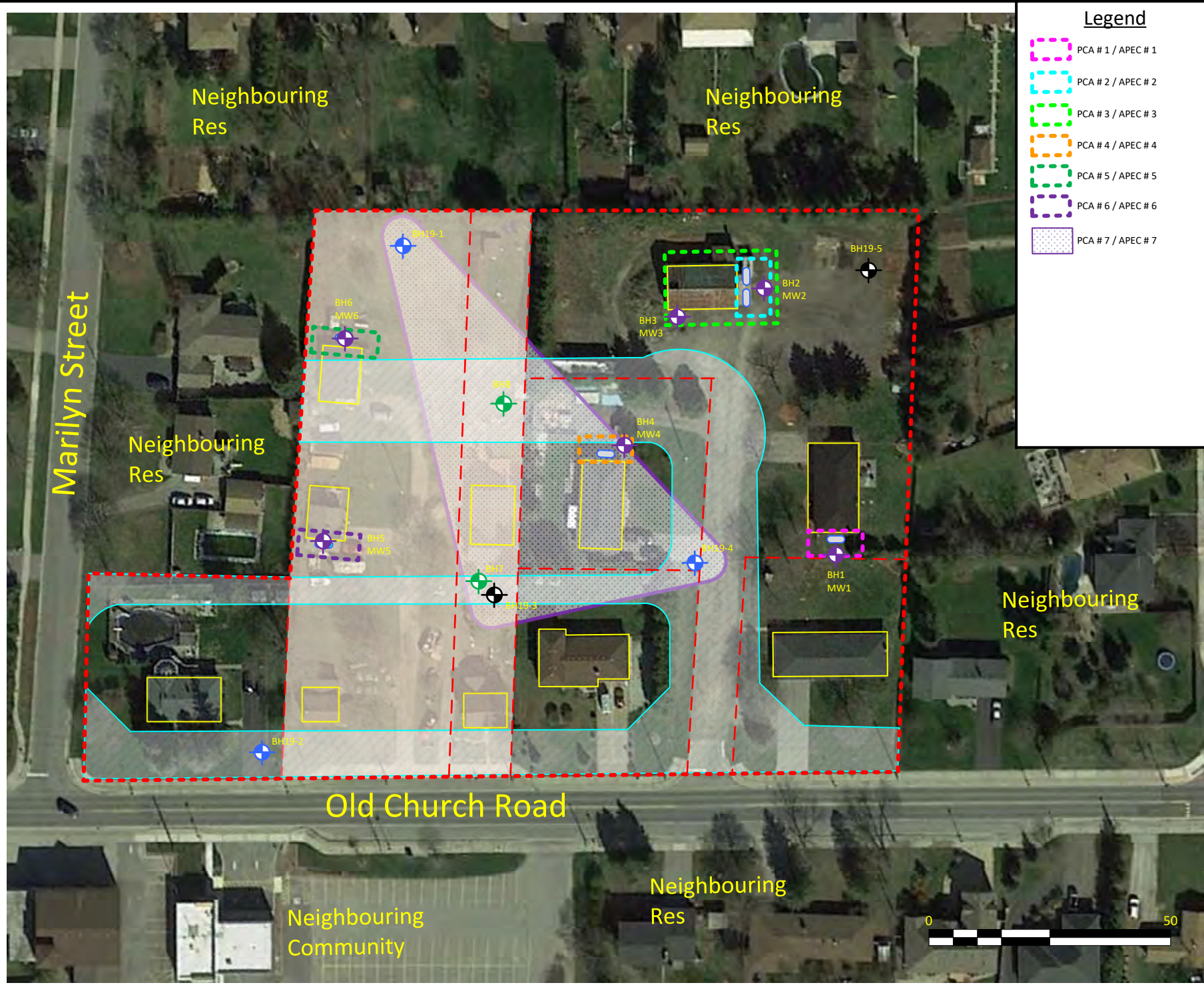
Drawn by: **ADT**

Reviewer: **AAT**

Project #: **2005-001**

Date: **MAY 2020**





**Legend**

- PCA # 1 / APEC # 1
- PCA # 2 / APEC # 2
- PCA # 3 / APEC # 3
- PCA # 4 / APEC # 4
- PCA # 5 / APEC # 5
- PCA # 6 / APEC # 6
- PCA # 7 / APEC # 7



**Legend**

- Phase One, Two, RSC Property
- Structure / former structure
- AST – Steel Single Walled
- Proposed Conveyance Lands
- Golder Geotech, HydroG Borehole (2020)
- Golder Geotech, HydroG Well (2020)
- Azure Env Borehole (2020)
- Azure Env Well (2020)

**FIGURE 8a:**  
Site Investigation:  
BH & MW



Source: Google Earth

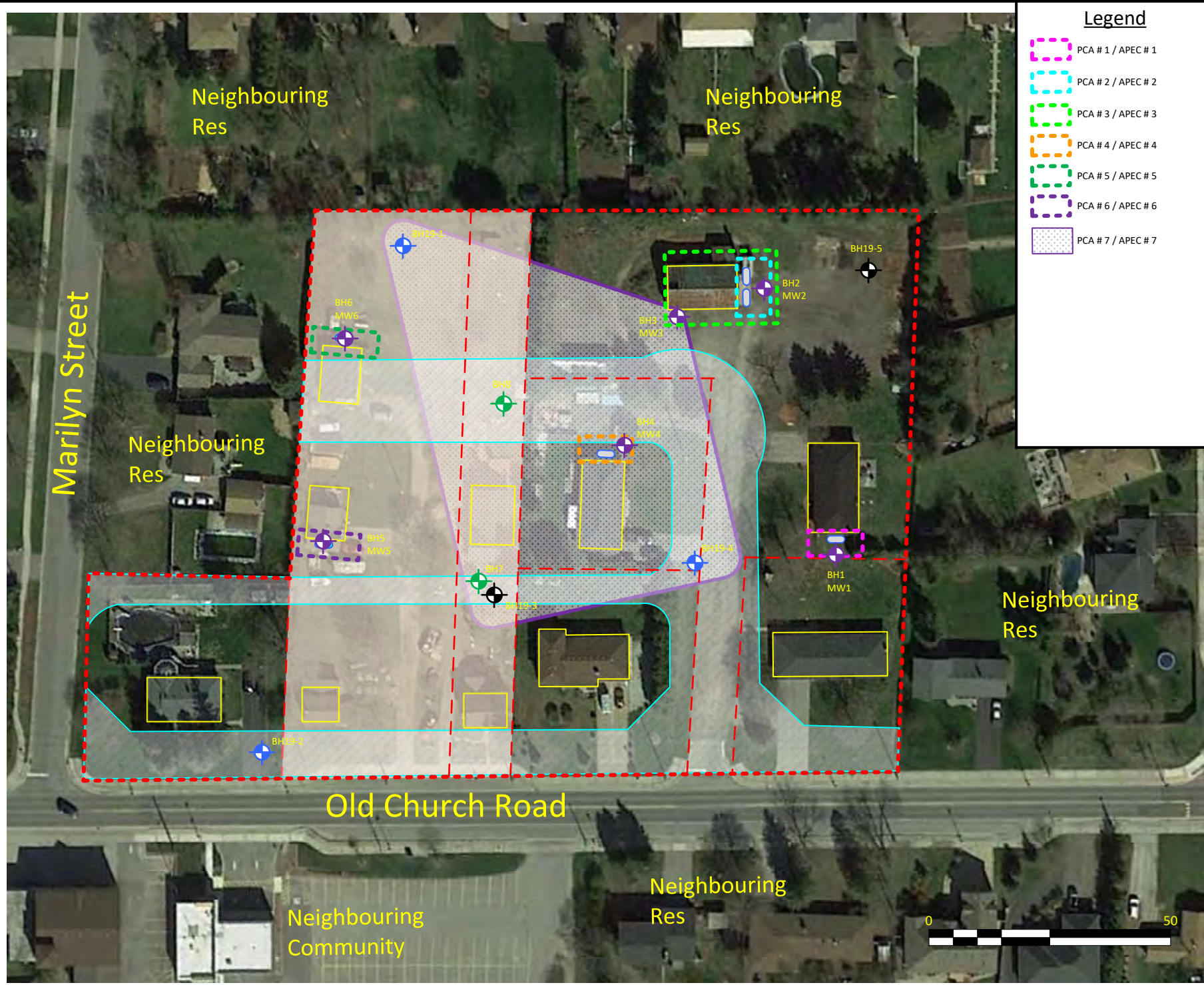
**SITE ADDRESS:**  
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6120, 6122, 6124 Old Church Road  
6110, 6112 & 6114 Old Church Road  
6098 Old Church Road  
CALEDON, ONTARIO

Drawn by: **ADT**

Reviewer: **AAT**

Project #: **2005-001**

Date: **JUNE 2020**



**Legend**

- PCA # 1 / APEC # 1
- PCA # 2 / APEC # 2
- PCA # 3 / APEC # 3
- PCA # 4 / APEC # 4
- PCA # 5 / APEC # 5
- PCA # 6 / APEC # 6
- PCA # 7 / APEC # 7



**Legend**

- Phase One, Two, RSC Property
- Structure / former structure
- AST – Steel Single Walled
- Proposed Conveyance Lands
- Golder Geotech, HydroG Borehole (2020)
- Golder Geotech, HydroG Well (2020)
- Azure Env Borehole (2020)
- Azure Env Well (2020)

**FIGURE 8b:**  
**Site Investigation:**  
**BH & MW**  
 \*Updated with locations of  
 Fill Material



Source: Google Earth

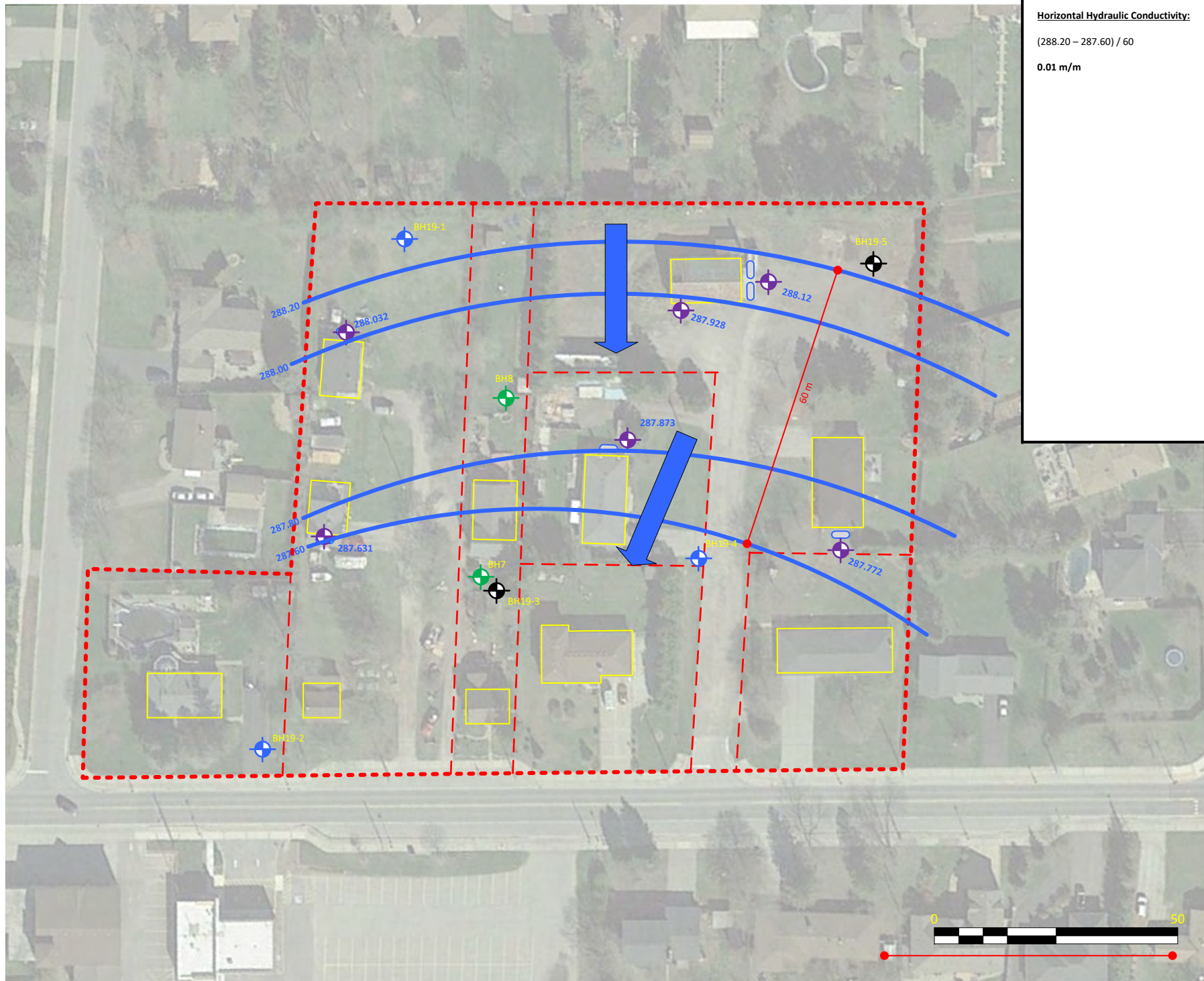
**SITE ADDRESS:**  
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 CALEDON, ONTARIO

Drawn by: **ADT**

Reviewer: **AAT**

Project #: **2005-001**

Date: **JUNE 2020**



Horizontal Hydraulic Conductivity:

$(288.20 - 287.60) / 60$

0.01 m/m



**Legend**

- Phase One, Two, RSC Property
- Structure / former structure
- AST – Steel Single Walled
- Proposed Conveyance Lands
- Golder Geotech, HydroG Borehole (2020)
- Golder Geotech, HydroG Well (2020)
- Azure Env Borehole (2020)
- Azure Env Well (2020)

**FIGURE 9:**  
GW Flow Direction



Source: Google Earth

**SITE ADDRESS:**  
 1 RUSSELL MASON COURT  
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 CALEDON, ONTARIO

Drawn by: **ADT**

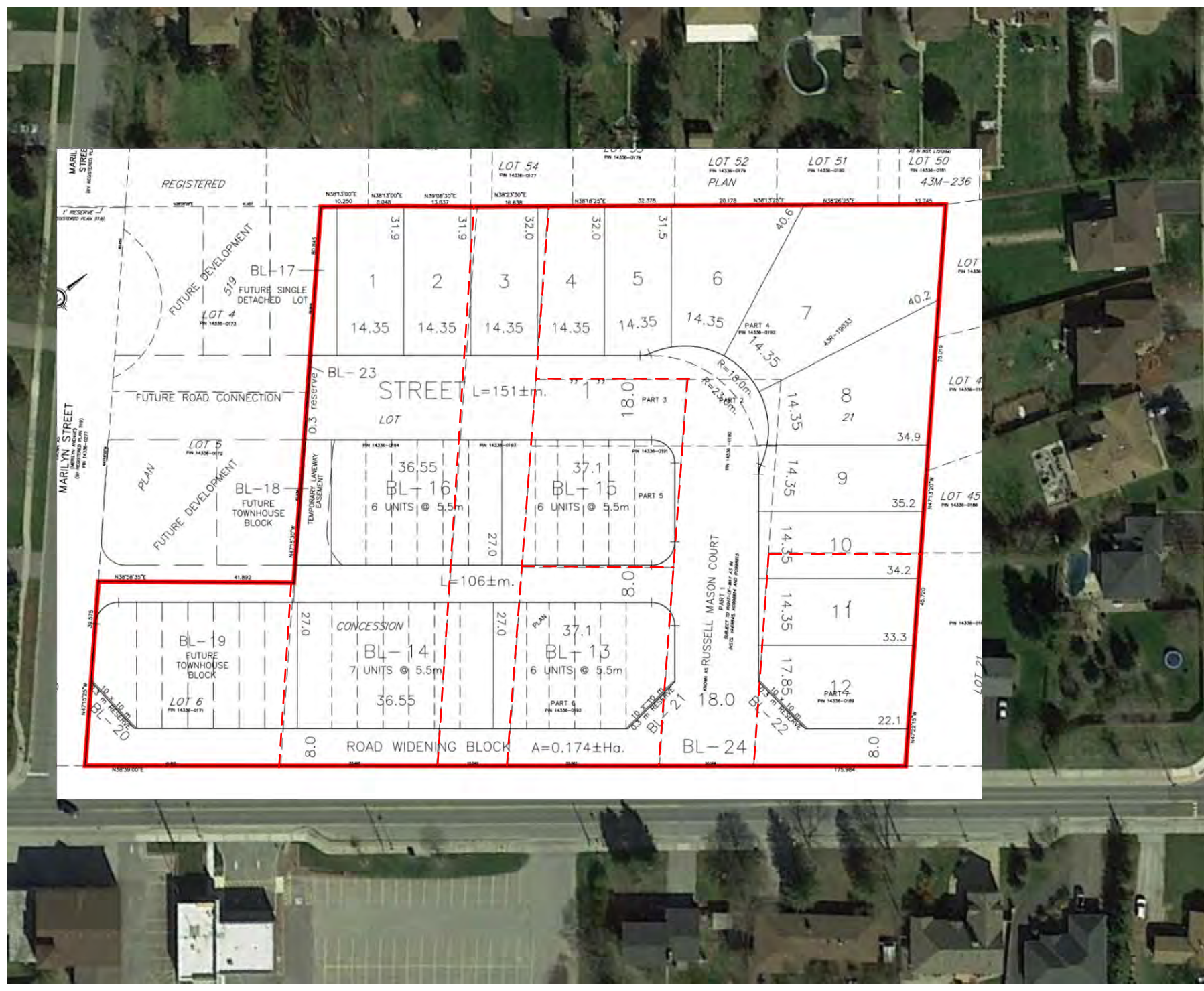
Reviewer: **AAT**

Project #: **2005-001**

Date: **JUNE 2020**

**Legend**

- Phase One Property
- Phase Two
- RSC Property



**FIGURE 10:**  
Proposed  
Development Plan



Source: Google Earth

**SITE ADDRESS:**  
1 RUSSELL MASON COURT  
2 Russell Mason court  
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6120, 6122, 6124 Old Church Road  
6110, 6112 & 6114 Old Church Road  
6098 Old Church Road  
CALEDON, ONTARIO









Drawn by: **ADT**

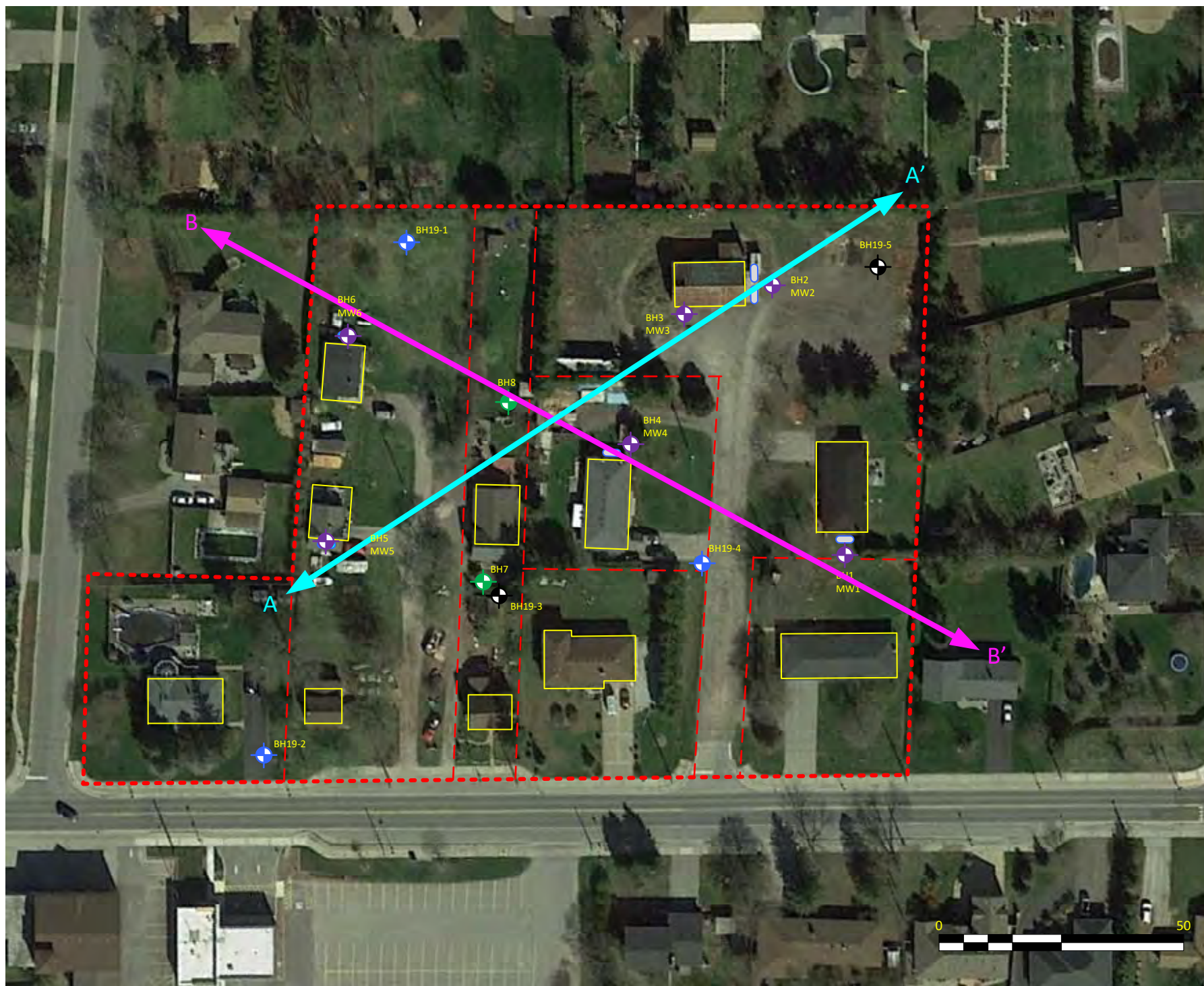
Reviewer: **AAT**

Project #: **2005-001**

Date: **JUNE 2020**

**Legend**

-  Phase One, Two, RSC Property
-  Structure / former structure
-  AST – Steel Single Walled
-  Proposed Conveyance Lands
-  Golder Geotech, HydroG Borehole (2020)
-  Golder Geotech, HydroG Well (2020)
-  Azure Env Borehole (2020)
-  Azure Env Well (2020)



**FIGURE 11:**  
Cross-Section Layout



Source: Google Earth

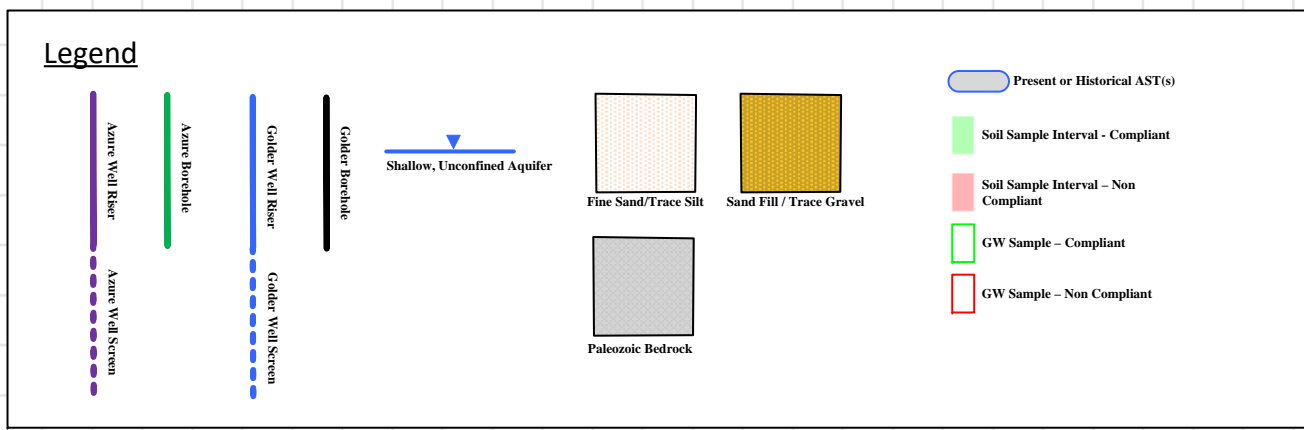
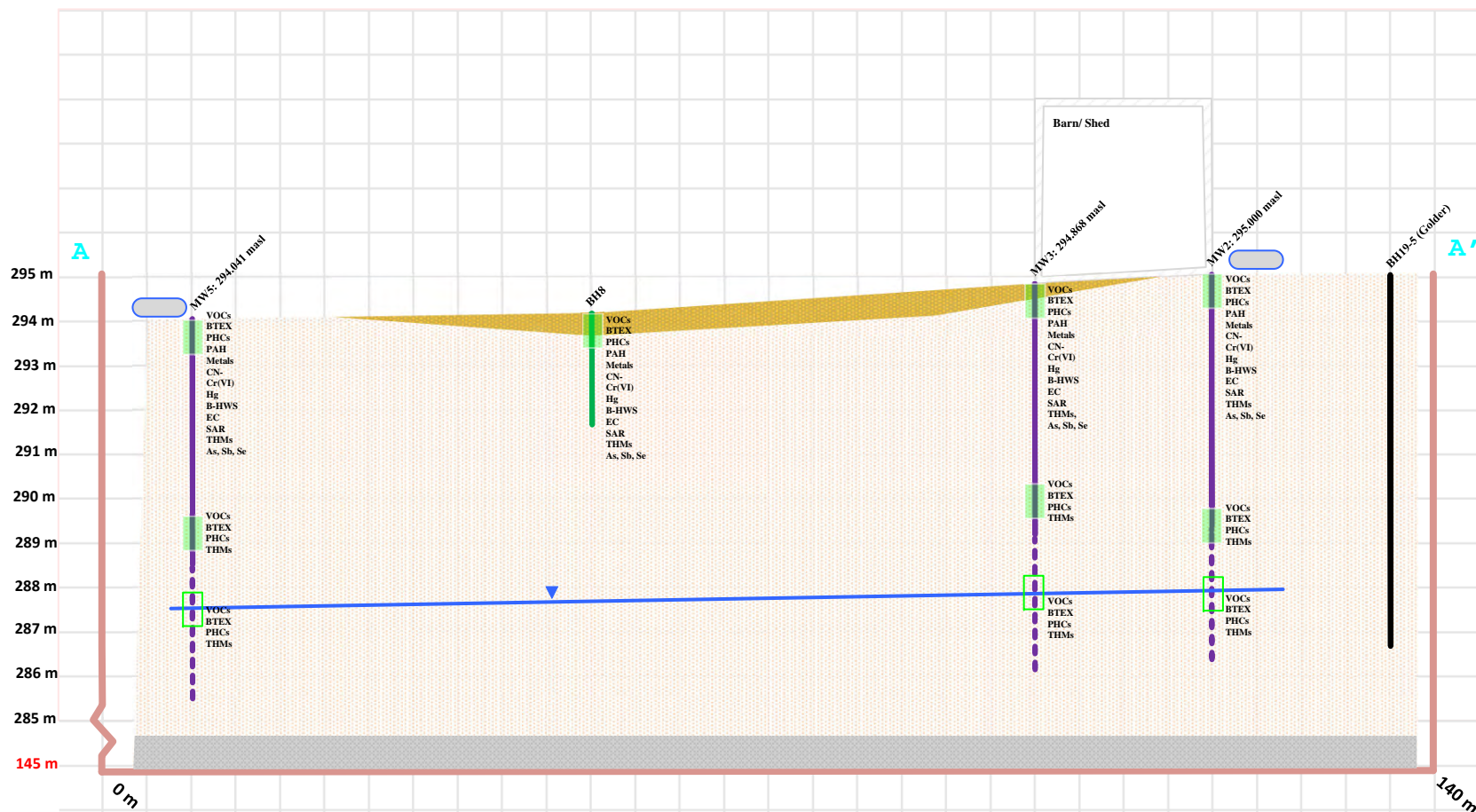
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 6110, 6112 & 6114 Old Church Road  
 6098 Old Church Road  
 CALEDON, ONTARIO

Drawn by: **ADT**

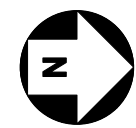
Reviewer: **AAT**

Project #: **2005-001**

Date: **JUNE 2020**



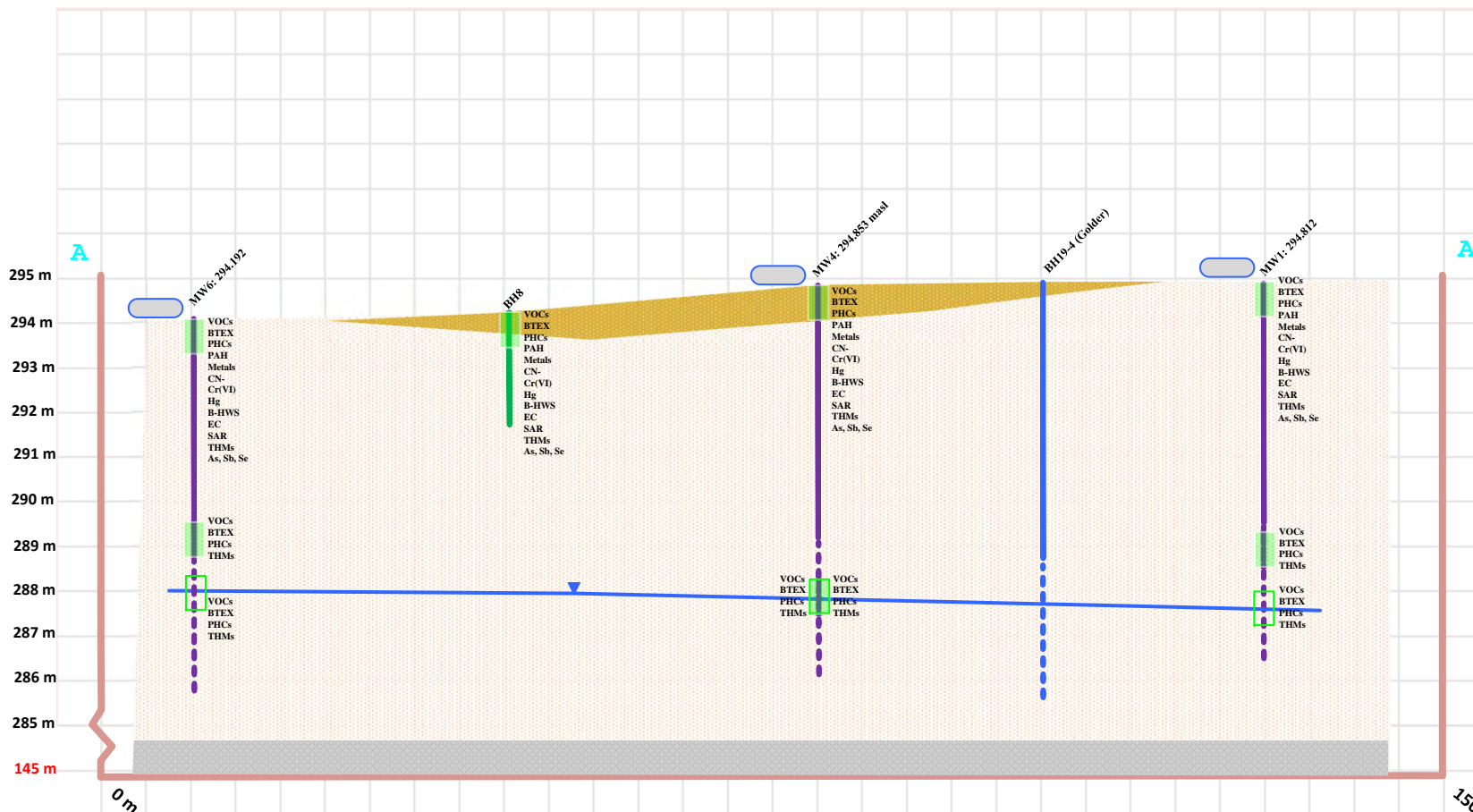
**FIGURE 12:**  
A-A'  
Cross Section  
(North-South)



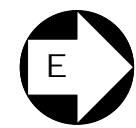
4.66: 1  
Horizontal to Vertical Exaggeration

**SITE ADDRESS:**  
1 RUSSELL MASON COURT  
2 Russell Mason court  
6142 Old Church Road  
6126 Old Church Road  
6120, 6122, 6124 Old Church Road  
6098 Old Church Road  
CALEDON, ONTARIO

Drawn by: **ADT**  
Reviewer: **AAT**  
Project #: **2005-001**  
Date: **JUNE 2020**



**FIGURE 13:**  
B-B'  
Cross Section  
(West-East)



5.00: 1  
Horizontal to Vertical Exaggeration

**SITE ADDRESS:**  
1 RUSSELL MASON COURT  
2 Russell Mason COURT  
6142 Old Church Road  
6126 Old Church Road  
6120, 6122, 6124 Old Church Road  
6110, 6112 & 6114 Old Church Road  
6098 Old Church Road  
CALEDON, ONTARIO

Drawn by: **ADT**

Reviewer: **AAT**

Project #: **2005-001**

Date: **JUNE 2020**



**APPENDIX B**

**BOREHOLE LOGS**





# BH1 MW1

**PROJECT NUMBER:** 2005-001      **UTM COORD. (m)** 17 T 591272 4858457      **TOTAL WELL DEPTH:** 8.645 m  
**PROJECT NAME:** RSC - Old Church Road      **HOLE SIZE/SAMPLING METHOD:** 50 mm /SS      **SURFACE ELEVATION:** 294.812 \* Arbitrary  
**CLIENT:** Stylux Caledon Inc.      **RIG MODEL:** Commachio Geo205      **WELL SCREEN:** 3.00 m; #10 Slot Screen  
**ADDRESS:** Res. Old Church Road, Russel Mason Court      **DRILLING METHOD:** Spilt Spoon, Solid Stem Aug  
**DRILLING DATE:** June 3, June 4, 2020      **SAMPLING LENGTH:** 0.75 m

**COMMENTS :** masl: meter above sea level - SS: Split-Spoon      **LOGGED BY** ATOPP  
**CHECKED BY** AT

Elevation (masl)	% Recovery	Soil Sample ID	Soil Lab Analyses	Sample Type	Graphic Log	Material Description	HSVC as Isobutylene (ppm)	HSVC as Hexane (ppm)	Depth (m)	Well Diagram
294.5		1	VOCs BTEX PHCs M&I PAHs	SS		Grass, Gravel, Topsoil at surface	0 ppm	0.0	0.5	
294		2		SS		Brown Fine Sand with trace gravel Staining: No Odour: No	0 ppm	0.0	1	
293.5		3		SS		Increasing silt content near base of borehole (7-7.5 mbgl)	0 ppm	0.0	1.5	
293		4		SS		Low moisture: 0.0 mbgl - 3.80 mbgl	0 ppm	0.0	2	
292.5		5		SS		Med/High Moisture: 4.00 mbgl - 6.00mbgl	0 ppm	0.0	2.5	
292		6		SS		Saturated: 6.00 mbgl - 9.00 mbgl cobbles encountered 7.00 - 7.20	0 ppm	0.0	3	
291.5		7	VOCs BTEX PHCs pH	SS			0 ppm	0.0	3.5	
291		8		SS			0 ppm	0.0	4	
290.5		9		SS			0 ppm	0.0	4.5	
290		10		SS			0 ppm	0.0	5	
289.5		11		SS			0 ppm	0.0	5.5	
289		12		SS			0 ppm	0.0	6	
288.5							0 ppm	0.0	6.5	
288							0 ppm	0.0	7	
287.5							0 ppm	0.0	7.5	
287							0 ppm	0.0	8	
286.5							0 ppm	0.0	8.5	
286							0 ppm	0.0	9	
285.5									9.5	Well Installed to ~30' GW: 7.04 mbgl on June 8, 2020
285									10	
284.5										



## BH2 MW2

<b>PROJECT NUMBER:</b> 2005-001 <b>PROJECT NAME:</b> RSC - Old Church Road <b>CLIENT:</b> Stylux Caledon Inc. <b>ADDRESS:</b> Res. Old Church Road, Russel Mason Court <b>DRILLING DATE:</b> June 3, June 4, 2020	<b>UTM COORD. (m)</b> 17 T 591214 4858481 <b>HOLE SIZE/SAMPLING METHOD:</b> 50 mm /SS <b>RIG MODEL:</b> Commachio Geo205 <b>DRILLING METHOD:</b> Spilt Spoon, Solid Stem Aug <b>SAMPLING LENGTH:</b> 0.75 m	<b>TOTAL WELL DEPTH:</b> 8.770 m <b>SURFACE ELEVATION:</b> 295.000 * Arbitrary <b>WELL SCREEN:</b> 3.00 m; #10 Slot Screen
---	---	--

**COMMENTS** : masl: meter above sea level - SS: Split-Spoon **LOGGED BY** ATOPP  
**CHECKED BY** AT

Elevation (masl)	% Recovery	Soil Sample ID	Soil Lab Analyses	Sample Type	Graphic Log	Material Description	HSVC as Isobutylene (ppm)	HSVC as Hexane (ppm)	Depth (m)	Well Diagram
294.5		1	VOCs BTEX PHCs M&I PAHs	SS		Grass, Gravel, Topsoil at surface	0 ppm	0.0	0.5	
294		2		SS		Brown Fine Sand with trace gravel Staining: No Odour: No	0 ppm	0.0	1	
293.5		3		SS		Increasing silt content near base of borehole (7-7.5 mbgl)	0 ppm	0.0	1.5	
293		4		SS		Low moisture: 0.0 mbgl - 4.50 mbgl	0 ppm	0.0	2	
292.5		5		SS		Med Moisture: 4.50 mbgl - 6.00mbgl	0 ppm	0.0	2.5	
292		6		SS		Med/High: 6.00 mbgl - 8.00 mbgl	0 ppm	0.0	3	
291.5		7		SS		Saturated: 8.00 mbgl - 9.00 mbgl	0 ppm	0.0	3.5	
291		8	VOCs BTEX PHCs	SS			0 ppm	0.0	4	
290.5		9		SS			0 ppm	0.0	4.5	
290		10		SS			0 ppm	0.0	5	
289.5		11		SS			0 ppm	0.0	5.5	
289		12		SS			0 ppm	0.0	6	
288.5									6.5	
288									7	
287.5									7.5	
287									8	
286.5									8.5	
286									9	
285.5									9.5	Well Installed to ~30' GW: 6.88 mbgl on June 8, 2020
285									10	



### BH3 MW3

**PROJECT NUMBER:** 2005-001      **UTM COORD. (m)** 17 T 591208 4858463      **TOTAL WELL DEPTH:** 8.81 m  
**PROJECT NAME:** RSC - Old Church Road      **HOLE SIZE/SAMPLING METHOD:** 50 mm /SS      **SURFACE ELEVATION:** 294.868 \* Arbitrary  
**CLIENT:** Stylux Caledon Inc.      **RIG MODEL:** Commachio Geo205      **WELL SCREEN:** 3.00 m; #10 Slot Screen  
**ADDRESS:** Res. Old Church Road, Russel Mason Court      **DRILLING METHOD:** Spilt Spoon, Solid Stem Aug  
**DRILLING DATE:** June 3, June 4, 2020      **SAMPLING LENGTH:** 0.75 m

**COMMENTS :** masl: meter above sea level - SS: Split-Spoon      **LOGGED BY** ATOPP  
**CHECKED BY** AT

Elevation (masl)	% Recovery	Soil Sample ID	Soil Lab Analyses	Sample Type	Graphic Log	Material Description	HSVC as Isobutylene (ppm)	HSVC as Hexane (ppm)	Depth (m)	Well Diagram
294.5		1	VOCs BTEX PHCs M&I PAHs	SS		Grass, Gravel, Topsoil at surface Brown Sand and Gravel Fill Staining: No Odour: No	0 ppm	0.0	0.5	
294		2		SS		-Organic content in soils - low moisture content - average clast size 15 mm	0 ppm	0.0	1	
293.5		3		SS		Brown Fine Sand with trace gravel Staining: No Odour: No	0 ppm	0.0	1.5	
293						Increasing silt content near base of borehole (7-7.5 mbgl)	0 ppm	0.0	2	
292.5		4		SS		Low moisture: 0.0 mbgl - 3.75 mbgl	0 ppm	0.0	2.5	
292						Med Moisture: 3.75 mbgl - 4.50mbgl	0 ppm	0.0	3	
291.5		5		SS		Med/High: 4.50 mbgl - 5.25 mbgl	0 ppm	0.0	3.5	
291						Saturated: 5.25 mbgl - 9.00 mbgl	0 ppm	0.0	4	
290.5							0 ppm	0.0	4.5	
290		7	VOCs BTEX PHCs	SS			0 ppm	0.0	5	
289.5							0 ppm	0.0	5.5	
289		8		SS			0 ppm	0.0	6	
288.5							0 ppm	0.0	6.5	
288		10		SS			0 ppm	0.0	7	
287.5							0 ppm	0.0	7.5	
287		11		SS			0 ppm	0.0	8	
286.5							0 ppm	0.0	8.5	
286		12		SS			0 ppm	0.0	9	
285.5									9.5	Well Installed to ~30' GW: 6.94 mbgl on June 8, 2020
285									10	
284.5										



# BH4 MW4

**PROJECT NUMBER:** 2005-001      **UTM COORD. (m)** 17 T 591221 4858442      **TOTAL WELL DEPTH:** 8.75 m  
**PROJECT NAME:** RSC - Old Church Road      **HOLE SIZE/SAMPLING METHOD:** 50 mm /SS      **SURFACE ELEVATION:** 294.843 \* Arbitrary  
**CLIENT:** Stylux Caledon Inc.      **RIG MODEL:** Commachio Geo205      **WELL SCREEN:** 3.00 m; #10 Slot Screen  
**ADDRESS:** Res. Old Church Road, Russel Mason Court      **DRILLING METHOD:** Spilt Spoon, Solid Stem Aug  
**DRILLING DATE:** June 3, June 4, 2020      **SAMPLING LENGTH:** 0.75 m

**COMMENTS :** masl: meter above sea level - SS: Split-Spoon      **LOGGED BY** ATOPP  
**CHECKED BY** AT

Elevation (masl)	% Recovery	Soil Sample ID	Soil Lab Analyses	Sample Type	Graphic Log	Material Description	HSVC as Isobutylene (ppm)	HSVC as Hexane (ppm)	Depth (m)	Well Diagram
294.5		1	VOCs BTEX PHCs M&I PAHs	SS		Grass, Gravel, Topsoil at surface Brown Sand and Gravel Fill Staining: No Odour: No	0 ppm	0.0	0.5	
294		2		SS		-Organic content in soils - low moisture content - average clast size 15 mm	0 ppm	0.0	1	
293.5		3		SS		Brown Fine Sand with trace gravel Staining: No Odour: No	0 ppm	0.0	1.5	
293		4		SS		Increasing silt content near base of borehole (7-7.5 mbgl)	0 ppm	0.0	2	
292.5		5		SS		Low moisture: 0.0 mbgl - 4.50 mbgl	0 ppm	0.0	2.5	
292		6		SS		Med Moisture: 4.50 mbgl - 5.25 mbgl	0 ppm	0.0	3	
291.5		7		SS		Med/High: 5.25 mbgl - 7.50 mbgl	0 ppm	0.0	3.5	
291		8		SS		Saturated: 7.50 mbgl - 9.00 mbgl	0 ppm	0.0	4	
290.5		9	VOCs BTEX PHCs	SS			0 ppm	0.0	4.5	
290		10		SS			0 ppm	0.0	5	
289.5		11		SS			0 ppm	0.0	5.5	
289		12		SS			0 ppm	0.0	6	
288.5							0 ppm	0.0	6.5	
288							0 ppm	0.0	7	
287.5							0 ppm	0.0	7.5	
287							0 ppm	0.0	8	
286.5							0 ppm	0.0	8.5	
286							0 ppm	0.0	9	
285.5									9.5	Well Installed to ~30' GW: 6.98 mbgl on June 8, 2020
285									10	
284.5										



# BH5 MW5

**PROJECT NUMBER:** 2005-001      **UTM COORD. (m)** 17 T 591204 4858371      **TOTAL WELL DEPTH:** 8.640 m  
**PROJECT NAME:** RSC - Old Church Road      **HOLE SIZE/SAMPLING METHOD:** 50 mm /SS      **SURFACE ELEVATION:** 294.041 \* Arbitrary  
**CLIENT:** Stylux Caledon Inc.      **RIG MODEL:** Commachio Geo205      **WELL SCREEN:** 3.00 m; #10 Slot Screen  
**ADDRESS:** Res. Old Church Road, Russel Mason Court      **DRILLING METHOD:** Spilt Spoon, Solid Stem Aug  
**DRILLING DATE:** June 3, June 4, 2020      **SAMPLING LENGTH:** 0.75 m

**COMMENTS :** masl: meter above sea level - SS: Split-Spoon      **LOGGED BY** ATOPP  
**CHECKED BY** AT

Elevation (masl)	% Recovery	Soil Sample ID	Soil Lab Analyses	Sample Type	Graphic Log	Material Description	HSVC as Isobutylene (ppm)	HSVC as Hexane (ppm)	Depth (m)	Well Diagram
294		1	VOCs BTEX PHCs M&I PAHs	SS		Grass, Gravel, Topsoil at surface	0 ppm	0.0	0.5	
293.5						Brown Fine Sand with trace gravel Staining: No Odour: No	0 ppm	0.0	1	
293		2		SS		Increasing silt content near base of borehole (7-7.5 mbgl)	0 ppm	0.0	1.5	
292.5		3		SS		Low moisture: 0.0 mbgl - 3.80 mbgl	0 ppm	0.0	2	
292		4		SS		Med/High Moisture: 4.00 mbgl - 6.00mbgl	0 ppm	0.0	2.5	
291.5		5		SS		Saturated: 6.00 mbgl - 9.00 mbgl	0 ppm	0.0	3	
291		6		SS		cobbles encountered 7.00 - 7.20	0 ppm	0.0	3.5	
290.5		7	VOCs BTEX PHCs	SS			0 ppm	0.0	4	
290		8		SS			0 ppm	0.0	4.5	
289.5		9		SS			0 ppm	0.0	5.5	
289		10		SS			0 ppm	0.0	6	
288.5		11		SS			0 ppm	0.0	6.5	
288		12		SS			0 ppm	0.0	7	
287.5							0 ppm	0.0	7.5	
287							0 ppm	0.0	8	
286.5							0 ppm	0.0	8.5	
286							0 ppm	0.0	9	
285.5							0 ppm	0.0	9.5	Well Installed to ~30'
285							0 ppm	0.0	10	GW: 6.41 mbgl on June 8, 2020



**BH6 MW6**

<b>PROJECT NUMBER:</b> 2005-001 <b>PROJECT NAME:</b> RSC - Old Church Road <b>CLIENT:</b> Stylux Caledon Inc. <b>ADDRESS:</b> Res. Old Church Road, Russel Mason Court <b>DRILLING DATE:</b> June 3, June 4, 2020	<b>UTM COORD. (m)</b> 17 T 591167 4858405 <b>HOLE SIZE/SAMPLING METHOD:</b> 50 mm /SS <b>RIG MODEL:</b> 4 x 6 Truck Mounted <b>DRILLING METHOD:</b> Spilt Spoon, Solid Stem Aug <b>SAMPLING LENGTH:</b> 0.75 m	<b>TOTAL WELL DEPTH:</b> 8.30 m <b>SURFACE ELEVATION:</b> 294.192 <b>WELL SCREEN:</b> 3.00 m; #10 Slot Screen
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**COMMENTS** : masl: meter above sea level - SS: Split-Spoon **LOGGED BY** ATOPP  
**CHECKED BY** AT

Elevation (masl)	% Recovery	Soil Sample ID	Soil Lab Analyses	Sample Type	Graphic Log	Material Description	HSVC as Isobutylene (ppm)	HSVC as Hexane (ppm)	Depth (m)	Well Diagram
294		1	VOCs BTEX PHCs M&I PAHs	SS		Grass, Gravel, Topsoil at surface	0 ppm	0.0	0.5	
293.5						Brown Fine Sand with trace gravel Staining: No Odour: No	0 ppm	0.0	1	
293		2		SS		Increasing silt content near base of borehole (7-7.5 mbgl)	0 ppm	0.0	1.5	
292.5		3		SS		Low moisture: 0.0 mbgl - 3.80 mbgl	0 ppm	0.0	2	
292		4		SS		Med/High Moisture: 4.00 mbgl - 6.00mbgl	0 ppm	0.0	2.5	
291.5		5		SS		Saturated: 6.00 mbgl - 9.00 mbgl	0 ppm	0.0	3	
291		6		SS		cobbles encountered 7.00 - 7.20	0 ppm	0.0	3.5	
290.5		7	VOCs BTEX PHCs	SS			0 ppm	0.0	4	
290		8		SS			0 ppm	0.0	4.5	
289.5		9		SS			0 ppm	0.0	5	
289		10		SS			0 ppm	0.0	5.5	
288.5		11		SS			0 ppm	0.0	6	
288		12		SS			0 ppm	0.0	6.5	
287.5							0 ppm	0.0	7	
287							0 ppm	0.0	7.5	
286.5							0 ppm	0.0	8	
286							0 ppm	0.0	8.5	
285.5							0 ppm	0.0	9	
285									9.5	Well Installed to ~30'
284.5									10	GW: 6.16 mbgl on June 8, 2020
284										



# BH7

<b>PROJECT NUMBER:</b> 2005-001 <b>PROJECT NAME:</b> RSC - Old Church Road <b>CLIENT:</b> Stylux Caledon Inc. <b>ADDRESS:</b> Res. Old Church Road, Russel Mason Court <b>DRILLING DATE:</b> June 3, June 4, 2020	<b>UTM COORD. (m)</b> 17 T 591229 4858394 <b>HOLE SIZE/SAMPLING METHOD:</b> 50 mm /SS <b>RIG MODEL:</b> 4 x 6 Truck Mounted <b>DRILLING METHOD:</b> Spilt Spoon, Solid Stem Aug <b>SAMPLING LENGTH:</b> 0.75 m	<b>TOTAL WELL DEPTH:</b> N/A <b>SURFACE ELEVATION:</b> N/A <b>WELL SCREEN:</b> N/A
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**COMMENTS** : masl: meter above sea level - SS: Split-Spoon **LOGGED BY** ATOPP  
**CHECKED BY** AT

Elevation (masl)	% Recovery	Soil Sample ID	Soil Lab Analyses	Sample Type	Graphic Log	Material Description	HSVC as Isobutylene (ppm)	HSVC as Hexane (ppm)	Depth (m)	Well Diagram
294	0 <span style="margin-left: 20px;">100</span>	1	VOCs BTEX PHCs M&I PAHs	SS		Grass, Gravel, Topsoil at surface	0 ppm	0.0	0.5	
293.5		2		SS		Brown Sand and Gravel Fill Staining: No Odour: No -Organic content in soils - low moisture content - average clast size 15 mm	0 ppm	0.0	1	
293		3		SS		Brown Fine Sand with trace gravel Staining: No Odour: No Low moisture: 0.0 mbgl - to depth	0 ppm	0.0	1.5	
292.5									2	
292										
291.5									2.5	No Well Installed
291									3	
290.5									3.5	
290									4	
289.5									4.5	
289									5	
288.5									5.5	
288									6	
287.5									6.5	
287									7	
286.5									7.5	
286									8	
285.5									8.5	
285									9	
284.5									9.5	
284									10	



# BH8

**PROJECT NUMBER:** 2005-001      **UTM COORD. (m)** 17 T 591199 4858420      **TOTAL WELL DEPTH:** N/A  
**PROJECT NAME:** RSC - Old Church Road      **HOLE SIZE/SAMPLING METHOD:** 50 mm /SS      **SURFACE ELEVATION:** N/A  
**CLIENT:** Stylux Caledon Inc.      **RIG MODEL:** 4 x 6 Truck Mounted      **WELL SCREEN:** N/A  
**ADDRESS:** Res. Old Church Road, Russel Mason Court      **DRILLING METHOD:** Spilt Spoon, Solid Stem Aug  
**SAMPLING LENGTH:** 0.75 m  
**DRILLING DATE:** June 3, June 4, 2020

**COMMENTS :** masl: meter above sea level - SS: Split-Spoon      **LOGGED BY** ATOPP  
**CHECKED BY** AT

Elevation (masl)	% Recovery	Soil Sample ID	Soil Lab Analyses	Sample Type	Graphic Log	Material Description	HSVC as Isobutylene (ppm)	HSVC as Hexane (ppm)	Depth (m)	Well Diagram
294		1	VOCs BTEX PHCs M&I PAHs	SS		Grass, Gravel, Topsoil at surface	0 ppm	0.0	0.5	
293.5		2		SS		Brown Sand and Gravel Fill	0 ppm	0.0	1	
293						-Organic content in soils - low moisture content - average clast size 15 mm				
292.5	3		SS		Brown Fine Sand with trace gravel	0 ppm	0.0	1.5		
292						Staining: No Odour: No Low moisture: 0.0 mbgl - to depth	0 ppm	0.0	2	
291.5									2.5	No Well Installed
291									3	
290.5									3.5	
290									4	
289.5									4.5	
289									5	
288.5									5.5	
288									6	
287.5									6.5	
287									7	
286.5									7.5	
286									8	
285.5									8.5	
285									9	
284.5									9.5	
284									10	





## **APPENDIX C**

### **LABORATORY CERTIFICATES OF ANALYSES (SOIL)**



Azure Group Inc.(Mississauga)  
ATTN: Andrew Topp  
6751 Professional Court  
Suite 201  
Mississauga ON L4V 1Y3

Date Received: 04-JUN-20  
Report Date: 12-JUN-20 11:02 (MT)  
Version: FINAL

Client Phone: 416-779-2694

## Certificate of Analysis

Lab Work Order #: L2456477  
Project P.O. #: NOT SUBMITTED  
Job Reference: 2005-001  
C of C Numbers: 17-640203, 17-640310  
Legal Site Desc:

Amanda Overholster  
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927  
ALS CANADA LTD Part of the ALS Group An ALS Limited Company



# ANALYTICAL REPORT

## Summary of Guideline Exceedances

Guideline							
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit	
Ontario Regulation 153/04 - April 15, 2011 Standards - T2-Soil-Res/Park/Inst. Property Use (Coarse)							
(No parameter exceedances)							

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Physical Tests - SOIL

Analyte	Unit	Guide Limits										
		#1	#2									
Conductivity	mS/cm	0.7	-	0.0618			0.0765			0.0690	0.0717	
% Moisture	%	-	-	2.63	9.69	<0.25	6.99	13.5	17.1	5.39	5.20	10.8
pH	pH units	-	-	7.87	8.08		7.91			8.09	8.05	

### Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Physical Tests - SOIL

Analyte	Unit	Guide Limits									
		#1	#2								
		<b>Lab ID</b>	L2456477-10	L2456477-11	L2456477-12	L2456477-13	L2456477-14	L2456477-15	L2456477-16	L2456477-17	L2456477-18
		<b>Sample Date</b>	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	04-JUN-20	04-JUN-20	04-JUN-20	04-JUN-20
		<b>Sample ID</b>	BH4-SS1	BH5-SS1	BH5-SS7	BH7-SS1	BH8-SS1	BH6-SS1	DUP 3	BH6-SS7	DUP4
Conductivity	mS/cm	0.7	-	0.115	0.0743		0.121	0.0436	0.0956		
% Moisture	%	-	-	7.40	3.58	10.5	5.62	6.39	7.06	6.16	13.8
pH	pH units	-	-	7.47	7.81		7.77	7.35	7.61		

### Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Physical Tests - SOIL

**Lab ID** L2456477-19  
**Sample Date** 04-JUN-20  
**Sample ID** BH4-SS9

Analyte	Unit	Guide Limits		
		#1	#2	
Conductivity	mS/cm	0.7	-	
% Moisture	%	-	-	9.73
pH	pH units	-	-	

### Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

# ANALYTICAL REPORT

## Cyanides - SOIL

	<b>Lab ID</b>	L2456477-1	L2456477-4	L2456477-7	L2456477-8	L2456477-10	L2456477-11	L2456477-13	L2456477-14	L2456477-15	
	<b>Sample Date</b>	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	04-JUN-20	
	<b>Sample ID</b>	BH1-SS1	BH2-SS1	BH3-SS1	DUP 2	BH4-SS1	BH5-SS1	BH7-SS1	BH8-SS1	BH6-SS1	
	<b>Guide Limits</b>										
<b>Analyte</b>	<b>Unit</b>	<b>#1</b>	<b>#2</b>								
Cyanide, Weak Acid Diss	ug/g	0.051	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

**Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)**

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Saturated Paste Extractables - SOIL

Analyte	Unit	Guide Limits		Lab ID	L2456477-1	L2456477-4	L2456477-7	L2456477-8	L2456477-10	L2456477-11	L2456477-13	L2456477-14	L2456477-15
		#1	#2	Sample Date	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20
				Sample ID	BH1-SS1	BH2-SS1	BH3-SS1	DUP 2	BH4-SS1	BH5-SS1	BH7-SS1	BH8-SS1	BH6-SS1
SAR	SAR	5	-		<0.10 <sup>SAR:M</sup>	0.15 <sup>SAR:M</sup>	0.23 <sup>SAR:M</sup>	0.24 <sup>SAR:M</sup>	<0.10	0.16 <sup>SAR:M</sup>	2.28 <sup>SAR:M</sup>	0.84 <sup>SAR:M</sup>	0.52 <sup>SAR:M</sup>
Calcium (Ca)	mg/L	-	-		4.73	6.83	4.91	5.17	13.4	6.44	3.91	1.99	7.43
Magnesium (Mg)	mg/L	-	-		<0.50	<0.50	<0.50	<0.50	0.59	<0.50	<0.50	<0.50	<0.50
Sodium (Na)	mg/L	-	-		0.59	1.40	1.88	1.96	1.00	1.43	16.4	4.32	5.11

### Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.



## Metals - SOIL

Analyte	Unit	Guide Limits		Lab ID	L2456477-1	L2456477-4	L2456477-7	L2456477-8	L2456477-10	L2456477-11	L2456477-13	L2456477-14	L2456477-15
		#1	#2	Sample Date	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20
				Sample ID	BH1-SS1	BH2-SS1	BH3-SS1	DUP 2	BH4-SS1	BH5-SS1	BH7-SS1	BH8-SS1	BH6-SS1
Antimony (Sb)	ug/g	7.5	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic (As)	ug/g	18	-	<1.0	<1.0	<1.0	<1.0	1.2	1.0	2.2	1.2	1.3	
Barium (Ba)	ug/g	390	-	7.3	6.4	7.3	8.6	24.9	8.3	29.0	20.1	15.0	
Beryllium (Be)	ug/g	4	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Boron (B)	ug/g	120	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
Boron (B), Hot Water Ext.	ug/g	1.5	-	<0.10	<0.10	<0.10	<0.10	0.13	<0.10	0.11	<0.10	0.13	
Cadmium (Cd)	ug/g	1.2	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Chromium (Cr)	ug/g	160	-	3.7	4.2	5.5	5.1	8.8	5.6	9.9	7.7	6.4	
Cobalt (Co)	ug/g	22	-	1.3	1.2	1.5	1.5	2.4	1.5	2.4	2.1	1.9	
Copper (Cu)	ug/g	140	-	3.4	3.6	3.5	4.1	3.7	3.3	7.2	3.5	3.9	
Lead (Pb)	ug/g	120	-	1.6	1.7	2.1	2.6	3.5	1.9	8.9	3.0	3.8	
Mercury (Hg)	ug/g	0.27	-	<0.0050	<0.0050	<0.0050	<0.0050	0.0175	0.0061	0.0101	0.0131	0.0162	
Molybdenum (Mo)	ug/g	6.9	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Nickel (Ni)	ug/g	100	-	2.8	2.7	2.8	3.3	4.6	3.0	4.8	4.5	3.8	
Selenium (Se)	ug/g	2.4	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Silver (Ag)	ug/g	20	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Thallium (Tl)	ug/g	1	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Uranium (U)	ug/g	23	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Vanadium (V)	ug/g	86	-	6.9	7.7	14.0	10.3	20.9	12.7	22.4	17.2	14.5	
Zinc (Zn)	ug/g	340	-	6.8	6.4	8.2	9.1	16.0	7.4	21.1	9.4	11.6	

### Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.



# ANALYTICAL REPORT

## Speciated Metals - SOIL

	Lab ID	L2456477-1	L2456477-4	L2456477-7	L2456477-8	L2456477-10	L2456477-11	L2456477-13	L2456477-14	L2456477-15		
	Sample Date	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	04-JUN-20		
	Sample ID	BH1-SS1	BH2-SS1	BH3-SS1	DUP 2	BH4-SS1	BH5-SS1	BH7-SS1	BH8-SS1	BH6-SS1		
Analyte	Unit	Guide Limits										
		#1	#2									
Chromium, Hexavalent	ug/g	8	-	<0.20	<0.20	<0.20	<0.20	0.40	<0.20	<0.20	<0.20	0.26

### Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Volatile Organic Compounds - SOIL

Analyte	Unit	Guide Limits		Lab ID	L2456477-1	L2456477-2	L2456477-3	L2456477-4	L2456477-5	L2456477-6	L2456477-7	L2456477-9	L2456477-10
		#1	#2	Sample Date	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20
				Sample ID	BH1-SS1	BH1-SS7	TRIP BLANK	BH2-SS1	BH2-SS8	DUP 1	BH3-SS1	BH3-SS7	BH4-SS1
Acetone	ug/g	16	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	ug/g	0.21	-		<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068
Bromodichloromethane	ug/g	1.5	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bromoform	ug/g	0.27	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bromomethane	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Carbon tetrachloride	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chlorobenzene	ug/g	2.4	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibromochloromethane	ug/g	2.3	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chloroform	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dibromoethane	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichlorobenzene	ug/g	1.2	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-Dichlorobenzene	ug/g	4.8	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,4-Dichlorobenzene	ug/g	0.083	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dichlorodifluoromethane	ug/g	16	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1-Dichloroethane	ug/g	0.47	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloroethane	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1-Dichloroethylene	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
cis-1,2-Dichloroethylene	ug/g	1.9	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
trans-1,2-Dichloroethylene	ug/g	0.084	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methylene Chloride	ug/g	0.1	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloropropane	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
cis-1,3-Dichloropropene	ug/g	-	-		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
trans-1,3-Dichloropropene	ug/g	-	-		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
1,3-Dichloropropene (cis & trans)	ug/g	0.05	-		<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
Ethylbenzene	ug/g	1.1	-		<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018
n-Hexane	ug/g	2.8	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methyl Ethyl Ketone	ug/g	16	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	ug/g	1.7	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MTBE	ug/g	0.75	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Styrene	ug/g	0.7	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

**Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)**

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Volatile Organic Compounds - SOIL

Analyte	Unit	Guide Limits		Lab ID	L2456477-11	L2456477-12	L2456477-13	L2456477-14	L2456477-15	L2456477-17	L2456477-18	L2456477-19
		#1	#2	Sample Date	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	04-JUN-20	04-JUN-20	04-JUN-20	04-JUN-20
				Sample ID	BH5-SS1	BH5-SS7	BH7-SS1	BH8-SS1	BH6-SS1	BH6-SS7	DUP4	BH4-SS9
Acetone	ug/g	16	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	ug/g	0.21	-		<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068
Bromodichloromethane	ug/g	1.5	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bromoform	ug/g	0.27	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Bromomethane	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Carbon tetrachloride	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chlorobenzene	ug/g	2.4	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibromochloromethane	ug/g	2.3	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chloroform	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dibromoethane	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichlorobenzene	ug/g	1.2	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,3-Dichlorobenzene	ug/g	4.8	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,4-Dichlorobenzene	ug/g	0.083	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dichlorodifluoromethane	ug/g	16	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1-Dichloroethane	ug/g	0.47	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloroethane	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1-Dichloroethylene	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
cis-1,2-Dichloroethylene	ug/g	1.9	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
trans-1,2-Dichloroethylene	ug/g	0.084	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methylene Chloride	ug/g	0.1	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,2-Dichloropropane	ug/g	0.05	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
cis-1,3-Dichloropropene	ug/g	-	-		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
trans-1,3-Dichloropropene	ug/g	-	-		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
1,3-Dichloropropene (cis & trans)	ug/g	0.05	-		<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
Ethylbenzene	ug/g	1.1	-		<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018
n-Hexane	ug/g	2.8	-		<0.050	<0.050	0.353	<0.050	<0.050	<0.050	<0.050	<0.050
Methyl Ethyl Ketone	ug/g	16	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	ug/g	1.7	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MTBE	ug/g	0.75	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Styrene	ug/g	0.7	-		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

### Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Volatile Organic Compounds - SOIL

Analyte	Unit	Guide Limits		Lab ID	L2456477-1	L2456477-2	L2456477-3	L2456477-4	L2456477-5	L2456477-6	L2456477-7	L2456477-9	L2456477-10
		#1	#2	Sample Date	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20
				Sample ID	BH1-SS1	BH1-SS7	TRIP BLANK	BH2-SS1	BH2-SS8	DUP 1	BH3-SS1	BH3-SS7	BH4-SS1
1,1,1,2-Tetrachloroethane	ug/g	0.058	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2,2-Tetrachloroethane	ug/g	0.05	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Tetrachloroethylene	ug/g	0.28	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	ug/g	2.3	-	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1,1-Trichloroethane	ug/g	0.38	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2-Trichloroethane	ug/g	0.05	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Trichloroethylene	ug/g	0.061	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Trichlorofluoromethane	ug/g	4	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Vinyl chloride	ug/g	0.02	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
o-Xylene	ug/g	-	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
m+p-Xylenes	ug/g	-	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Xylenes (Total)	ug/g	3.1	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Surrogate: 4-Bromofluorobenzene	%	-	-	90.7	87.3	91.8	88.8	82.3	96.6	93.7	96.3	97.8	
Surrogate: 1,4-Difluorobenzene	%	-	-	123.3	118.6	124.1	120.2	112.3	112.5	109.9	114.3	116.0	

### Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Volatile Organic Compounds - SOIL

Analyte	Unit	Guide Limits		Lab ID	L2456477-11	L2456477-12	L2456477-13	L2456477-14	L2456477-15	L2456477-17	L2456477-18	L2456477-19
		#1	#2	Sample Date	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	04-JUN-20	04-JUN-20	04-JUN-20	04-JUN-20
				Sample ID	BH5-SS1	BH5-SS7	BH7-SS1	BH8-SS1	BH6-SS1	BH6-SS7	DUP4	BH4-SS9
1,1,1,2-Tetrachloroethane	ug/g	0.058	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2,2-Tetrachloroethane	ug/g	0.05	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Tetrachloroethylene	ug/g	0.28	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Toluene	ug/g	2.3	-	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1,1-Trichloroethane	ug/g	0.38	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1,1,2-Trichloroethane	ug/g	0.05	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Trichloroethylene	ug/g	0.061	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Trichlorofluoromethane	ug/g	4	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Vinyl chloride	ug/g	0.02	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
o-Xylene	ug/g	-	-	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
m+p-Xylenes	ug/g	-	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Xylenes (Total)	ug/g	3.1	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Surrogate: 4-Bromofluorobenzene	%	-	-	99.5	102.1	100.4	92.1	100.8	94.0	91.9	92.1	
Surrogate: 1,4-Difluorobenzene	%	-	-	117.8	120.2	118.4	110.9	104.6	110.9	110.2	106.0	

### Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Hydrocarbons - SOIL

Analyte	Unit	Guide Limits		Lab ID	L2456477-1	L2456477-2	L2456477-4	L2456477-5	L2456477-6	L2456477-7	L2456477-9	L2456477-10	L2456477-11
		#1	#2	Sample Date	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20
				Sample ID	BH1-SS1	BH1-SS7	BH2-SS1	BH2-SS8	DUP 1	BH3-SS1	BH3-SS7	BH4-SS1	BH5-SS1
F1 (C6-C10)	ug/g	55	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F1-BTEX	ug/g	55	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F2 (C10-C16)	ug/g	98	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F2-Naphth	ug/g	-	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16-C34)	ug/g	300	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
F3-PAH	ug/g	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34-C50)	ug/g	2800	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Total Hydrocarbons (C6-C50)	ug/g	-	-	<72	<72	<72	<72	<72	<72	<72	<72	<72	<72
Chrom. to baseline at nC50		-	-	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	86.6	85.9	85.9	84.3	85.1	82.5	82.9	80.8	84.5	
Surrogate: 3,4-Dichlorotoluene	%	-	-	72.1	71.9	59.4	<sup>SURR-</sup> ND	62.8	80.0	91.9	97.0	100.9	99.4

### Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Hydrocarbons - SOIL

Analyte	Unit	Guide Limits		Lab ID	L2456477-12	L2456477-13	L2456477-14	L2456477-15	L2456477-17	L2456477-18	L2456477-19
		#1	#2	Sample Date	03-JUN-20	03-JUN-20	03-JUN-20	04-JUN-20	04-JUN-20	04-JUN-20	04-JUN-20
				Sample ID	BH5-SS7	BH7-SS1	BH8-SS1	BH6-SS1	BH6-SS7	DUP4	BH4-SS9
F1 (C6-C10)	ug/g	55	-	<5.0	13.6	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F1-BTEX	ug/g	55	-	<5.0	13.6	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F2 (C10-C16)	ug/g	98	-	<10	<10	<10	<10	<10	<10	<10	<10
F2-Naphth	ug/g	-	-	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16-C34)	ug/g	300	-	<50	<50	<50	<50	<50	<50	<50	<50
F3-PAH	ug/g	-	-	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34-C50)	ug/g	2800	-	<50	<50	<50	<50	<50	<50	<50	<50
Total Hydrocarbons (C6-C50)	ug/g	-	-	<72	<72	<72	<72	<72	<72	<72	<72
Chrom. to baseline at nC50		-	-	YES	YES	YES	YES	YES	YES	YES	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	84.0	84.1	81.6	81.1	82.6	82.7	80.1	80.1
Surrogate: 3,4-Dichlorotoluene	%	-	-	102.4	97.7	84.8	92.5	82.1	75.6	84.0	84.0

### Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.



## ANALYTICAL REPORT



## Polycyclic Aromatic Hydrocarbons - SOIL

Analyte	Unit	Guide Limits		Lab ID	L2456477-1	L2456477-4	L2456477-7	L2456477-10	L2456477-11	L2456477-13	L2456477-14	L2456477-15	L2456477-16
		#1	#2	Sample Date	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	03-JUN-20	04-JUN-20
				Sample ID	BH1-SS1	BH2-SS1	BH3-SS1	BH4-SS1	BH5-SS1	BH7-SS1	BH8-SS1	BH6-SS1	DUP 3
Acenaphthene	ug/g	7.9	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	ug/g	0.15	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	ug/g	0.67	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)anthracene	ug/g	0.5	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene	ug/g	0.3	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(b)fluoranthene	ug/g	0.78	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	ug/g	6.6	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	ug/g	0.78	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chrysene	ug/g	7	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenzo(ah)anthracene	ug/g	0.1	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluoranthene	ug/g	0.69	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	ug/g	62	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-cd)pyrene	ug/g	0.38	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1+2-Methylnaphthalenes	ug/g	0.99	-	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
1-Methylnaphthalene	ug/g	0.99	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
2-Methylnaphthalene	ug/g	0.99	-	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Naphthalene	ug/g	0.6	-	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
Phenanthrene	ug/g	6.2	-	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046	<0.046
Pyrene	ug/g	78	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Surrogate: 2-Fluorobiphenyl	%	-	-	85.4	90.7	84.5	91.6	87.7	86.1	89.4	93.5	90.0	
Surrogate: p-Terphenyl d14	%	-	-	86.4	94.2	86.6	99.1	92.3	90.2	97.6	103.3	96.6	

## Guide Limit #1: T2-Soil-Res/Park/Inst. Property Use (Coarse)

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.  
    Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

# Reference Information

## Qualifiers for Individual Parameters Listed:

Qualifier	Description
SURR-ND	Surrogate recovery marginally exceeded ALS DQO. Reported non-detect results for associated samples were deemed to be unaffected.
SAR:M	Reported SAR represents a maximum value. Actual SAR may be lower if both Ca and Mg were detectable.

## Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
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**B-HWS-R511-WT** Soil Boron-HWE-O.Reg 153/04 (July 2011) HW EXTR, EPA 6010B

A dried solid sample is extracted with calcium chloride, the sample undergoes a heating process. After cooling the sample is filtered and analyzed by ICP/OES.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

**CN-WAD-R511-WT** Soil Cyanide (WAD)-O.Reg 153/04 (July 2011) MOE 3015/APHA 4500CN I-WAD

The sample is extracted with a strong base for 16 hours, and then filtered. The filtrate is then distilled where the cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

**CR-CR6-IC-WT** Soil Hexavalent Chromium in Soil SW846 3060A/7199

This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

**EC-WT** Soil Conductivity (EC) MOEE E3138

A representative subsample is tumbled with de-ionized (DI) water. The ratio of water to soil is 2:1 v/w. After tumbling the sample is then analyzed by a conductivity meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

**F1-F4-511-CALC-WT** Soil F1-F4 Hydrocarbon Calculated Parameters CCME CWS-PHC, Pub #1310, Dec 2001-S

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

# Reference Information

## Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
<p>Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:</p> <ol style="list-style-type: none"> <li>1. All extraction and analysis holding times were met.</li> <li>2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.</li> <li>3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.</li> <li>4. Linearity of diesel or motor oil response within 15% throughout the calibration range.</li> </ol>			
<b>F1-HS-511-WT</b>	Soil	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS
<p>Fraction F1 is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/FID.</p> <p>Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).</p>			
<b>F2-F4-511-WT</b>	Soil	F2-F4-O.Reg 153/04 (July 2011)	CCME Tier 1
<p>Petroleum Hydrocarbons (F2-F4 fractions) are extracted from soil with 1:1 hexane:acetone using a rotary extractor. Extracts are treated with silica gel to remove polar organic interferences. F2, F3, &amp; F4 are analyzed by GC-FID. F4G-sg is analyzed gravimetrically.</p> <p>Notes:</p> <ol style="list-style-type: none"> <li>1. F2 (C10-C16): Sum of all hydrocarbons that elute between nC10 and nC16.</li> <li>2. F3 (C16-C34): Sum of all hydrocarbons that elute between nC16 and nC34.</li> <li>3. F4 (C34-C50): Sum of all hydrocarbons that elute between nC34 and nC50.</li> <li>4. F4G: Gravimetric Heavy Hydrocarbons</li> <li>5. F4G-sg: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.</li> <li>6. Where both F4 (C34-C50) and F4G-sg are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.</li> <li>7. F4G-sg cannot be added to the C6 to C50 hydrocarbon results to obtain an estimate of total extractable hydrocarbons.</li> <li>8. This method is validated for use.</li> <li>9. Data from analysis of validation and quality control samples is available upon request.</li> <li>10. Reported results are expressed as milligrams per dry kilogram, unless otherwise indicated.</li> </ol> <p>Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).</p>			
<b>HG-200.2-CVAA-WT</b>	Soil	Mercury in Soil by CVAAS	EPA 200.2/1631E (mod)
<p>Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.</p> <p>Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).</p>			
<b>MET-200.2-CCMS-WT</b>	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020A (mod)
<p>Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the &lt;2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the &lt;2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.</p> <p>Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H<sub>2</sub>S) may be excluded if lost during sampling, storage, or digestion.</p> <p>Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).</p>			
<b>METHYLNAPS-CALC-WT</b>	Soil	ABN-Calculated Parameters	SW846 8270
<b>MOISTURE-WT</b>	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)

# Reference Information

**Methods Listed (if applicable):**

ALS Test Code	Matrix	Test Description	Method Reference**
<b>PAH-511-WT</b>	Soil	PAH-O.Reg 153/04 (July 2011)	SW846 3510/8270
<p>A representative sub-sample of soil is fortified with deuterium-labelled surrogates and a mechanical shaking technique is used to extract the sample with a mixture of methanol and toluene. The extracts are concentrated and analyzed by GC/MS. Results for benzo(b) fluoranthene may include contributions from benzo(j)fluoranthene, if also present in the sample.</p> <p>Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).</p>			
<b>PH-WT</b>	Soil	pH	MOEE E3137A
<p>A minimum 10g portion of the sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil and then analyzed using a pH meter and electrode.</p> <p>Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).</p>			
<b>SAR-R511-WT</b>	Soil	SAR-O.Reg 153/04 (July 2011)	SW846 6010C
<p>A dried, disaggregated solid sample is extracted with deionized water, the aqueous extract is separated from the solid, acidified and then analyzed using a ICP/OES. The concentrations of Na, Ca and Mg are reported as per CALA requirements for calculated parameters. These individual parameters are not for comparison to any guideline.</p> <p>Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).</p>			
<b>VOC-1,3-DCP-CALC-WT</b>	Soil	Regulation 153 VOCs	SW8260B/SW8270C
<b>VOC-511-HS-WT</b>	Soil	VOC-O.Reg 153/04 (July 2011)	SW846 8260 (511)
<p>Soil and sediment samples are extracted in methanol and analyzed by headspace-GC/MS.</p> <p>Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).</p>			
<b>XYLENES-SUM-CALC-WT</b>	Soil	Sum of Xylene Isomer Concentrations	CALCULATION
<p>Total xylenes represents the sum of o-xylene and m&amp;p-xylene.</p>			
<p>**ALS test methods may incorporate modifications from specified reference methods to improve performance.</p>			
<p>Chain of Custody Numbers:</p>			
17-640203	17-640310		
<p><i>The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:</i></p>			
Laboratory Definition Code	Laboratory Location		
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA		

# Reference Information

L2456477 CONT'D....  
Job Reference: 2005-001  
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12-JUN-20 11:02 (MT)

## GLOSSARY OF REPORT TERMS

*Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.*

*mg/kg - milligrams per kilogram based on dry weight of sample*

*mg/kg wwt - milligrams per kilogram based on wet weight of sample*

*mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight*

*mg/L - unit of concentration based on volume, parts per million.*

*< - Less than.*

*D.L. - The reporting limit.*

*N/A - Result not available. Refer to qualifier code and definition for explanation.*

*Test results reported relate only to the samples as received by the laboratory.*

*UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.*

*Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.*

*Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.*



## Quality Control Report

Workorder: L2456477

Report Date: 12-JUN-20

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Client: Azure Group Inc.(Mississauga)  
 6751 Professional Court Suite 201  
 Mississauga ON L4V 1Y3

Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>B-HWS-R511-WT</b>								
	<b>Soil</b>							
<b>Batch</b>	<b>R5114579</b>							
<b>WG3338755-4</b>	<b>DUP</b>	<b>L2457712-3</b>						
Boron (B), Hot Water Ext.		0.17	0.16		ug/g	5.9	30	10-JUN-20
<b>WG3338755-2</b>	<b>IRM</b>	<b>WT SAR4</b>						
Boron (B), Hot Water Ext.			88.8		%		70-130	10-JUN-20
<b>WG3338755-3</b>	<b>LCS</b>							
Boron (B), Hot Water Ext.			107.0		%		70-130	10-JUN-20
<b>WG3338755-1</b>	<b>MB</b>							
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	10-JUN-20
<b>CN-WAD-R511-WT</b>								
	<b>Soil</b>							
<b>Batch</b>	<b>R5115362</b>							
<b>WG3337885-3</b>	<b>DUP</b>	<b>L2456477-1</b>						
Cyanide, Weak Acid Diss		<0.050	<0.050	RPD-NA	ug/g	N/A	35	10-JUN-20
<b>WG3337885-2</b>	<b>LCS</b>							
Cyanide, Weak Acid Diss			97.5		%		80-120	10-JUN-20
<b>WG3337885-1</b>	<b>MB</b>							
Cyanide, Weak Acid Diss			<0.050		ug/g		0.05	10-JUN-20
<b>WG3337885-4</b>	<b>MS</b>	<b>L2456477-1</b>						
Cyanide, Weak Acid Diss			104.5		%		70-130	10-JUN-20
<b>CR-CR6-IC-WT</b>								
	<b>Soil</b>							
<b>Batch</b>	<b>R5115624</b>							
<b>WG3337886-4</b>	<b>CRM</b>	<b>WT-SQC012</b>						
Chromium, Hexavalent			97.1		%		70-130	10-JUN-20
<b>WG3337886-3</b>	<b>DUP</b>	<b>L2456477-1</b>						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	10-JUN-20
<b>WG3337886-2</b>	<b>LCS</b>							
Chromium, Hexavalent			98.4		%		80-120	10-JUN-20
<b>WG3337886-1</b>	<b>MB</b>							
Chromium, Hexavalent			<0.20		ug/g		0.2	10-JUN-20
<b>EC-WT</b>								
	<b>Soil</b>							
<b>Batch</b>	<b>R5115394</b>							
<b>WG3338757-4</b>	<b>DUP</b>	<b>WG3338757-3</b>						
Conductivity		0.320	0.320		mS/cm	0.0	20	10-JUN-20
<b>WG3338757-2</b>	<b>IRM</b>	<b>WT SAR4</b>						
Conductivity			99.0		%		70-130	10-JUN-20
<b>WG3339096-1</b>	<b>LCS</b>							
Conductivity			99.5		%		90-110	10-JUN-20
<b>WG3338757-1</b>	<b>MB</b>							



## Quality Control Report

Workorder: L2456477

Report Date: 12-JUN-20

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Client: Azure Group Inc.(Mississauga)  
6751 Professional Court Suite 201  
Mississauga ON L4V 1Y3

Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>EC-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5115394</b>							
<b>WG3338757-1</b>	<b>MB</b>							
Conductivity			<0.0040		mS/cm		0.004	10-JUN-20
<b>F1-HS-511-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5110554</b>							
<b>WG3336714-4</b>	<b>DUP</b>	<b>WG3336714-3</b>						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	08-JUN-20
<b>WG3336714-2</b>	<b>LCS</b>							
F1 (C6-C10)			104.8		%		80-120	08-JUN-20
<b>WG3336714-1</b>	<b>MB</b>							
F1 (C6-C10)			<5.0		ug/g		5	08-JUN-20
Surrogate: 3,4-Dichlorotoluene			97.3		%		60-140	08-JUN-20
<b>WG3336714-6</b>	<b>MS</b>	<b>L2456741-1</b>						
F1 (C6-C10)			103.1		%		60-140	09-JUN-20
<b>Batch</b>	<b>R5110800</b>							
<b>WG3335809-4</b>	<b>DUP</b>	<b>WG3335809-3</b>						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	08-JUN-20
<b>WG3335809-2</b>	<b>LCS</b>							
F1 (C6-C10)			99.2		%		80-120	08-JUN-20
<b>WG3335809-1</b>	<b>MB</b>							
F1 (C6-C10)			<5.0		ug/g		5	08-JUN-20
Surrogate: 3,4-Dichlorotoluene			75.8		%		60-140	08-JUN-20
<b>Batch</b>	<b>R5115730</b>							
<b>WG3336020-4</b>	<b>DUP</b>	<b>WG3336020-3</b>						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	11-JUN-20
<b>WG3336020-2</b>	<b>LCS</b>							
F1 (C6-C10)			109.3		%		80-120	11-JUN-20
<b>WG3336020-1</b>	<b>MB</b>							
F1 (C6-C10)			<5.0		ug/g		5	11-JUN-20
Surrogate: 3,4-Dichlorotoluene			91.6		%		60-140	11-JUN-20
<b>WG3336020-6</b>	<b>MS</b>	<b>L2456477-7</b>						
F1 (C6-C10)			112.4		%		60-140	11-JUN-20
<b>F2-F4-511-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5116227</b>							
<b>WG3337944-3</b>	<b>DUP</b>	<b>WG3337944-5</b>						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	11-JUN-20
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	11-JUN-20



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Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>F2-F4-511-WT</b>	<b>Soil</b>							
<b>Batch</b>	<b>R5116227</b>							
<b>WG3337944-3</b>	<b>DUP</b>	<b>WG3337944-5</b>						
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	11-JUN-20
<b>WG3337944-2</b>	<b>LCS</b>							
F2 (C10-C16)			91.1		%		80-120	11-JUN-20
F3 (C16-C34)			97.3		%		80-120	11-JUN-20
F4 (C34-C50)			89.6		%		80-120	11-JUN-20
<b>WG3337944-1</b>	<b>MB</b>							
F2 (C10-C16)			<10		ug/g		10	11-JUN-20
F3 (C16-C34)			<50		ug/g		50	11-JUN-20
F4 (C34-C50)			<50		ug/g		50	11-JUN-20
Surrogate: 2-Bromobenzotrifluoride			84.8		%		60-140	11-JUN-20
<b>WG3337944-4</b>	<b>MS</b>	<b>WG3337944-5</b>						
F2 (C10-C16)			89.7		%		60-140	11-JUN-20
F3 (C16-C34)			93.1		%		60-140	11-JUN-20
F4 (C34-C50)			86.1		%		60-140	11-JUN-20
<b>Batch</b>	<b>R5116517</b>							
<b>WG3337945-3</b>	<b>DUP</b>	<b>WG3337945-5</b>						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	11-JUN-20
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	11-JUN-20
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	11-JUN-20
<b>WG3337945-2</b>	<b>LCS</b>							
F2 (C10-C16)			96.5		%		80-120	11-JUN-20
F3 (C16-C34)			104.0		%		80-120	11-JUN-20
F4 (C34-C50)			94.2		%		80-120	11-JUN-20
<b>WG3337945-1</b>	<b>MB</b>							
F2 (C10-C16)			<10		ug/g		10	11-JUN-20
F3 (C16-C34)			<50		ug/g		50	11-JUN-20
F4 (C34-C50)			<50		ug/g		50	11-JUN-20
Surrogate: 2-Bromobenzotrifluoride			85.0		%		60-140	11-JUN-20
<b>WG3337945-4</b>	<b>MS</b>	<b>WG3337945-5</b>						
F2 (C10-C16)			97.1		%		60-140	11-JUN-20
F3 (C16-C34)			99.6		%		60-140	11-JUN-20
F4 (C34-C50)			95.1		%		60-140	11-JUN-20

**HG-200.2-CVAA-WT**      **Soil**





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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>HG-200.2-CVAA-WT</b>								
	<b>Soil</b>							
<b>Batch</b>	<b>R5114397</b>							
<b>WG3338739-9</b>	<b>CRM</b>	<b>WT-SS-1</b>						
Mercury (Hg)			106.7		%		70-130	10-JUN-20
<b>WG3338739-13</b>	<b>DUP</b>	<b>WG3338739-12</b>						
Mercury (Hg)		0.0405	0.0366		ug/g	10	40	10-JUN-20
<b>WG3338739-10</b>	<b>LCS</b>							
Mercury (Hg)			104.5		%		80-120	10-JUN-20
<b>WG3338739-8</b>	<b>MB</b>							
Mercury (Hg)			<0.0050		mg/kg		0.005	10-JUN-20
<b>MET-200.2-CCMS-WT</b>								
	<b>Soil</b>							
<b>Batch</b>	<b>R5115747</b>							
<b>WG3338739-9</b>	<b>CRM</b>	<b>WT-SS-1</b>						
Antimony (Sb)			96.0		%		70-130	10-JUN-20
Arsenic (As)			110.8		%		70-130	10-JUN-20
Beryllium (Be)			93.6		%		70-130	10-JUN-20
Boron (B)			77.7		%		70-130	10-JUN-20
Cadmium (Cd)			106.8		%		70-130	10-JUN-20
Chromium (Cr)			82.8		%		70-130	10-JUN-20
Cobalt (Co)			96.8		%		70-130	10-JUN-20
Copper (Cu)			95.8		%		70-130	10-JUN-20
Lead (Pb)			108.1		%		70-130	10-JUN-20
Molybdenum (Mo)			102.2		%		70-130	10-JUN-20
Nickel (Ni)			98.0		%		70-130	10-JUN-20
Selenium (Se)			91.6		%		70-130	10-JUN-20
Silver (Ag)			103.4		%		70-130	10-JUN-20
Thallium (Tl)			73.1		%		70-130	10-JUN-20
Vanadium (V)			97.0		%		70-130	10-JUN-20
Zinc (Zn)			99.2		%		70-130	10-JUN-20
<b>WG3338739-13</b>	<b>DUP</b>	<b>WG3338739-12</b>						
Antimony (Sb)		0.15	0.15		ug/g	1.3	30	10-JUN-20
Arsenic (As)		2.81	2.91		ug/g	3.6	30	10-JUN-20
Barium (Ba)		48.6	48.7		ug/g	0.2	40	10-JUN-20
Beryllium (Be)		0.39	0.41		ug/g	5.5	30	10-JUN-20
Boron (B)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	10-JUN-20
Cadmium (Cd)		0.178	0.186		ug/g	4.4	30	10-JUN-20
Chromium (Cr)		14.3	14.9		ug/g	4.1	30	10-JUN-20



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-200.2-CCMS-WT</b>	<b>Soil</b>							
<b>Batch</b>	<b>R5115747</b>							
<b>WG3338739-13 DUP</b>		<b>WG3338739-12</b>						
Cobalt (Co)		5.32	5.40		ug/g	1.4	30	10-JUN-20
Copper (Cu)		10.0	9.82		ug/g	2.0	30	10-JUN-20
Lead (Pb)		10.7	11.0		ug/g	2.6	40	10-JUN-20
Molybdenum (Mo)		0.27	0.31		ug/g	16	40	10-JUN-20
Nickel (Ni)		10.5	10.6		ug/g	0.3	30	10-JUN-20
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	10-JUN-20
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	10-JUN-20
Thallium (Tl)		0.095	0.097		ug/g	2.9	30	10-JUN-20
Uranium (U)		0.437	0.482		ug/g	9.7	30	10-JUN-20
Vanadium (V)		27.0	28.0		ug/g	3.8	30	10-JUN-20
Zinc (Zn)		42.0	41.4		ug/g	1.5	30	10-JUN-20
<b>WG3338739-11 LCS</b>								
Antimony (Sb)			118.2		%		80-120	10-JUN-20
Arsenic (As)			104.7		%		80-120	10-JUN-20
Barium (Ba)			108.1		%		80-120	10-JUN-20
Beryllium (Be)			97.3		%		80-120	10-JUN-20
Boron (B)			93.9		%		80-120	10-JUN-20
Cadmium (Cd)			103.8		%		80-120	10-JUN-20
Chromium (Cr)			99.0		%		80-120	10-JUN-20
Cobalt (Co)			100.0		%		80-120	10-JUN-20
Copper (Cu)			99.9		%		80-120	10-JUN-20
Lead (Pb)			106.5		%		80-120	10-JUN-20
Molybdenum (Mo)			109.5		%		80-120	10-JUN-20
Nickel (Ni)			98.7		%		80-120	10-JUN-20
Selenium (Se)			107.2		%		80-120	10-JUN-20
Silver (Ag)			106.6		%		80-120	10-JUN-20
Thallium (Tl)			107.2		%		80-120	10-JUN-20
Uranium (U)			97.3		%		80-120	10-JUN-20
Vanadium (V)			102.1		%		80-120	10-JUN-20
Zinc (Zn)			99.7		%		80-120	10-JUN-20
<b>WG3338739-8 MB</b>								
Antimony (Sb)			<0.10		mg/kg		0.1	10-JUN-20
Arsenic (As)			<0.10		mg/kg		0.1	10-JUN-20
Barium (Ba)			0.60	B	mg/kg		0.5	



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-200.2-CCMS-WT</b>								
	<b>Soil</b>							
<b>Batch</b>	<b>R5115747</b>							
<b>WG3338739-8</b>	<b>MB</b>							
Barium (Ba)			0.60	B	mg/kg		0.5	10-JUN-20
Beryllium (Be)			<0.10		mg/kg		0.1	10-JUN-20
Boron (B)			<5.0		mg/kg		5	10-JUN-20
Cadmium (Cd)			<0.020		mg/kg		0.02	10-JUN-20
Chromium (Cr)			<0.50		mg/kg		0.5	10-JUN-20
Cobalt (Co)			<0.10		mg/kg		0.1	10-JUN-20
Copper (Cu)			<0.50		mg/kg		0.5	10-JUN-20
Lead (Pb)			<0.50		mg/kg		0.5	10-JUN-20
Molybdenum (Mo)			<0.10		mg/kg		0.1	10-JUN-20
Nickel (Ni)			<0.50		mg/kg		0.5	10-JUN-20
Selenium (Se)			<0.20		mg/kg		0.2	10-JUN-20
Silver (Ag)			<0.10		mg/kg		0.1	10-JUN-20
Thallium (Tl)			<0.050		mg/kg		0.05	10-JUN-20
Uranium (U)			<0.050		mg/kg		0.05	10-JUN-20
Vanadium (V)			<0.20		mg/kg		0.2	10-JUN-20
Zinc (Zn)			<2.0		mg/kg		2	10-JUN-20
<b>MOISTURE-WT</b>								
	<b>Soil</b>							
<b>Batch</b>	<b>R5111881</b>							
<b>WG3337927-3</b>	<b>DUP</b>	<b>L2456477-7</b>						
% Moisture		5.39	5.24		%	2.8	20	10-JUN-20
<b>WG3337927-2</b>	<b>LCS</b>							
% Moisture			99.7		%		90-110	10-JUN-20
<b>WG3337927-1</b>	<b>MB</b>							
% Moisture			<0.25		%		0.25	10-JUN-20
<b>Batch</b>	<b>R5111891</b>							
<b>WG3337901-3</b>	<b>DUP</b>	<b>L2456474-7</b>						
% Moisture		1.27	2.24	DUP-H,J	%	0.97	0.5	10-JUN-20
<b>WG3337901-2</b>	<b>LCS</b>							
% Moisture			99.3		%		90-110	10-JUN-20
<b>WG3337901-1</b>	<b>MB</b>							
% Moisture			<0.25		%		0.25	10-JUN-20
<b>Batch</b>	<b>R5111894</b>							
<b>WG3337965-3</b>	<b>DUP</b>	<b>L2456477-17</b>						
% Moisture		13.8	12.6		%	9.1	20	10-JUN-20
<b>WG3337965-2</b>	<b>LCS</b>							



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MOISTURE-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5111894</b>							
<b>WG3337965-2</b>	<b>LCS</b>							
% Moisture			95.7		%		90-110	10-JUN-20
<b>WG3337965-1</b>	<b>MB</b>							
% Moisture			<0.25		%		0.25	10-JUN-20
<b>PAH-511-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5115787</b>							
<b>WG3337878-3</b>	<b>DUP</b>	<b>WG3337878-5</b>						
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	11-JUN-20
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	11-JUN-20
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Benzo(b)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Dibenzo(ah)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	11-JUN-20
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	11-JUN-20
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
<b>WG3337878-2</b>	<b>LCS</b>							
1-Methylnaphthalene			91.1		%		50-140	11-JUN-20
2-Methylnaphthalene			88.7		%		50-140	11-JUN-20
Acenaphthene			91.3		%		50-140	11-JUN-20
Acenaphthylene			84.9		%		50-140	11-JUN-20
Anthracene			87.8		%		50-140	11-JUN-20
Benzo(a)anthracene			88.1		%		50-140	11-JUN-20
Benzo(a)pyrene			89.6		%		50-140	11-JUN-20
Benzo(b)fluoranthene			89.1		%		50-140	11-JUN-20
Benzo(g,h,i)perylene			97.2				50-140	



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>PAH-511-WT</b>	<b>Soil</b>							
<b>Batch</b>	<b>R5115787</b>							
<b>WG3337878-2 LCS</b>								
Benzo(g,h,i)perylene			97.2		%		50-140	11-JUN-20
Benzo(k)fluoranthene			94.2		%		50-140	11-JUN-20
Chrysene			103.7		%		50-140	11-JUN-20
Dibenzo(ah)anthracene			95.8		%		50-140	11-JUN-20
Fluoranthene			93.2		%		50-140	11-JUN-20
Fluorene			84.8		%		50-140	11-JUN-20
Indeno(1,2,3-cd)pyrene			108.2		%		50-140	11-JUN-20
Naphthalene			90.2		%		50-140	11-JUN-20
Phenanthrene			92.0		%		50-140	11-JUN-20
Pyrene			95.3		%		50-140	11-JUN-20
<b>WG3337878-1 MB</b>								
1-Methylnaphthalene			<0.030		ug/g		0.03	11-JUN-20
2-Methylnaphthalene			<0.030		ug/g		0.03	11-JUN-20
Acenaphthene			<0.050		ug/g		0.05	11-JUN-20
Acenaphthylene			<0.050		ug/g		0.05	11-JUN-20
Anthracene			<0.050		ug/g		0.05	11-JUN-20
Benzo(a)anthracene			<0.050		ug/g		0.05	11-JUN-20
Benzo(a)pyrene			<0.050		ug/g		0.05	11-JUN-20
Benzo(b)fluoranthene			<0.050		ug/g		0.05	11-JUN-20
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	11-JUN-20
Benzo(k)fluoranthene			<0.050		ug/g		0.05	11-JUN-20
Chrysene			<0.050		ug/g		0.05	11-JUN-20
Dibenzo(ah)anthracene			<0.050		ug/g		0.05	11-JUN-20
Fluoranthene			<0.050		ug/g		0.05	11-JUN-20
Fluorene			<0.050		ug/g		0.05	11-JUN-20
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	11-JUN-20
Naphthalene			<0.013		ug/g		0.013	11-JUN-20
Phenanthrene			<0.046		ug/g		0.046	11-JUN-20
Pyrene			<0.050		ug/g		0.05	11-JUN-20
Surrogate: 2-Fluorobiphenyl			92.2		%		50-140	11-JUN-20
Surrogate: p-Terphenyl d14			94.2		%		50-140	11-JUN-20
<b>WG3337878-4 MS</b>		<b>WG3337878-5</b>						
1-Methylnaphthalene			86.7		%		50-140	11-JUN-20
2-Methylnaphthalene			84.4		%		50-140	11-JUN-20



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Client: Azure Group Inc.(Mississauga)  
 6751 Professional Court Suite 201  
 Mississauga ON L4V 1Y3

Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>PAH-511-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5115787</b>							
<b>WG3337878-4</b>	<b>MS</b>	<b>WG3337878-5</b>						
Acenaphthene			90.8		%		50-140	11-JUN-20
Acenaphthylene			82.6		%		50-140	11-JUN-20
Anthracene			82.1		%		50-140	11-JUN-20
Benzo(a)anthracene			84.3		%		50-140	11-JUN-20
Benzo(a)pyrene			81.8		%		50-140	11-JUN-20
Benzo(b)fluoranthene			86.9		%		50-140	11-JUN-20
Benzo(g,h,i)perylene			87.1		%		50-140	11-JUN-20
Benzo(k)fluoranthene			83.1		%		50-140	11-JUN-20
Chrysene			94.8		%		50-140	11-JUN-20
Dibenzo(ah)anthracene			86.9		%		50-140	11-JUN-20
Fluoranthene			82.4		%		50-140	11-JUN-20
Fluorene			88.2		%		50-140	11-JUN-20
Indeno(1,2,3-cd)pyrene			99.4		%		50-140	11-JUN-20
Naphthalene			84.5		%		50-140	11-JUN-20
Phenanthrene			85.9		%		50-140	11-JUN-20
Pyrene			83.3		%		50-140	11-JUN-20
<b>PH-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5115400</b>							
<b>WG3337876-1</b>	<b>DUP</b>	<b>L2455903-9</b>						
pH		8.34	8.37	J	pH units	0.03	0.3	10-JUN-20
<b>WG3339084-1</b>	<b>LCS</b>							
pH			6.95		pH units		6.9-7.1	10-JUN-20
<b>Batch</b>	<b>R5115402</b>							
<b>WG3338114-1</b>	<b>DUP</b>	<b>L2456321-1</b>						
pH		7.56	7.61	J	pH units	0.05	0.3	10-JUN-20
<b>WG3339087-1</b>	<b>LCS</b>							
pH			6.98		pH units		6.9-7.1	10-JUN-20
<b>SAR-R511-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5114917</b>							
<b>WG3338757-4</b>	<b>DUP</b>	<b>WG3338757-3</b>						
Calcium (Ca)		29.2	26.2		mg/L	11	30	10-JUN-20
Sodium (Na)		11.2	11.3		mg/L	0.9	30	10-JUN-20
Magnesium (Mg)		11.2	10.3		mg/L	8.4	30	10-JUN-20
<b>WG3338757-2</b>	<b>IRM</b>	<b>WT SAR4</b>						



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Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>SAR-R511-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5114917</b>							
<b>WG3338757-2</b>	<b>IRM</b>	<b>WT SAR4</b>						
Calcium (Ca)			83.1		%		70-130	10-JUN-20
Sodium (Na)			91.6		%		70-130	10-JUN-20
Magnesium (Mg)			87.2		%		70-130	10-JUN-20
<b>WG3338757-5</b>	<b>LCS</b>							
Calcium (Ca)			103.0		%		80-120	10-JUN-20
Sodium (Na)			102.8		%		80-120	10-JUN-20
Magnesium (Mg)			100.2		%		80-120	10-JUN-20
<b>WG3338757-1</b>	<b>MB</b>							
Calcium (Ca)			<0.50		mg/L		0.5	10-JUN-20
Sodium (Na)			<0.50		mg/L		0.5	10-JUN-20
Magnesium (Mg)			<0.50		mg/L		0.5	10-JUN-20
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5110554</b>							
<b>WG3336714-4</b>	<b>DUP</b>	<b>WG3336714-3</b>						
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	08-JUN-20
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	08-JUN-20
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20



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Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5110554</b>							
<b>WG3336714-4</b>	<b>DUP</b>	<b>WG3336714-3</b>						
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	08-JUN-20
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	08-JUN-20
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	08-JUN-20
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	08-JUN-20
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	08-JUN-20
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	08-JUN-20
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	08-JUN-20
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	08-JUN-20
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	08-JUN-20
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	08-JUN-20
<b>WG3336714-2</b>	<b>LCS</b>							
1,1,1,2-Tetrachloroethane			102.5		%		60-130	08-JUN-20
1,1,2,2-Tetrachloroethane			126.0		%		60-130	08-JUN-20
1,1,1-Trichloroethane			88.5		%		60-130	08-JUN-20
1,1,2-Trichloroethane			118.6		%		60-130	08-JUN-20
1,1-Dichloroethane			101.9		%		60-130	08-JUN-20
1,1-Dichloroethylene			77.5		%		60-130	08-JUN-20
1,2-Dibromoethane			130.6	MES	%		70-130	08-JUN-20
1,2-Dichlorobenzene			108.1		%		70-130	08-JUN-20
1,2-Dichloroethane			122.5		%		60-130	08-JUN-20
1,2-Dichloropropane			112.1		%		70-130	08-JUN-20
1,3-Dichlorobenzene			98.1		%		70-130	08-JUN-20





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Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5110554</b>							
<b>WG3336714-2</b>	<b>LCS</b>							
1,4-Dichlorobenzene			101.0		%		70-130	08-JUN-20
Acetone			162.8	LCS-H	%		60-140	08-JUN-20
Benzene			102.0		%		70-130	08-JUN-20
Bromodichloromethane			120.7		%		50-140	08-JUN-20
Bromoform			133.6	MES	%		70-130	08-JUN-20
Bromomethane			113.0		%		50-140	08-JUN-20
Carbon tetrachloride			84.4		%		70-130	08-JUN-20
Chlorobenzene			100.8		%		70-130	08-JUN-20
Chloroform			105.1		%		70-130	08-JUN-20
cis-1,2-Dichloroethylene			104.0		%		70-130	08-JUN-20
cis-1,3-Dichloropropene			118.9		%		70-130	08-JUN-20
Dibromochloromethane			115.2		%		60-130	08-JUN-20
Dichlorodifluoromethane			49.0	MES	%		50-140	08-JUN-20
Ethylbenzene			87.3		%		70-130	08-JUN-20
n-Hexane			73.2		%		70-130	08-JUN-20
Methylene Chloride			111.4		%		70-130	08-JUN-20
MTBE			106.6		%		70-130	08-JUN-20
m+p-Xylenes			87.7		%		70-130	08-JUN-20
Methyl Ethyl Ketone			182.2	LCS-H	%		60-140	08-JUN-20
Methyl Isobutyl Ketone			170.1	LCS-H	%		60-140	08-JUN-20
o-Xylene			100.9		%		70-130	08-JUN-20
Styrene			103.4		%		70-130	08-JUN-20
Tetrachloroethylene			82.7		%		60-130	08-JUN-20
Toluene			91.4		%		70-130	08-JUN-20
trans-1,2-Dichloroethylene			86.3		%		60-130	08-JUN-20
trans-1,3-Dichloropropene			118.4		%		70-130	08-JUN-20
Trichloroethylene			96.0		%		60-130	08-JUN-20
Trichlorofluoromethane			70.1		%		50-140	08-JUN-20
Vinyl chloride			79.2		%		60-140	08-JUN-20
<b>WG3336714-1</b>	<b>MB</b>							
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	08-JUN-20
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	08-JUN-20
1,1,1-Trichloroethane			<0.050		ug/g		0.05	08-JUN-20
1,1,2-Trichloroethane			<0.050		ug/g		0.05	08-JUN-20



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Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5110554</b>							
<b>WG3336714-1 MB</b>								
1,1-Dichloroethane			<0.050		ug/g		0.05	08-JUN-20
1,1-Dichloroethylene			<0.050		ug/g		0.05	08-JUN-20
1,2-Dibromoethane			<0.050		ug/g		0.05	08-JUN-20
1,2-Dichlorobenzene			<0.050		ug/g		0.05	08-JUN-20
1,2-Dichloroethane			<0.050		ug/g		0.05	08-JUN-20
1,2-Dichloropropane			<0.050		ug/g		0.05	08-JUN-20
1,3-Dichlorobenzene			<0.050		ug/g		0.05	08-JUN-20
1,4-Dichlorobenzene			<0.050		ug/g		0.05	08-JUN-20
Acetone			<0.50		ug/g		0.5	08-JUN-20
Benzene			<0.0068		ug/g		0.0068	08-JUN-20
Bromodichloromethane			<0.050		ug/g		0.05	08-JUN-20
Bromoform			<0.050		ug/g		0.05	08-JUN-20
Bromomethane			<0.050		ug/g		0.05	08-JUN-20
Carbon tetrachloride			<0.050		ug/g		0.05	08-JUN-20
Chlorobenzene			<0.050		ug/g		0.05	08-JUN-20
Chloroform			<0.050		ug/g		0.05	08-JUN-20
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	08-JUN-20
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	08-JUN-20
Dibromochloromethane			<0.050		ug/g		0.05	08-JUN-20
Dichlorodifluoromethane			<0.050		ug/g		0.05	08-JUN-20
Ethylbenzene			<0.018		ug/g		0.018	08-JUN-20
n-Hexane			<0.050		ug/g		0.05	08-JUN-20
Methylene Chloride			<0.050		ug/g		0.05	08-JUN-20
MTBE			<0.050		ug/g		0.05	08-JUN-20
m+p-Xylenes			<0.030		ug/g		0.03	08-JUN-20
Methyl Ethyl Ketone			<0.50		ug/g		0.5	08-JUN-20
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	08-JUN-20
o-Xylene			<0.020		ug/g		0.02	08-JUN-20
Styrene			<0.050		ug/g		0.05	08-JUN-20
Tetrachloroethylene			<0.050		ug/g		0.05	08-JUN-20
Toluene			<0.080		ug/g		0.08	08-JUN-20
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	08-JUN-20
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	08-JUN-20



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5110554</b>							
<b>WG3336714-1 MB</b>								
Trichloroethylene			<0.010		ug/g		0.01	08-JUN-20
Trichlorofluoromethane			<0.050		ug/g		0.05	08-JUN-20
Vinyl chloride			<0.020		ug/g		0.02	08-JUN-20
Surrogate: 1,4-Difluorobenzene			122.3		%		50-140	08-JUN-20
Surrogate: 4-Bromofluorobenzene			104.5		%		50-140	08-JUN-20
<b>WG3336714-5 MS</b>		<b>WG3336714-3</b>						
1,1,1,2-Tetrachloroethane			110.8		%		50-140	08-JUN-20
1,1,2,2-Tetrachloroethane			140.8	MS-B	%		50-140	08-JUN-20
1,1,1-Trichloroethane			106.7		%		50-140	08-JUN-20
1,1,2-Trichloroethane			130.7		%		50-140	08-JUN-20
1,1-Dichloroethane			121.7		%		50-140	08-JUN-20
1,1-Dichloroethylene			95.8		%		50-140	08-JUN-20
1,2-Dibromoethane			133.1		%		50-140	08-JUN-20
1,2-Dichlorobenzene			104.2		%		50-140	08-JUN-20
1,2-Dichloroethane			135.0		%		50-140	08-JUN-20
1,2-Dichloropropane			122.8		%		50-140	08-JUN-20
1,3-Dichlorobenzene			97.6		%		50-140	08-JUN-20
1,4-Dichlorobenzene			99.6		%		50-140	08-JUN-20
Acetone			172.3	RRQC	%		50-140	08-JUN-20
Benzene			119.6		%		50-140	08-JUN-20
Bromodichloromethane			131.8		%		50-140	08-JUN-20
Bromoform			132.2		%		50-140	08-JUN-20
Bromomethane			120.8		%		50-140	08-JUN-20
Carbon tetrachloride			103.9		%		50-140	08-JUN-20
Chlorobenzene			115.5		%		50-140	08-JUN-20
Chloroform			123.1		%		50-140	08-JUN-20
cis-1,2-Dichloroethylene			116.6		%		50-140	08-JUN-20
cis-1,3-Dichloropropene			114.7		%		50-140	08-JUN-20
Dibromochloromethane			112.8		%		50-140	08-JUN-20
Dichlorodifluoromethane			71.9		%		50-140	08-JUN-20
Ethylbenzene			100.7		%		50-140	08-JUN-20
n-Hexane			90.8		%		50-140	08-JUN-20
Methylene Chloride			125.3		%		50-140	08-JUN-20
MTBE			111.6		%		50-140	08-JUN-20



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Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch R5110554</b>								
<b>WG3336714-5 MS</b>		<b>WG3336714-3</b>						
m+p-Xylenes			101.1		%		50-140	08-JUN-20
Methyl Ethyl Ketone			152.0	RRQC	%		50-140	08-JUN-20
Methyl Isobutyl Ketone			165.9	RRQC	%		50-140	08-JUN-20
o-Xylene			113.8		%		50-140	08-JUN-20
Styrene			110.8		%		50-140	08-JUN-20
Tetrachloroethylene			100.3		%		50-140	08-JUN-20
Toluene			110.2		%		50-140	08-JUN-20
trans-1,2-Dichloroethylene			96.4		%		50-140	08-JUN-20
trans-1,3-Dichloropropene			117.7		%		50-140	08-JUN-20
Trichloroethylene			109.0		%		50-140	08-JUN-20
Trichlorofluoromethane			85.8		%		50-140	08-JUN-20
Vinyl chloride			98.9		%		50-140	08-JUN-20

COMMENTS: Matrix spike recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.

<b>Batch R5110800</b>								
<b>WG3335809-4 DUP</b>		<b>WG3335809-3</b>						
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	08-JUN-20
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	08-JUN-20
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20



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 6751 Professional Court Suite 201  
 Mississauga ON L4V 1Y3

Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5110800</b>							
<b>WG3335809-4</b>	<b>DUP</b>	<b>WG3335809-3</b>						
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	08-JUN-20
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	08-JUN-20
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	08-JUN-20
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	08-JUN-20
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	08-JUN-20
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	08-JUN-20
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	08-JUN-20
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	08-JUN-20
Trichloroethylene		0.333	0.355		ug/g	6.5	40	08-JUN-20
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	08-JUN-20
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	08-JUN-20
<b>WG3335809-2</b>	<b>LCS</b>							
1,1,1,2-Tetrachloroethane			102.1		%		60-130	08-JUN-20
1,1,2,2-Tetrachloroethane			93.8		%		60-130	08-JUN-20
1,1,1-Trichloroethane			111.4		%		60-130	08-JUN-20
1,1,2-Trichloroethane			91.4		%		60-130	08-JUN-20
1,1-Dichloroethane			110.8		%		60-130	08-JUN-20
1,1-Dichloroethylene			110.8		%		60-130	08-JUN-20
1,2-Dibromoethane			94.4		%		70-130	08-JUN-20
1,2-Dichlorobenzene			105.0		%		70-130	08-JUN-20
1,2-Dichloroethane			109.6		%		60-130	08-JUN-20
1,2-Dichloropropane			105.6		%		70-130	08-JUN-20



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 6751 Professional Court Suite 201  
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Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5110800</b>							
<b>WG3335809-2</b>	<b>LCS</b>							
1,3-Dichlorobenzene			112.2		%		70-130	08-JUN-20
1,4-Dichlorobenzene			114.3		%		70-130	08-JUN-20
Acetone			107.2		%		60-140	08-JUN-20
Benzene			107.2		%		70-130	08-JUN-20
Bromodichloromethane			119.7		%		50-140	08-JUN-20
Bromoform			97.7		%		70-130	08-JUN-20
Bromomethane			131.0		%		50-140	08-JUN-20
Carbon tetrachloride			114.2		%		70-130	08-JUN-20
Chlorobenzene			106.1		%		70-130	08-JUN-20
Chloroform			112.7		%		70-130	08-JUN-20
cis-1,2-Dichloroethylene			104.0		%		70-130	08-JUN-20
cis-1,3-Dichloropropene			111.0		%		70-130	08-JUN-20
Dibromochloromethane			99.4		%		60-130	08-JUN-20
Dichlorodifluoromethane			69.9		%		50-140	08-JUN-20
Ethylbenzene			99.96		%		70-130	08-JUN-20
n-Hexane			101.5		%		70-130	08-JUN-20
Methylene Chloride			113.0		%		70-130	08-JUN-20
MTBE			99.6		%		70-130	08-JUN-20
m+p-Xylenes			106.4		%		70-130	08-JUN-20
Methyl Ethyl Ketone			108.1		%		60-140	08-JUN-20
Methyl Isobutyl Ketone			87.3		%		60-140	08-JUN-20
o-Xylene			107.6		%		70-130	08-JUN-20
Styrene			91.8		%		70-130	08-JUN-20
Tetrachloroethylene			107.7		%		60-130	08-JUN-20
Toluene			99.1		%		70-130	08-JUN-20
trans-1,2-Dichloroethylene			110.0		%		60-130	08-JUN-20
trans-1,3-Dichloropropene			114.0		%		70-130	08-JUN-20
Trichloroethylene			113.8		%		60-130	08-JUN-20
Trichlorofluoromethane			102.0		%		50-140	08-JUN-20
Vinyl chloride			106.9		%		60-140	08-JUN-20
<b>WG3335809-1</b>	<b>MB</b>							
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	08-JUN-20
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	08-JUN-20
1,1,1-Trichloroethane			<0.050		ug/g		0.05	08-JUN-20



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Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>	<b>Soil</b>							
<b>Batch</b>	<b>R5110800</b>							
<b>WG3335809-1 MB</b>								
1,1,2-Trichloroethane			<0.050		ug/g		0.05	08-JUN-20
1,1-Dichloroethane			<0.050		ug/g		0.05	08-JUN-20
1,1-Dichloroethylene			<0.050		ug/g		0.05	08-JUN-20
1,2-Dibromoethane			<0.050		ug/g		0.05	08-JUN-20
1,2-Dichlorobenzene			<0.050		ug/g		0.05	08-JUN-20
1,2-Dichloroethane			<0.050		ug/g		0.05	08-JUN-20
1,2-Dichloropropane			<0.050		ug/g		0.05	08-JUN-20
1,3-Dichlorobenzene			<0.050		ug/g		0.05	08-JUN-20
1,4-Dichlorobenzene			<0.050		ug/g		0.05	08-JUN-20
Acetone			<0.50		ug/g		0.5	08-JUN-20
Benzene			<0.0068		ug/g		0.0068	08-JUN-20
Bromodichloromethane			<0.050		ug/g		0.05	08-JUN-20
Bromoform			<0.050		ug/g		0.05	08-JUN-20
Bromomethane			<0.050		ug/g		0.05	08-JUN-20
Carbon tetrachloride			<0.050		ug/g		0.05	08-JUN-20
Chlorobenzene			<0.050		ug/g		0.05	08-JUN-20
Chloroform			<0.050		ug/g		0.05	08-JUN-20
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	08-JUN-20
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	08-JUN-20
Dibromochloromethane			<0.050		ug/g		0.05	08-JUN-20
Dichlorodifluoromethane			<0.050		ug/g		0.05	08-JUN-20
Ethylbenzene			<0.018		ug/g		0.018	08-JUN-20
n-Hexane			<0.050		ug/g		0.05	08-JUN-20
Methylene Chloride			<0.050		ug/g		0.05	08-JUN-20
MTBE			<0.050		ug/g		0.05	08-JUN-20
m+p-Xylenes			<0.030		ug/g		0.03	08-JUN-20
Methyl Ethyl Ketone			<0.50		ug/g		0.5	08-JUN-20
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	08-JUN-20
o-Xylene			<0.020		ug/g		0.02	08-JUN-20
Styrene			<0.050		ug/g		0.05	08-JUN-20
Tetrachloroethylene			<0.050		ug/g		0.05	08-JUN-20
Toluene			<0.080		ug/g		0.08	08-JUN-20
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	08-JUN-20



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Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch R5110800</b>								
<b>WG3335809-1 MB</b>								
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	08-JUN-20
Trichloroethylene			<0.010		ug/g		0.01	08-JUN-20
Trichlorofluoromethane			<0.050		ug/g		0.05	08-JUN-20
Vinyl chloride			<0.020		ug/g		0.02	08-JUN-20
Surrogate: 1,4-Difluorobenzene			116.7		%		50-140	08-JUN-20
Surrogate: 4-Bromofluorobenzene			84.8		%		50-140	08-JUN-20
<b>Batch R5115730</b>								
<b>WG3336020-4 DUP</b>		<b>WG3336020-3</b>						
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	11-JUN-20
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	11-JUN-20
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	11-JUN-20
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	11-JUN-20





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Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5115730</b>							
<b>WG3336020-4</b>	<b>DUP</b>	<b>WG3336020-3</b>						
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	11-JUN-20
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	11-JUN-20
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	11-JUN-20
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	11-JUN-20
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	11-JUN-20
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	11-JUN-20
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	11-JUN-20
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	11-JUN-20
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	11-JUN-20
<b>WG3336020-2</b>	<b>LCS</b>							
1,1,1,2-Tetrachloroethane			107.7		%		60-130	11-JUN-20
1,1,2,2-Tetrachloroethane			109.1		%		60-130	11-JUN-20
1,1,1-Trichloroethane			107.3		%		60-130	11-JUN-20
1,1,2-Trichloroethane			109.4		%		60-130	11-JUN-20
1,1-Dichloroethane			101.7		%		60-130	11-JUN-20
1,1-Dichloroethylene			91.3		%		60-130	11-JUN-20
1,2-Dibromoethane			109.7		%		70-130	11-JUN-20
1,2-Dichlorobenzene			103.0		%		70-130	11-JUN-20
1,2-Dichloroethane			110.9		%		60-130	11-JUN-20
1,2-Dichloropropane			110.8		%		70-130	11-JUN-20
1,3-Dichlorobenzene			100.9		%		70-130	11-JUN-20
1,4-Dichlorobenzene			107.4		%		70-130	11-JUN-20
Acetone			117.9		%		60-140	11-JUN-20
Benzene			107.8		%		70-130	11-JUN-20
Bromodichloromethane			119.7		%		50-140	11-JUN-20
Bromoform			116.6		%		70-130	11-JUN-20
Bromomethane			116.6		%		50-140	11-JUN-20



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Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>	<b>Soil</b>							
<b>Batch</b>	<b>R5115730</b>							
<b>WG3336020-2</b>	<b>LCS</b>							
Carbon tetrachloride			107.1		%		70-130	11-JUN-20
Chlorobenzene			103.7		%		70-130	11-JUN-20
Chloroform			112.4		%		70-130	11-JUN-20
cis-1,2-Dichloroethylene			102.9		%		70-130	11-JUN-20
cis-1,3-Dichloropropene			117.2		%		70-130	11-JUN-20
Dibromochloromethane			107.6		%		60-130	11-JUN-20
Dichlorodifluoromethane			49.5	MES	%		50-140	11-JUN-20
Ethylbenzene			102.9		%		70-130	11-JUN-20
n-Hexane			94.2		%		70-130	11-JUN-20
Methylene Chloride			107.9		%		70-130	11-JUN-20
MTBE			104.4		%		70-130	11-JUN-20
m+p-Xylenes			106.2		%		70-130	11-JUN-20
Methyl Ethyl Ketone			115.6		%		60-140	11-JUN-20
Methyl Isobutyl Ketone			113.1		%		60-140	11-JUN-20
o-Xylene			112.0		%		70-130	11-JUN-20
Styrene			109.2		%		70-130	11-JUN-20
Tetrachloroethylene			106.1		%		60-130	11-JUN-20
Toluene			103.9		%		70-130	11-JUN-20
trans-1,2-Dichloroethylene			102.6		%		60-130	11-JUN-20
trans-1,3-Dichloropropene			122.9		%		70-130	11-JUN-20
Trichloroethylene			104.6		%		60-130	11-JUN-20
Trichlorofluoromethane			82.0		%		50-140	11-JUN-20
Vinyl chloride			90.9		%		60-140	11-JUN-20
<b>WG3336020-1</b>	<b>MB</b>							
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	11-JUN-20
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	11-JUN-20
1,1,1-Trichloroethane			<0.050		ug/g		0.05	11-JUN-20
1,1,2-Trichloroethane			<0.050		ug/g		0.05	11-JUN-20
1,1-Dichloroethane			<0.050		ug/g		0.05	11-JUN-20
1,1-Dichloroethylene			<0.050		ug/g		0.05	11-JUN-20
1,2-Dibromoethane			<0.050		ug/g		0.05	11-JUN-20
1,2-Dichlorobenzene			<0.050		ug/g		0.05	11-JUN-20
1,2-Dichloroethane			<0.050		ug/g		0.05	11-JUN-20
1,2-Dichloropropane			<0.050		ug/g		0.05	11-JUN-20



## Quality Control Report

Workorder: L2456477

Report Date: 12-JUN-20

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Client: Azure Group Inc.(Mississauga)  
 6751 Professional Court Suite 201  
 Mississauga ON L4V 1Y3

Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>								
	<b>Soil</b>							
<b>Batch</b>	<b>R5115730</b>							
<b>WG3336020-1 MB</b>								
1,3-Dichlorobenzene			<0.050		ug/g		0.05	11-JUN-20
1,4-Dichlorobenzene			<0.050		ug/g		0.05	11-JUN-20
Acetone			<0.50		ug/g		0.5	11-JUN-20
Benzene			<0.0068		ug/g		0.0068	11-JUN-20
Bromodichloromethane			<0.050		ug/g		0.05	11-JUN-20
Bromoform			<0.050		ug/g		0.05	11-JUN-20
Bromomethane			<0.050		ug/g		0.05	11-JUN-20
Carbon tetrachloride			<0.050		ug/g		0.05	11-JUN-20
Chlorobenzene			<0.050		ug/g		0.05	11-JUN-20
Chloroform			<0.050		ug/g		0.05	11-JUN-20
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	11-JUN-20
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	11-JUN-20
Dibromochloromethane			<0.050		ug/g		0.05	11-JUN-20
Dichlorodifluoromethane			<0.050		ug/g		0.05	11-JUN-20
Ethylbenzene			<0.018		ug/g		0.018	11-JUN-20
n-Hexane			<0.050		ug/g		0.05	11-JUN-20
Methylene Chloride			<0.050		ug/g		0.05	11-JUN-20
MTBE			<0.050		ug/g		0.05	11-JUN-20
m+p-Xylenes			<0.030		ug/g		0.03	11-JUN-20
Methyl Ethyl Ketone			<0.50		ug/g		0.5	11-JUN-20
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	11-JUN-20
o-Xylene			<0.020		ug/g		0.02	11-JUN-20
Styrene			<0.050		ug/g		0.05	11-JUN-20
Tetrachloroethylene			<0.050		ug/g		0.05	11-JUN-20
Toluene			<0.080		ug/g		0.08	11-JUN-20
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	11-JUN-20
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	11-JUN-20
Trichloroethylene			<0.010		ug/g		0.01	11-JUN-20
Trichlorofluoromethane			<0.050		ug/g		0.05	11-JUN-20
Vinyl chloride			<0.020		ug/g		0.02	11-JUN-20
Surrogate: 1,4-Difluorobenzene			118.3		%		50-140	11-JUN-20
Surrogate: 4-Bromofluorobenzene			97.8		%		50-140	11-JUN-20
<b>WG3336020-5 MS</b>		<b>WG3336020-3</b>						
1,1,1,2-Tetrachloroethane			103.7		%		50-140	11-JUN-20



## Quality Control Report

Workorder: L2456477

Report Date: 12-JUN-20

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Client: Azure Group Inc.(Mississauga)  
 6751 Professional Court Suite 201  
 Mississauga ON L4V 1Y3

Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Soil</b>						
<b>Batch</b>	<b>R5115730</b>							
<b>WG3336020-5 MS</b>	<b>WG3336020-3</b>							
1,1,2,2-Tetrachloroethane			0.65	MSDL	%		50-140	11-JUN-20
1,1,1-Trichloroethane			103.3		%		50-140	11-JUN-20
1,1,2-Trichloroethane			120.8		%		50-140	11-JUN-20
1,1-Dichloroethane			118.6		%		50-140	11-JUN-20
1,1-Dichloroethylene			97.9		%		50-140	11-JUN-20
1,2-Dibromoethane			123.2		%		50-140	11-JUN-20
1,2-Dichlorobenzene			99.8		%		50-140	11-JUN-20
1,2-Dichloroethane			126.4		%		50-140	11-JUN-20
1,2-Dichloropropane			119.5		%		50-140	11-JUN-20
1,3-Dichlorobenzene			94.5		%		50-140	11-JUN-20
1,4-Dichlorobenzene			97.4		%		50-140	11-JUN-20
Acetone			153.2	RRQC	%		50-140	11-JUN-20
Benzene			118.1		%		50-140	11-JUN-20
Bromodichloromethane			124.6		%		50-140	11-JUN-20
Bromoform			119.0		%		50-140	11-JUN-20
Bromomethane			115.2		%		50-140	11-JUN-20
Carbon tetrachloride			99.6		%		50-140	11-JUN-20
Chlorobenzene			113.3		%		50-140	11-JUN-20
Chloroform			119.0		%		50-140	11-JUN-20
cis-1,2-Dichloroethylene			112.7		%		50-140	11-JUN-20
cis-1,3-Dichloropropene			113.0		%		50-140	11-JUN-20
Dibromochloromethane			103.8		%		50-140	11-JUN-20
Dichlorodifluoromethane			69.0		%		50-140	11-JUN-20
Ethylbenzene			98.7		%		50-140	11-JUN-20
n-Hexane			92.3		%		50-140	11-JUN-20
Methylene Chloride			121.0		%		50-140	11-JUN-20
MTBE			110.6		%		50-140	11-JUN-20
m+p-Xylenes			99.9		%		50-140	11-JUN-20
Methyl Ethyl Ketone			137.5		%		50-140	11-JUN-20
Methyl Isobutyl Ketone			143.7	MES	%		50-140	11-JUN-20
o-Xylene			109.9		%		50-140	11-JUN-20
Styrene			102.7		%		50-140	11-JUN-20
Tetrachloroethylene			97.0		%		50-140	11-JUN-20

COMMENTS: Matrix spike recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported,



## Quality Control Report

Workorder: L2456477

Report Date: 12-JUN-20

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Client: Azure Group Inc.(Mississauga)  
 6751 Professional Court Suite 201  
 Mississauga ON L4V 1Y3

Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>								
	<b>Soil</b>							
<b>Batch</b>	<b>R5115730</b>							
<b>WG3336020-5</b>	<b>MS</b>	<b>WG3336020-3</b>						
Toluene			108.7		%		50-140	11-JUN-20
trans-1,2-Dichloroethylene			96.6		%		50-140	11-JUN-20
trans-1,3-Dichloropropene			121.6		%		50-140	11-JUN-20
Trichloroethylene			188.3	MSDH	%		50-140	11-JUN-20
Trichlorofluoromethane			83.6		%		50-140	11-JUN-20
Vinyl chloride			99.1		%		50-140	11-JUN-20

COMMENTS: Matrix spike recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.

# Quality Control Report

Workorder: L2456477

Report Date: 12-JUN-20

Client: Azure Group Inc.(Mississauga)  
6751 Professional Court Suite 201  
Mississauga ON L4V 1Y3

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Contact: Andrew Topp

## Legend:

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Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

## Sample Parameter Qualifier Definitions:

---

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
DUP-H,J	Duplicate results outside ALS DQO, due to sample heterogeneity. Duplicate results and limits are expressed in terms of absolute difference.
J	Duplicate results and limits are expressed in terms of absolute difference.
LCS-H	Lab Control Sample recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
MSDH	TCE recovery in MS was high. Spiked 1122-TCA converted to TCE due to sample matrix (dehydrohalogenation).
MSDL	1122-TCA recovery in MS was low. Analyte is unstable in this sample matrix due to dehydrohalogenation.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.
RRQC	Refer to report remarks for information regarding this QC result.

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## Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

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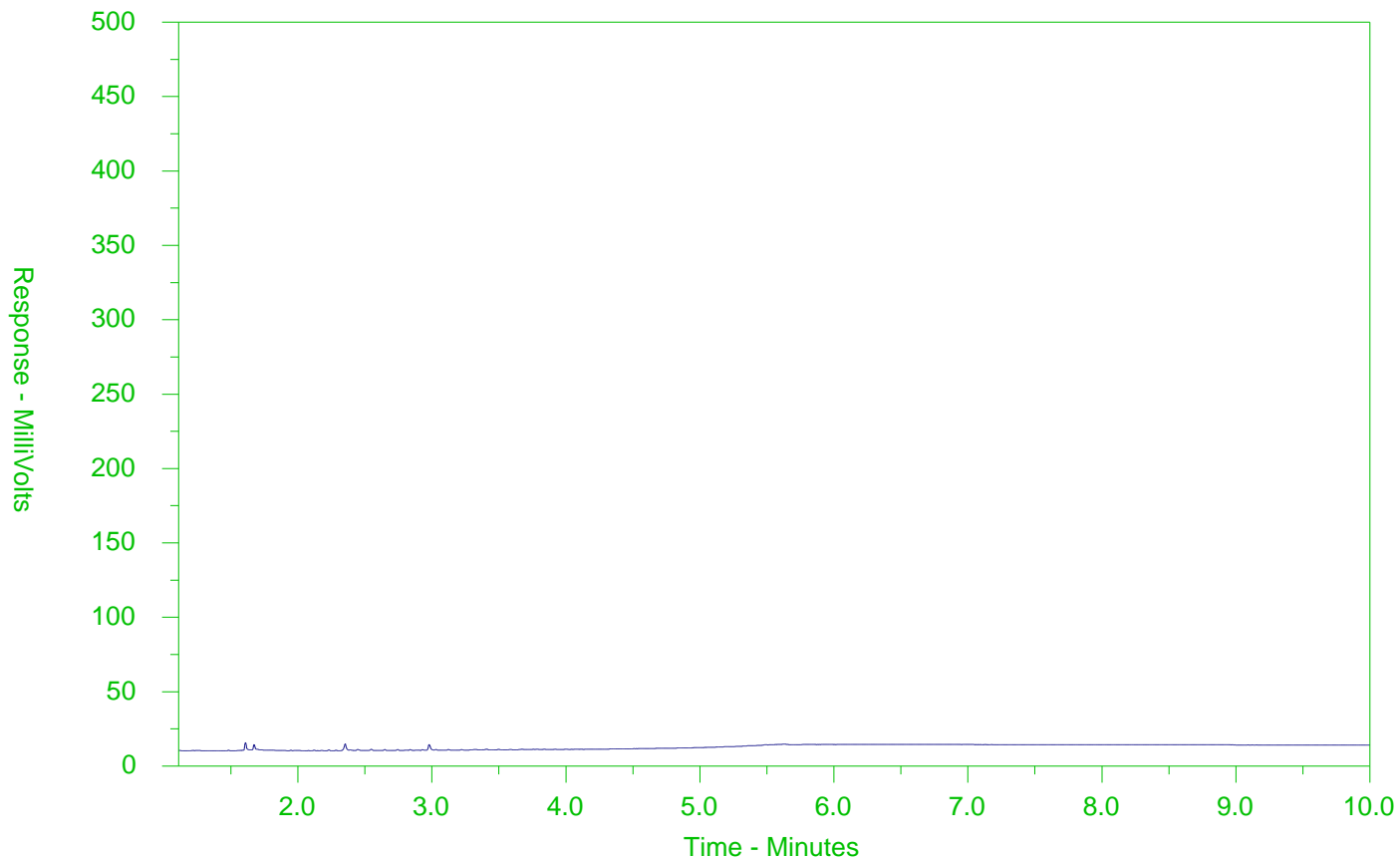
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-1  
 Client Sample ID: BH1-SS1



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

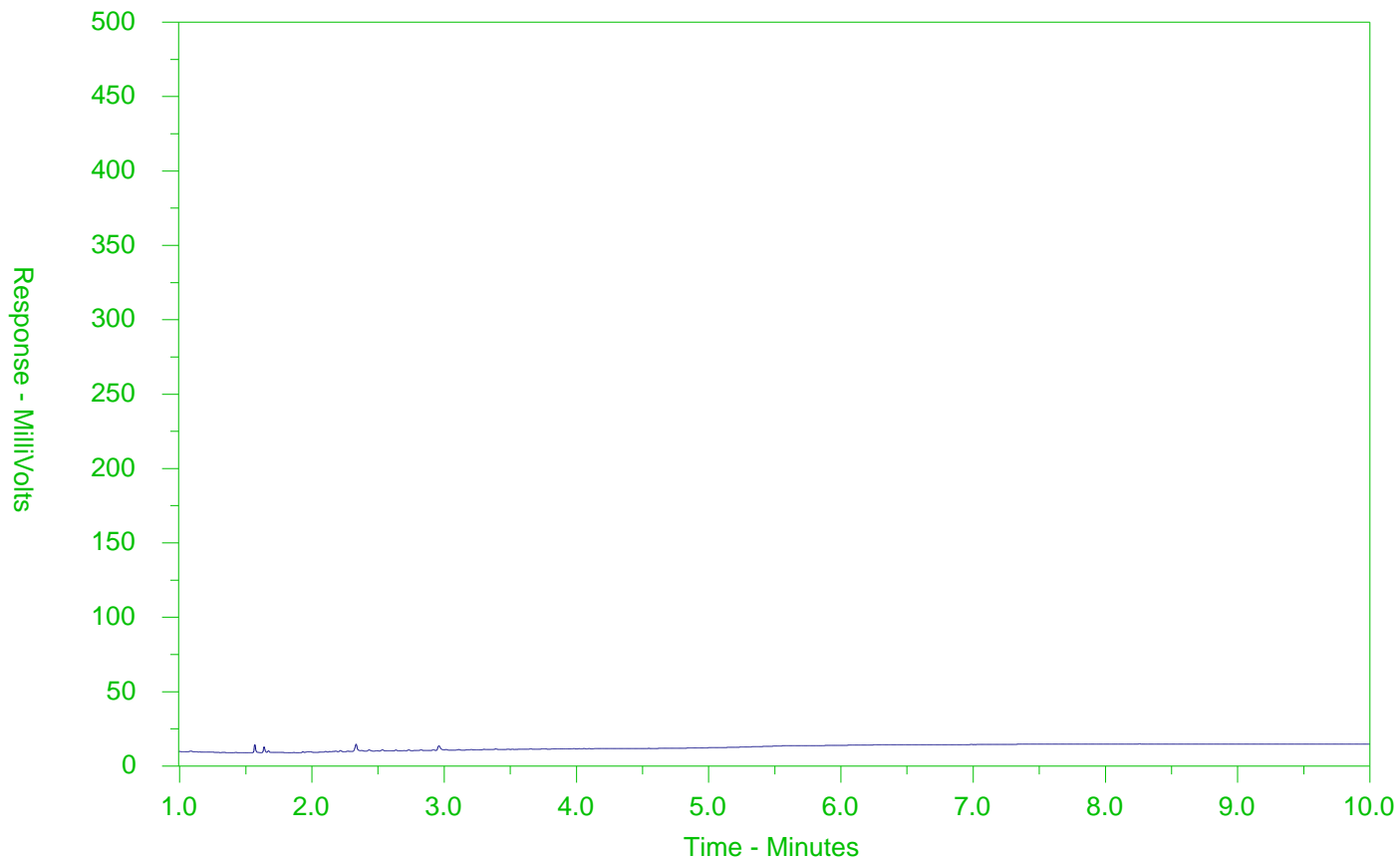
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-2  
 Client Sample ID: BH1-SS7



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

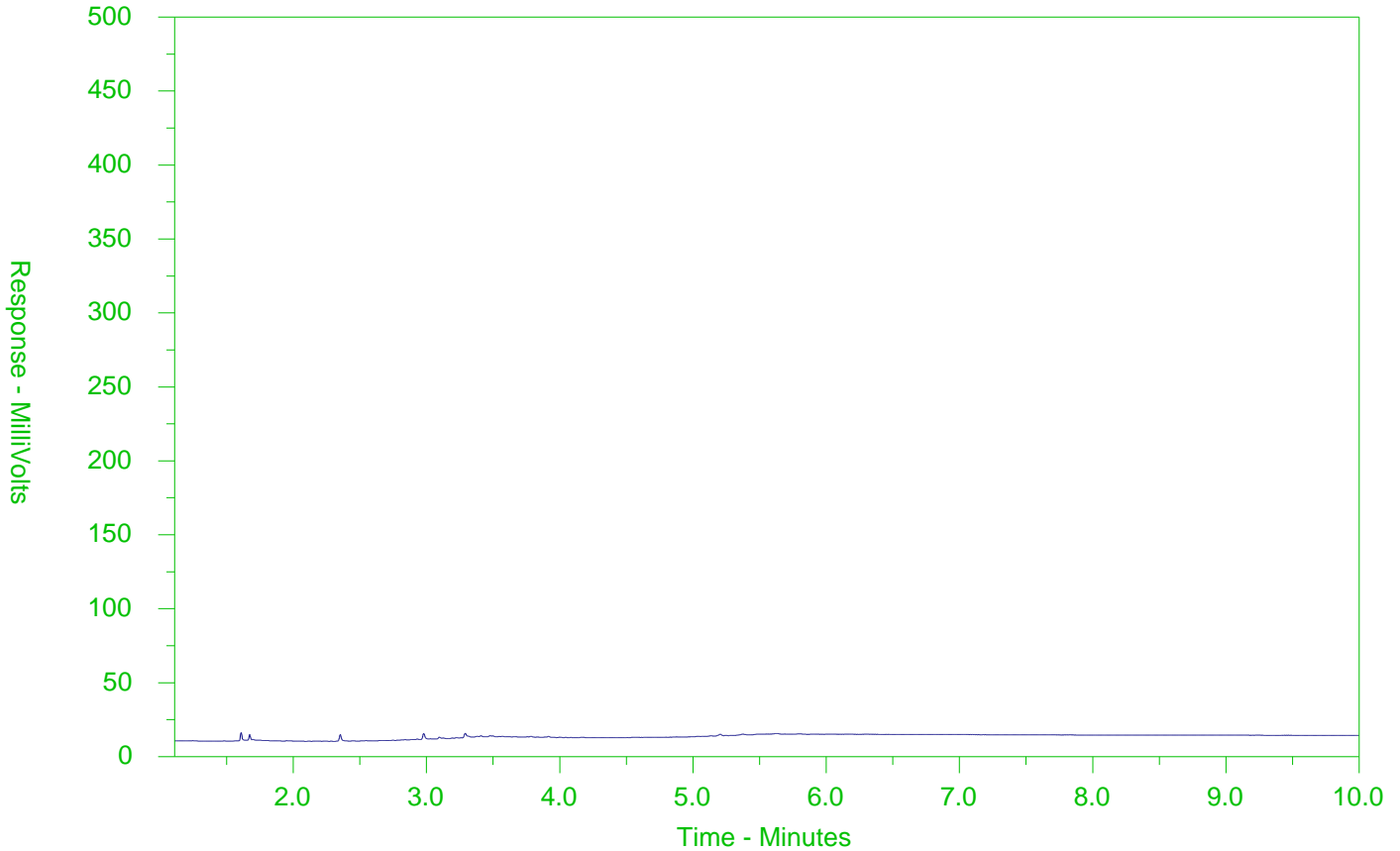
Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).



# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-4  
 Client Sample ID: BH2-SS1



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

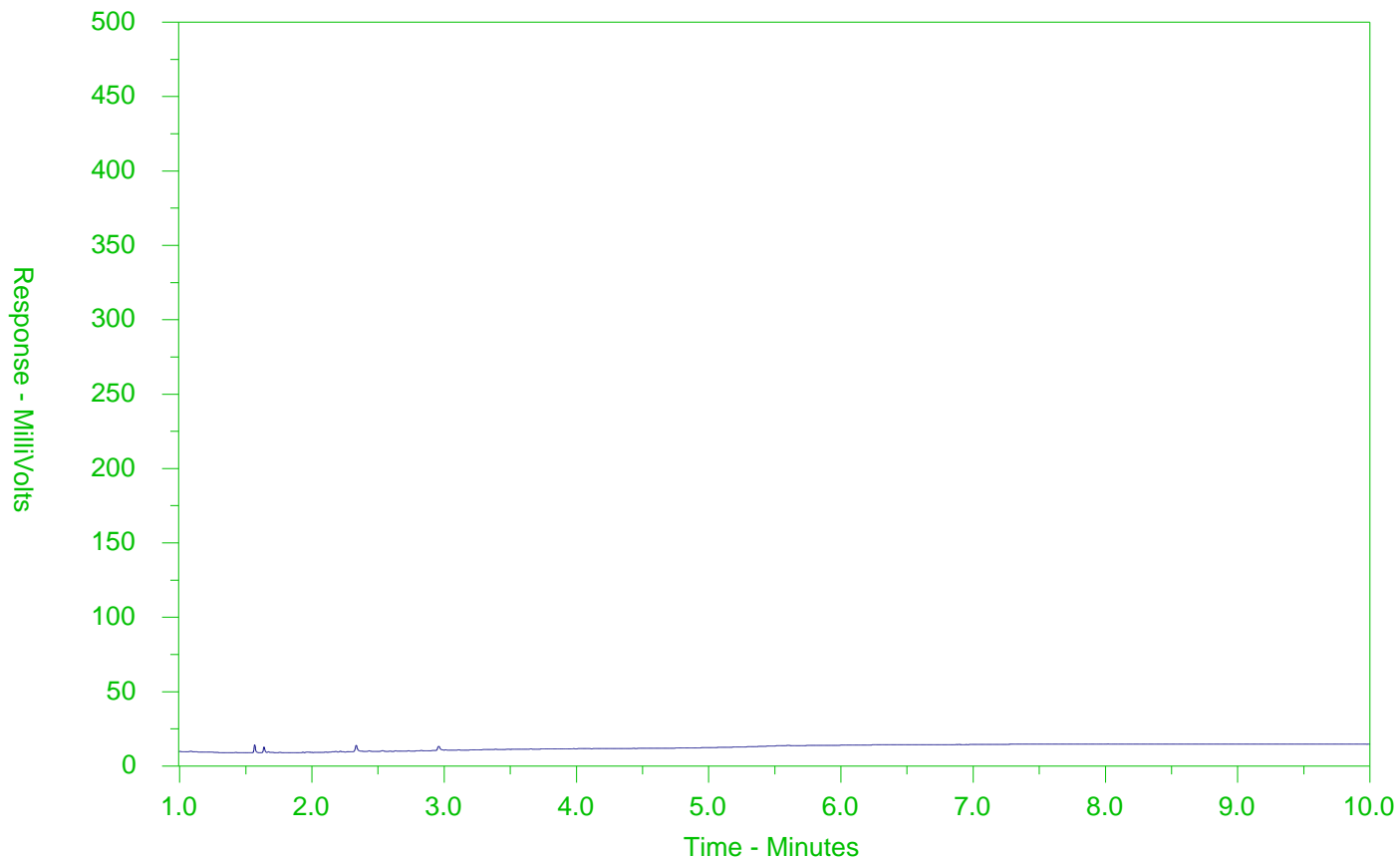
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-5  
 Client Sample ID: BH2-SS8



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

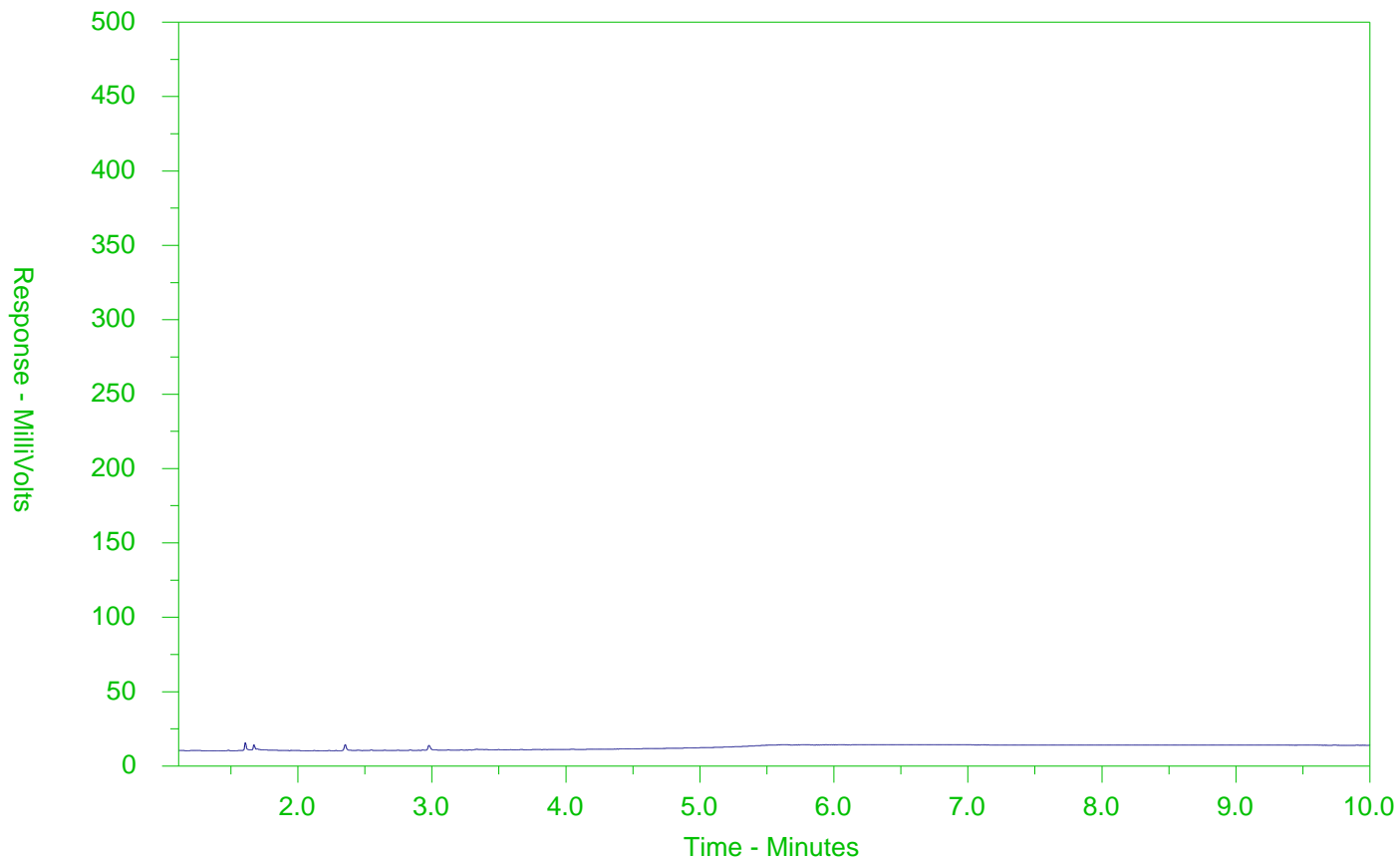
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-6  
 Client Sample ID: DUP 1



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

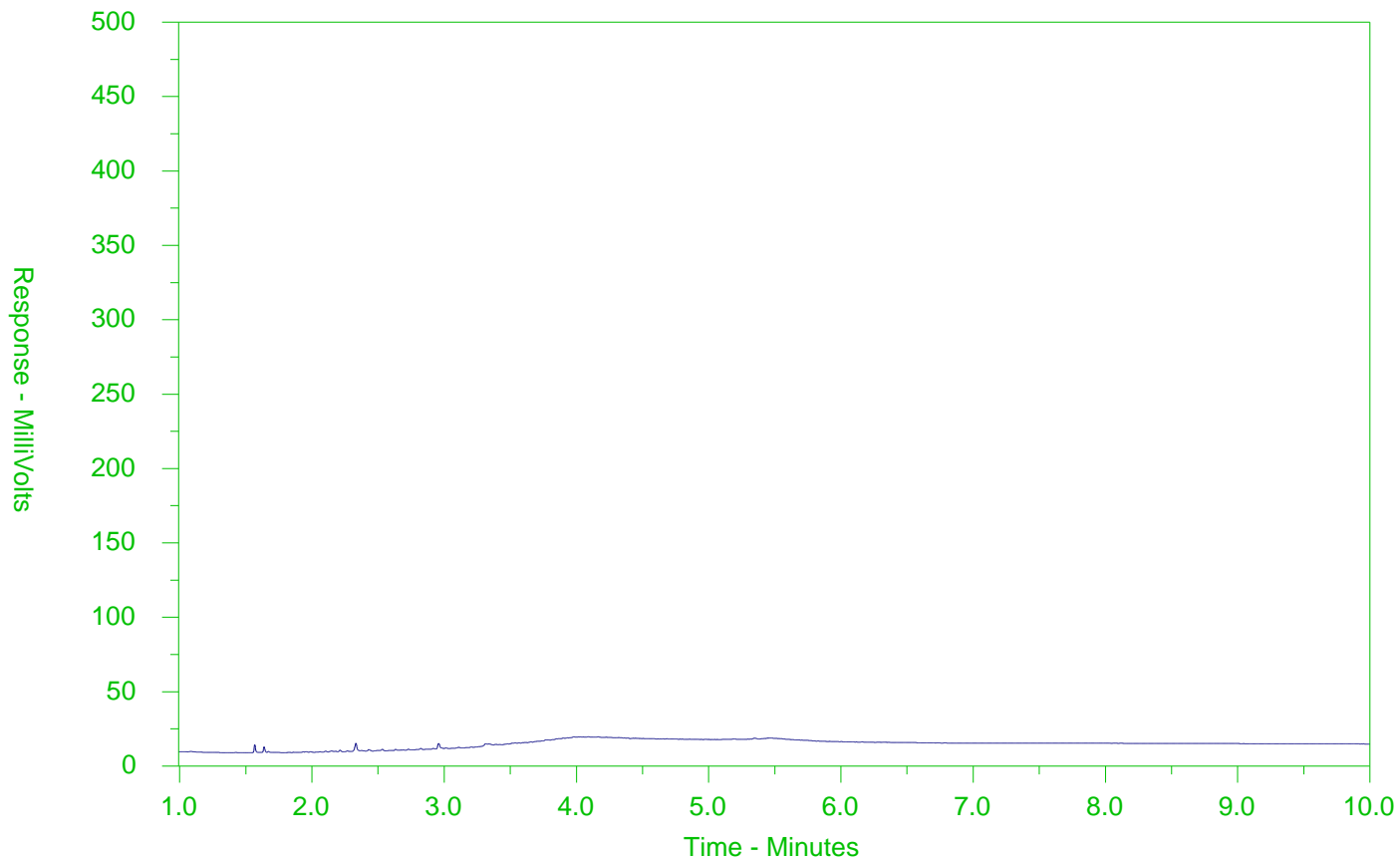
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-7  
 Client Sample ID: BH3-SS1



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

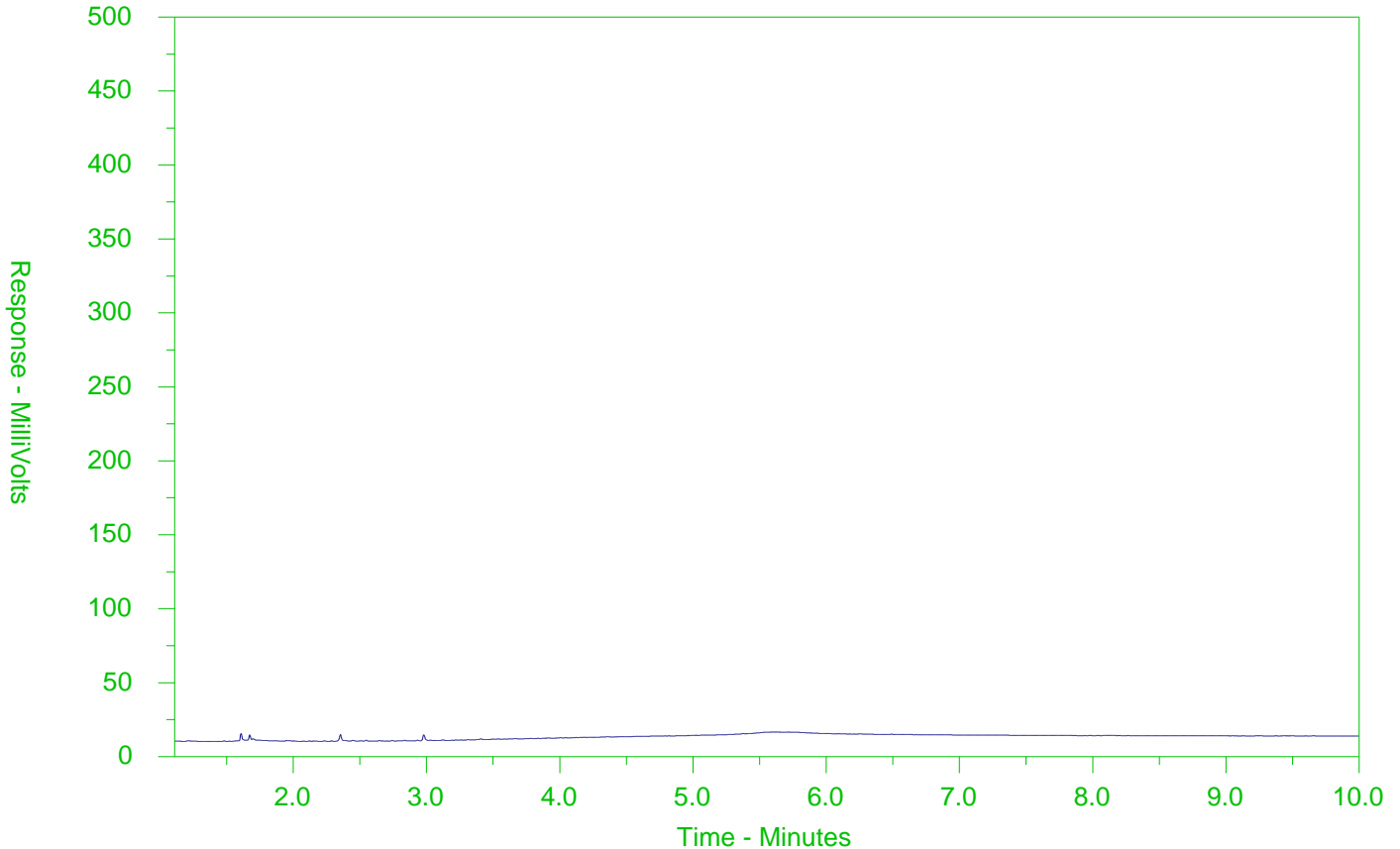
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-9  
 Client Sample ID: BH3-SS7



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

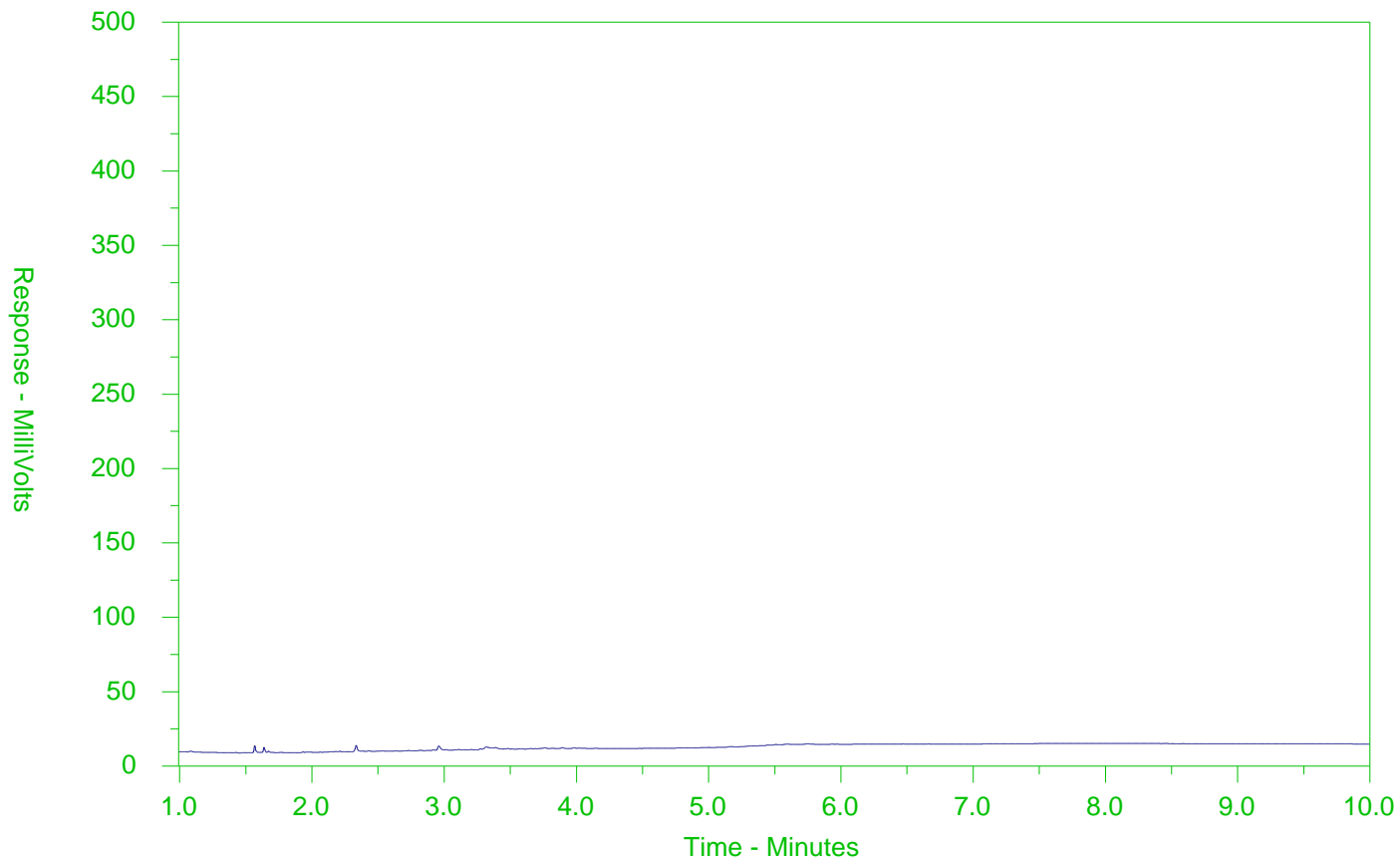
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-10  
 Client Sample ID: BH4-SS1



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

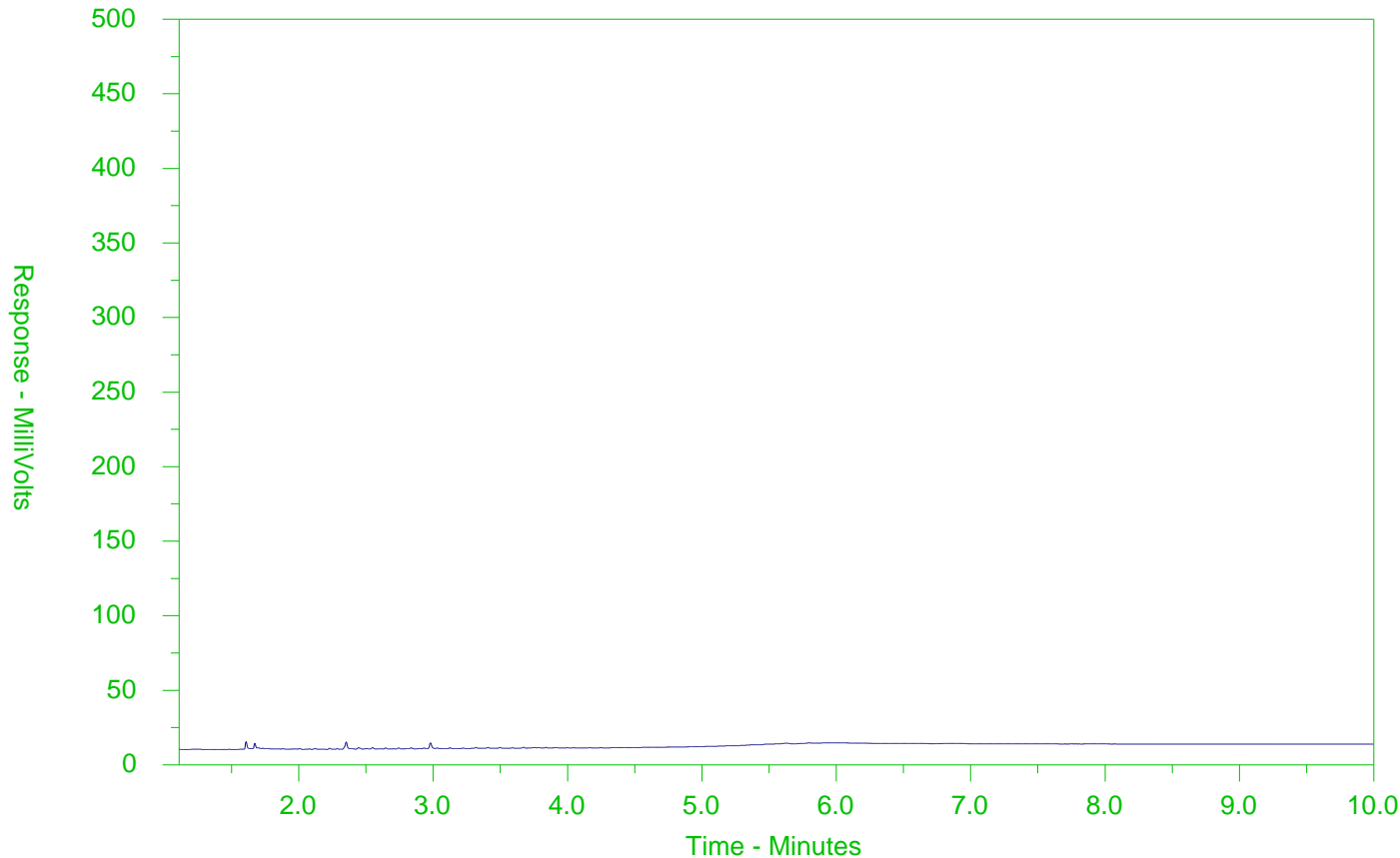
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-11  
 Client Sample ID: BH5-SS1



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

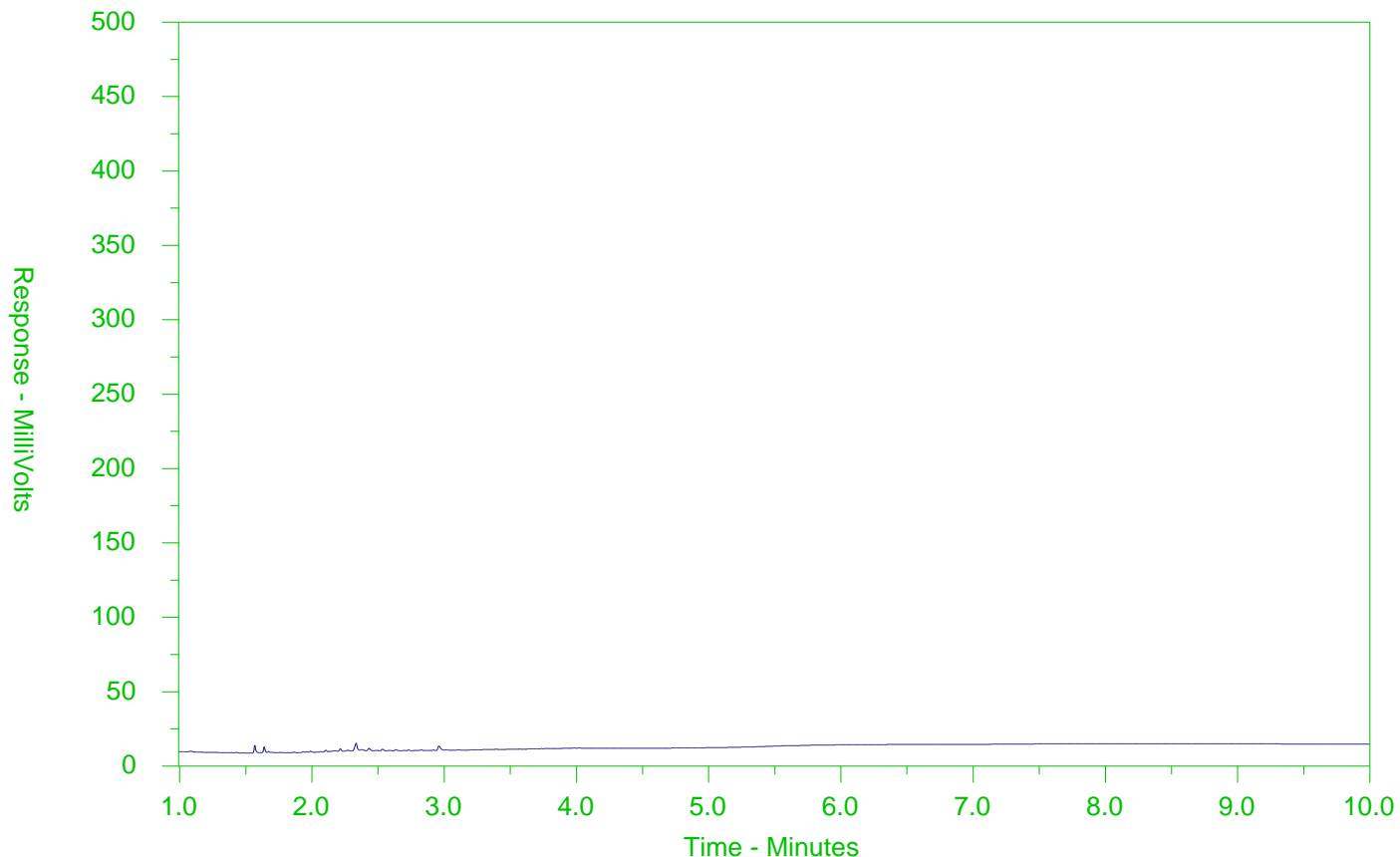
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-12  
 Client Sample ID: BH5-SS7



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

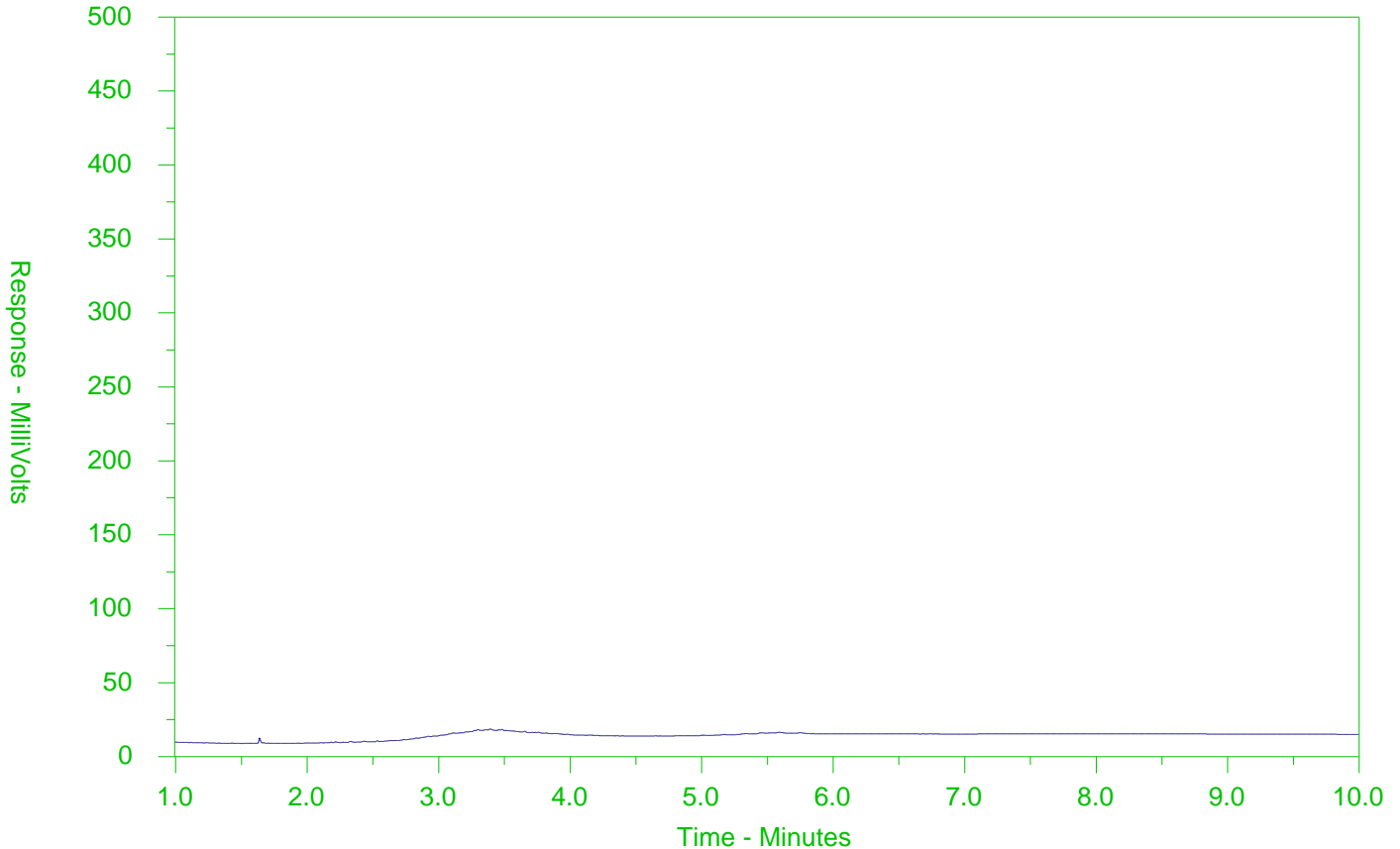
Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).



# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-13  
 Client Sample ID: BH7-SS1



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

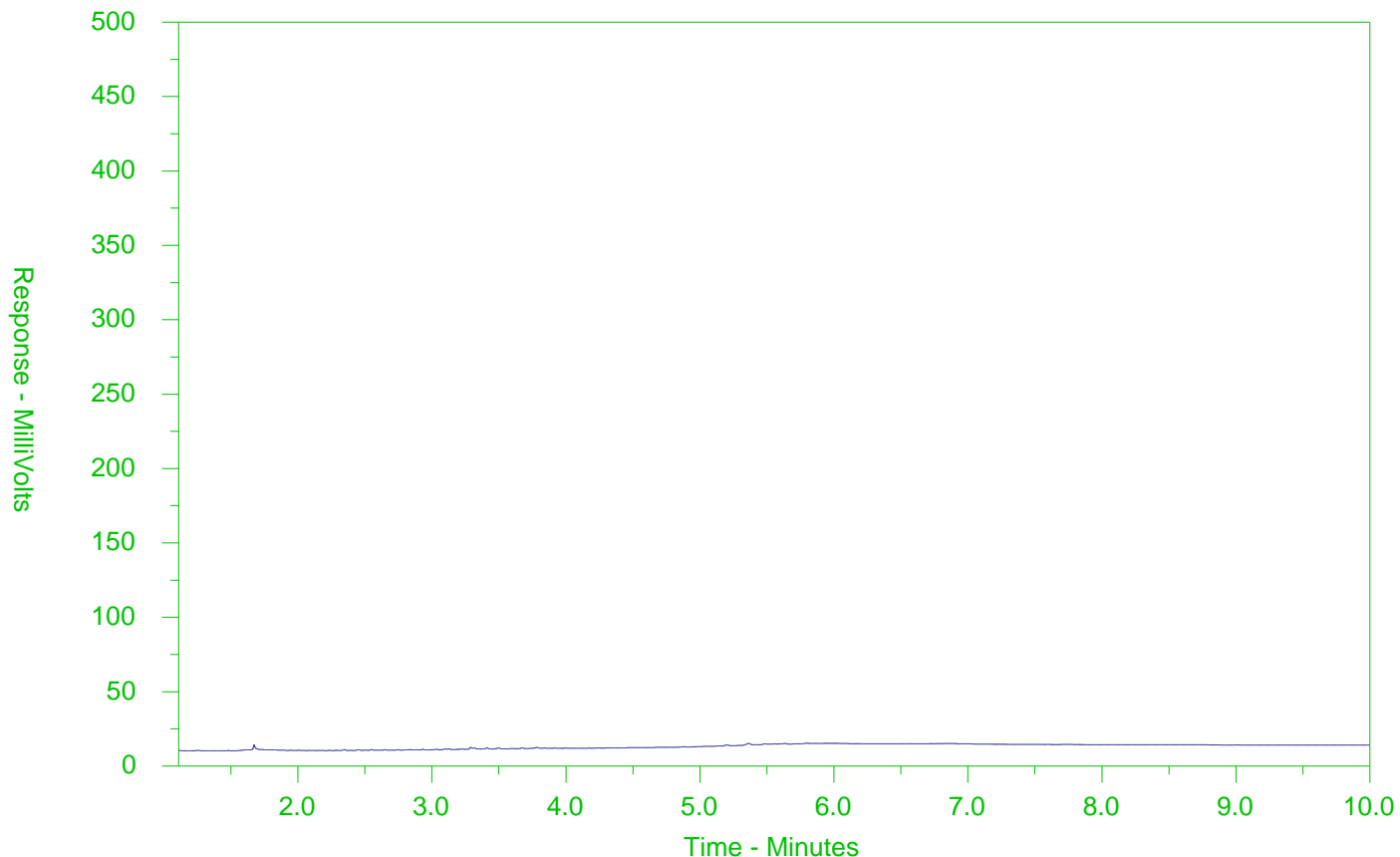
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-14  
 Client Sample ID: BH8-SS1



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

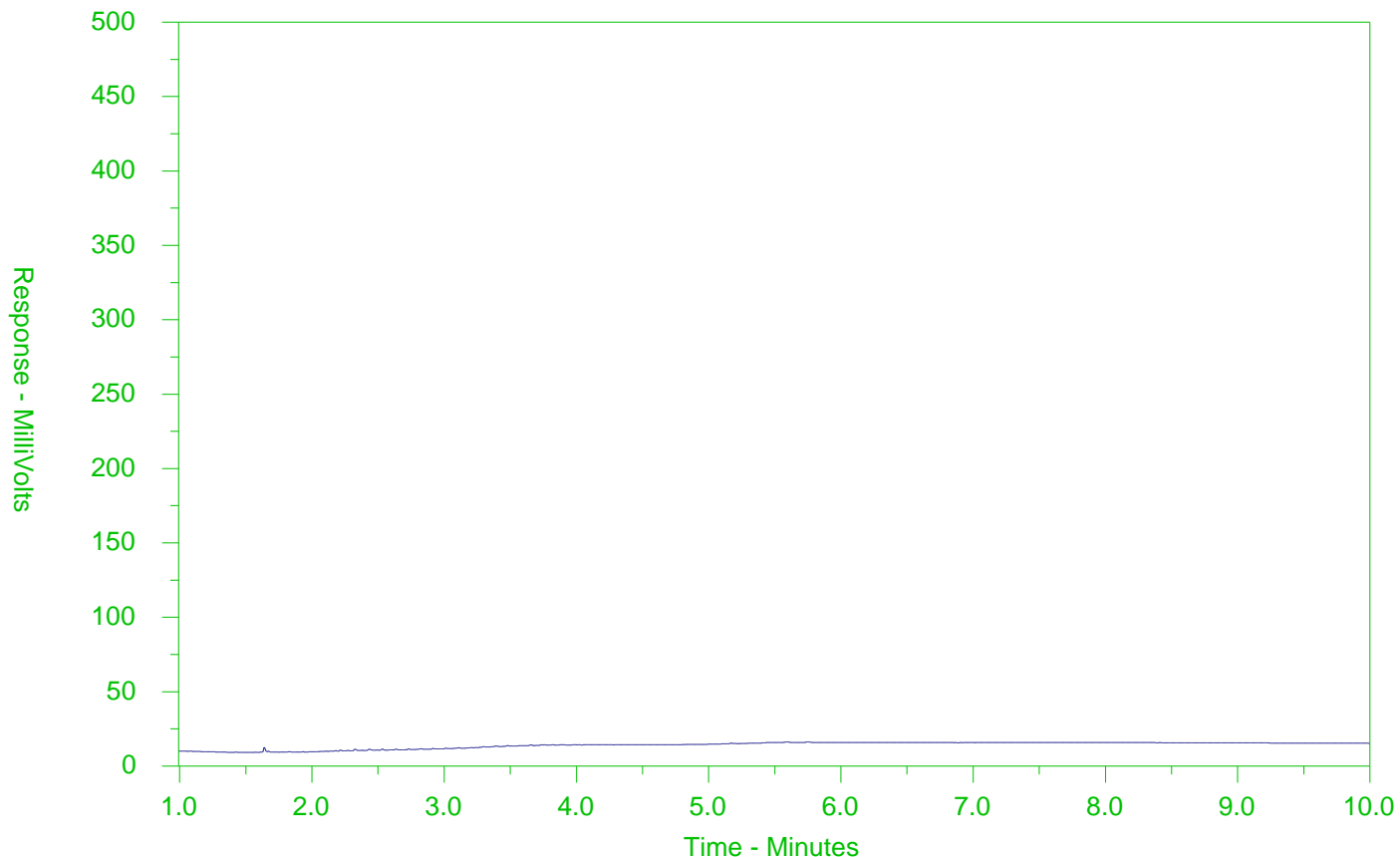
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-15  
 Client Sample ID: BH6-SS1



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

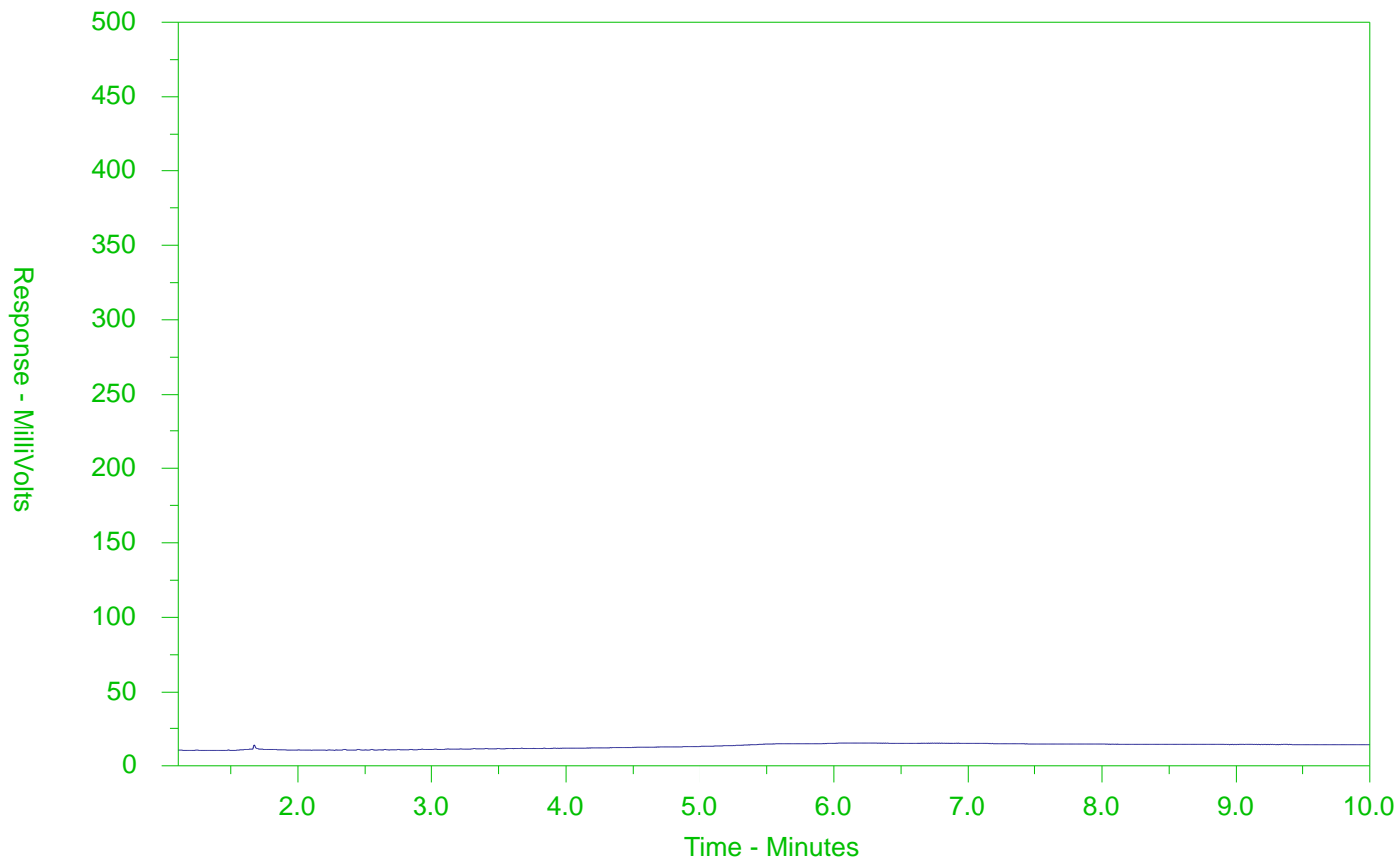
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-17  
 Client Sample ID: BH6-SS7



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

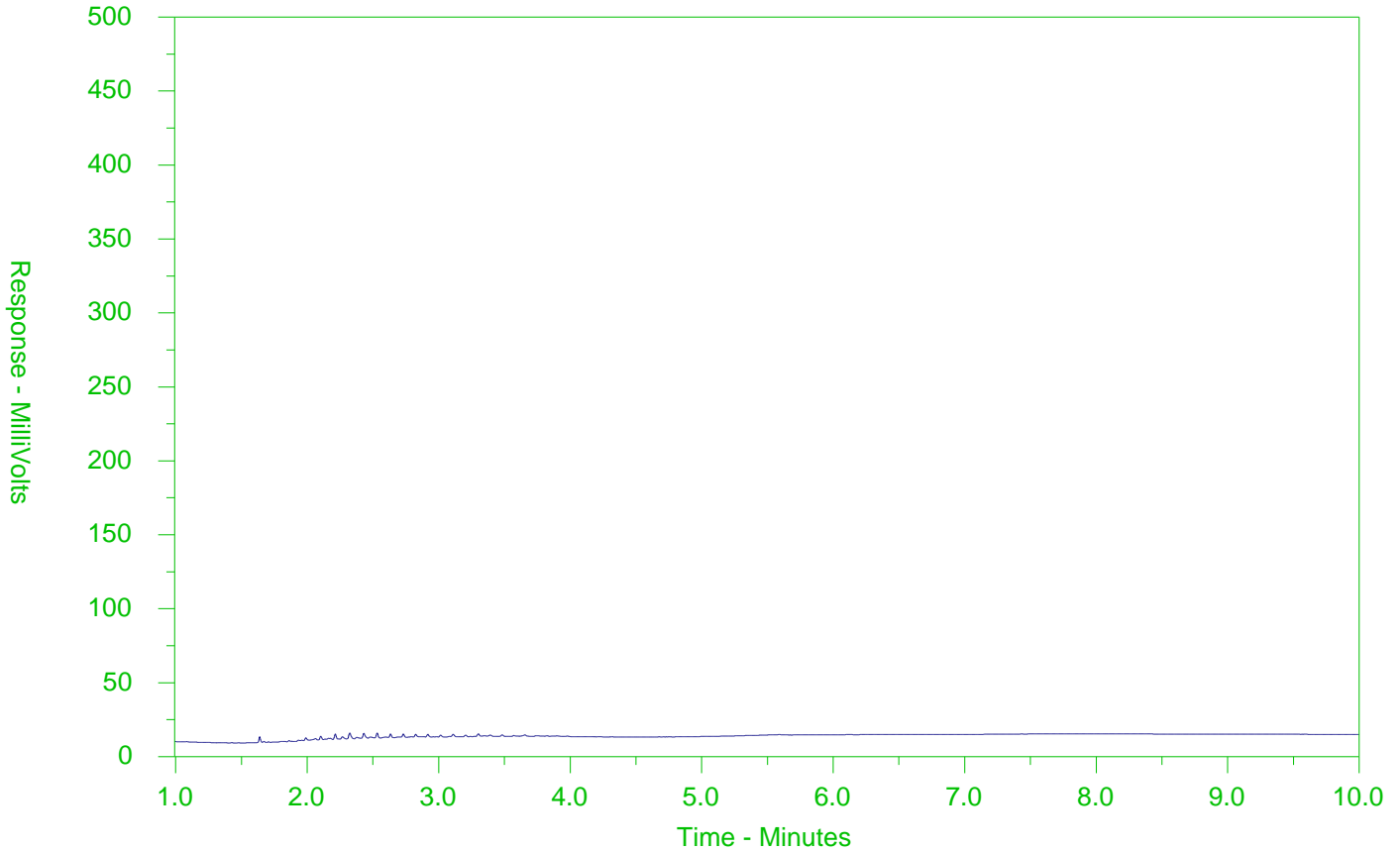
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-18  
 Client Sample ID: DUP4



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

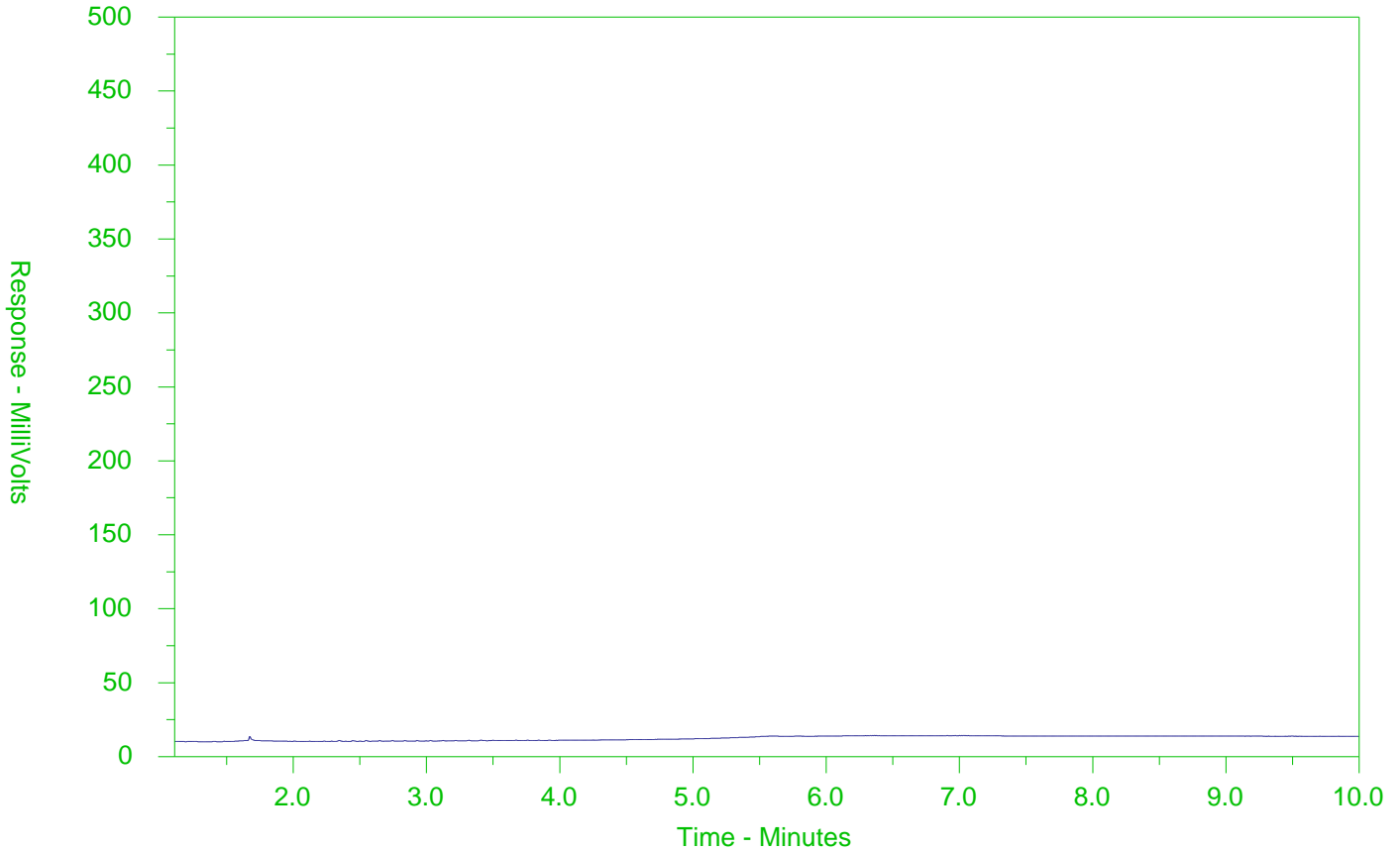
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2456477-19  
 Client Sample ID: BH4-SS9



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).









## **APPENDIX D**

### **LABORATORY CERTIFICATES OF ANALYSES (Groundwater)**



Azure Group Inc.(Mississauga)  
ATTN: Andrew Topp  
6751 Professional Court  
Suite 201  
Mississauga ON L4V 1Y3

Date Received: 08-JUN-20  
Report Date: 15-JUN-20 14:06 (MT)  
Version: FINAL

Client Phone: 416-779-2694

## Certificate of Analysis

Lab Work Order #: L2457656  
Project P.O. #: NOT SUBMITTED  
Job Reference: 2005-001  
C of C Numbers: 17-640339  
Legal Site Desc:

Amanda Overholster  
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

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# ANALYTICAL REPORT

## Summary of Guideline Exceedances

Guideline							
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit	
Ontario Regulation 153/04 - April 15, 2011 Standards - T2-Ground Water (Coarse Soil)-All Types of Property Use							
(No parameter exceedances)							

## Volatile Organic Compounds - WATER

Analyte	Unit	Guide Limits		Lab ID	L2457656-1	L2457656-2	L2457656-3	L2457656-4	L2457656-5	L2457656-6	L2457656-7	L2457656-8
		#1	#2	Sample Date	08-JUN-20	08-JUN-20	08-JUN-20	08-JUN-20	08-JUN-20	08-JUN-20	08-JUN-20	08-JUN-20
				Sample ID	MW1	DUP1	MW2	MW3	MW4	MW5	MW6	TRIP BLANK
Acetone	ug/L	2700	-		<30	<30	<30	<30	<30	<30	<30	<30
Benzene	ug/L	5	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane	ug/L	16	-		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bromoform	ug/L	25	-		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Bromomethane	ug/L	0.89	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon tetrachloride	ug/L	0.79	-		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	ug/L	30	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dibromochloromethane	ug/L	25	-		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform	ug/L	2.4	-		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	ug/L	0.2	-		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichlorobenzene	ug/L	3	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	ug/L	59	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	ug/L	1	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	ug/L	590	-		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethane	ug/L	5	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	ug/L	1.6	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/L	1.6	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethylene	ug/L	1.6	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethylene	ug/L	1.6	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	ug/L	50	-		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloropropane	ug/L	5	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,3-Dichloropropene	ug/L	-	-		<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans-1,3-Dichloropropene	ug/L	-	-		<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,3-Dichloropropene (cis & trans)	ug/L	0.5	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	ug/L	2.4	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
n-Hexane	ug/L	51	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Ethyl Ketone	ug/L	1800	-		<20	<20	<20	<20	<20	<20	<20	<20
Methyl Isobutyl Ketone	ug/L	640	-		<20	<20	<20	<20	<20	<20	<20	<20
MTBE	ug/L	15	-		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	ug/L	5.4	-		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Guide Limit #1: T2-Ground Water (Coarse Soil)-All Types of Property Use

## Volatile Organic Compounds - WATER

Analyte	Unit	Guide Limits		Lab ID	L2457656-1	L2457656-2	L2457656-3	L2457656-4	L2457656-5	L2457656-6	L2457656-7	L2457656-8
		#1	#2	Sample Date	08-JUN-20	08-JUN-20	08-JUN-20	08-JUN-20	08-JUN-20	08-JUN-20	08-JUN-20	08-JUN-20
				Sample ID	MW1	DUP1	MW2	MW3	MW4	MW5	MW6	TRIP BLANK
1,1,1,2-Tetrachloroethane	ug/L	1.1	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	ug/L	1	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	ug/L	1.6	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	ug/L	24	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1-Trichloroethane	ug/L	200	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/L	4.7	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	ug/L	1.6	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichlorofluoromethane	ug/L	150	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl chloride	ug/L	0.5	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
o-Xylene	ug/L	-	-	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
m+p-Xylenes	ug/L	-	-	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Xylenes (Total)	ug/L	300	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	103.2	104.2	102.2	102.4	103.5	104.1	101.6	101.8	
Surrogate: 1,4-Difluorobenzene	%	-	-	98.8	97.9	98.2	98.2	97.6	97.7	97.7	98.1	

### Guide Limit #1: T2-Ground Water (Coarse Soil)-All Types of Property Use

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

# ANALYTICAL REPORT

## Hydrocarbons - WATER

Analyte	Unit	Guide Limits		Lab ID	L2457656-1	L2457656-2	L2457656-3	L2457656-4	L2457656-5	L2457656-6	L2457656-7
		#1	#2	Sample Date	08-JUN-20	08-JUN-20	08-JUN-20	08-JUN-20	08-JUN-20	08-JUN-20	08-JUN-20
				Sample ID	MW1	DUP1	MW2	MW3	MW4	MW5	MW6
F1 (C6-C10)	ug/L	750	-	<25	<25	<25	<25	<25	<25	<25	<25
F1-BTEX	ug/L	750	-	<25	<25	<25	<25	<25	<25	<25	<25
F2 (C10-C16)	ug/L	150	-	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16-C34)	ug/L	500	-	<250	<250	<250	<250	<250	<250	<250	<250
F4 (C34-C50)	ug/L	500	-	<250	<250	<250	<250	<250	<250	<250	<250
Total Hydrocarbons (C6-C50)	ug/L	-	-	<370	<370	<370	<370	<370	<370	<370	<370
Chrom. to baseline at nC50		-	-	YES	YES	YES	YES	YES	YES	YES	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	91.0	91.1	89.6	92.7	90.2	92.7	89.3	
Surrogate: 3,4-Dichlorotoluene	%	-	-	73.2	78.1	74.1	66.8	77.6	69.8	76.7	

### Guide Limit #1: T2-Ground Water (Coarse Soil)-All Types of Property Use

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

# Reference Information

**Methods Listed (if applicable):**

ALS Test Code	Matrix	Test Description	Method Reference**
<b>F1-F4-511-CALC-WT</b>	Water	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-L
<p>Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.</p> <p>In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.</p> <p>In samples where BTEX and F1 were analyzed , F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.</p> <p>In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.</p> <p>Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:</p> <ol style="list-style-type: none"> <li>1. All extraction and analysis holding times were met.</li> <li>2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.</li> <li>3. Linearity of gasoline response within 15% throughout the calibration range.</li> </ol> <p>Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:</p> <ol style="list-style-type: none"> <li>1. All extraction and analysis holding times were met.</li> <li>2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.</li> <li>3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.</li> <li>4. Linearity of diesel or motor oil response within 15% throughout the calibration range.</li> </ol>			
<b>F1-HS-511-WT</b>	Water	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS
<p>Fraction F1 is determined by analyzing by headspace-GC/FID.</p> <p>Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).</p>			
<b>F2-F4-511-WT</b>	Water	F2-F4-O.Reg 153/04 (July 2011)	EPA 3511/CCME Tier 1
<p>Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.</p> <p>Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).</p>			
<b>VOC-1,3-DCP-CALC-WT</b>	Water	Regulation 153 VOCs	SW8260B/SW8270C
<b>VOC-511-HS-WT</b>	Water	VOC by GCMS HS O.Reg 153/04 (July 2011)	SW846 8260
<p>Liquid samples are analyzed by headspace GC/MSD.</p> <p>Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).</p>			
<b>XYLENES-SUM-CALC-WT</b>	Water	Sum of Xylene Isomer Concentrations	CALCULATION

Total xylenes represents the sum of o-xylene and m&p-xylene.

\*\*ALS test methods may incorporate modifications from specified reference methods to improve performance.

# Reference Information

L2457656 CONT'D....  
Job Reference: 2005-001  
PAGE 7 of 7  
15-JUN-20 14:06 (MT)

Chain of Custody Numbers:

17-640339

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

## GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.





# Quality Control Report

Workorder: L2457656

Report Date: 15-JUN-20

Page 1 of 7

Client: Azure Group Inc.(Mississauga)  
 6751 Professional Court Suite 201  
 Mississauga ON L4V 1Y3

Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>F1-HS-511-WT</b>								
	Water							
<b>Batch</b>	<b>R5117458</b>							
<b>WG3340884-4</b>	<b>DUP</b>	<b>WG3340884-3</b>						
F1 (C6-C10)		<25	<25	RPD-NA	ug/L	N/A	30	15-JUN-20
<b>WG3340884-1</b>	<b>LCS</b>							
F1 (C6-C10)			108.3		%		80-120	15-JUN-20
<b>WG3340884-2</b>	<b>MB</b>							
F1 (C6-C10)			<25		ug/L		25	15-JUN-20
Surrogate: 3,4-Dichlorotoluene			86.3		%		60-140	15-JUN-20
<b>WG3340884-5</b>	<b>MS</b>	<b>WG3340884-3</b>						
F1 (C6-C10)			93.1		%		60-140	15-JUN-20
<b>F2-F4-511-WT</b>								
	Water							
<b>Batch</b>	<b>R5116250</b>							
<b>WG3338902-2</b>	<b>LCS</b>							
F2 (C10-C16)			99.1		%		70-130	11-JUN-20
F3 (C16-C34)			104.3		%		70-130	11-JUN-20
F4 (C34-C50)			95.7		%		70-130	11-JUN-20
<b>WG3338902-1</b>	<b>MB</b>							
F2 (C10-C16)			<100		ug/L		100	11-JUN-20
F3 (C16-C34)			<250		ug/L		250	11-JUN-20
F4 (C34-C50)			<250		ug/L		250	11-JUN-20
Surrogate: 2-Bromobenzotrifluoride			85.9		%		60-140	11-JUN-20
<b>VOC-511-HS-WT</b>								
	Water							
<b>Batch</b>	<b>R5117458</b>							
<b>WG3340884-4</b>	<b>DUP</b>	<b>WG3340884-3</b>						
1,1,1,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
1,1,2,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	15-JUN-20
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20



## Quality Control Report

Workorder: L2457656

Report Date: 15-JUN-20

Page 2 of 7

Client: Azure Group Inc.(Mississauga)  
 6751 Professional Court Suite 201  
 Mississauga ON L4V 1Y3

Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>								
	<b>Water</b>							
<b>Batch</b>	<b>R5117458</b>							
<b>WG3340884-4</b>	<b>DUP</b>	<b>WG3340884-3</b>						
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	15-JUN-20
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	15-JUN-20
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	15-JUN-20
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	15-JUN-20
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	15-JUN-20
cis-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
cis-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	15-JUN-20
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	15-JUN-20
Dichlorodifluoromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	15-JUN-20
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	15-JUN-20
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	15-JUN-20
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	15-JUN-20
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	15-JUN-20
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	15-JUN-20
o-Xylene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	15-JUN-20
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
trans-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
trans-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	15-JUN-20
Trichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	15-JUN-20
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	15-JUN-20
<b>WG3340884-1</b>	<b>LCS</b>							
1,1,1,2-Tetrachloroethane			105.1		%		70-130	15-JUN-20
1,1,2,2-Tetrachloroethane			98.5		%		70-130	15-JUN-20
1,1,1-Trichloroethane			103.4		%		70-130	15-JUN-20
1,1,2-Trichloroethane			103.8		%		70-130	15-JUN-20



## Quality Control Report

Workorder: L2457656

Report Date: 15-JUN-20

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Client: Azure Group Inc.(Mississauga)  
 6751 Professional Court Suite 201  
 Mississauga ON L4V 1Y3

Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>	<b>Water</b>							
<b>Batch</b>	<b>R5117458</b>							
<b>WG3340884-1</b>	<b>LCS</b>							
1,1-Dichloroethane			79.6		%		70-130	15-JUN-20
1,1-Dichloroethylene			93.6		%		70-130	15-JUN-20
1,2-Dibromoethane			100.8		%		70-130	15-JUN-20
1,2-Dichlorobenzene			101.0		%		70-130	15-JUN-20
1,2-Dichloroethane			99.7		%		70-130	15-JUN-20
1,2-Dichloropropane			108.7		%		70-130	15-JUN-20
1,3-Dichlorobenzene			100.9		%		70-130	15-JUN-20
1,4-Dichlorobenzene			106.2		%		70-130	15-JUN-20
Acetone			113.9		%		60-140	15-JUN-20
Benzene			107.1		%		70-130	15-JUN-20
Bromodichloromethane			109.4		%		70-130	15-JUN-20
Bromoform			105.4		%		70-130	15-JUN-20
Bromomethane			131.1		%		60-140	15-JUN-20
Carbon tetrachloride			104.2		%		70-130	15-JUN-20
Chlorobenzene			101.0		%		70-130	15-JUN-20
Chloroform			106.5		%		70-130	15-JUN-20
cis-1,2-Dichloroethylene			96.5		%		70-130	15-JUN-20
cis-1,3-Dichloropropene			100.5		%		70-130	15-JUN-20
Dibromochloromethane			99.8		%		70-130	15-JUN-20
Dichlorodifluoromethane			100.4		%		50-140	15-JUN-20
Ethylbenzene			105.1		%		70-130	15-JUN-20
n-Hexane			109.8		%		70-130	15-JUN-20
m+p-Xylenes			108.4		%		70-130	15-JUN-20
Methyl Ethyl Ketone			95.1		%		60-140	15-JUN-20
Methyl Isobutyl Ketone			96.3		%		60-140	15-JUN-20
Methylene Chloride			99.4		%		70-130	15-JUN-20
MTBE			95.4		%		70-130	15-JUN-20
o-Xylene			113.0		%		70-130	15-JUN-20
Styrene			105.7		%		70-130	15-JUN-20
Tetrachloroethylene			108.3		%		70-130	15-JUN-20
Toluene			106.3		%		70-130	15-JUN-20
trans-1,2-Dichloroethylene			105.1		%		70-130	15-JUN-20
trans-1,3-Dichloropropene			108.1		%		70-130	15-JUN-20



## Quality Control Report

Workorder: L2457656

Report Date: 15-JUN-20

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Client: Azure Group Inc.(Mississauga)  
 6751 Professional Court Suite 201  
 Mississauga ON L4V 1Y3

Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R5117458</b>							
<b>WG3340884-1</b>	<b>LCS</b>							
Trichloroethylene			98.5		%		70-130	15-JUN-20
Trichlorofluoromethane			96.0		%		60-140	15-JUN-20
Vinyl chloride			131.0		%		60-140	15-JUN-20
<b>WG3340884-2</b>	<b>MB</b>							
1,1,1,2-Tetrachloroethane			<0.50		ug/L		0.5	15-JUN-20
1,1,2,2-Tetrachloroethane			<0.50		ug/L		0.5	15-JUN-20
1,1,1-Trichloroethane			<0.50		ug/L		0.5	15-JUN-20
1,1,2-Trichloroethane			<0.50		ug/L		0.5	15-JUN-20
1,1-Dichloroethane			<0.50		ug/L		0.5	15-JUN-20
1,1-Dichloroethylene			<0.50		ug/L		0.5	15-JUN-20
1,2-Dibromoethane			<0.20		ug/L		0.2	15-JUN-20
1,2-Dichlorobenzene			<0.50		ug/L		0.5	15-JUN-20
1,2-Dichloroethane			<0.50		ug/L		0.5	15-JUN-20
1,2-Dichloropropane			<0.50		ug/L		0.5	15-JUN-20
1,3-Dichlorobenzene			<0.50		ug/L		0.5	15-JUN-20
1,4-Dichlorobenzene			<0.50		ug/L		0.5	15-JUN-20
Acetone			<30		ug/L		30	15-JUN-20
Benzene			<0.50		ug/L		0.5	15-JUN-20
Bromodichloromethane			<2.0		ug/L		2	15-JUN-20
Bromoform			<5.0		ug/L		5	15-JUN-20
Bromomethane			<0.50		ug/L		0.5	15-JUN-20
Carbon tetrachloride			<0.20		ug/L		0.2	15-JUN-20
Chlorobenzene			<0.50		ug/L		0.5	15-JUN-20
Chloroform			<1.0		ug/L		1	15-JUN-20
cis-1,2-Dichloroethylene			<0.50		ug/L		0.5	15-JUN-20
cis-1,3-Dichloropropene			<0.30		ug/L		0.3	15-JUN-20
Dibromochloromethane			<2.0		ug/L		2	15-JUN-20
Dichlorodifluoromethane			<2.0		ug/L		2	15-JUN-20
Ethylbenzene			<0.50		ug/L		0.5	15-JUN-20
n-Hexane			<0.50		ug/L		0.5	15-JUN-20
m+p-Xylenes			<0.40		ug/L		0.4	15-JUN-20
Methyl Ethyl Ketone			<20		ug/L		20	15-JUN-20
Methyl Isobutyl Ketone			<20		ug/L		20	15-JUN-20
Methylene Chloride			<5.0		ug/L		5	15-JUN-20



## Quality Control Report

Workorder: L2457656

Report Date: 15-JUN-20

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Client: Azure Group Inc.(Mississauga)  
 6751 Professional Court Suite 201  
 Mississauga ON L4V 1Y3

Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>								
	<b>Water</b>							
<b>Batch</b>	<b>R5117458</b>							
<b>WG3340884-2 MB</b>								
MTBE			<2.0		ug/L		2	15-JUN-20
o-Xylene			<0.30		ug/L		0.3	15-JUN-20
Styrene			<0.50		ug/L		0.5	15-JUN-20
Tetrachloroethylene			<0.50		ug/L		0.5	15-JUN-20
Toluene			<0.50		ug/L		0.5	15-JUN-20
trans-1,2-Dichloroethylene			<0.50		ug/L		0.5	15-JUN-20
trans-1,3-Dichloropropene			<0.30		ug/L		0.3	15-JUN-20
Trichloroethylene			<0.50		ug/L		0.5	15-JUN-20
Trichlorofluoromethane			<5.0		ug/L		5	15-JUN-20
Vinyl chloride			<0.50		ug/L		0.5	15-JUN-20
Surrogate: 1,4-Difluorobenzene			99.2		%		70-130	15-JUN-20
Surrogate: 4-Bromofluorobenzene			104.7		%		70-130	15-JUN-20
<b>WG3340884-5 MS</b>		<b>WG3340884-3</b>						
1,1,1,2-Tetrachloroethane			105.8		%		50-140	15-JUN-20
1,1,2,2-Tetrachloroethane			108.2		%		50-140	15-JUN-20
1,1,1-Trichloroethane			101.6		%		50-140	15-JUN-20
1,1,2-Trichloroethane			109.4		%		50-140	15-JUN-20
1,1-Dichloroethane			75.7		%		50-140	15-JUN-20
1,1-Dichloroethylene			91.7		%		50-140	15-JUN-20
1,2-Dibromoethane			106.9		%		50-140	15-JUN-20
1,2-Dichlorobenzene			100.3		%		50-140	15-JUN-20
1,2-Dichloroethane			107.0		%		50-140	15-JUN-20
1,2-Dichloropropane			115.3		%		50-140	15-JUN-20
1,3-Dichlorobenzene			97.1		%		50-140	15-JUN-20
1,4-Dichlorobenzene			102.8		%		50-140	15-JUN-20
Acetone			128.7		%		50-140	15-JUN-20
Benzene			109.2		%		50-140	15-JUN-20
Bromodichloromethane			115.3		%		50-140	15-JUN-20
Bromoform			111.6		%		50-140	15-JUN-20
Bromomethane			131.8		%		50-140	15-JUN-20
Carbon tetrachloride			101.0		%		50-140	15-JUN-20
Chlorobenzene			99.9		%		50-140	15-JUN-20
Chloroform			109.3		%		50-140	15-JUN-20
cis-1,2-Dichloroethylene			97.4		%		50-140	15-JUN-20



## Quality Control Report

Workorder: L2457656

Report Date: 15-JUN-20

Page 6 of 7

Client: Azure Group Inc.(Mississauga)  
 6751 Professional Court Suite 201  
 Mississauga ON L4V 1Y3

Contact: Andrew Topp

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-511-HS-WT</b>	<b>Water</b>							
<b>Batch</b>	<b>R5117458</b>							
<b>WG3340884-5 MS</b>		<b>WG3340884-3</b>						
cis-1,3-Dichloropropene			101.6		%		50-140	15-JUN-20
Dibromochloromethane			103.2		%		50-140	15-JUN-20
Dichlorodifluoromethane			106.5		%		50-140	15-JUN-20
Ethylbenzene			100.3		%		50-140	15-JUN-20
n-Hexane			106.3		%		50-140	15-JUN-20
m+p-Xylenes			104.6		%		50-140	15-JUN-20
Methyl Ethyl Ketone			114.1		%		50-140	15-JUN-20
Methyl Isobutyl Ketone			114.0		%		50-140	15-JUN-20
Methylene Chloride			100.6		%		50-140	15-JUN-20
MTBE			95.0		%		50-140	15-JUN-20
o-Xylene			109.8		%		50-140	15-JUN-20
Styrene			103.5		%		50-140	15-JUN-20
Tetrachloroethylene			100.0		%		50-140	15-JUN-20
Toluene			102.8		%		50-140	15-JUN-20
trans-1,2-Dichloroethylene			102.8		%		50-140	15-JUN-20
trans-1,3-Dichloropropene			107.2		%		50-140	15-JUN-20
Trichloroethylene			95.7		%		50-140	15-JUN-20
Trichlorofluoromethane			93.7		%		50-140	15-JUN-20
Vinyl chloride			134.5		%		50-140	15-JUN-20

# Quality Control Report

Workorder: L2457656

Report Date: 15-JUN-20

Client: Azure Group Inc.(Mississauga)  
6751 Professional Court Suite 201  
Mississauga ON L4V 1Y3

Page 7 of 7

Contact: Andrew Topp

## Legend:

---

Limit ALS Control Limit (Data Quality Objectives)  
DUP Duplicate  
RPD Relative Percent Difference  
N/A Not Available  
LCS Laboratory Control Sample  
SRM Standard Reference Material  
MS Matrix Spike  
MSD Matrix Spike Duplicate  
ADE Average Desorption Efficiency  
MB Method Blank  
IRM Internal Reference Material  
CRM Certified Reference Material  
CCV Continuing Calibration Verification  
CVS Calibration Verification Standard  
LCSD Laboratory Control Sample Duplicate

## Sample Parameter Qualifier Definitions:

---

Qualifier	Description
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

---

## Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

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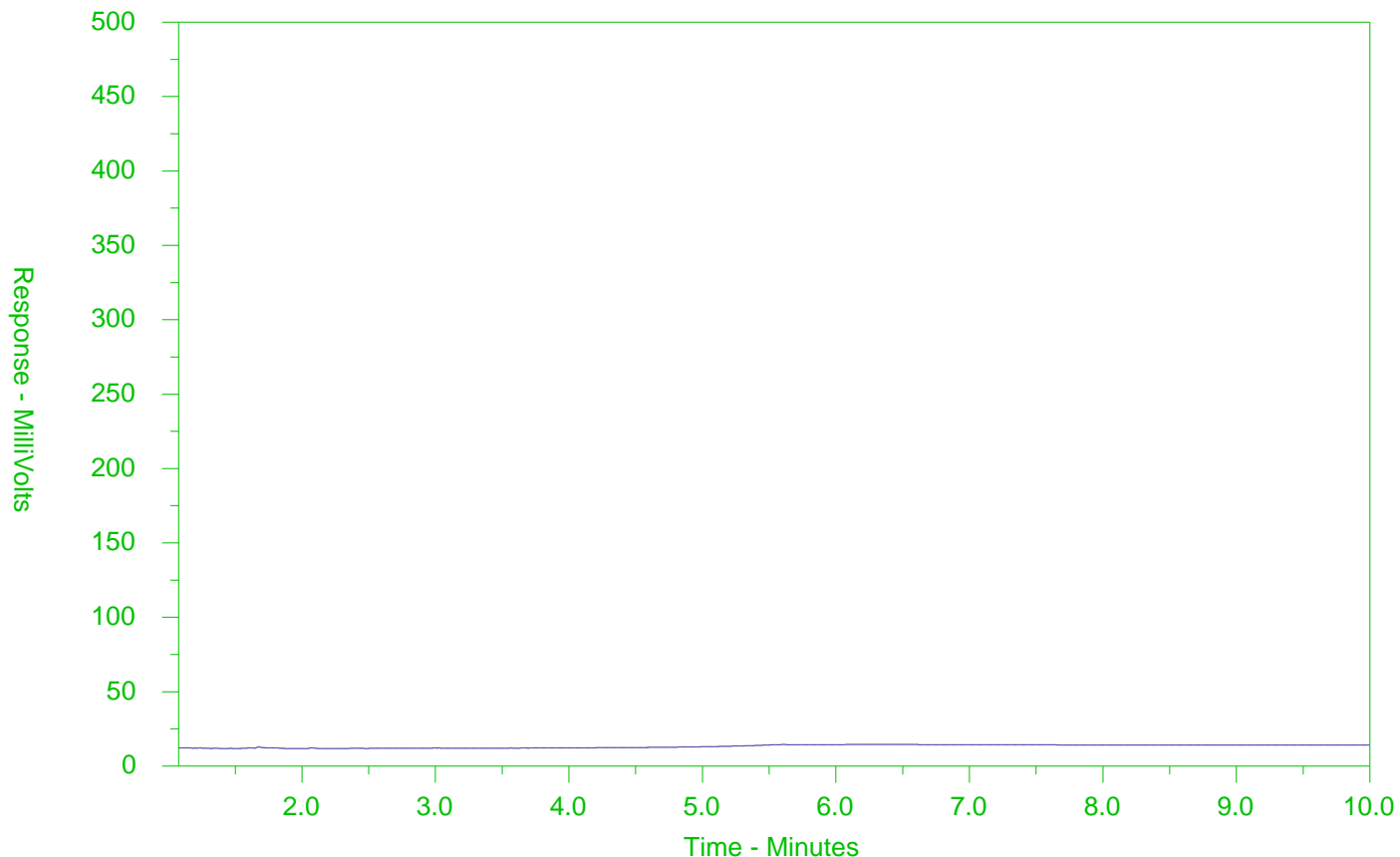
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2457656-1  
 Client Sample ID: MW1



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

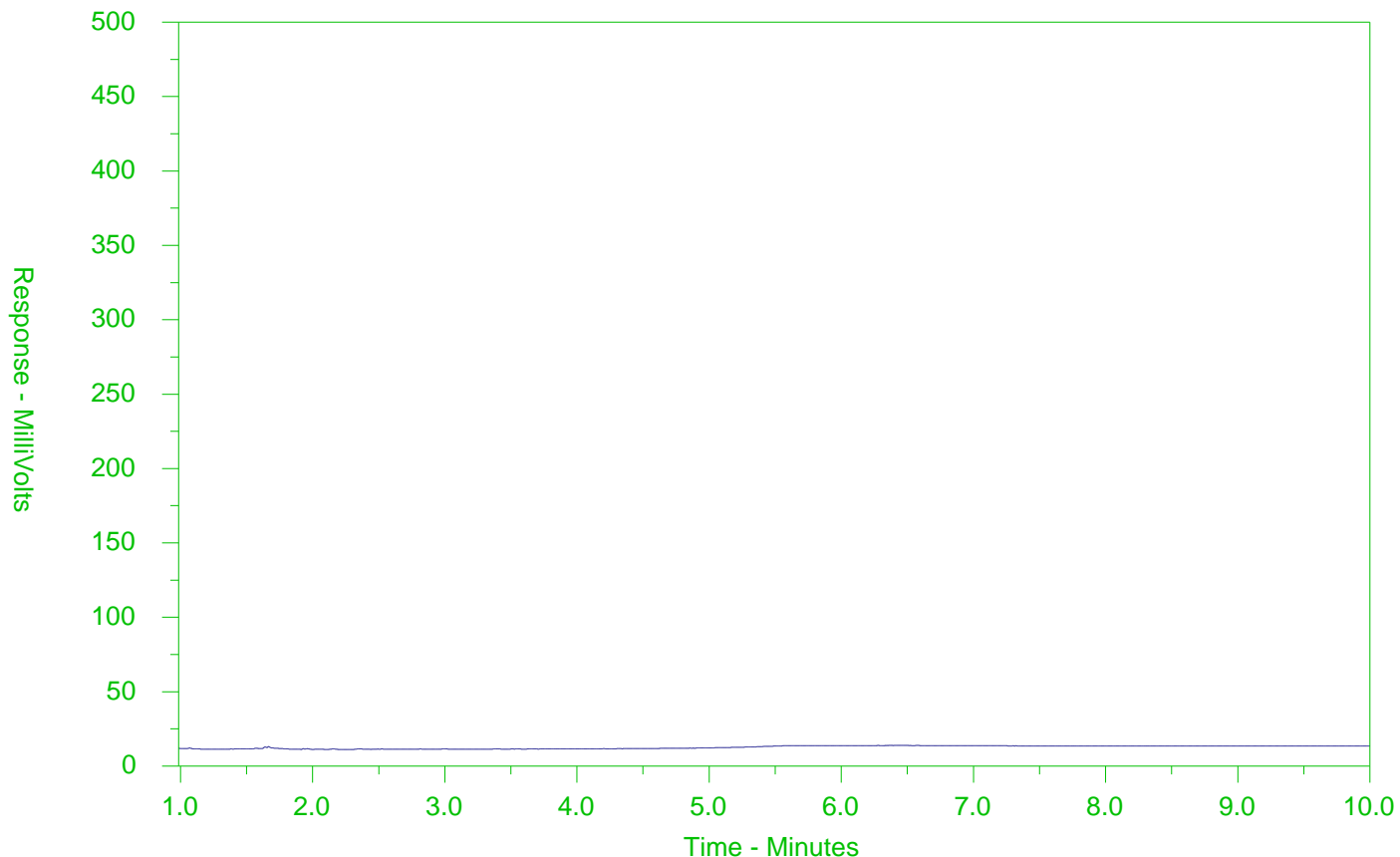
Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).



# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2457656-2  
 Client Sample ID: DUP1



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

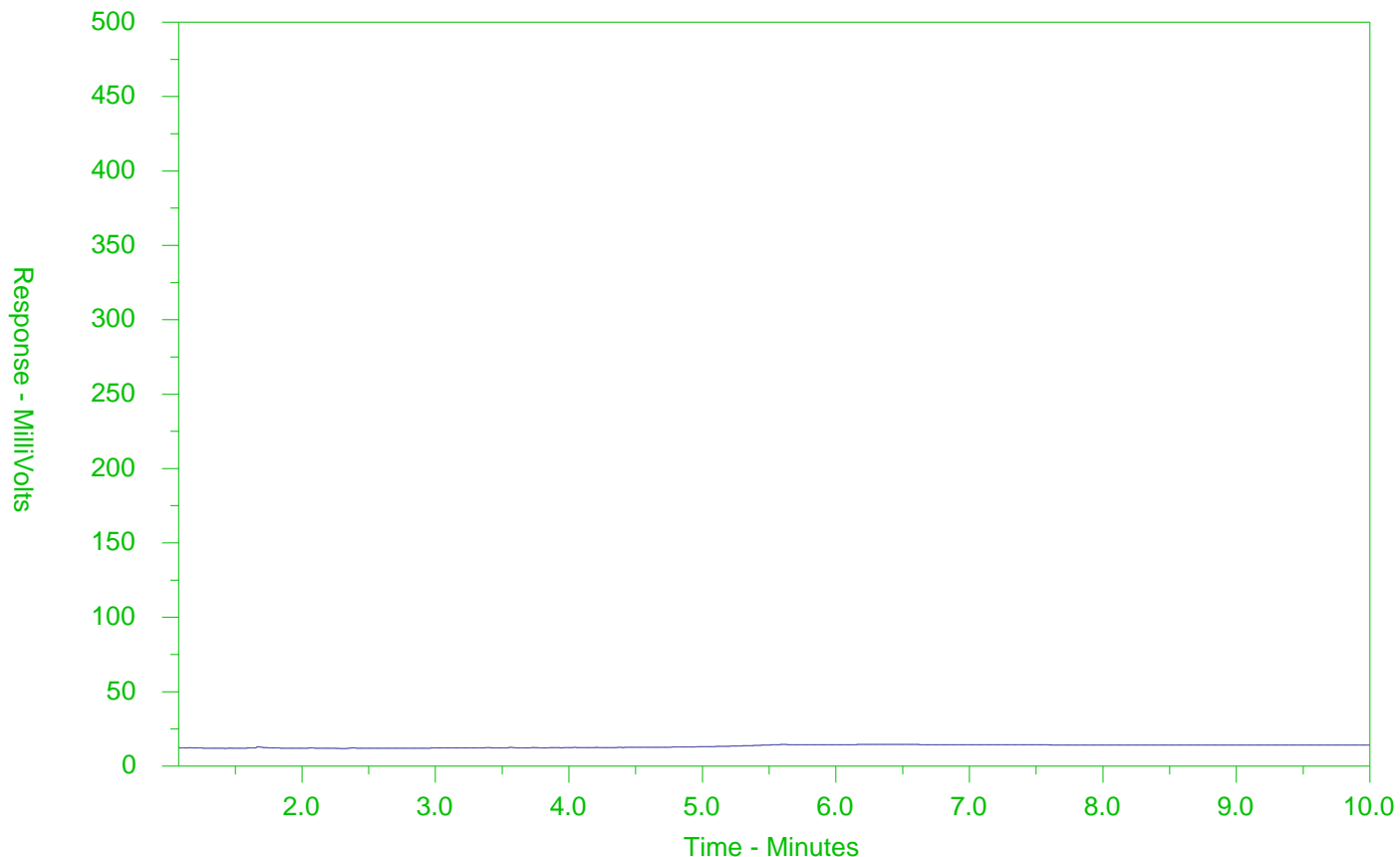
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2457656-3  
 Client Sample ID: MW2



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

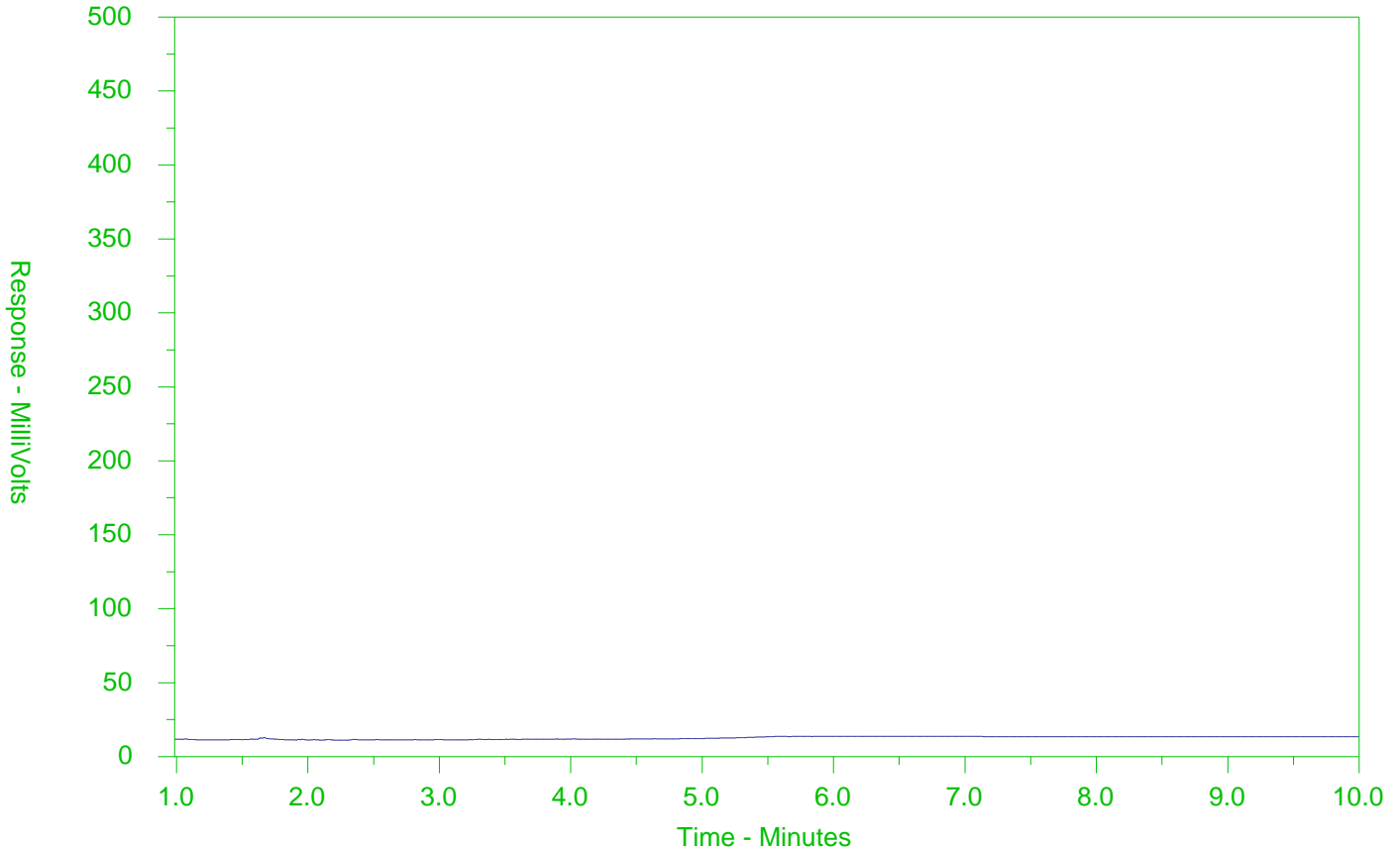
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2457656-4  
 Client Sample ID: MW3



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

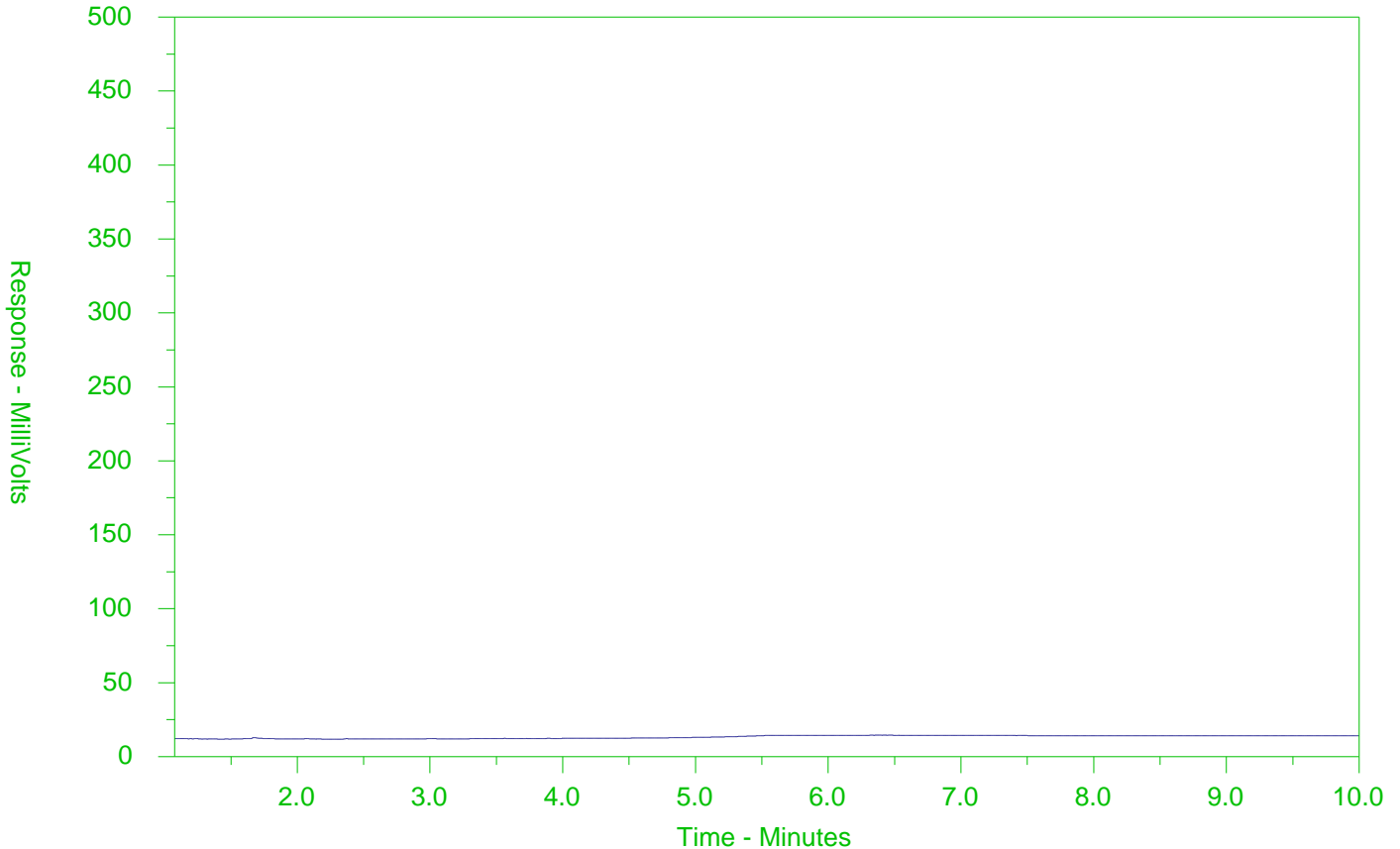
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2457656-5  
 Client Sample ID: MW4



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

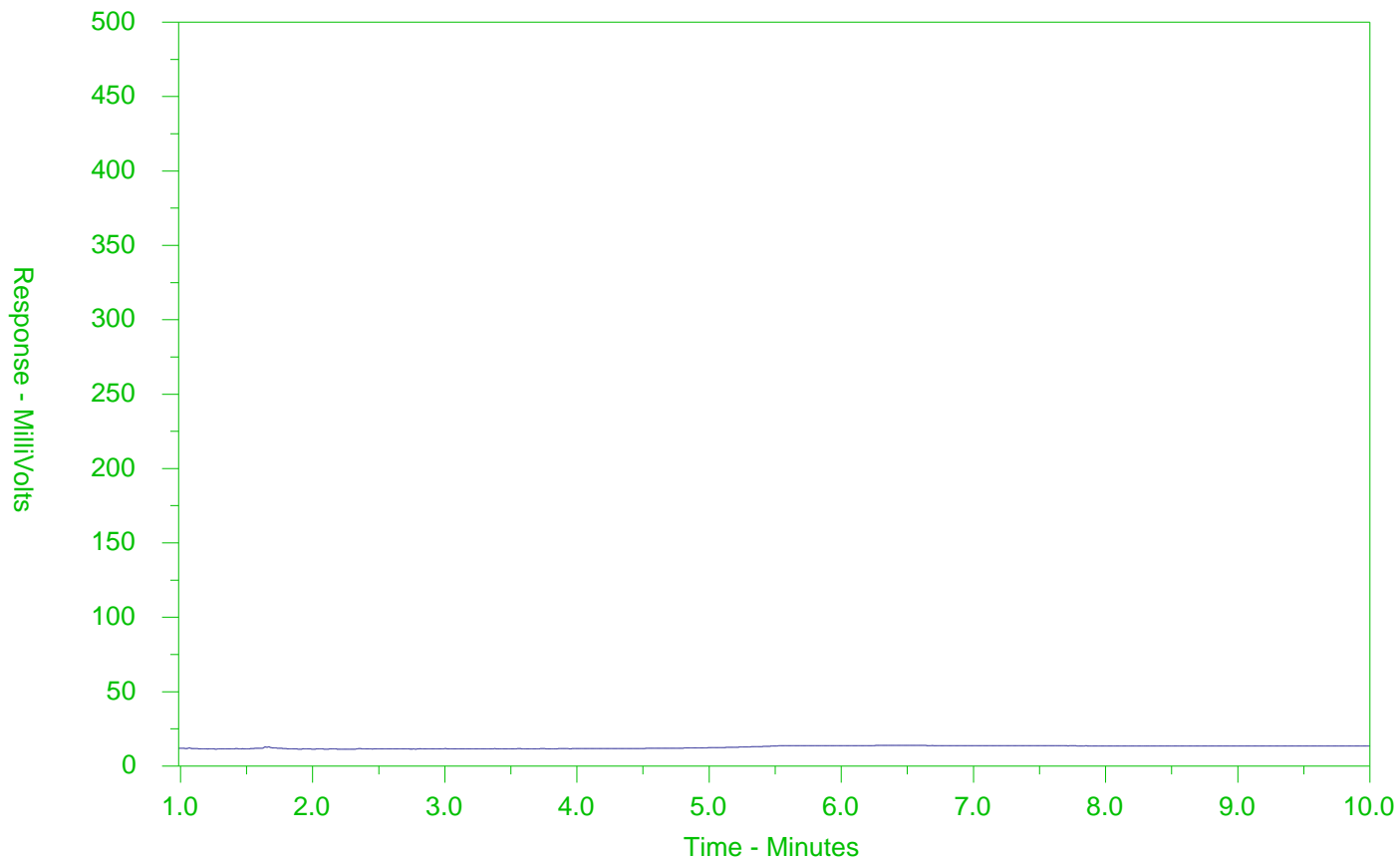
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2457656-6  
 Client Sample ID: MW5



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

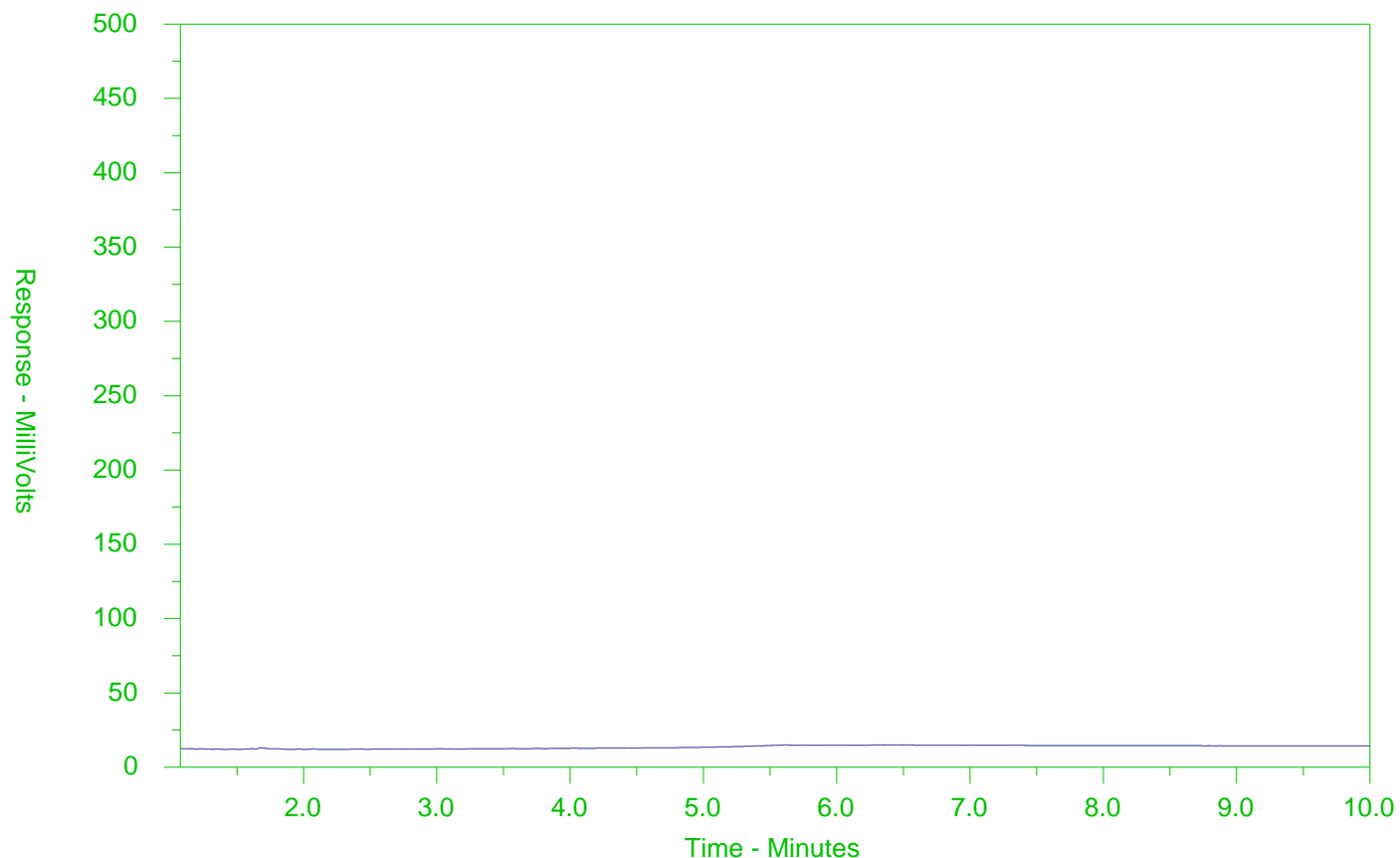
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2457656-7  
 Client Sample ID: MW6



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).





## **APPENDIX E**

### **SAMPLING AND ANALYSIS PLAN**



Soil and groundwater samples from each borehole/monitoring well were collected and submitted for laboratory analysis of concentrations of the chemical parameters identified in our Phase One. The following table outlines the parameters analyzed in each borehole

Borehole ID (total depth mbgl)	Sample ID	Sample Depth	Comments / Rationale
BH1 (9.144)	BH1 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand</li> <li>• APEC: 1</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH1 – SS7	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand and trace silt</li> <li>• APEC: 1</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOCs, THMS, BTEX, PHCs, pH</li> </ul>
BH2 (9.144)	BH2 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand</li> <li>• APEC: 2, 3</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH2 – SS8 + Dup 1	5.334 – 6.096 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand and trace silt</li> <li>• APEC: 2, 3</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOCs, THMS, BTEX, PHCs</li> <li>• Dup 1 Analyses: VOCs, THMS, BTEX, PHCs</li> </ul>
BH3 (9.144)	BH3 – SS1 + Dup 2	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>• Soil: Brown sand and gravel fill, trace organics</li> <li>• APEC: 3, 7</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> <li>• Dup 2 Analyses: Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH3 – SS7	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand and trace silt</li> <li>• APEC: 3</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOC, THMS, BTEX, PHCs</li> </ul>
BH4 (9.144)	BH4 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>• Soil: Brown sand and gravel fill, trace organics</li> <li>• APEC: 4, 7</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH4 – SS9	6.096 – 6.858 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand and trace silt</li> <li>• APEC: 4</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOC, THMS, BTEX, PHCs</li> </ul>
BH5 (9.144)	BH5 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand</li> <li>• APEC: 6</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH5 – SS7	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>• Soil: Native Fine Sand and trace silt</li> <li>• APEC: 6</li> <li>• No irregular odours or soil staining present</li> <li>• No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Analyses: VOC, THMS, BTEX, PHCs</li> </ul>

Borehole ID (total depth mbgl)	Sample ID	Sample Depth	Comments / Rationale
BH6 (9.144)	BH6 – SS1 + Dup 3	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Fine Sand</li> <li>APEC: 5</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> <li>Dup 3 Analyses: PAHs</li> </ul>
	BH6 – SS7 + Dup 4	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand and trace silt</li> <li>APEC: 5</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMS, BTEX, PHCs</li> <li>Dup 4 Analyses: VOCs, THMS, BTEX, PHCs</li> </ul>
BH7 (2.286)	BH7 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Brown sand and gravel fill, trace organics</li> <li>APEC: 7</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
BH8 (2.286)	BH8 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Brown sand and gravel fill, trace organics</li> <li>APEC: 7</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	Trip Blank	-	<ul style="list-style-type: none"> <li>Trip Blank Submitted with Laboratory Submission</li> </ul>

Monitoring Well ID (Sample ID)	COMMENTS / RATIONALE
MW1 + Dup 1	<ul style="list-style-type: none"> <li>Located within APEC 1</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, BTEX, PHCs</li> <li>Dup 1 groundwater samples analyzed for VOCs, THMS, BTEX, PHCs</li> </ul>
MW2	<ul style="list-style-type: none"> <li>Located within APEC 2, 3</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, THMS, BTEX, PHCs</li> </ul>
MW3	<ul style="list-style-type: none"> <li>Located within APEC 3</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, THMS, BTEX, PHCs</li> </ul>
MW4	<ul style="list-style-type: none"> <li>Located within APEC 4</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, THMS, BTEX, PHCs</li> </ul>
MW5	<ul style="list-style-type: none"> <li>Located within APEC 6</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, THMS, BTEX, PHCs</li> </ul>
MW6	<ul style="list-style-type: none"> <li>Located within APEC 5</li> <li>No unusual sheen or odour identified in sample</li> <li>No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>Groundwater sample analyzed for VOCs, THMS, BTEX, PHCs</li> </ul>
(Trip Blank)	<ul style="list-style-type: none"> <li>VOCs Trip Blank Submitted with laboratory submission</li> </ul>

In accordance with the requirements of O. Reg. 153/04, based on the most sensitive expected residential use of the subject property, laboratory analysis of grain size (coarse), a laboratory-determined pH of Surficial: 7.77 to Subsurface: 8.08 on recovered soil samples from BH1 and BH8, Azure determined the appropriate standards for the Subject Property are Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the EPA, dated April 15, 2011, Table 2 Full Depth Generic Site Condition Standards in a potable groundwater condition for residential/parkland/institutional property use for coarse textured soils – MECP Standard.



## **APPENDIX F**

### **PLAN OF SURVEY OF PHASE TWO ESA PROPERTY**





## **APPENDIX G**

### **PHASE TWO CONCEPTUAL SITE MODEL**



**Phase Two Conceptual Site Model**

**6098 Old Church Road:**

Lot 6 Plan 519 ALBION; CALEDON (PIN: 14336-0171)

**6142 Old Church Road:**

Part Lot 21 Concession 1 ALBION PT 7, 43R19033; CALEDON (PIN: 14336-0189)

**1 Russell Mason Court:**

Part Lot 21 Concession 1 ALBION PTS 1, 2 & 4, 43R19033; S/T RO998815; CALEDON (PIN: 14336-0190)

**2 Russell Mason Court:**

Part Lot 21 Concession 1 ALBION PTS 3 & 5, 43R19033; T/W VS69845, RO998814; CALEDON (PIN: 14336-0191)

**6126 Old Church Road:**

Part Lot 21 CON 1 ALBION PT 6, 43R19033; CALEDON (PIN: 14336-0192)

**6122 & 6124 & 6120 Old Church Road:**

Part Lot 21 Concession 1 ALBION as in RO585800; CALEDON (PIN: 14336-0193)

**6110 & 6112 & 6114 Old Church Road:**

Part Lot 21 Concession 1 ALBION AS IN RO549336; CALEDON (PIN: 14336-0194)

The seven (7) cumulative properties shall hereby be referred to as; “The Phase One Properties”, “The Phase Two Properties”, an/or “The RSC Properties”.

Job #: 2005-001

Qualified Person: Ahmed Al-Temimi, P.Eng



The Phase Two CSM is divided into the following sections:

### **1.0 Objective**

### **2.0 Phase One Environmental Site Assessment**

Table 1: Contributing Potentially Contaminating Activities Pertaining to the RSC Property

Table 2: Non Contributing Potentially Contaminating Activities Pertaining to the RSC Property

Table 3: Table of Areas of Potential Environmental Concern

### **3.0 Phase Two Environmental Site Assessment**

3.1 Borehole Investigation

3.2 Monitoring Well Investigation

3.3 Laboratory Analyses

### **4.0 Physical Setting**

4.1 Geological Setting

4.2 Hydrogeological Setting

4.3 Site Condition Standards

### **5.0 Contaminants Greater than the applicable Site Condition Standard**

#### Appendix A: Figures:

Figure 1 – Site Location & Study Area

Figure 2 – Site Plan: Addresses

Figure 3 – Site Plan

Figure 4 – Study Area: Land Uses

Figure 5 – Study Area: PCAs

Figure 6 – Site Plan: PCAs

Figure 7 – Site Plan: APECs

Figure 8a – Site Investigation: BH & MW

Figure 8b – Site Investigation: BH & MW \* Updated with locations of fill material

Figure 9 – GW Flow Direction

Figure 10 – Proposed Development Plan

Figure 11 – Cross-Section Layout

Figure 12 – A A' Cross Section

Figure 13 – B B' Cross Section

#### Appendix B: Proposed Sub Division





## 1.0 Objective

According to the current redevelopment plan for the site, all current buildings are to be demolished and multiple residences (townhomes and semi-detached) are to be erected as part of the redevelopment, certain portions of the RSC Properties will be conveyed to the Town of Caledon and the Region of Peel as part of the creation of private roads throughout the proposed subdivision. Therefore as recommended by the Clients' retained planner (KLM Planning); Azure was instructed to file an RSC for the entire land package, including all seven (7) parcels and the future conveyed lands. Therefore the current investigation was conducted in anticipation of filing an RSC with The Ministry of The Environment, Conservation and Parks (MECP). A site plan showing the proposed redevelopment can be found in Figure 10.

Current Land Use: Residential

Proposed Land Use: Residential

Purpose for RSC: Requested by Municipality for planning purposes

The objective of this Phase One ESA is to identify any potentially contaminating activities (PCAs) that are occurring, or have occurred, at the Phase One Properties and at properties within 250 m from the Phase One Properties (Phase One Study Area). The Phase One ESA also evaluates each individual Potentially Contaminating Activity (PCA), and determines whether it would contribute as an Area of Potential Environmental Concern (APEC) at the Phase One Properties.

In the event that Contributing PCAs and therefore APECs are identified during the Phase One ESA, The Phase Two ESA will be completed in order to fully investigate the potentially impacted media within the identified APECs.

## 2.0 Phase One Environmental Site Assessment

As previously discussed, the Phase One Properties are located on the northern edge of Old Church Road, approximately 250 m east of Airport Road in the Town of Caledon, Ontario. The Phase One Study Area consists of the neighbouring properties located totally or partially within 250 m from the Phase One Properties' boundaries.

The Phase One properties are all currently developed with single-storey (bungalow) dwelling, some of which are occupied by residential tenants, and some are vacant. The Phase One study Area (a 250 m buffer surrounding the Phase One Properties) consists of residential properties to the north and west; community/parkland properties to the south, east and commercial along Airport Road (250 m west). All of the structures on the RSC properties are slab on grade.

Refer to Figures 1, 2, 3 & 4 for all current land-use information pertaining to the Phase One Properties and Phase One Study Area.

The RSC consists of seven (7) separate parcels making up the entire RSC property. All properties are adjacent to one another and will all be redeveloped under continued residential land use.

The legal description of each parcel can be found on the cover page of this report.

Based on a review of aerial photographs, the first developed use of the property was between 1946 – 1964 when the sites were developed as residential upon acquisition by Russell and Patricia Mason. A review of aerial photographs found the following information:



Aerial Photograph	Details
2018	<ul style="list-style-type: none"><li>The aerial shows the properties and surrounding area developed as present, the photograph was taken on May 7, 2018 and predates the demolition of the properties located at 6110 Old Church Road and 6122/6124 Old Church Road.</li></ul>
2015	<ul style="list-style-type: none"><li>The aerial shows the properties to have been developed as present with five buildings. The surrounding lands are residential with a park area to the south west.</li></ul>
1985	<ul style="list-style-type: none"><li>The aerial shows the properties to have been developed as present with five buildings. The surrounding lands are residential with some undeveloped area to the south west.</li></ul>
1964	<ul style="list-style-type: none"><li>The aerial shows the properties to have been developed with one building at the north end and a road way to Old Church Road. The surrounding lands were undeveloped.</li></ul>
1946	<ul style="list-style-type: none"><li>The aerial photograph shows the subject properties and the surrounding lands to be undeveloped.</li></ul>

Based on a review of aerial photographs, the first developed use of the property was between 1946 – 1964 when the sites were developed as residential upon acquisition by Russell and Patricia Mason. Please refer to the Table of Current and Past Land Uses submitted with the RSC filing for property ownership information.

Land Use of the RSC Properties: Residential Use  
Total size of the RSC Properties: 17,805 m<sup>2</sup> (1.7805 Ha)  
Centroid of the RSC Properties: 17 T 591228 4858423  
Owner of the RSC Properties: Stylux Caledon Inc.

## 2.1 Historical Report Review

Two (2) Environmental Reports were reviewed as part of the current investigation.

- 1) Phase One Environmental Site Assessment – 6122/6124, 6110, 6126, 6142 Old Church Road and 1, 2 Russell Mason Court, Caledon / ON. Author: Rubicon Environmental (2008) Inc. Dated: March 29, 2019.
- 2) Preliminary Geotechnical and Hydrogeological Investigation Report: Proposed Residential Development at Old Church Road; Caledon East / ON. Author: Golder Associates Ltd. Dated: February 25, 2020.

Azure utilized pertinent information from both reports in order to assist with the determination of PCAs and APECs on-site and within the study area, as well for the planning of the Phase Two ESA.



## **2.2 Potentially Contaminating Activities & Areas of Potential Environmental Concern**

The Phase One ESA identified several on-site and off-site potentially contaminating activities (PCAs) that may have led to multiple areas of potential environmental concern (APECs) on the RSC Properties. The off-site PCAs are identified in Figure 5 and the On-Site PCAs are identified in Figure 6. The resultant on-site APECs are identified in Figure 7.

The overall conclusion of the Phase One ESA is that there are seven (7) APECs on the RSC Properties based on the following ten (10) PCAs, which were identified based on the overall history and uses of the RSC Properties and Phase One Study Area.



**Table 1: Contributing Potentially Contaminating Activities:  
Pertaining to the Phase One Property**

PCA #	Historical or Current Source(Address, distance from Phase One Property)	Activity Description	Date	PCA's	Rationale
1	On-Site – On going	Heating Oil AST – 1 Russell Mason Court (Residence)	2002 - Present	(28) Gasoline and Associated Products Storage in Fixed Tanks	<p>The heating oil AST was installed in 2002. Records indicate the AST is periodically inspected by the fuel delivery company. This AST was inspected during the 2020 Phase One Site Investigation by Azure personnel.</p> <p>Based on the objective of the current investigation and proposed RSC filing for the site; Azure considers this PCA to represent an APEC on-site and should be the subject of a soil and groundwater investigation.</p>
2	On-Site – On going	Heating Oil AST/Empty Fuel AST – 1 Russell Mason Court (Workshop)	2002 - Present	(28) Gasoline and Associated Products Storage in Fixed Tanks	<p>The heating oil AST was installed in 2002 and was empty upon inspection. This AST was inspected during the 2020 Phase One Site Investigation by Azure personnel.</p> <p>Based on the objective of the current investigation and proposed RSC filing for the site; Azure considers this PCA to represent an APEC on-site and should be the subject of a soil and groundwater investigation.</p>
3	On-Site	Commercial Workshop – 1 Russell Mason Court	1961 - Present	Other – Vehicle Storage, Tool Storage	<p>The shed/barn had been utilized for various purposes since 1961. The barn The building was mainly used as parking and or storage of equipment for businesses owned by the owner of 1 Russell Mason Court. The nature of the businesses was storage of PVC pipe and tools for a septic tank business, as well as snow-plow truck parking. The building was described to Azure by the owner of the property as a “shed or barn”.</p> <p>The building has a concrete floor and was empty upon investigation. No drains, pits or subsurface infrastructure was identified within the building. No automotive maintenance was reported to be conducted within the workshop however due to its use for parking and equipment storage (as mentioned above) Azure concludes the following:</p> <p>Based on the objective of the current</p>



					investigation and proposed RSC filing for the site; Azure considers this relatively low risk PCA to represent an APEC on-site and the vicinity of the structure should be the subject of a soil and groundwater investigation.
4	On-Site – On going	Heating Oil AST – 2 Russell mason Court (Residence)	2004 - Present	(28) Gasoline and Associated Products Storage in Fixed Tanks	<p>The heating oil AST was installed in 2004. Records indicate the AST is periodically inspected by the fuel delivery company. This AST was inspected during the 2020 Phase One Site Investigation by Azure personnel.</p> <p>Based on the objective of the current investigation and proposed RSC filing for the site; Azure considers this PCA to represent an APEC on-site and should be the subject of a soil and groundwater investigation.</p>
5	On-Site	Heating Oil AST – 6110 Old Church Road (northern residence)	~2000 - Present	(28) Gasoline and Associated Products Storage in Fixed Tanks	<p>The heating oil ASTs which serviced the residential building were likely installed in the 2000s. This information and location of ASTs were provided by the interview with the owner of the site. This AST was not inspected during the 2020 Phase One Site Investigation by Azure personnel as it was removed in 2018.</p> <p>The heating oil ASTs were removed during the 2018 demolition program on site.</p> <p>Based on the objective of the current investigation and proposed RSC filing for the site; Azure considers this PCA to represent an APEC on-site and should be the subject of a soil and groundwater investigation.</p>
6	On-Site	Heating Oil AST – 6110 Old Church Road (southern residence)	~2000 – Present	(28) Gasoline and Associated Products Storage in Fixed Tanks	<p>The heating oil AST serviced the residential buildings and were likely installed in the 2000s. This information and location of ASTs were provided by the interview with the owner of the site. This AST was not inspected during the 2020 Phase One Site Investigation by Azure personnel as it was removed in 2018.</p> <p>The heating oil ASTs were removed during the 2018 demolition program on site.</p> <p>Based on the objective of the current investigation and proposed RSC filing for the site; Azure considers this PCA to represent an APEC on-site and should be the subject of a soil and groundwater investigation.</p>



7	On-site	Fill Material located within the Phase One properties	Circa 1961 - Present	30. Importation of Fill Material of Unknown Quality	<p>Upon review of a 2020 Hydrogeological and Geotechnical report fill material was identified in 3 out of 5 boreholes located throughout the study area. Maximum depth of fill was found from surface to a maximum depth of 0.61 mbgl and a minimum depth of 0.15 mbgl.</p> <p>Based on the objective of the current investigation and proposed RSC filing for the site; Azure considers this PCA to represent an APEC on-site and should be the subject of a soil and groundwater investigation.</p>
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**Table 2: Non-Contributing Potentially Contaminating Activities:  
Pertaining to the Phase One Property**

PCA #	Historic or Current Source(Address, distance from Phase One Property)	Activity Description	Date	PCA's	Rationale
8	Off-Site	Retail Fuel outlet – 15977 Airport Road	~1960s	(28) Gasoline and Associated Products Storage in Fixed Tanks	<p>A retail fuel outlet is located south of the subject property at 15977 Airport Road. The RFO is located approximately 250m south of the Phase One property.</p> <p>Based on proximity to the Phase One property. Azure does not consider this PCA to represent a significant APEC to the property.</p>
9	Off-Site	Motor Oil Spill	2000	(28) Gasoline and Associated Products Storage in Fixed Tanks	<p>One spill was noted in the ERIS report at the corner of Marilyn Street and Old Church Road. The spill was low in quantity (5 – 10L), was located off-site, and was reported to have ended up in the catch basin.</p> <p>Therefore based on quantity, proximity to the site and potential contaminant fate; the PCA does not represent an APEC on the subject property.</p>
10	On-site	De-icing	1960 - present	Other – Salt Application for vehicular safety	<p>Since the private road referred to as Russell Mason Court is utilized as a roadway it will have likely been “salted” for the purpose of de-icing to help ensure public safety during the winter months.</p> <p>Due to the fact that such activities are exempt as per O.Reg 153/04, Azure does not consider this PCA to represent an APEC on-site.</p>



**Table 3: “TABLE OF AREAS OF POTENTIAL ENVIRONMENTAL CONCERN”**

Refer to clause 16(2) (a), Schedule D, O. Reg 153/04

Area of Potential Environmental Concern (APECs)	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity <sup>2</sup>	Location of PCA (on-site or off-site)	Contaminants of Potential Concern <sup>3</sup>	Media Potentially Impacted (Ground water, soil and/or sediment)
1	Southern edge of the residence located at 1 Russell Mason Court.	28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs	Soil Groundwater
2	Eastern edge of workshop located at 1 Russell Mason Court	28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs	Soil Groundwater
3	Area surrounding the shed/barn located on the northern portion of 1 Russell Mason Court	Other – Vehicle Storage, Tool Storage	On-site	VOCs BTEX PHCs	Soil Groundwater
4	Northern edge of the residence located at 2 Russell Mason Court.	28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs	Soil Groundwater
5	Northern edge of northern residence located at 6110 Old Church Road.	28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs	Soil Groundwater
6	Southern edge of Southern residence located at 6110 Old Church Road.	28. Gasoline and Associated Products Storage in Fixed Tanks	On-site	BTEX PHCs	Soil Groundwater
7	Fill identified within Golder Geotech/HydroGbor hole: BH19-1, BH19-3, BH19-4 to depths of a maximum of 0.61 mbgl. Horizontal extent of fill not fully identified	30. Importation of Fill Material of Unknown Quality	On-site	VOCs BTEX PHCs PAHs Metals CN- Cr (VI) Hg B-HWS EC SAR	Soil

**Notes:**

- PHCs – Petroleum Hydrocarbons
- BTEX – Benzene, Toluene, Ethylbenzene, Xylenes
- VOCs – Volatile Organic Compounds
- PAHs – Polycyclic Aromatic Hydrocarbons
- PCBs – Polychlorinated biphenyls
- CN- – Cyanide
- Hg – Mercury
- CR (VI) – Hexavalent Chromium
- EC – Electrical Conductivity
- SAR – Sodium Absorption Ratio
- B-HWS – Boron Hot Water Extractable



### 3.0 Phase Two Environmental Site Assessment

The Phase Two ESA field investigation was conducted in June of 2020. Scope of work for each drilling event is as follows (Locations of Boreholes and Monitoring Wells can be found in Figure 8a):

**June 3-4 2020**

Eight (8) boreholes developed (BH1, BH2, BH3, BH4, BH5, BH6, BH7, BH8)  
Six (6) monitoring wells installed (MW1, MW2, MW3, MW4, MW5, MW6)

Note: No impediments were reported by the QP during the entirety of the investigation

A portion of each soil sample was placed in a disposable plastic bag and analyzed in the field for petroleum-derived headspace vapour concentrations (where possible) using an RKI Model Eagle 2 portable gas monitor equipped with a dual sensor for hydrocarbons (i.e., in the ppm and LEL range) and for volatile compounds (i.e., PID sensor in the ppm range). The hydrocarbon sensor was set to methane elimination mode and calibrated with hexane (for petroleum-derived vapours) and the PID sensor was calibrated with isobutylene (for solvent-derived vapours).

#### 3.1 BOREHOLE INVESTIGATION

Table 4: Summary of Borehole Investigations

Borehole ID (total depth mbgl)	Sample ID	Sample Depth	Comments / Rationale
BH1 (9.144)	BH1 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand</li> <li>APEC: 1</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH1 – SS7	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand and trace silt</li> <li>APEC: 1</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMs, BTEX, PHCs, pH</li> </ul>
BH2 (9.144)	BH2 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand</li> <li>APEC: 2, 3</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMs, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH2 – SS8 + Dup 1	5.334 – 6.096 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand and trace silt</li> <li>APEC: 2, 3</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMs, BTEX, PHCs</li> <li>Dup 1 Analyses: VOCs, THMs, BTEX, PHCs</li> </ul>
BH3 (9.144)	BH3 – SS1 + Dup 2	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Brown sand and gravel fill, trace organics</li> <li>APEC: 3, 7</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMs, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> <li>Dup 2 Analyses: Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH3 – SS7	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand and trace silt</li> <li>APEC: 3</li> </ul>





Borehole ID (total depth mbgl)	Sample ID	Sample Depth	Comments / Rationale
			<ul style="list-style-type: none"> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOC, THMs, BTEX, PHCs</li> </ul>
BH4 (9.144)	BH4 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Brown sand and gravel fill, trace organics</li> <li>APEC: 4, 7</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMs, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH4 – SS9	6.096 – 6.858 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand and trace silt</li> <li>APEC: 4</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOC, THMS, BTEX, PHCs</li> </ul>
BH5 (9.144)	BH5 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand</li> <li>APEC: 6</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	BH5 – SS7	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand and trace silt</li> <li>APEC: 6</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOC, THMS, BTEX, PHCs</li> </ul>
BH6 (9.144)	BH6 – SS1 + Dup 3	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Fine Sand</li> <li>APEC: 5</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> <li>Dup 3 Analyses: PAHs</li> </ul>
	BH6 – SS7 + Dup 4	4.572 – 5.334 mbgl	<ul style="list-style-type: none"> <li>Soil: Native Fine Sand and trace silt</li> <li>APEC: 5</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMs, BTEX, PHCs</li> <li>Dup 4 Analyses: VOCs, THMs, BTEX, PHCs</li> </ul>
BH7 (2.286)	BH7 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Brown sand and gravel fill, trace organics</li> <li>APEC: 7</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMs, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
BH8 (2.286)	BH8 – SS1	0.00 – 0.762 mbgl	<ul style="list-style-type: none"> <li>Soil: Brown sand and gravel fill, trace organics</li> <li>APEC: 7</li> <li>No irregular odours or soil staining present</li> <li>No significant vapour readings using field instruments (&lt; 5 ppm)</li> <li>Analyses: VOCs, THMS, BTEX, PHCs, PAHs, Metals, As, Sb, Se, Cn-, Cr(VI), Hg, B-HWS, EC, SAR, pH</li> </ul>
	Trip Blank	-	<ul style="list-style-type: none"> <li>Trip Blank Submitted with Laboratory Submission</li> </ul>

Note: THMs, As, Sb, Se were not identified as contaminants of concern. Analyses were conducted as these parameters are part of the VOCs, and Metals package provided by the laboratory and were therefore included by default.



### 3.2 MONITORING WELL INVESTIGATION

**Table 5: Summary of Monitoring Well Investigations**

Monitoring Well ID (Sample ID)	COMMENTS / RATIONALE
MW1 + Dup 1	<ul style="list-style-type: none"> <li>• Located within APEC 1</li> <li>• No unusual sheen or odour identified in sample</li> <li>• No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Groundwater sample analyzed for VOCs, BTEX, PHCs</li> <li>• Dup 1 groundwater samples analyzed for VOCs, THMs, BTEX, PHCs</li> </ul>
MW2	<ul style="list-style-type: none"> <li>• Located within APEC 2, 3</li> <li>• No unusual sheen or odour identified in sample</li> <li>• No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Groundwater sample analyzed for VOCs, THMs, BTEX, PHCs</li> </ul>
MW3	<ul style="list-style-type: none"> <li>• Located within APEC 3</li> <li>• No unusual sheen or odour identified in sample</li> <li>• No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Groundwater sample analyzed for VOCs, THMs, BTEX, PHCs</li> </ul>
MW4	<ul style="list-style-type: none"> <li>• Located within APEC 4</li> <li>• No unusual sheen or odour identified in sample</li> <li>• No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Groundwater sample analyzed for VOCs, THMs, BTEX, PHCs</li> </ul>
MW5	<ul style="list-style-type: none"> <li>• Located within APEC 6</li> <li>• No unusual sheen or odour identified in sample</li> <li>• No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Groundwater sample analyzed for VOCs, THMs, BTEX, PHCs</li> </ul>
MW6	<ul style="list-style-type: none"> <li>• Located within APEC 5</li> <li>• No unusual sheen or odour identified in sample</li> <li>• No significant well vapour readings using field instruments (&lt; 5 ppm)</li> <li>• Groundwater sample analyzed for VOCs, THMS, BTEX, PHCs</li> </ul>
(Trip Blank)	<ul style="list-style-type: none"> <li>• VOCs Trip Blank Submitted with laboratory submission</li> </ul>

**Note: THMs were not identified as contaminants of concern. Analyses were conducted as these parameters are part of the VOCs package provided by the laboratory and were therefore included by default.**



### 3.3 LABORATORY ANALYSES

ALS Environmental of Waterloo, Ontario, conducted all chemical analyses. ALS is a member of the Canadian Association for Laboratory Accreditation Inc. (CALA) and meets the requirements of Section 47 of O. Reg. 153/04, certifying that the analytical laboratory be accredited in accordance with the International Standard ISO/IEC 17025 and with standards developed by the Standards Council of Canada.

#### Soil

In total, fourteen (14) verification soil samples (and acceptable duplicates as per O. Reg 153/04) were analyzed for VOCs – Volatile Organic Compounds, THMs – Trihalomethanes, BTEX – Benzene, Toluene, Ethylbenzene, Xylenes, PHCs - Petroleum Hydrocarbon (F1 to F4 fractions), PAHs – Polycyclic Aromatic Hydrocarbons, Metals, As Sb Se – Arsenic, Antimony, Selenium, Hg – Mercury, CN- – Cyanide, CR (VI) – Hexavalent Chromium, B-HWS – Boron Hot Water Extractable, EC – Electrical Conductivity, SAR – Sodium Absorption Ratio and pH. Grain Size analyses were taken directly from a previously reviewed Hydrogeological/Geotechnical Report prepared by Golder Associates in 2019. Visual analyses of the investigated soils were similar enough to Golder’s Grain size analytical results for them to be utilized for the RSC.

The analytical results were compared to Table 2 O. Reg.153/04 criteria for residential land use with coarse textured soil. The soil sample analytical results showed that the parameters tested for, met the applicable MECP criteria. Note: Where soil samples were analyzed for volatile organic compounds, at least one trip blank sample was submitted for laboratory analysis with each laboratory submission.

#### Groundwater

In total, six (6) groundwater verification samples (and acceptable duplicates as per O. Reg 153/04) were analyzed for VOCs – Volatile Organic Compounds, BTEX – Benzene, Toluene, Ethylbenzene, Xylenes, PHCs - Petroleum Hydrocarbon (F1 to F4 fractions). The analytical results were compared to Table 2, O. Reg.511/09 criteria for residential land use with coarse textured soil. The groundwater sample results showed that the parameters tested for, met the applicable MECP criteria. Note: Where groundwater samples were analyzed for volatile organic compounds, at least one trip blank sample was submitted for laboratory analysis with each laboratory submission.

#### Summary

Based on the chemical analytical results, Azure found that no contaminants were present at concentrations greater than the applicable site condition standard (Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water condition with coarse textured soil, Residential Property Use)

#### Effects of subsurface structures and underground utilities

Six (6) structures exist on the RSC Properties. Each structure is slab on grade, so therefore the presence of basements will not have an effect on the distribution of potential contaminants of concern.

Telecom is delivered below ground, hydro is delivered below ground, sanitary sewers and water are also delivered below ground. The nature of such subsurface utilities does not represent an environmental risk to the RSC properties.



HVAC is supplied by natural gas for the residential dwellings located along Old Church Road and furnace oil tanks are/ were utilized for the properties on Russell Mason court, as well as the former properties at 6110 Old Church Road. The furnace oil ASTs were considered APECs to the RSC properties, and were fully investigated during the Phase Two ESA. None of the PCOCs had concentrations in soil or groundwater greater than the applicable SCS; therefore the presence of subsurface utilities with regards to HVAC services does not represent an environmental risk to the RSC property.

#### Migration of Contaminants

No COPCs at concentrations greater than the applicable site condition standards were identified in soil and groundwater therefore, there is no concern for the migration of contaminants. No significant off-site, on-going PCAs were identified in the study area at proximities that would cause potential future environmental risk to the RSC properties.

#### Climatic or Meteorological Conditions

There were no COPCs at concentrations greater than the applicable site condition standards, identified in soil or groundwater and there are no concerns for climatic or meteorological conditions to influence contaminant distribution.

#### Potential for Vapour Intrusion

The proposed future use of the site is residential. The results of the Phase Two ESA did not identify the presence of volatile contaminants in soil and groundwater on the Site, and therefore there is no concern for vapour intrusion into future or current buildings.

#### Distributions of Contaminants

There were no COPCs identified in soil or groundwater. Geologic cross sections showing the Site Stratigraphy are included on Figures 12 & 13. There were no COPCs at concentrations greater than the applicable site condition standards identified in soil or groundwater and therefore there are no relevant release mechanisms, transport pathways, receptors or routes of exposure

#### Soil Brought to the Phase Two Property

No soil was brought to the Phase Two Properties as part of the Phase Two ESA.

#### Imported Soil (Fill Material of Unknown Quality)

Imported soil was identified on site near the center of the RSC Properties. Fill material consisted of brown sandy gravel with trace organic content. This fill was found in approximate thickness of 0.6 m in Azure Boreholes: BH3, BH4, BH7, BH8 & Golder Boreholes: BH19-1, BH19-3, BH19-4. Samples of the fill material, analyzed for the applicable COPCs did not show concentrations greater than the applicable SCS. Therefore the fill material identified on-site does not pose an environmental risk to the subject property. The horizontal extent of fill material identified during the investigation can be found in Figure 8b. The vertical extent of fill material identified during the investigation can be found in the Geologic cross-sections (Figure 12 & Figure 13).



## 4.0 Physical Setting

As part of the Phase Two Investigation, eight (8) boreholes and six (6) monitoring wells were developed on the RSC Properties in order to ascertain the subsurface soil conditions on the RSC property. The field data gathered during the field investigation, in conjunction with topographical, quaternary and bedrock maps of the surrounding area were used to develop the physical setting of the RSC property. The locations of Geological cross sections are shown in Figures 12 and 13. The subsurface investigation identified the following geologic formations beneath the RSC Property from surface to depth.

### 4.1 Geological Setting

#### Desktop Review

The Natural Resource Canada Topographic Map was reviewed. The map indicates that the RSC Properties are relatively flat, (approx elevation 295 masl) with the grade descending slightly to the northeast as the land dips towards the nearest watercourse.

According to the Physiography of the Southern Ontario, the Properties are located within the Physiography region of Kame Moraines, developed due to the deposition of sand and gravels, as well as till from the retreating glacier.

Map 2544 “Bedrock Geology of Ontario – Southern Sheet identifies the bedrock formations underlying the subject property to be Upper Ordovician aged, Shale, limestone, dolostone and siltstone of the Queenston Formation.

Map 2556 Quaternary Geology of Ontario – Southern Sheet identifies the sediment below the property to be classified as Glaciofluvial Ice-contact deposits; gravel and sand, minor till, includes esker, kame, end moraine, ice marginal delta and sub-aqueous fan deposits.

Well ID: 4907554 indicated that bedrock was not identified at 73.5 mbgl (241 feet).

Well ID: 4903815 also did not encounter bedrock at 75.6 mbgl (248 feet)

Well ID: 4900223 did not encounter bedrock at 100.3 mbgl (329 feet)

Well ID: 4905008 did not encounter bedrock at 111.3 mbgl (365 feet). This is the deepest well located in the vicinity of the site.

The OGS bedrock topography and overburden thickness map was reviewed in order to determine the approximate depth to bedrock. Based on the approximate overburden thickness provided in the map; Azure estimates that the depth to bedrock is approximately 150 – 175 mbgl.

#### Field Observations

Quaternary clasts and bedrock encountered during the Phase Two drilling investigation consisted of the following stratigraphical layers:



**Granular Fill material:** Gravel and Sand, granular fill material with trace organic content to maximum depths of 0.60 mbgl. This Fill material was found in Azure Boreholes: BH3, BH4, BH7, BH8 & Golder Boreholes: BH19-1, BH19-3, BH19-4.

**Native Sand:** Uniform Fine Native coarse sand containing medium clast content is located throughout the entire RSC property (properties) at surface or underlying fill material to investigated depth of 9.144 mbgl. Increased silt content was found in the native sands near 5 – 7 mbgl as moisture increased and soils appeared grey due to lack of oxidation.

## 4.2 Hydrogeological Setting

In June 2020, groundwater data was collected. The following table presents the results.

Table 6: Summary of Groundwater monitoring

Monitoring Well ID Record # (Surface Elevation)	Construction	Depth to water table (mbgl)	Water table elevation <sup>1</sup>
MW1 A289556 (294.812)	Riser: 5.597 m Screen: 3.048 m	7.04	287.772
MW2 A289639 (295 masl*)	Riser: 5.722 Screen: 3.048	6.88	288.12



MW3 A289682 (294.868)	Riser: 5.762 Screen: 3.048	6.94	287.928
MW4 A289680 (294.853)	Riser: 5.702 Screen: 3.048	6.98	287.873
MW5 A289683 (294.041)	Riser: 5.592 Screen: 3.048	6.41	287.631
MW6 A296692 (294.192)	Riser: 5.252 Screen: 3.048	6.16	288.032

\* Surface elevation based on arbitrary elevation provided by Natural Resources Canada Toporama

MW1, MW2, MW3, MW4, MW5, MW6 were constructed on June 3-4 2020 as part of the Phase Two ESA study in order to assess groundwater quality and groundwater flow direction. The resultant, relative groundwater elevations for all of the onsite monitoring wells ranged from 288.12 masl – 287.631. There was no indication of free phase product, elevated VOC headspace readings, sheen or odour encountered in any of the groundwater monitoring wells inspected. One (1) Aquifer was encountered during the investigation; representing the shallow unconfined aquifer located within the native sand unit located within the study area.

Groundwater flow direction was calculated using contour lines. Groundwater calculation resulted in a southeast direction toward the nearby watercourse; Refer to Figure 9 for the groundwater flow direction drawing.



The horizontal hydraulic gradients of the true single aquifer investigated on the RSC property was calculated as follows: SE = 0.01 m/m. Refer to figure 9 for the groundwater flow direction and horizontal hydraulic conductivity calculations. Refer to Figures 12 and 13 for the horizontal cross-section(s) of the RSC properties.

### 4.3 Site Condition Standards

The criteria for conducting this investigation were defined in MECP O.Reg 153/04. The analytical results obtained from laboratory testing were compared to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water condition with coarse textured soil, Residential Property Use. The following rationale was used to determine the applicable site restoration criteria for use at this site:

**Site Sensitivity:** Section 41: Site condition standards, environmentally sensitive areas of the regulation, does not apply to the Phase Two properties for the following conditions; (a) the properties are not, (i) within an area of natural significance, (ii) includes or is adjacent to an area of natural significance or part of such an area, or (iii) includes land that is within 30 metres of an area of natural significance or part of such an area; (b) the soil at the properties do not have a pH value as follows: (i) for surface soil, less than 5 or greater than 9, (ii) for sub-surface soil, less than 5 or greater than 11; The Average pH values were found to be as follows. Surface: 7.77, Subsurface: 8.08. Section 43.1: Site condition standards, shallow soil property or water body of the regulation does not apply to the Phase Two properties for the following conditions; (a) the property is not a shallow soil property; or (b) the property does not include all or part of a water body or is adjacent to a water body or includes land that is within 30 metres of a water body. O. Reg. 511/09, s. 21.

**Land Use:** The RSC properties are currently developed for residential land use. Due to the plan for redevelopment under continued residential land use, the residential standards shall be applied to determine the sites' suitability for the filing of Record of Site Condition.

**Groundwater Use:** municipal potable water is supplied to the sites, however a review of the MECP well record database indicated that potable wells are likely located at adjacent properties and or within the study area. Therefore for due-diligence purposes the properties will be assessed under the standards issued in a potable groundwater condition.

**Depth and Soil Texture Criteria Selection:** During the previously mentioned Hydrogeological and Geotechnical report conducted by *Golder* in 2019; eight (8) soil samples were submitted for Grain Size distribution. The Grain size classified the soils on the RSC Properties as fine sand with increasing silt content at depth. As per O.Reg 153/04, based on the results of the grain Size analyses; the soils on-site should be classified as coarse textured for the purposes of the current investigation.

## 5.0 Contaminants Present Greater than the Applicable Site Condition Standard

Based on the findings of the Phase Two ESA, It is the opinion of Azure that the RSC Properties are compliant and currently no environmental impairment exists in the surficial and subsurface soils as well as groundwater; as no





contaminants are present at concentrations greater than the applicable site condition standard. The RSC Properties' are therefore suitable for continued residential land-use.



## **APPENDIX H**

## **REFERENCES**

## REFERENCES

1. Environmental Protection Act (EPA). Part VII of Ontario Regulation 511/09. The Ontario Ministry of the Environment Conservation and Parks (MECP) (2009).
2. Service Ontario, Peel Registry Office;
3. Environmental Risk Information Service (ERIS).
4. Toronto Reference Library.
5. The Natural Resources Canada, Topographic Maps.
6. The Official Zoning Plan of Caledon.
7. Core Natural Heritage Maps; Regional Municipality of Peel
8. Archives Canada.
9. University of Waterloo Aerial Photographs.
10. Google Earth.



## **APPENDIX I**

### **PHOTOGRAPHS OF THE INVESTIGATION**



Photograph 1: Drilling BH1/MW1



Photograph 2: The Furnace oil AST in the vicinity of APEC1



Photograph 3: Drilling BH1/MW1 in the vicinity of APEC 1 (Furnace oil AST)



Photograph 4: Completed MW1





Photograph 5: Drilling BH2/MW2



Photograph 6: Drilling BH2/MW2



Photograph 7: Drilling BH3/MW3



Photograph 8: Drilling BH4/MW4



Photograph 9: MECP well tag installed with monitoring wells on-site



Photograph 10: Completed MW4



Photograph 11: Drilling BH5/MW5



Photograph 12: Drilling BH7





Photograph 13: Drilling BH7



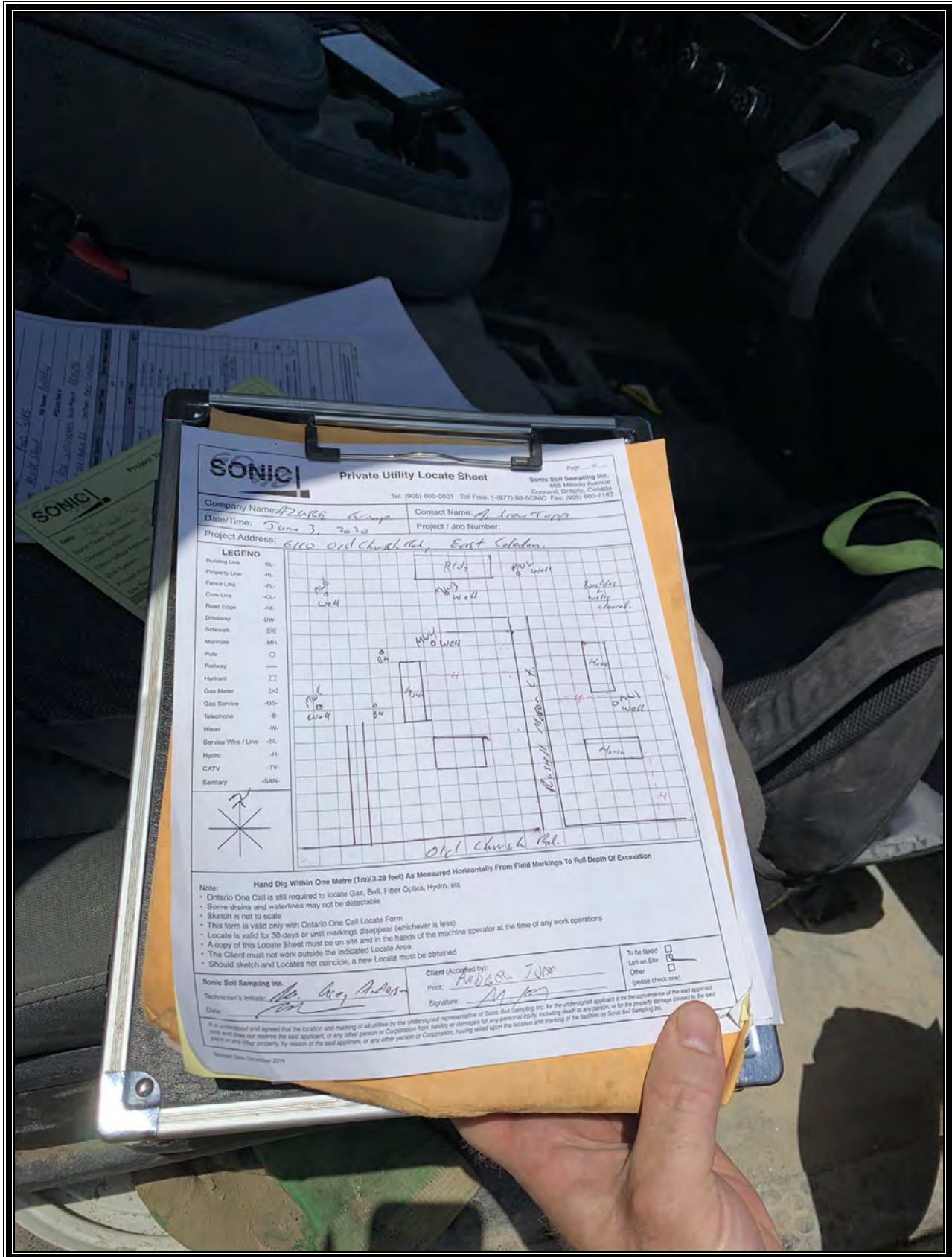
Photograph 14: Drilling BH8



Photograph 15: Drilling BH6/MW6



Photograph 16: Example of coarse native sand deposit investigated throughout the RSC Properties.



Photograph 17: Private Locates completed by Sonic Soil Sampling Inc.