PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
78 ROSEMOUNT AVENUE, OTTAWA, ON

Project No.: CCO-22-1129

Prepared for:

78 Rosemount Avenue Inc.
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November 18, 2021

McINTOSH PERRY

Executive Summary

McIntosh Perry Consulting Engineers Ltd. (McIntosh Perry) was retained by 78 Rosemount Avenue Inc. ('the Client') to conduct a Phase Two Environmental Site Assessment (ESA) at 78 Rosemount Avenue, Ottawa, Ontario ('the Site', see Figure 1). The property is currently developed with a two-storey multi-unit residential home, a garage located at the west end of the Site, as well as paved parking spaces surrounding the building and a grass lawn south of the building.

It is understood that this Phase Two ESA is being completed as a component of the City of Ottawa site plan submission process, in support of the future redevelopment of the Site with a twelve-unit residential building. This does not represent a change to a more sensitive land use, and as such, a Record of Site Condition (RSC) would be not be required under O.Reg. 153/04. However, a Phase Two ESA completed in general accordance with O.Reg. 153/04 would be required for the City of Ottawa Site Plan Approval (SPA) process.

McIntosh Perry completed a Phase One Environmental Site Assessment (ESA) (July 21, 2021) for the subject property. The Phase I ESA identified the following potential environmental concern in relation to the Site:

- Presence of an automotive garage at 1150 Gladstone Avenue (address also given as 1156 Gladstone Avenue)

Based on this information, a Phase Two Environmental Site Assessment (ESA) was recommended for Site to assess soil and groundwater quality.

The Phase Two ESA involved the drilling of three boreholes and installation of three monitoring wells on the Site; One was located at the northwestern corner of the Site, as close as possible to the adjacent automotive garage, one was located at the northeast corner of the Site, and the third was one located in the southwestern corner of the driveway. Five (5) soil samples and four (4) groundwater samples were collected and submitted for laboratory analysis of benzene, toluene, ethylbenzene and xylenes (BTEX), petroleum hydrocarbons (PHCs) in four fractions (F1-F4), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), metals and inorganics.

The findings of the Phase Two ESA are summarized as follows:

- Site stratigraphy consists of asphalt overlying sand fill, underlain by native sand and limestone bedrock;
- A metal exceedance of lead at 78Ros-BH3-SS1 (438 µg/g) exceeded the MECP Table 3 SCS of 120 µg/g as well as the MECP Table 1 SCS of 120 µg/g;
- Results from soil samples from all other boreholes were below guideline limits and therefore in compliance with MECP Table 3 SCS;
- Additionally, analytical data from the soil samples was compared to O.Reg. 153/04 (2011) Table 1 SCS. It is important to note that MECP Table 1 SCS are not strictly applicable to this investigation, however in the event of future excavation at the Site, soils which meet Table 1 SCS may be considered as "clean fill" for soil management purposes. It is noted that all other facets of O.Reg. 406/19 will need to be met when considering excess soil management; and
- Results from groundwater samples were below guideline limits and therefore in compliance with MECP Table 3 SCS.

Based on the analytical results, all soil at the Site is in compliance with applicable Table 1 and Table 3 SCS with the exception of the lead exceedance at 78Ros-BH3-SS1, from the fill layer underlying the asphalt at the Site. Given the age of the Site, lead exceedances are not uncommon and may be associated with historical building materials, lead piping, paint, etc. The fill material in which the lead exceedance was noted is isolated from human and ecological receptors by a layer of asphalt, and as such, is not considered to represent a concern to the continued use of the Site for its present purposes.

Given the nature of the exceedances in soil, the lack of exceedances in groundwater, and the groundwater flow direction, the presence of the automotive service garage is not considered to have impacted the Site.

In the event that the Site is redeveloped, any excess soil should be disposed of or reused according to O.Reg. 406/19 (On-Site and Excess Soil Management). Due to the noted lead exceedance, it is anticipated that disposal of a licensed waste disposal facility will be required.

McIntosh Perry does not recommend any further investigative or remedial action for the Site at this time. The environmental condition of the Site is considered suitable for the proposed development.

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1.0 INTRODUCTION

McIntosh Perry Consulting Engineers Ltd. (McIntosh Perry) was retained by 78 Rosemount Avenue Inc. ('the Client') to conduct a Phase Two Environmental Site Assessment (ESA) at 78 Rosemount Avenue, Ottawa, Ontario ('the Site', see Figure 1). The property is currently developed with a two-storey multi-unit residential home, a garage located at the west end of the Site, as well as paved parking spaces surrounding the building and a grass lawn south of the building.

It is understood that this Phase Two ESA is being completed as a component of the City of Ottawa site plan submission process, in support of the future redevelopment of the Site with a twelve-unit residential building. This does not represent a change to a more sensitive land use, and as such, a Record of Site Condition (RSC) would be not be required under O.Reg. 153/04. However, a Phase Two ESA completed in general accordance with O.Reg. 153/04 would be required for the City of Ottawa Site Plan Approval (SPA) process.

McIntosh Perry completed a Phase One Environmental Site Assessment (ESA) (July 21, 2021) for the subject property. The Phase I ESA identified the following potential environmental concern in relation to the Site:

- Presence of an automotive garage at 1150 Gladstone Avenue (address also given as 1156 Gladstone Avenue)

Based on this information, a Phase Two Environmental Site Assessment (ESA) was recommended for Site to assess soil and groundwater quality.

A Phase Two ESA is typically used to confirm the presence (or absence) of contaminant(s) of concern and to characterize impacts, if any, to soil and/or groundwater. The Phase Two ESA was conducted in accordance with McIntosh Perry's standard procedures.

1.1 Property Information

The property is addressed as 78 Rosemount Avenue and is currently a residential duplex building.

The Site has an official plan designation as Residential Fourth Density Zone (R4-UB) as shown on the City of Ottawa Zoning By-law (Sections 161 and 162).

The total area of the Site is approximately 5, 737 ft^2 (approx. 0.05 hectares).

1.1.1 Property Identification

The legal description of the entire property is as follows;

- PT LT 20, PL 94, AS IN NS246899; Ottawa/Nepean (PIN: 040920141).

1.1.2 Property Ownership and Contact Details

McIntosh Perry was retained to complete this Phase One ESA by Mr. Jake Levinson of 78 Rosemount Avenue Inc.. Mr. Jake Levinson can be contacted via email at jakelevinson@gmail.com. The property is currently owned by 78 Rosemount Avenue Inc.

1.1.3 Current and Proposed Future Uses

The Site is currently used as a multi-unit residential building. It is MP's understanding that the Client intends to purchase the property with the intention of redeveloping the Site with a twelve-unit residential building.

1.2 Applicable Site Condition Standard

The following parameters were used to select the most appropriate Site Condition Standards (SCS) for the site:

- Proposed property use is residential;
- The Site and surrounding properties in the area are serviced by municipal water supply and not by water wells (i.e., the subject site will continue to have treated potable water available, and potable groundwater standards do not need to be applied);
- Soil depth across the property is more than two metres on average (i.e., the site does not have shallow soil);
- The site is not located within 30 metres of a water body; the closest significant water body, the Ottawa River, is approximately 1.25 kilometers (km) to the north of the Site;
- The site is not located near any areas of natural significance (e.g. Provincially Significant Wetland), and
- Native soil at the site is coarse textured (based on classification of borehole samples collected during the environmental investigation completed at the Site by McIntosh Perry, and analytical results of the grain size analysis).

Given these parameters, it was determined that Ministry of the Environment, Conservation, and Parks (MECP) Ontario Regulation (O.Reg.) 153/04, as amended (Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act) is the most applicable reference criteria for the site. The following SCS were selected:

MECP Table 3 – Full Depth Generic Site Condition Standards in a non-potable groundwater condition, for residential land use, with coarse textured soils.

Soil analytical results were also compared to MECP Table 1 Background SCS for the purpose of assessing potential disposal options for excess soil generated during site redevelopment.

2.0 BACKGROUND INFORMATION

2.1 Physical Setting

2.1.1 Water Bodies and Areas of Natural Significance

The closest permanent waterbody is the Ottawa River (located 1.25 km north of the Site at its closest point).

No areas of natural significance were observed within the Site.

2.1.2 Topography and Surface Water Drainage Features

Elevation at the Site ranges from approximately 64 m above mean sea level. The topography is generally flat, with a slight slope in a northern direction.

The Site occurs within the Ottawa River watershed. The Ottawa River is located approximately 1.25 km north of the Site, at its closest point. Site drainage consists primarily of sheet flow to storm drains along Gladstone Avenue, with infiltration occurring in permeable areas such as lawns.

2.1.3 Geology and Hydrogeology

Geological maps of the area classify the overburden at the Site as stone-poor, sandy silt to silty sand-textured till on Paleozoic terrain (OGS, 2021).

Geological maps of the area classify the bedrock under the Site as predominantly shale, limestone, dolostone, arkose and sandstone. (OGS, 2021).

Based on a review of site geology and topography, groundwater is likely to flow northwest toward the Ottawa River. As ground surface at the Site is predominantly paved, on-site drainage is dominated by overland flow to stormwater drains and catch basins in the roadway

2.1.4 Potable Water Source

The Site is situated in the City of Ottawa. It is our understanding 78 Rosemont Avenue is currently serviced by the City of Ottawa municipal water distribution system; ground water is not used as a source of potable water.

2.2 Past Investigations

A Phase One ESA was conducted on the subject property by McIntosh Perry in July of 2021. The Phase One ESA identified potential contaminating activities (PCAs) and Areas of Potential Environmental Concern (APECs) on site and/or in the Phase One Study area.

One potentially contaminating activity (PCA) was identified within the Phase One Study Area (including the Phase One Property). The following PCA was identified immediately north of the Phase One Property:

- Presence of an automotive service garage at 1150 Gladstone Avenue (address also given as 1156 Gladstone Avenue)

Based on the nature of the operations and the proximity to the Site, the PCA is considered to have the potential to result in environmental impacts to the Site and is therefore considered an APEC with respect to the Site.

2.3 Overview of Soil and Groundwater Data and Regulation Changes

It is noted that in December of 2019, new regulation amendments associated with salt impacts were enacted. These amendments permitted the exemption of salt impacts if the impacts were deemed by the Qualified Person (QP) to be resultant from de-icing activities for the purpose of human and vehicular safety.

Soil results were evaluated in the context of current regulations. Based on this evaluation, the QP determined that as EC and SAR were eligible for the exemption application. Accordingly, with application of the regulatory amendment that provides exemption relief for impact resulting from de-icing activities, EC, SAR, sodium and chloride are not considered contaminants of concern for the Site. However, these parameters must still be considered when determining destinations for excess soil from the Site, per the requirements of O.Reg. 406/19 (On-Site and Excess Soil Management).

3.0 SCOPE OF THE INVESTIGATION

The Phase Two ESA site investigation at the Site consisted of the following components:

- Underground service locate clearance was provided by public utility service provides through Ontario One Call and a private utility locating service;
- In coordination with an environmental investigation at the Site, the advancement of three (3) boreholes to a maximum depth of 6.1 m bgs, all three (3) of which were completed as monitoring wells by a licensed water well contractor to the requirements of O.Reg. 903;
- Submission of select "worst case" soil samples collected from each borehole, as determined through field screening, for laboratory analyses of VOCs (including BTEX), PHCs, PAHs, metals & inorganics;
- Submission of ground water samples collected from each monitoring well for laboratory analysis of VOCs (including BTEX), PHCs, PAHs, and metals & inorganics;
- Submission of representative soil samples for analysis of pH and grain size, for determination of the appropriate MECP standards for the Site (undertaken as part of the environmental investigation);
- Completion of a quality assurance/quality control (QA/QC) program consisting of the submission of field duplicate samples; and
- Completion of a relative elevation survey of the ground surface elevation of each borehole advanced at the Site.

The Phase Two ESA was completed in general accordance with the requirements of O. Reg. 153/04 (as amended).

3.1 Media Investigated

Soil samples were obtained from each borehole advanced during the investigation and submitted for laboratory analyses of the selected contaminants of potential concern (COPCs). Each borehole was instrumented with a monitoring well and subsequently sampled for each of the selected COPCs.

No water bodies were present on the Site and, as such, no sediment samples were collected as part of this Phase Two ESA.

3.1.1 Contaminants of Potential Concern

The following contaminants of potential concern (COCs) are suspected and should be tested at the Site:

- Petroleum hydrocarbons Fractions 1 to 4 (PHCs): This parameter group consists of petroleum hydrocarbons of various carbon chain lengths commonly encountered in gasoline (PHC F1), diesel and furnace oil (PHC F2), and heavy oils and asphalts (PHC F3-F4).
- Volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene, and xylenes (BTEX): This parameter group consists of soluble components in gasoline, diesel, and fuel oil.
- Polycyclic aromatic hydrocarbons (PAHs): This parameter group consists of various complex hydrocarbons associated with heavy oils as well as combustion byproducts, coal, etc.

- Metals and inorganic parameters: this parameter group includes metals such as arsenic, antimony, selenium, boron, mercury, and chromium IV.

The contaminants of concern are primarily associated with the activities that may have occurred at the automotive service garage, located at 1150 Gladstone Avenue, as well as with potential fill material of unknown quality present at the Site.

4.0 METHODOLOGY

4.1 General

Prior to the commencement of subsurface investigations, a private underground service locating company, Ottawa Locates of Ottawa, Ontario, obtained all applicable public and private underground service location reports/clearances (i.e., hydro, natural gas, telephone and cable).

4.2 Drilling

Stefan Holik (Environmental Technician) and Kevin Cortez (Environmental Engineering Intern) of McIntosh Perry supervised a drilling and sampling program at the Site on July 12, 2021. McIntosh Perry advanced three (3) boreholes (78Ros-BH1, 78Ros-BH2, and 78Ros-BH3) at the locations indicated on Figure 2. All three boreholes were instrumented with monitoring wells.

Drilling services were provided by Aardvark Drilling using a CME 55m track mounted drill rig. All boreholes were advanced into bedrock using air percussion methods to facilitate groundwater monitoring well installation. Soil samples were collected on a continuous basis from ground surface through the overburden strata. The drilling equipment was decontaminated between runs and borehole locations to minimize the possibility of cross-contamination.

4.3 Impediments

No physical impediments or denial of access were encountered at the Site during this Phase Two ESA.

4.4 Soil Sampling

Soil samples were taken from the 0.61 m (2') split spoons at regular intervals across multiple stratigraphic layers. In general, one sample per stratigraphic layer was considered sufficient, unless an area of concern was noted or change in moisture content. Soil samples were collected with a gloved hand and deposited directly into sealed bags. The samples were then divided into two representative portions; one portion in a glass container for possible laboratory analysis (if selected based on screening results), and one portion in a plastic bag for soil headspace combustible gas screening, which was performed on site. Recovered soil samples were generally logged for soil type, moisture, colour, texture, and visual evidence of impacts.

Based on field observations and CGI/PID readings it was determined that the submission of nine (9) soils samples, three from 78Ros-BH1, three from 78Ros-BH2, one blind duplicate from 78Ros-BH2 for QA/QC purposes, and two from 78Ros-BH3 would be sufficient to determine potential impacts to the Study Area. Samples that were chosen for laboratory analysis were placed into laboratory supplied sample jars, stored in a cooler with ice, and delivered directly to ALS Laboratories (ALS) of Ottawa, Ontario.

Soil samples that were selected for VOC, BTEX and F1 Hydrocarbon analysis were preserved immediately after sampling with laboratory supplied vials containing methanol.

Soil sample identification and details are included on the graphic borehole logs presented in Appendix A.

4.5 Field Screening Measurements

Soil headspace vapour concentration readings of soil samples obtained from the boreholes were taken using a RKI Eagle 2 Gas (combined CGI and PID). The CGI was operated in methane elimination mode and both the CGI and PID were calibrated prior to use in the field. Calibration was performed following the manufacturer's instructions.

4.6 Groundwater – Monitoring Well Installation

Three monitoring wells (78Ros-MW1, 78Ros-MW2 and 78Ros-MW3) were installed July 12, 2021, by Aardvark Drilling, under the supervision of McIntosh Perry personnel.

The boreholes were instrumented with PVC monitoring well components and protected at the surface with a stick-up monument well casing (Photo 5).

78Ros-MW1, 78Ros-MW2 and 78Ros-MW3 were constructed using 50.8 mm (2") diameter, Schedule 40 PVC well screen (10 slot), flush-threaded to Schedule 40 PVC riser pipe. A silica sand 'filter pack' was installed in the annular space around the well screen. A bentonite clay seal was installed above the screened interval to prevent infiltration of surface water into the well. The screened interval was positioned to intersect the estimated water table elevation, based on moisture content observations of recovered soil samples obtained during drilling and from measured water levels in existing on-site wells. Monitoring well installation was conducted in conformance with O.Reg. 903, as amended.

Detailed graphic logs showing the monitoring well installation details are included in Appendix A. Monitoring well completion details are included in Table 2.

4.7 Field Measurement of Water Quality Parameters

Field measurement of water quality parameters was not undertaken as part of this investigation.

4.8 Groundwater – Monitoring and Sampling

McIntosh Perry carried out initial groundwater level monitoring and sampling activities on July 23, 2021. Groundwater level monitoring and sampling activities occurred again following the receipt of initial 2021 sample results on August 9, 2021. The static water level was measured at the well using an electronic water level tape. Groundwater levels ranged between 3.05 and 3.51 m below ground surface (m bgs).

Prior to water sample collection, an attempt was made to purge the wells by removing a minimum of three well volumes using dedicated polyethylene tubing and a positive displacement foot valve. The recharge rate of all wells was good to moderate, and the wells were purged three well volumes or three time dry.

Groundwater was sampled directly into laboratory provided bottles and delivered directly to ALS Laboratory Group of Ottawa, Ontario.

78Ros-MW1, 78Ros-MW2 and 78Ros-MW3 were sampled for BTEX, F1-F4 PHCs, VOC, PAHs and inorganics including metals.

4.9 Sediment: Sampling

No water bodies are present on the Site. As such, sediment sampling was not conducted as part of this Phase Two ESA.

4.10 Analytical Testing

All soil and water samples selected for laboratory analysis were submitted to ALS Laboratory Group of Ottawa, Ontario, under strict 'chain of custody' documentation protocols.

Samples were submitted for laboratory analysis of the following parameter groups:

- Volatile organic compounds (VOC)
- Benzene, toluene, ethylbenzene and xylenes (BTEX), which are a sub-set of the volatile organic compound (VOC) parameter set
- Petroleum hydrocarbons (PHCs) in four fractions (F1-F4) according to MECP requirements
- Polycyclic Aromatic Hydrocarbons (PAHs)
- Metals and inorganic parameters (M&I)

Copies of all laboratory Certificates of Analysis and chain of custody documentation are included in Appendix B.

4.11 Residue Management Procedures

Soil cuttings and purge water generated as part a of this Phase Two ESA were retained on-Site.

4.12 Elevation Surveying

All monitoring wells were surveyed to a temporary site benchmark, a catchbasin on Rosemount Avenue (assumed elevation of 100 m). Groundwater elevations were calculated and plotted on Figure 3 to determine groundwater elevation. Groundwater flow was interpreted to be in a northwesterly direction.

4.13 Quality Assurance and Quality Control Measures

All activities completed as part of this Phase Two ESA were conducted in accordance with McIntosh Perry's Standard Operating Procedures (SOPs). Details of QA/QC measures, including sampling containers, preservation, labelling, handling, and custody, equipment cleaning procedures, and field quality control measurements can be provided upon request.

Additionally, all soil and ground water samples submitted as part of this assessment were handled in accordance with laboratory analytical protocols with respect to holding time, preservation method, storage requirements, and container type. All Certificates of Analysis provided by the laboratory are appended to this report in Appendix B.

5.0 RESULTS

5.1 Geology

Overburden at the site consisted of asphalt overlying sand starting from 0.02 – 0.61 m bgs to approximately 2.89 meters below ground surface (m bgs), underlain by bedrock. All of the boreholes and monitoring wells were terminated in bedrock. Geological maps of the area classify the overburden at the Site as stone-poor, sandy silt to silty sand-textured till on Paleozoic terrain (OGS, 2021). This is generally consistent with on-Site observations made by McIntosh Perry.

Geological maps of the area classify the bedrock under the Site as predominantly shale, limestone, dolostone, arkose and sandstone. (OGS, 2021). Based on the results of this investigation, bedrock was encountered at depths ranging from 2.13 – 2.89 m bgs.

Stratigraphic details are provided on the borehole logs (Appendix A) appended to this report.

5.2 Groundwater: Elevations and Flow Direction

Groundwater elevations were calculated for all groundwater monitoring and sampling events and are summarized in Table 1, appended to this report. Groundwater elevations varied between approximately 97.095 and 97. 665 m above datum (m AD) at the Site.

Using the groundwater elevations from the July 2021 sampling event, groundwater contour mapping was completed for the Site. Groundwater elevation contours are shown on Figure 3. Groundwater at the Site is interpreted to flow in a northwesterly direction.

5.3 Coarse Soil Texture

One representative soil sample was submitted for grain size analysis to determine appropriate Site Condition Standards. Sample 78Ros-BH1-SS2 was selected as it was considered to be generally representative of soil conditions at the Site based on texture and visual appearance. Based on the grain size analysis, the sample was characterized as a fine to medium sand, and therefore coarse-grained Site Condition Standards are considered appropriate.

The grain size analysis results are provided in Appendix B.

5.4 Soil: Field Screening

Soil headspace for combustible gas readings and volatile organic compounds were taken using a combustible gas indicator (CGI) operated in methane elimination mode and a photoionization detector (PID) respectively. The CGI/PID readings were intended to identify “worst-case” samples from each borehole. However, the CGI and PID readings were not indicative of significant contamination.

5.5 Soil Quality

Soil vapour readings ranged from 0 to 2 ppm (photoionization detector calibrated to isobutylene) and from 0 to 25 ppm (combustible gas indicator calibrated to hexane). These readings are not indicative of significant hydrocarbon or volatile organic compound impacts in soil samples. The soil samples did not exhibit visual or olfactory evidence of contamination.

All soil analysis results were compared to the applicable SCS (MECP Table 3 SCS) as presented in the following table appended to this report:

- Table 3 – Soil Analytical Results: VOC, BTEX, PHCs, PAHs, Metals and Inorganics

Additionally, analytical data from the soil samples was compared to O.Reg. 153/04 (2011) Table 1 SCS, as seen in Table 3 appended to this report. It is important to note that MECP Table 1 SCS are not strictly applicable to this investigation, however in the event of future excavation at the Site, soils which meet Table 1 SCS may be considered as "clean fill" for soil management purposes. It is noted that all other facets of O.Reg. 406/19 will need to be met when considering excess soil management.

Sample depths are indicated on the tables and borehole logs presented in Appendix A. Laboratory Certificates of Analysis are included in Appendix B.

The analytical data is summarized as follows:

Metals

The following metal exceedance was noted:

- The concentration of lead at 78Ros-BH3 SS1 (438 µg/g) exceeded the MECP Table 3 SCS of 120 µg/g, as well as MECP Table 1 SCS of 120 µg/g.

Results for the boreholes 78Ros-BH1 and 78Ros-BH2, soil samples that were submitted for analysis of metal parameters indicate that all parameters were below laboratory detection limits and therefore in compliance with MECP Table 3 SCS.

VOCs

Results for the boreholes 78Ros-BH1, 78Ros-BH2, and 78Ros-BH3 soil samples that were submitted for analysis of VOC parameters indicate that all parameters were below laboratory detection limits and therefore in compliance with MECP Table 3 SCS.

BTEX

Results for the boreholes 78Ros-BH1, 78Ros-BH2, and 78Ros-BH3 soil samples that were submitted for analysis of BTEX parameters indicate that all parameters were below laboratory detection limits and therefore in compliance with MECP Table 3 SCS.

PHCs

Results for the boreholes 78Ros-BH1, 78Ros-BH2, and 78Ros-BH3 soil samples that were submitted for analysis of PHCs parameters indicated that all parameters were below laboratory detection and therefore in compliance with MECP Table 3 SCS.

PAHs

Results for the boreholes 78Ros-BH1, 78Ros-BH2, and 78Ros-BH3 soil samples that were submitted for analysis of PAH parameters indicated that all parameters were below laboratory detection limits and therefore in compliance with MECP Table 3 SCS.

The soil exceedance found at 78 Rosedale Avenue is outlined in Figure 4, appended to this report.

5.6 Groundwater Quality

All groundwater analysis results were compared to the applicable SCS, as shown on the following table:

- Table 4 – Groundwater Analytical Results: VOC, BTEX, PHCs, PAHs, Metals and Inorganics

Laboratory Certificates of Analysis are included in Appendix B.

The analytical data is summarized as follows:

Metals and Inorganics

Results for the monitoring wells 78Ros-MW1, 78Ros-MW2 and 78Ros-MW3 groundwater samples that were submitted for analysis of metals and inorganic parameters indicate that all parameters were below laboratory detection limits and therefore below MECP Table 3 SCS.

VOCs

Results for the boreholes 78Ros-MW1, 78Ros-MW2 and 78Ros-MW3 groundwater samples that were submitted for analysis of VOC parameters indicate that all parameters were below laboratory detection limits and therefore below MECP Table 3 SCS.

BTEX

Results for the boreholes 78Ros-MW1, 78Ros-MW2 and 78Ros-MW3 groundwater samples that were submitted for analysis of VOC parameters indicate that all parameters were below laboratory detection limits and therefore below MECP Table 3 SCS.

PHCs

Initial results for the boreholes 78Ros-MW1, 78Ros-MW2 and 78Ros-MW3 groundwater samples collected for PHCs indicate that all parameters were below laboratory detection limits and therefore below MECP Table 3 SCS.

PAHs

Results for the boreholes 78Ros-MW1, 78Ros-MW2 and 78Ros-MW3 groundwater samples that were submitted for analysis of PAH parameters indicate that all parameters were below laboratory detection limits and therefore below MECP Table 3 SCS.

5.7 Sediment Quality

Sediment quality was not assessed as part of this Phase Two ESA.

5.8 Quality Assurance and Quality Control Results

All soil and groundwater samples submitted as part of this assessment were handled in accordance with laboratory analytical protocols with respect to holding time, preservation method, storage requirements, and container type. A Certificate of Analysis has been received for each sample submitted for analysis, and all Certificates of Analysis are appended to this report.

Overall, the quality of the field data collected during this Phase Two ESA are considered to be sufficient to meet the overall objectives of this assessment. No significant discrepancies between soils samples 78ROS-BH2-SS2 and 78ROS-BH2-SS2-DUP, which was a duplicate of 78ROS-BH2-SS2 were noted. Relative percent differences were generally within 20% and no discrepancies in SCS exceedances were noted between original and duplicate samples.

All tasks completed as a part of this investigation were completed in accordance with McIntosh Perry's Standard Operating Procedures and in general accordance with O.Reg. 153/04 (as amended).

5.9 Phase Two Conceptual Site Model

The Phase Two Property is located at 78 Rosemount Avenue in Ottawa ("the Site") is approximately 0.05 hectares in area. The Phase Two Property is currently developed with a two-storey multi-unit residential home, a garage located at the west end of the Site, as well as paved parking spaces surrounding the building and a grass lawn south of the building. Plans showing the location and layout of the Phase Two Property are provided as Figures 1 and 2, respectively.

5.9.1 Potentially Contaminating Activities

The following PCAs were identified in on the Phase Two Property, in the previous Phase One ESA:

Table 10: Potentially Contaminating Activities						
No.	Potential Contaminating Activity	Location of PCA	Proximity of PCA to Phase One ESA Property	Time Frame Associated with PCA	Information Source	Does the PCA warrant an area of potential environmental concern
1	Item 10, Schedule D, Table 2: Commercial Autobody Shop	1150 Gladstone Avenue	Immediately north of the Site	Historic and Current	Site Reconnaissance	YES
2	Item 10, Schedule D, Table 2: Commercial Autobody Shop	1086 Gladstone Avenue	188 m east	Historic and Current	ERIS	NO, based on separation distance
3	Item 28, Schedule D, Table 2: Gasoline and Associated Products Storage in Fixed Tanks	1185 Wellington Street West	250 m northwest	Historic	FIPs	NO, based on separation distance
4	Item 28, Schedule D, Table 2: Gasoline and Associated Products Storage in Fixed Tanks	402 Parkdale Avenue	250 m northwest	Historic	FIPs	NO, based on separation distance
5	Item 37, Schedule D, Table 2: Operation of Dry Cleaning Equipment	1200 Wellington Street West	250 m northwest	Historic	FIPs	NO, based on separation distance
6	Item 46, Schedule D, Table 2: Rail Yards, Tracks and Spurs	Present-day Highway 417	140 m south	Historic	FIPs	NO, based on separation distance
7	Item 28, Schedule D, Table 2: Gasoline and Associated Products Storage in Fixed Tanks	1140 Wellington Street West	170 m north	Historic	FIPs	NO, based on separation distance
8	Item 10, Schedule D, Table 2: Commercial Autobody Shop	1 Grant Avenue	250 m north	Historic	FIPs	NO, based on separation distance
9	Item 28, Schedule D, Table 2: Gasoline and Associated Products Storage in Fixed Tanks	1067 Wellington Street West	250 m north	Historic	FIPs	NO, based on separation distance
10	Spill record: oil leak from oil filter at residential dwelling	1164 Gladstone Avenue	80 m west	2012	ERIS	NO, based on separation distance
11	Spill record: 15-25 L of furnace oil from tank at private residence	116 Melrose Avenue	180 m southeast	2002	ERIS	NO, based on separation distance

Table 10: Potentially Contaminating Activities						
No.	Potential Contaminating Activity	Location of PCA	Proximity of PCA to Phase One ESA Property	Time Frame Associated with PCA	Information Source	Does the PCA warrant an area of potential environmental concern
12	Spill record: furnace oil leak	19 Westmount Avenue	160 m southwest	2012	ERIS	NO, based on separation distance
13	Furnace oil tank leak	479 Parkdale Avenue	220 m southwest	1990	ERIS	NO, based on separation distance
14	136 L of furnace oil leaked into sanitary sewer	483 Parkdale Avenue	230 m southwest	2004, 2012	ERIS	NO, based on separation distance

No additional PCAs were identified within the Phase Two Study Area, including on the Phase Two Property, during the 2021 McIntosh Perry Phase Two ESA. The location of the PCAs are shown on Figure 5.

5.9.2 Area of Potential Environmental Concern

The following identified PCAs were determined to be representative of APECs in relation to the Phase Two Property. Details of the APECs and the investigation into them are provided below.

Table 11: Areas of Potential Environmental Concern					
Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC-1 (Off-Site Automotive Garage)	Northwest portion of the property	#10 Commercial Autobody Shops	Off-Site	PHCs, PAHs, VOCs, Metals	Soil and Groundwater

The location of the APECs are shown on Figure 5.

5.9.3 Subsurface Structures and Utilities

As part of the Phase Two ESA, utility service clearances were provided by public and private locating companies. The depths of these utilities were not determined during the Phase Two ESA.

5.9.4 Physical Setting

5.9.4.1 Stratigraphy

During the field program conducted at the Phase Two Property, subsurface soil was determined to consist of asphalt overlying sand to a maximum depth of 2.89 m bgs. Bedrock was encountered in all boreholes, depths ranging from 2.13 to 2.89 m bgs. A detailed description of the stratigraphy observed during the Phase Two ESA is provided on borehole logs within Appendix C. Geological Cross-Sections A-A' is shown on Figures 5.

5.9.4.2 Hydrogeology

Based on the ground water measurements taken as part of the 2021 McIntosh Perry Phase Two ESA, ground water at the Phase Two Property is inferred to be located at a depth between approximately 3.05 – 3.51 m bgs. The Site occurs within the Ottawa River watershed. The Ottawa River is located approximately 1.27 kilometres (km) north of the Site, at its closest point. Site drainage consists primarily of sheet flow to storm drains along Gladstone Avenue, with infiltration occurring in permeable areas such as grass lawns.

5.9.4.3 Bedrock

Bedrock was encountered in all boreholes. A detailed description of the stratigraphy observed during the Phase Two ESA is provided on borehole logs within Appendix C and on Figure 5.

5.9.5 Potable Site Condition Standards

The Phase Two Property is serviced by the City of Ottawa municipal water distribution system; ground water is not used as a source of potable water.

5.9.6 Water Bodies and Areas of Natural Significance

There are no water bodies within the Phase One Study Area. The closest permanent waterbody is the Ottawa River, which is located approximately 1.27 km north of the Phase Two Property. When completing the 2021 McIntosh Perry Phase One ESA, considerations were made for the following MNRF-maintained areas of natural significance:

- Areas of Natural and Scientific Interest;
- Provincially Significant Wetlands; and
- Wildlife Management Areas.

No areas of natural significance were identified within the Phase One Study Area.

Based on our review of the above-noted information, it was determined that the Phase Two Property is not located in or within 30 m of an area of natural and scientific interest and, as such, the Phase Two Property is not located within an environmentally sensitive area.

5.9.7 Site Condition Standards - N/A or N/V Values

During this Phase Two ESA, an exceedance of lead was found at the Phase Two Property, corresponding to the criteria listed within both the Table 1 and Table 3 Standards, as seen in Figure 4.

5.9.8 Approximate Locations of Proposed Buildings and Other Structures

It is understood that the Client is considering demolishing the existing building at 78 Rosemont Avenue, Ottawa and constructing a new twelve-unit residential building.

5.9.9 Concentrations of COPCs above the Table 3 Standards

Analytical results from one location (78Ros-BH3 SS1) indicate SCS exceedance of lead in the top layer of sand. It is possible that SCS exceedances of lead is likely related to historical lead paint or lead piping. Additionally, the lead exceedance may be related to poor quality fill.

Based on the results of the Phase Two ESA, McIntosh Perry is of the opinion that the lead contamination does not extend laterally across the entirety of the Site. The lead contamination does not extend vertically beyond the lower layer of sand, at a depth of 2.29 m bgs at 78Ros-BH3.

The concentrations of the tested parameters for all ground water samples were below the MECP Table 3 Standards.

5.9.9.1 Each Area Where A Contaminant Is Present on, in or under the Phase Two Property

The investigations for the Phase Two ESA identified soil impacted with a metal (lead) exceeding MECP Table 3 Standards in soil samples collected from 78Ros-BH3. McIntosh Perry is of the opinion that the lead contamination does not extend laterally across the entirety of the Site. The lead exceedance at 78Ros-BH3 is likely to be isolated within the top layer (0 – 0.6 m bgs), as it does not extend into the SS4, located at the interval of 2.29 – 2.89 m bgs.

Figures 5 depicts the lateral and vertical extents of the soil exceedance at the Site.

It is understood that soil contaminants (metal (lead)) exceeding MECP Table 3 Standards were found in the soil at the surface of the Site to a depth of 0.60 m bgs. With the proposed redevelopment of the Site it is anticipated that the contaminated soils will be excavated to account for foundation/footing for the proposed building.

5.9.9.2 The Contaminants Associated with Each of Areas Investigated

Contaminants associated with the lead exceedance in the sand layer was isolated at 78Ros-BH3. The parameter exceedance at the Site is unknown, but may be related to historical lead paint or lead piping. Additionally, the lead exceedance may be related to poor quality fill.

5.9.9.3 Each Medium in Which A Contaminant Is Present

Contaminants (lead) exceeded the applicable SCS in soil. All groundwater results were in compliance with applicable SCS. Sediment was not tested as part of this Phase Two ESA as no water bodies were present on-Site.

5.9.9.4 A Description and Assessment of Each Area Where Contaminant Identified

It is understood that soil contaminant (lead) exceeded MECP Table 3 Standards and were found in the soil at the surface of 78Ros-BH3 to a depth of approximately 0.60 m bgs. With the proposed redevelopment of the Site it is anticipated that the contaminated soils will be excavated to account for foundation/footing for the proposed building. Based on an assessment of subsurface conditions at the Site, the area of contaminants is interpreted to be associated with historical lead paints and lead pipes. It is also likely to be associated with the presence of fill material at the Site. This fill material was likely deposited at the time the Site was developed with the present-day buildings and likely included debris from previous buildings on the Site.

5.9.9.5 The Distribution of Contaminants in Each Area for Each Medium Investigated

The Site investigations for the Phase Two ESA identified the sand layer impacted with a lead exceedance above the MECP Table 3 Standards. Vertically, the metal (lead) soil contamination did not extend beyond the uppermost layer of sand at the Site to a depth of approximately 0.60 m bgs.

It is understood that soil contaminants (metals) exceeding the MECP Table 3 Standards were found in the soil at the surface of the Site to a depth of approximately 0.60 m bgs. With the proposed redevelopment of the Site it is anticipated that the contaminated soils will be excavated to account for foundation/footing for the proposed building.

5.9.9.6 The Reason for Discharge of Contaminants Present on, in or under the Phase Two Property

The soil impact was primarily identified in the upper layer of sand at 78Ros-BH3 at the Phase Two Property. The nature of the fill material (sand) suggests that the previous structures at the Site had been demolished.

Fill material could be the main reason for the metal detected in soil above the MECP Table 3 Standards at the Phase Two Property.

5.9.9.7 Migration of Contaminants Present on, in or under the Phase Two Property

Migration of contaminants at the Site is currently considered to be limited. Contaminants exceeded applicable SCS in soil but not in groundwater, suggesting that significant migration of contaminants from soil to groundwater is not occurring, and that transport of contaminants on-site or off-site through the groundwater flow system is negligible. Also, downward leaching of contaminants is limited by asphalt paving and impermeable building surfaces over much of the Site. It is further noted that no physical transportation (i.e. excavation) of Site soils is currently occurring.

5.9.9.8 Climatic or Meteorological Conditions That May Have Influenced Distribution and Migration of the Contaminants

The distribution of contaminants is not expected to be strongly influenced by climatic or meteorological conditions as the area with elevated contaminants was within the paved area on the Site.

5.9.9.9 Information Concerning Soil Vapour Intrusion of Contaminants into Buildings

Due to the non-volatile nature of lead, no concern of soil vapour intrusion into the proposed newly constructed buildings is anticipated following the excavation and confirmatory sampling.

5.10 Cross-sections Showing Contaminants Greater Than the Standards

5.10.1 The Lateral and Vertical Distribution of Contaminants in Each Area and for Each Medium

The lateral and vertical distributions of contaminants in soil were presented on the following figures:

- Figure 6 depicts the vertical soil exceedances with metals at the Site– Cross Section A-A';

5.10.1.1 Approximate Depth to Water Table in Each Area

Based on ground water tables measured on the July 23, 2021, depths to the shallower water table within the sand layer range from 3.05 m bgs to 3.51 m bgs. The interpreted shallower ground water flow direction is expected to be towards the northwest, and in a similar manner with the topography of the Site. Ground water contours and groundwater flow direction map are presented on Figure 3. Measured depths to water table are also illustrated on cross-sectional figures.

5.10.1.2 Stratigraphy from Ground Surface to the Deepest Aquifer or Aquitard Investigated

In general, the soil stratigraphy at the borehole locations comprised of ashphalt, underlain by sand. Below the sand layer lies bedrock. Geological Cross Section A-A', illustrating the soil profile, monitoring well constructions and groundwater elevations, are shown on Figure 6.

5.10.1.3 Any Subsurface Structures and Utilities That May Affect Contaminant Distribution and Transport

Several underground utilities were noted be likely present at the Site including, but not limited to, municipal water and sewer services, electricity, natural gas and telecommunications services. The locations and depths of these underground utilities were not determined as part of this Phase One ESA. No Site-specific concerns regarding underground utility service trenches were identified.

5.11 Potential Contaminant Sources, Exposure Pathways and Receptors

The contaminants identified in soil at the Phase Two Property included lead (metal). The source of the lead contaminants is most likely related to historical lead paint and lead pipes, as well as poor quality fill.

The contaminants are not expected to have mechanisms via soil, groundwater and air exposure pathways to humans and ecological receptors at or in the vicinity of the Phase Two Property. The impacted soil is isolated from human and ecological receptors by overlying asphalt, and groundwater results indicate that lead impacts in soil have not entered the groundwater to any significant degree. .

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

Based on the analytical results, all soil at the Site is in compliance with applicable Table 1 and Table 3 SCS with the exception of the lead exceedance at 78Ros-BH3-SS1, from the fill layer underlying the asphalt at the Site. Given the age of the Site, lead exceedances are not uncommon and may be associated with historical building materials, lead piping, paint, etc. The fill material in which the lead exceedance was noted is isolated from human and ecological receptors by a layer of asphalt, and as such, is not considered to represent a concern to the continued use of the Site for its present purposes.

All groundwater results were in compliance with applicable SCS for the parameters tested.

Given the nature of the exceedances in soil, the lack of exceedances in groundwater, and the groundwater flow direction, the presence of the automotive service garage is not considered to have impacted the Site.

In the event that the Site is redeveloped, any excess soil should be disposed of or reused according to O.Reg. 406/19 (On-Site and Excess Soil Management). Due to the noted lead exceedance, it is anticipated that disposal of a licensed waste disposal facility will be required.

6.2 Recommendations

McIntosh Perry does not recommend any further investigative or remedial action for the Site at this time. The environmental condition of the Site is considered suitable for the proposed development.

7.0 LIMITATIONS

This report has been prepared, and the work referred to in this report has been undertaken by, McIntosh Perry Consulting Engineers Ltd. for 78 Rosemount Avenue Inc. It is intended for the sole, and exclusive use of 78 Rosemount Avenue Inc. and any affiliated companies and partners and their respective financial institutions, insurers, agents, employees and advisors (collectively, 78 Rosemount Avenue Inc.). The report may not be relied upon by any other person or entity without the express written consent of McIntosh Perry Any use which a third party makes of this report, or any reliance on decisions made based on it, without a Reliance Letter are the responsibility of such third parties. McIntosh Perry Consulting Engineers Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

The investigation undertaken by McIntosh Perry Consulting Engineers Ltd. with respect to this report and any conclusions or recommendations made in this report reflect McIntosh Perry Consulting Engineers Ltd.'s judgment based on the site conditions observed at the time of the site investigations, inspections and sampling on the date(s) set out in this report and on information available at the time of the preparation of this report.

This report has been prepared for specific application to this site and it is based, in part, upon visual observation of the site, subsurface investigation at discrete locations and depths, and specific analysis of specific chemical parameters and materials during a specific time interval, all as described in this report. Unless otherwise stated, the findings cannot be extended to previous or future site conditions, portions of the site which were unavailable for direct investigation, subsurface locations which were not investigated directly, or chemical parameters, materials or analysis which were not addressed. Substances other than those addressed by the investigation described in this report may exist within the site, substances addressed by the investigation may exist in areas of the site not investigated and concentrations of substances addressed which are different than those reported may exist in areas other than the locations from which samples were taken.

If site conditions or applicable standards change or if any additional information becomes available at a future date, modifications to the findings, conclusions and recommendations in this report may be necessary.

8.0 CLOSURE

We trust that this information is satisfactory for your present requirements. Should you have any questions or require additional information, please do not hesitate to contact the undersigned.

Respectfully submitted,

McIntosh Perry Consulting Engineers Ltd.

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9.0 REFERENCES

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Ontario Ministry of Environment, Conservation and Parks (MECP), Ontario Regulation (O.Reg.) 153/04; Records of Site Condition – Part XV.1 of the Act (i.e. The Environmental Protection Act), as amended.

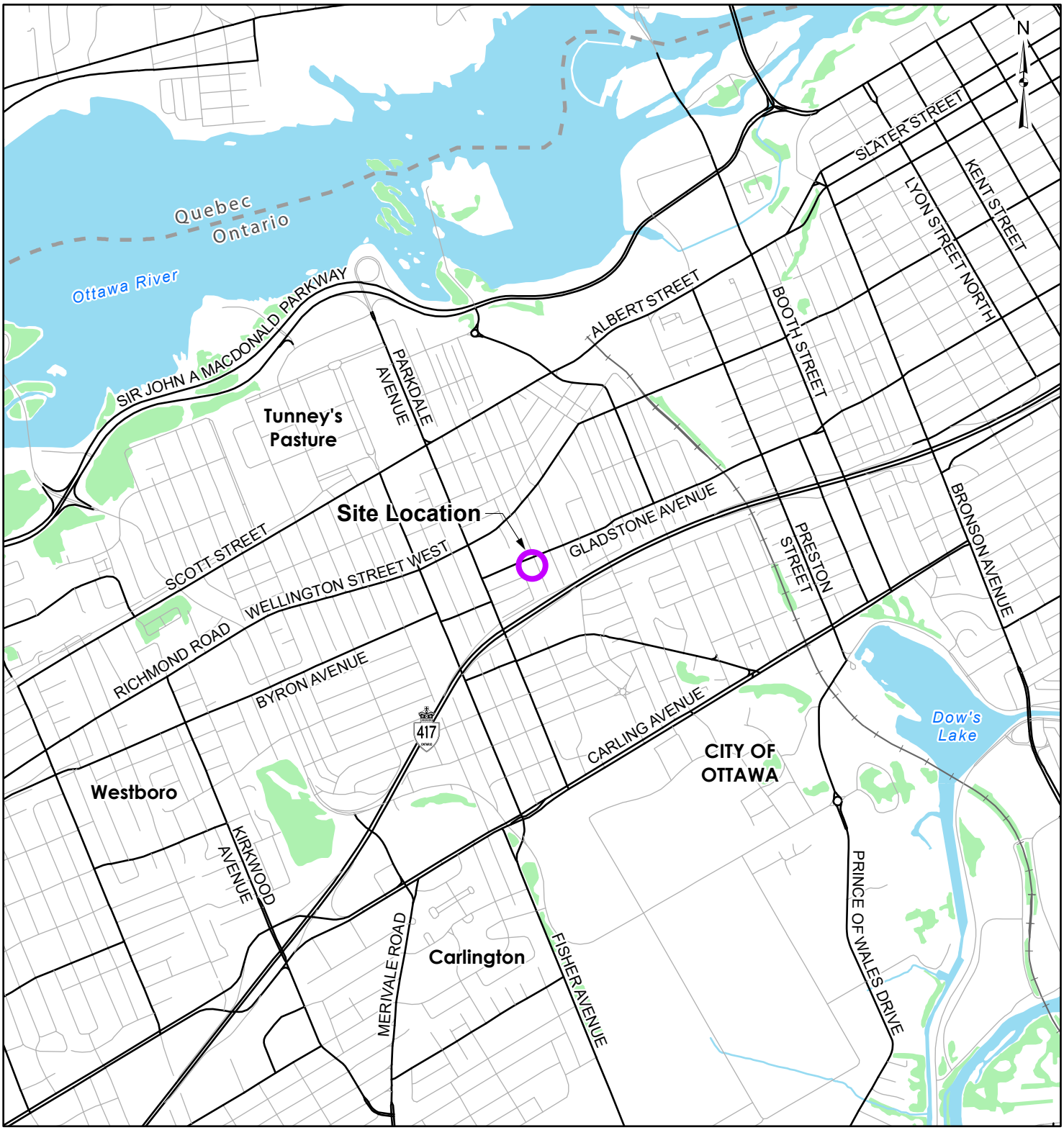
Ontario Geological Survey (OGS), 2017 – Google EarthTM (website: http://www.mndmf.gov.on.ca /mines/ogs_earth _e.asp).

'Phase One Environmental Assessment, 78 Rosement Avenue, Ottawa, Ontario.' McIntosh Perry Consulting Engineers Ltd., July 21, 2021.

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
78 ROSEMOUNT AVENUE, OTTAWA, ON

FIGURES

McINTOSH PERRY



600 300 0 600

Scale 1:25,000 Metres

LEGEND

- Site Location
- Local Road
- Major Road
- Railroad
- Watercourse
- Waterbody
- Wooded Area

REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2021.

CLIENT: 78 ROSEMOUNT AVENUE INC.

PROJECT: PHASE TWO ESA
78 ROSEMOUNT AVENUE, OTTAWA, ON

TITLE: SITE LOCATION

McINTOSH PERRY
115 Walgreen Road, RR3, Carp, ON K0A1L0
Tel: 613-836-2184 Fax: 613-836-3742
www.mcintoshperry.com

PROJECT NO: CCO-22-1129	
Date	Jun., 21, 2021
GIS	EU
Checked By	MB

FIGURE: 1

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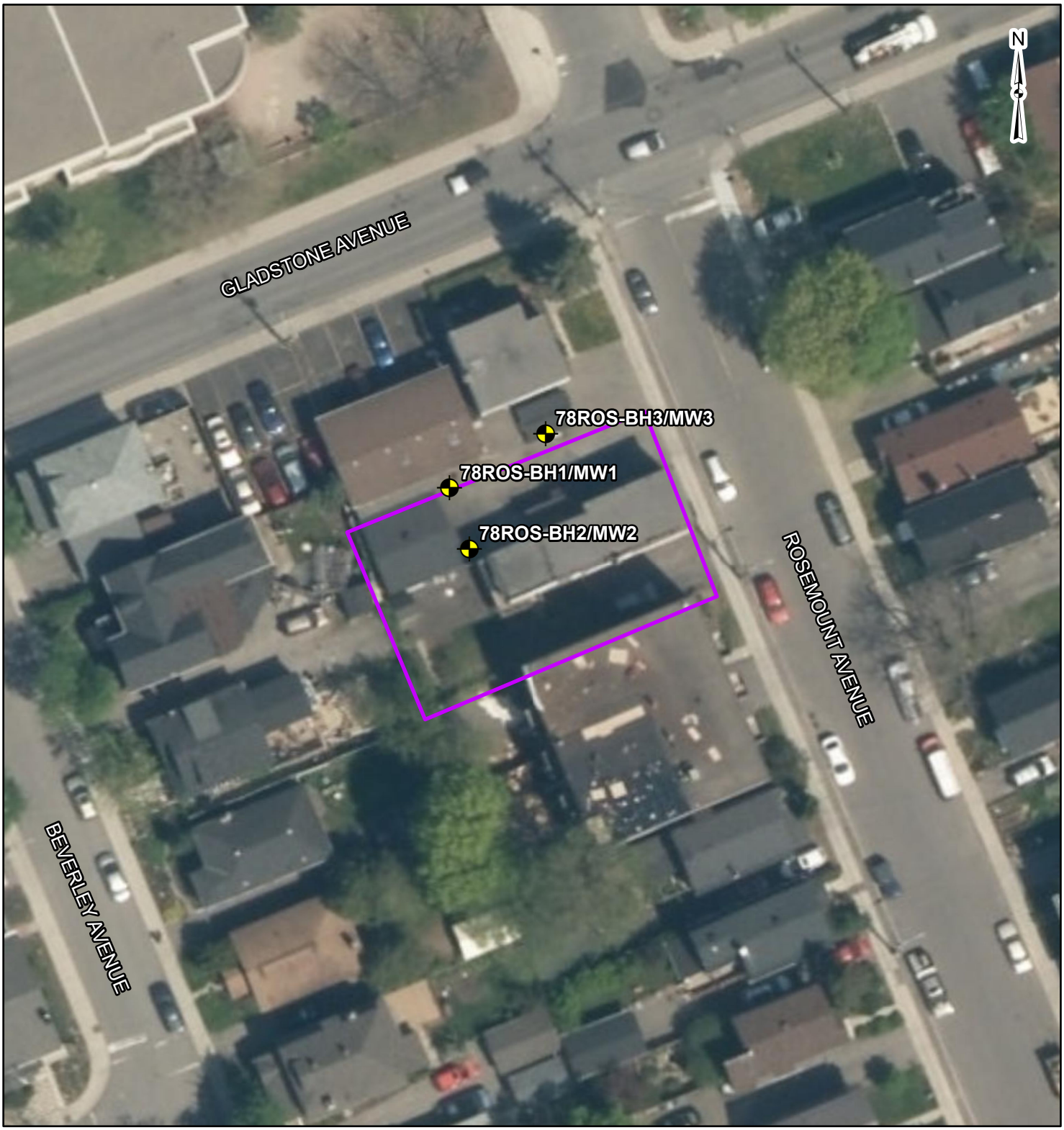

LEGEND

- Site Boundary
- Borehole/Monitoring Well Location

10 5 0 10

Scale 1:500 Metres

REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2021.

CLIENT: 78 ROSEMOUNT AVENUE INC.

PROJECT: PHASE TWO ESA
78 ROSEMOUNT AVENUE, OTTAWA, ON

TITLE: SITE LAYOUT

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PROJECT NO:	CCO-22-1129
Date	Nov., 16, 2021
GIS	EU
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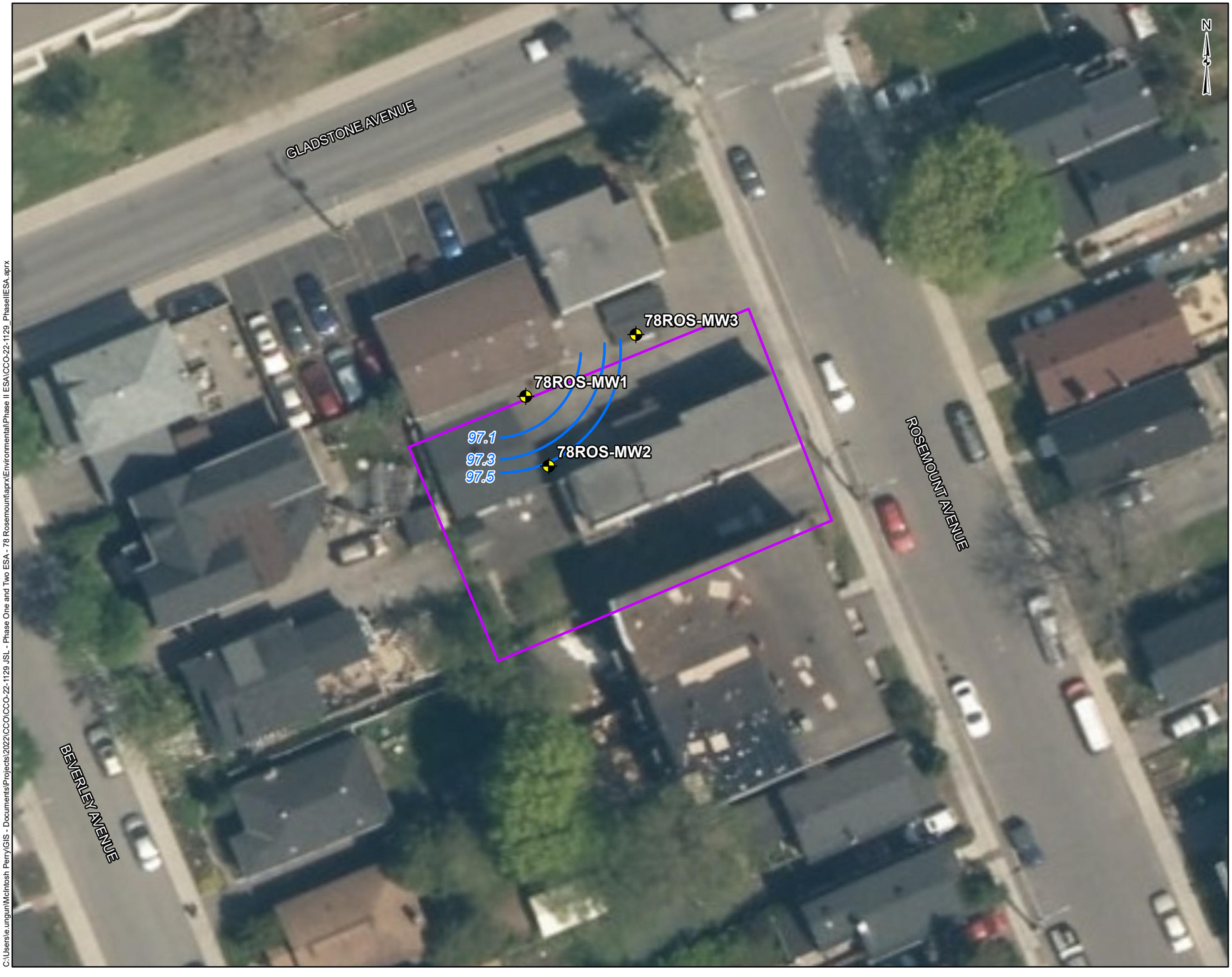
FIGURE: 2



LEGEND

- Site Boundary
- Borehole/Monitoring Well Location
- Groundwater Elevation Contour
- 100.605 Ground Surface Elevation (m above datum)

REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2021.

10 5 0 10

Scale 1:300 Metres

CLIENT: 78 ROSEMOUNT AVENUE INC.

PROJECT: PHASE TWO ESA
78 ROSEMOUNT AVENUE, OTTAWA, ON

TITLE: GROUNDWATER CONTOUR PLAN

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PROJECT NO:CCO-22-1129		FIGURE: 3
Date	Nov., 16, 2021	
GIS	EU	
Checked By	MB	

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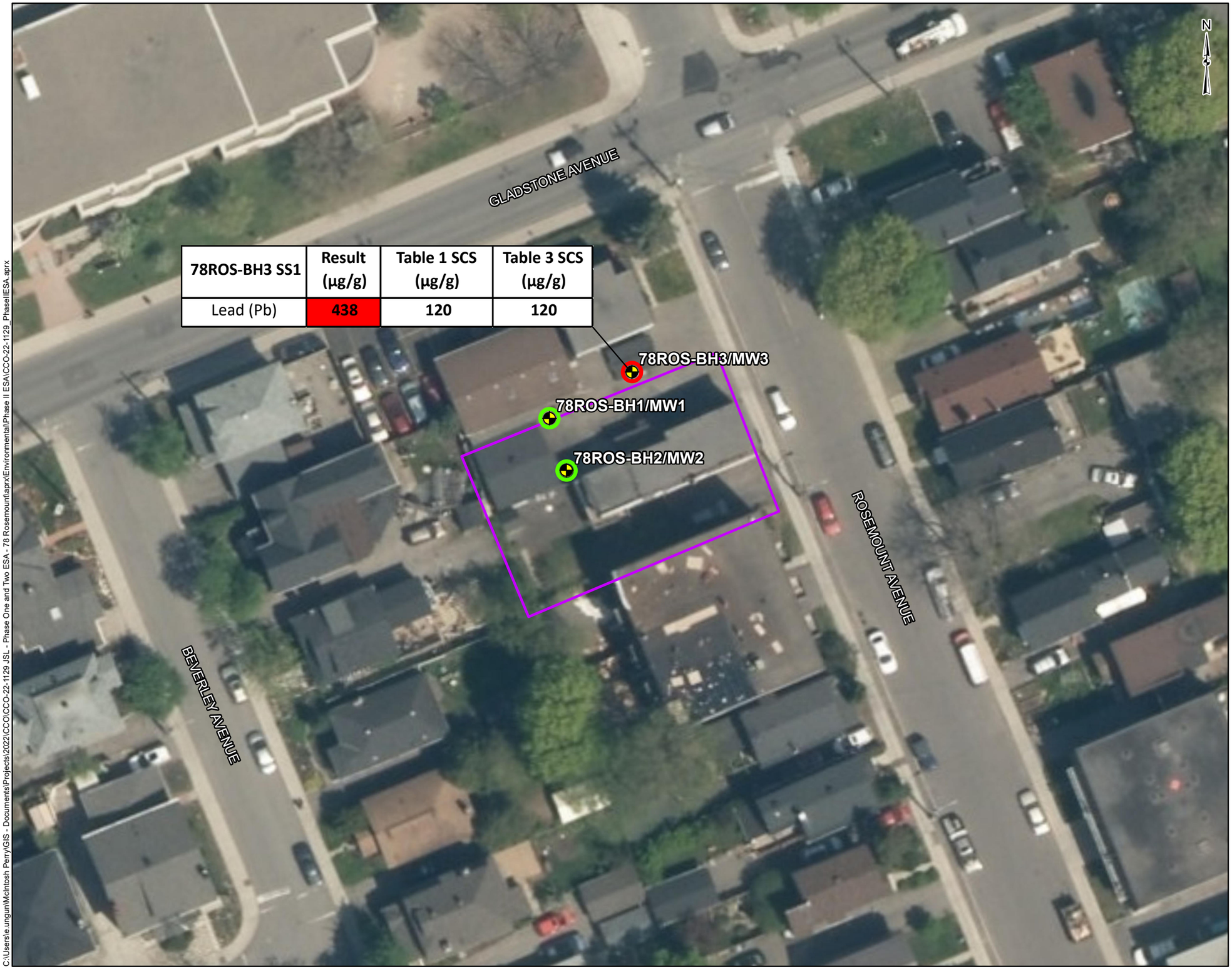

78ROS-BH3 SS1	Result (µg/g)	Table 1 SCS (µg/g)	Table 3 SCS (µg/g)
Lead (Pb)	438	120	120

LEGEND

- Site Boundary
- Borehole/Monitoring Well Location
- Does Not Exceed Standards
- Exceeds Table 3 SCS
- Exceeds Table 1 SCS

REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2021.

10 5 0 10

Scale 1:400 Metres

CLIENT: 78 ROSEMOUNT AVENUE INC.

PROJECT: PHASE TWO ESA
78 ROSEMOUNT AVENUE, OTTAWA, ON

TITLE: SOIL EXCEEDANCE PLAN

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PROJECT NO:CCO-22-1129	FIGURE:
Date: Nov., 16, 2021	4
GIS: EU	
Checked By: MB	

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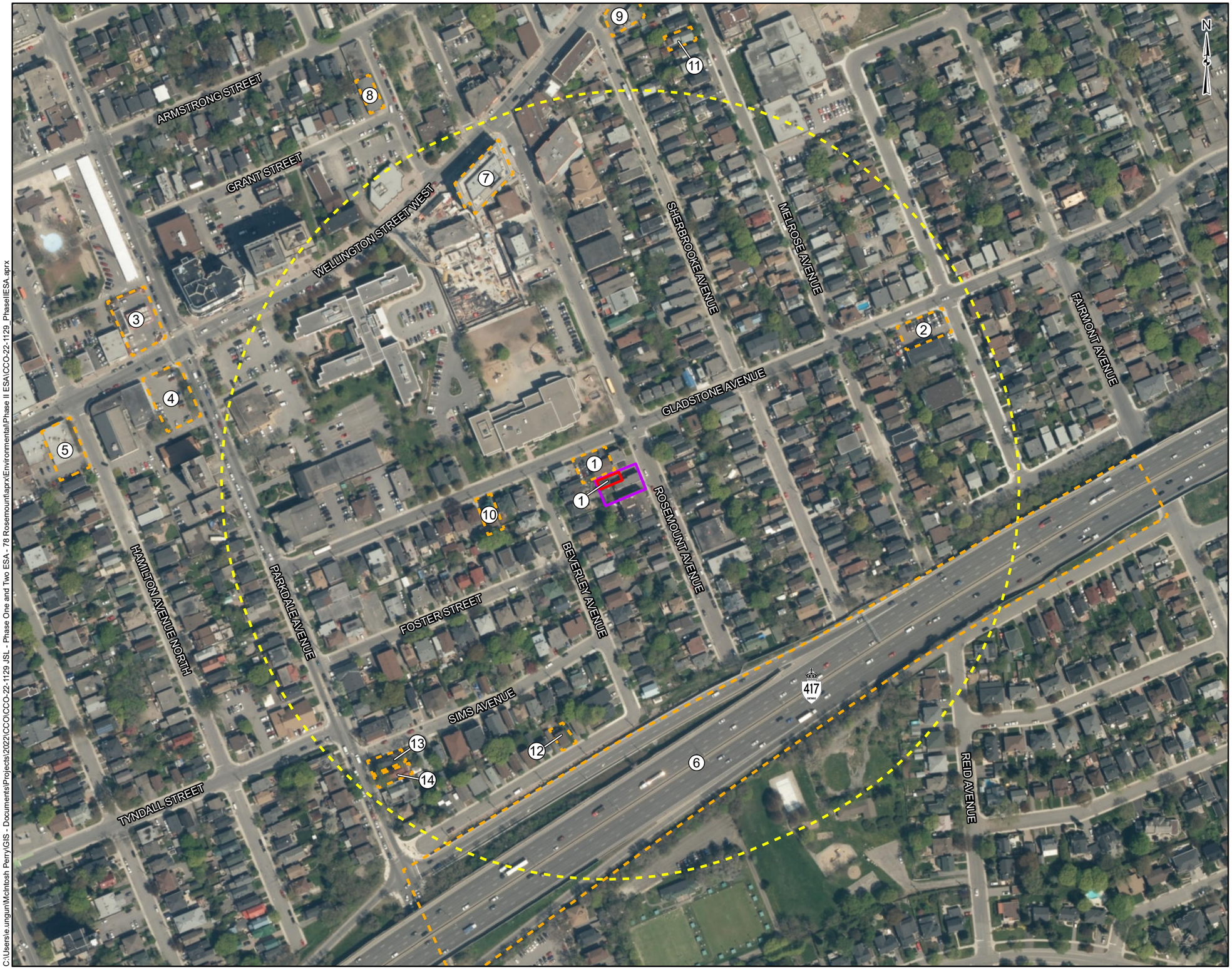

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LEGEND

- Site Boundary
- 250m Buffer
- PCA

1. 1150 Gladstone Avenue
   - #10 Commercial Autobody Shop
2. 1086 Gladstone Avenue
   - #10 Commercial Autobody Shop
3. 1185 Wellington Street West
   - #28 Schedule D, Table 2: Gasoline and Associated Products Storage in Fixed Tanks
4. 402 Parkdale Avenue
   - #28 Schedule D, Table 2: Gasoline and Associated Products Storage in Fixed Tanks
5. 1200 Wellington Street West
   - #37 Schedule D, Table 2: Operation of Dry Cleaning Equipment
6. Present-day Highway 417
   - #46 Schedule D, Table 2: Rail Yards, Tracks and Spurs
7. 1140 Wellington Street West
   - #28 Schedule D, Table 2: Gasoline and Associated Products Storage in Fixed Tanks
8. 1 Grant Avenue
   - #10 Schedule D, Table 2: Commercial Autobody Shop
9. 1067 Wellington Street West
   - #28 Schedule D, Table 2: Gasoline and Associated Products Storage in Fixed Tanks
10. 1164 Gladstone Avenue
    - Spill Record: Oil Leak from Oil Filter at Residential Dwelling
11. 116 Melrose Avenue
    - Spill Record: 15-25 L of Furnace Oil from Tank at Private Residence
12. 19 Westmount Avenue
    - Spill Record: Furnace Oil Leak
13. 479 Parkdale Avenue
    - Furnace Oil Tank Leak
14. 483 Parkdale Avenue
    - 136 L of Furnace Oil Leaked Into Sanitary Sewer

- APEC

1. 78 Rosemount Avenue
   - Northwestern portion of the property

REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2021.

80 40 0 80

Scale 1:2,500 Metres

CLIENT: 78 ROSEMOUNT AVENUE INC.

PROJECT: PHASE TWO ESA
78 ROSEMOUNT AVENUE, OTTAWA, ON

TITLE: POTENTIALLY CONTAMINATING ACTIVITIES (PCA'S) AND AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APEC'S)

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PROJECT NO: CCO-22-1129		FIGURE: 5
Date	Nov., 16, 2021	
GIS	EU	
Checked By	MB	

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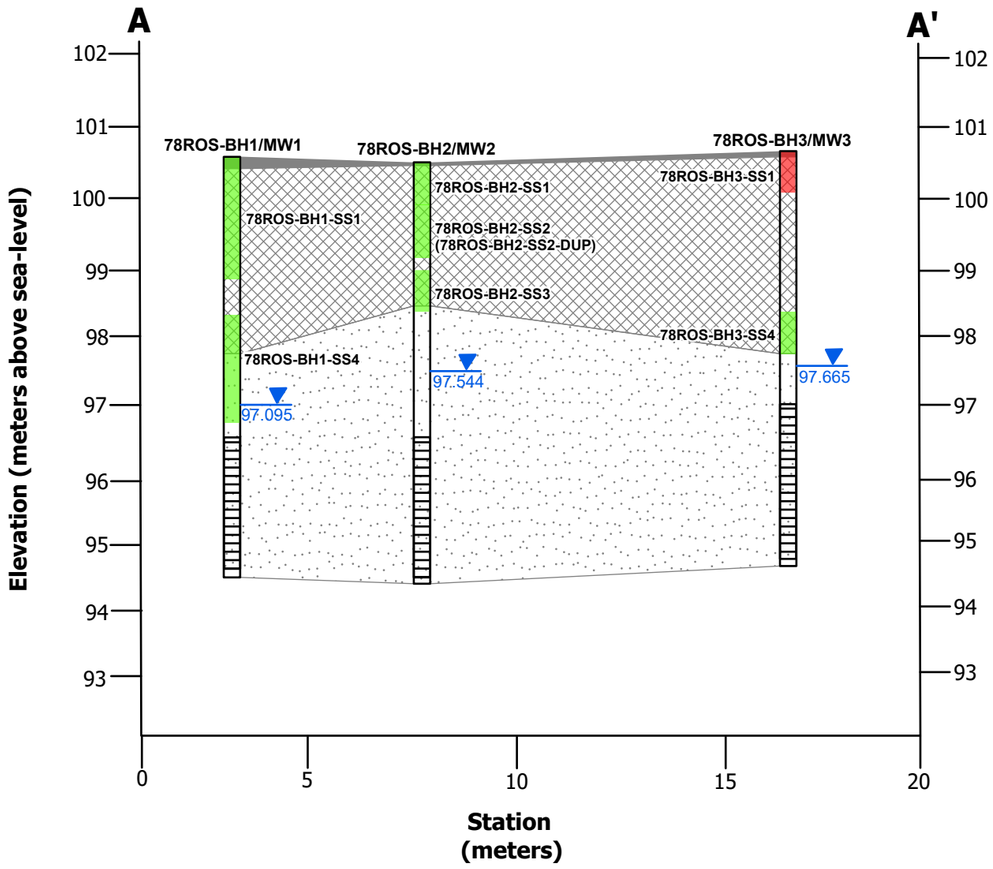
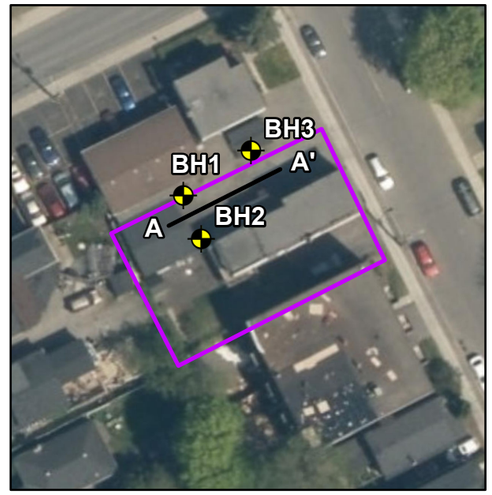
PROFILE VIEW



LEGEND

- Approximate Site Boundary
- Cross Section
- Exceeds MECP Table 3SCS
- Meets All Applicable SCS



- Asphaltic Concrete
- Sand
- Bedrock
- Water Level
- Screen

REFERENCE

GIS data provided by the Ontario Ministry of Natural Resources and Forestry, 2021.

CLIENT: 78 ROSEMOUNT AVENUE INC.

PROJECT: PHASE TWO ESA
78 ROSEMOUNT AVENUE, OTTAWA, ON

TITLE: CROSS SECTION A-A'

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PROJECT NO:	CCO-22-1129
Date	Nov., 16, 2021
GIS	EU
Checked By	MB

FIGURE: 6

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
78 ROSEMOUNT AVENUE, OTTAWA, ON

TABLES

McINTOSH PERRY

Monitoring Well ID	Total Depth (m)	Screened Interval (m BGS)	Ground Elevation (m AD)	Water Level Measurement (m BGS)	Water Elevation (m AD)	Date	Comments
78Ros-MW1	6.1	3.46 - 6.0	100.605	3.51	97.095	23-Jul-21	Flush mount casing
78Ros-MW2	6.1	3.46 - 6.0	100.594	3.05	97.544	23-Jul-21	Flush mount casing
78Ros-MW3	6.1	3.65 - 6.0	100.735	3.07	97.665	23-Jul-21	Flush mount casing

Notes:

BGS	*below ground surface*
AD	*above datum (above datum is the top of the fire hydrant, assigned local*

Table 3: Soil - Analytical Results

Phase II Environmental Assessment
78 Rosemount Avenue, Ottawa

PARAMETER	UNITS	Detection Limit	Sample Date:	July 12,2021								MECP Table 1 SCS	MECP Table 3 SCS
			Sample ID:	78ROS-BH1-SS1	78ROS-BH1-SS4	78ROS-BH2-SS1	78ROS-BH2-SS2	78ROS-BH2-SS2-DUP	78ROS-BH2-SS3	78ROS-BH3-SS1	78ROS-BH3-SS4		
			Sample Depth (m bgs)	0 - 0.61	2.29 - 2.74	0 - 0.6	0.60 - 1.37	0.60 - 1.37	1.52 - 2.13	0 - 0.6	2.29 - 2.89		
Metals													
Antimony (Sb)	ug/g	1		1.1	-	<1.0	-	-	-	1.1	-	**1.3**	**50**
Arsenic (As)	ug/g	1		2.3	-	1.1	-	-	-	4.7	-	**18**	**18**
Barium (Ba)	ug/g	1		63.5	-	35.3	-	-	-	178	-	**220**	**670**
Beryllium (Be)	ug/g	0.5		<0.50	-	<0.50	-	-	-	<0.50	-	**2.5**	**10**
Boron (B), Hot Water Ext.	ug/g	0.1		0.18	-	0.3	-	-	-	0.15	-	**N/A**	**2**
Boron (B)	ug/g	5		<5.0	-	<5.0	-	-	-	8.7	-	**36**	**120**
Cadmium (Cd)	ug/g	0.5		<0.50	-	<0.50	-	-	-	<0.50	-	**1.2**	**1.9**
Chromium (Cr)	ug/g	1		9.7	-	7.4	-	-	-	21.7	-	**70**	**160**
Hexavalent Chromium (Cr(VI))	ug/g	0.2		<0.20	-	<0.20	-	-	-	0.27	-	**0.66**	**10**
Cobalt (Co)	ug/g	1		3.4	-	2.5	-	-	-	6.4	-	**21**	**100**
Copper (Cu)	ug/g	1		32.4	-	5	-	-	-	37.3	-	**92**	**300**
Lead (Pb)	ug/g	1		82.9	-	9.7	-	-	-	438	-	**120**	**120**
Mercury (Hg)	ug/g	0.005		0.0309	-	0.0163	-	-	-	0.105	-	**0.27**	**20**
Molybdenum (Mo)	ug/g	1		<1.0	-	<1.0	-	-	-	1.1	-	**2**	**40**
Nickel (Ni)	ug/g	1		8.9	-	4.3	-	-	-	14.8	-	**82**	**340**
Selenium (Se)	ug/g	1		<1.0	-	<1.0	-	-	-	<1.0	-	**1.5**	**5.5**
Silver (Ag)	ug/g	0.2		<0.20	-	<0.20	-	-	-	<0.20	-	**0.5**	**50**
Thallium (Tl)	ug/g	0.5		<0.50	-	<0.50	-	-	-	<0.50	-	**1**	**3.3**
Uranium (U)	ug/g	1		<1.0	-	<1.0	-	-	-	<1.0	-	**2.8**	**33**
Vanadium (V)	ug/g	1		19.2	-	18.1	-	-	-	33.6	-	**86**	**86**
Zinc (Zn)	ug/g	5		50.1	-	16.1	-	-	-	109	-	**290**	**340**

Table 3: Soil - Analytical Results

Phase II Environmental Assessment
78 Rosemount Avenue, Ottawa

PARAMETER	UNITS	Detection Limit	Sample Date:	July 12,2021							MECP Table 1 SCS	MECP Table 3 SCS
			Sample ID:	78ROS-BH1-SS1	78ROS-BH1-SS4	78ROS-BH2-SS1	78ROS-BH2-SS2	78ROS-BH2-SS2-DUP	78ROS-BH2-SS3	78ROS-BH3-SS1	78ROS-BH3-SS4	
			Sample Depth (m bgs)	0 - 0.61	2.29 - 2.74	0 - 0.6	0.60 - 1.37	0.60 - 1.37	1.52 - 2.13	0 - 0.6	2.29 - 2.89	
VOCs (including BTEX)												
Acetone	ug/g	0.5	-	<0.50	-	<0.50	<0.50	<0.50	-	<0.50	**0.5**	**16**
Benzene	ug/g	0.0068	-	<0.0068	-	<0.0068	<0.0068	<0.0068	-	<0.0068	**0.02**	**0.21**
Bromodichloromethane	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**13**
Bromoform	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.27**
Bromomethane	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.05**
Carbon tetrachloride	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.05**
Chlorobenzene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**2.4**
Dibromochloromethane	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**9.4**
Chloroform	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.05**
1,2-Dibromoethane	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.05**
1,2-Dichlorobenzene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**3.4**
1,3-Dichlorobenzene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**4.8**
1,4-Dichlorobenzene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.083**
Dichlorodifluoromethane	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**16**
1,1-Dichloroethane	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**3.5**
1,2-Dichloroethane	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.05**
1,1-Dichloroethylene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.05**
cis-1,2-Dichloroethylene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**3.4**
trans-1,2-Dichloroethylene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.084**
Methylene Chloride	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.1**
1,2-Dichloropropane	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.05**
cis-1,3-Dichloropropene	ug/g	0.03	-	<0.030	-	<0.030	<0.030	<0.030	-	<0.030	**No SCS**	**No SCS**
trans-1,3-Dichloropropene	ug/g	0.03	-	<0.030	-	<0.030	<0.030	<0.030	-	<0.030	**No SCS**	**No SCS**
1,3-Dichloropropene (cis & trans)	ug/g	0.042	-	<0.042	-	<0.042	<0.042	<0.042	-	<0.042	**0.05**	**0.05**
Ethylbenzene	ug/g	0.018	-	<0.018	-	<0.018	<0.018	<0.018	-	<0.018	**0.05**	**2**
n-Hexane	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**2.8**
Methyl Ethyl Ketone	ug/g	0.5	-	<0.50	-	<0.50	<0.50	<0.50	-	<0.50	**0.5**	**16**
Methyl Isobutyl Ketone	ug/g	0.5	-	<0.50	-	<0.50	<0.50	<0.50	-	<0.50	**0.5**	**1.7**
MTBE	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.75**
Styrene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.7**

Table 3: Soil - Analytical Results

Phase II Environmental Assessment
78 Rosemount Avenue, Ottawa

PARAMETER	UNITS	Detection Limit	Sample Date:	July 12,2021							MECP Table 1 SCS	MECP Table 3 SCS
			Sample ID:	78ROS-BH1-SS1	78ROS-BH1-SS4	78ROS-BH2-SS1	78ROS-BH2-SS2	78ROS-BH2-SS2-DUP	78ROS-BH2-SS3	78ROS-BH3-SS1	78ROS-BH3-SS4	
			Sample Depth (m bgs)	0 - 0.61	2.29 - 2.74	0 - 0.6	0.60 - 1.37	0.60 - 1.37	1.52 - 2.13	0 - 0.6	2.29 - 2.89	
1,1,1,2-Tetrachloroethane	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.058**
1,1,2,2-Tetrachloroethane	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.05**
Tetrachloroethylene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.28**
Toluene	ug/g	0.08	-	<0.080	-	<0.080	<0.080	<0.080	-	<0.080	**0.2**	**2.3**
1,1,1-Trichloroethane	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.38**
1,1,2-Trichloroethane	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**0.05**
Trichloroethylene	ug/g	0.01	-	<0.010	-	<0.010	<0.010	<0.010	-	<0.010	**0.05**	**0.061**
Trichlorofluoromethane	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.25**	**4**
Vinyl chloride	ug/g	0.02	-	<0.020	-	<0.020	<0.020	<0.020	-	<0.020	**0.02**	**0.02**
o-Xylene	ug/g	0.02	-	<0.020	-	<0.020	<0.020	<0.020	-	<0.020	**No SCS**	**No SCS**
m+p-Xylenes	ug/g	0.03	-	<0.030	-	<0.030	<0.030	<0.030	-	<0.030	**No SCS**	**No SCS**
Xylenes (Total)	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.05**	**3.1**
4-Bromofluorobenzene	%	%	-	112.1	-	101.3	105.5	101.5	-	104.8	**No SCS**	**No SCS**
1,4-Difluorobenzene	%	%	-	117	-	105.7	110.7	106.4	-	110.2	**No SCS**	**No SCS**
PHCs												
F1 (C6-C10)	ug/g	5	-	<5.0	-	<5.0	<5.0	<5.0	-	<5.0	**25**	**55**
F1 (C6 to C10) minus BTEX	ug/g	5	-	<5.0	-	<5.0	<5.0	<5.0	-	<5.0	**No SCS**	**55**
F2 (C10-C16)	ug/g	10	-	<10	-	<10	<10	<10	-	<10	**10**	**230**
F2 (C10 to C16) minus Naphthalene	ug/g	10	-	<10	-	<10	<10	<10	-	<10	**No SCS**	**No SCS**
F3 (C16-C34)	ug/g	50	-	<50	-	<50	<50	<50	-	<50	**240**	**1,700**
F3 (C16 to C34) minus PAHs	ug/g	50	-	<50	-	<50	<50	<50	-	<50	**No SCS**	**No SCS**
F4 (C34-C50)	ug/g	50	-	<50	-	<50	<50	<50	-	<50	**120**	**3,300**
Total Hydrocarbons (C6-C50)	ug/g	72	-	<72	-	<72	<72	<72	-	<72	**No SCS**	**No SCS**
PAHs												
Acenaphthene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.072**	**7.9**
Acenaphthylene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.093**	**0.15**
Anthracene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.16**	**0.67**
Benzo(a)anthracene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.36**	**0.5**
Benzo(a)pyrene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.3**	**0.3**
Benzo(b&j)fluoranthene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.47**	**0.78**
Benzo(g,h,i)perylene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.68**	**6.6**

PARAMETER	Sample Date:		July 12,2021								MECP Table 1 SCS	MECP Table 3 SCS
	Sample ID:		78ROS-BH1-SS1	78ROS-BH1-SS4	78ROS-BH2-SS1	78ROS-BH2-SS2	78ROS-BH2-SS2-DUP	78ROS-BH2-SS3	78ROS-BH3-SS1	78ROS-BH3-SS4		
	Sample Depth (m bgs)		0 - 0.61	2.29 - 2.74	0 - 0.6	0.60 - 1.37	0.60 - 1.37	1.52 - 2.13	0 - 0.6	2.29 - 2.89		
	UNITS	Detection Limit										
Benzo(k)fluoranthene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.48**	**0.78**
Chrysene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**2.8**	**7**
Dibenz(a,h)anthracene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.1**	**0.1**
Fluoranthene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.56**	**0.69**
Fluorene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.12**	**62**
Indeno(1,2,3-cd)pyrene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**0.23**	**0.38**
1+2-Methylnaphthalenes	ug/g	0.0424	-	<0.042	-	<0.042	<0.042	<0.042	-	<0.042	**0.59**	**0.99**
1-Methylnaphthalene	ug/g	0.03	-	<0.030	-	<0.030	<0.030	<0.030	-	<0.030	**0.59**	**0.99**
2-Methylnaphthalene	ug/g	0.03	-	<0.030	-	<0.030	<0.030	<0.030	-	<0.030	**0.59**	**0.99**
Naphthalene	ug/g	0.013	-	<0.013	-	<0.013	<0.013	<0.013	-	<0.013	**0.09**	**0.6**
Phenanthrene	ug/g	0.046	-	<0.046	-	<0.046	<0.046	<0.046	-	<0.046	**0.69**	**6.2**
Pyrene	ug/g	0.05	-	<0.050	-	<0.050	<0.050	<0.050	-	<0.050	**1**	**78**

**	*O.Reg. 153/04 (as amended) -*
-	*No analytical result*
No SCS	*No Site Condition Standard*
ND	*Non Detectable (i.e. the analytical result was below the method reporting limit for the test)*
100	*Exceeds Table 1 SCS*
100	*Exceeds Table 3 SCS*

Table 4: Groundwater - Analytical Results

Phase II Environmental Assessment
78 Rosemount Avenue, Ottawa

PARAMETER	UNITS	Detection Limit	Sample Date:	July 23,2021			MECP Table 3 SCS
			Sample ID: 78 ROS-MW1	MW1-DUP	78 ROS-MW2	78 ROS-MW3	
Metals and Inorganic Parameters							
Antimony (Sb)-Dissolved	ug/g	0.1	<1.0	<1.0	1.14	0.9	**20000**
Arsenic (As)-Dissolved	ug/g	0.1	<1.0	<1.0	0.51	0.46	**1900**
Barium (Ba)-Dissolved	ug/g	0.1	174	154	228	224	**29000**
Beryllium (Be)-Dissolved	ug/g	0.1	<1.0	<1.0	<0.10	<0.10	**67**
Boron (B)-Dissolved	ug/g	10	<100	<100	81	92	**45000**
Cadmium (Cd)-Dissolved	ug/g	0.01	<0.050	<0.050	<0.010	<0.010	**2.7**
Chromium (Cr)-Dissolved	ug/g	0.5	<5.0	<5.0	<0.50	<0.50	**810**
Chromium, Hexavalent	ug/g	0.5	<0.50	<0.50	<0.50	<0.50	**140**
Cobalt (Co)-Dissolved	ug/g	0.1	1.2	1.2	0.6	0.44	**66**
Copper (Cu)-Dissolved	ug/g	0.2	<2.0	<2.0	1.17	0.72	**87**
Lead (Pb)-Dissolved	ug/g	0.05	4.76	4.14	0.138	0.113	**25**
Mercury (Hg)-Dissolved	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	**0.29**
Molybdenum (Mo)-Dissolved	ug/g	0.05	7.18	7.35	5	5.65	**9200**
Nickel (Ni)-Dissolved	ug/g	0.5	<5.0	<5.0	3.67	2.72	**490**
Selenium (Se)-Dissolved	ug/g	0.05	1.11	1.28	1.82	1.24	**63**
Silver (Ag)-Dissolved	ug/g	0.05	<0.50	<0.50	<0.050	<0.050	**1.5**
Sodium (Na)-Dissolved	ug/g	500	58500	64100	22200	60100	**2300000**
Thallium (Tl)-Dissolved	ug/g	0.01	<0.10	<0.10	0.033	0.032	**510**
Uranium -Dissolved	ug/g	0.01	1.88	1.88	2.3	3.23	**420**
Vanadium (V)-Dissolved	ug/g	0.5	<5.0	<5.0	<0.50	<0.50	**250**
Zinc (Zn)-Dissolved	ug/g	1	<10	15	3.8	<1.0	**1100**
Conductivity	mS/cm	0.003	0.68	0.728	0.718	0.876	**No SCS**
pH	pH units	0.1	7.79	7.8	8.02	7.72	**No SCS**
Chloride (Cl)	mg/L	0.5	54.3	23.2	23.6	44.4	**No SCS**
Cyanide, Weak Acid Diss	ug/L	2	<2.0	<2.0	<2.0	<2.0	**No SCS**

Table 4: Groundwater - Analytical Results

Phase II Environmental Assessment
78 Rosemount Avenue, Ottawa

PARAMETER	UNITS	Detection Limit	Sample Date:	July 23,2021			MECP Table 3 SCS
			Sample ID:	78 ROS-MW1	MW1-DUP	78 ROS-MW2	78 ROS-MW3	
VOCs (including BTEX)								
Acetone	ug/g	30	30	<30	<30	<30	**130000**
Benzene	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**44**
Bromodichloromethane	ug/g	2	2	<2.0	<2.0	<2.0	**85000**
Bromoform	ug/g	5	5	<5.0	<5.0	<5.0	**380**
Bromomethane	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**5.6**
Carbon tetrachloride	ug/g	0.2	0.2	<0.20	<0.20	<0.20	**0.79**
Chlorobenzene	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**630**
Dibromochloromethane	ug/g	2	2	<2.0	<2.0	<2.0	**82000**
Chloroform	ug/g	1	1	<1.0	<1.0	<1.0	**2.4**
1,2-Dibromoethane	ug/g	0.2	0.2	<0.20	<0.20	<0.20	**0.25**
1,2-Dichlorobenzene	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**4600**
1,3-Dichlorobenzene	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**9600**
1,4-Dichlorobenzene	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**8**
Dichlorodifluoromethane	ug/g	2	2	<2.0	<2.0	<2.0	**4400**
1,1-Dichloroethane	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**320**
1,2-Dichloroethane	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**1.6**
1,1-Dichloroethylene	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**1.6**
cis-1,2-Dichloroethylene	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**1.6**
trans-1,2-Dichloroethylene	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**1.6**
Methylene Chloride	ug/g	5	5	<5.0	<5.0	<5.0	**610**
1,2-Dichloropropane	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**16**
cis-1,3-Dichloropropene	ug/g	0.3	0.3	<0.30	<0.30	<0.30	**No SCS**
trans-1,3-Dichloropropene	ug/g	0.3	0.3	<0.30	<0.30	<0.30	**No SCS**
1,3-Dichloropropene (cis & trans)	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**5.2**
Ethylbenzene	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**2300**
n-Hexane	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**51**
Methyl Ethyl Ketone	ug/g	20	20	<20	<20	<20	**470000**
Methyl Isobutyl Ketone	ug/g	20	20	<20	<20	<20	**140000**
MTBE	ug/g	2	2	<2.0	<2.0	<2.0	**190**
Styrene	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**1300**
1,1,1,2-Tetrachloroethane	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**3.3**

Table 4: Groundwater - Analytical Results

Phase II Environmental Assessment
78 Rosemount Avenue, Ottawa

	Sample Date:		July 23,2021				MECP Table 3 SCS
	Sample ID:		78 ROS-MW1	MW1-DUP	78 ROS-MW2	78 ROS-MW3	
PARAMETER	**UNITS**	**Detection Limit**					
1,1,2,2-Tetrachloroethane	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**3.2**
Tetrachloroethylene	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**1.6**
Toluene	ug/g	0.5	0.5	<0.50	<0.50	0.53	**18000**
1,1,1-Trichloroethane	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**640**
1,1,2-Trichloroethane	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**4.7**
Trichloroethylene	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**1.6**
Trichlorofluoromethane	ug/g	5	5	<5.0	<5.0	<5.0	**2500**
Vinyl chloride	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**0.5**
o-Xylene	ug/g	0.3	0.3	<0.30	<0.30	<0.30	**No SCS**
m+p-Xylenes	ug/g	0.4	0.4	<0.40	<0.40	<0.40	**No SCS**
Xylenes (Total)	ug/g	0.5	0.5	<0.50	<0.50	<0.50	**4200**
4-Bromofluorobenzene	%	%	90.7	100.4	90.3	89.9	**No SCS**
1,4-Difluorobenzene	%	%	98.7	99.3	98.1	98.1	**No SCS**
PHCs							
F1 (C6-C10)	ug/g	25	<25	<25	<25	<25	**750**
F1 (C6 to C10) minus BTEX	ug/g	25	<25	<25	<25	<25	**750**
F2 (C10-C16)	ug/g	100	<100	<100	<100	<100	**150**
F2 (C10 to C16) minus Naphthalene	ug/g	100	<100	<100	<100	<100	**No SCS**
F3 (C16-C34)	ug/g	250	<250	<250	<250	410	**500**
F3 (C16 to C34) minus PAHs	ug/g	250	<250	<250	<250	410	**No SCS**
F4 (C34-C50)	ug/g	250	<250	<250	<250	490	**500**
Total Hydrocarbons (C6-C50)	ug/g	370	<370	<370	<370	890	**No SCS**
PAHs							
Acenaphthene	ug/g	0.02	<0.020	<0.020	<0.020	<0.020	**600**
Acenaphthylene	ug/g	0.02	<0.020	<0.020	<0.020	<0.020	**1.8**
Anthracene	ug/g	0.02	<0.020	<0.020	<0.020	<0.020	**2.4**
Benzo(a)anthracene	ug/g	0.02	<0.010	<0.010	<0.010	<0.010	**4.7**
Benzo(a)pyrene	ug/g	0.01	<0.020	<0.020	<0.020	<0.020	**0.81**
Benzo(b&j)fluoranthene	ug/g	0.02	<0.020	<0.020	<0.020	<0.020	**0.75**
Benzo(g,h,i)perylene	ug/g	0.02	<0.020	<0.020	<0.020	<0.020	**0.2**
Benzo(k)fluoranthene	ug/g	0.02	<0.020	<0.020	<0.020	<0.020	**0.4**
Chrysene	ug/g	0.02	<0.020	<0.020	<0.020	<0.020	**1**
Dibenz(a,h)anthracene	ug/g	0.02	0.025	<0.020	<0.020	0.067	**0.52**

Table 4: Groundwater - Analytical Results

Phase II Environmental Assessment
78 Rosemount Avenue, Ottawa

PARAMETER	UNITS	Sample Date: / Sample ID: / Detection Limit	July 23,2021 78 ROS-MW1	MW1-DUP	78 ROS-MW2	78 ROS-MW3	MECP Table 3 SCS
Fluoranthene	ug/g	0.02	0.05	0.051	<0.020	0.026	**130**
Fluorene	ug/g	0.02	<0.020	<0.020	<0.020	<0.020	**400**
Indeno(1,2,3-cd)pyrene	ug/g	0.02	0.188	0.166	0.058	0.104	**0.2**
1+2-Methylnaphthalenes	ug/g	0.0283	0.06	0.048	0.023	0.043	**1800**
1-Methylnaphthalene	ug/g	0.02	0.128	0.118	0.035	0.061	**1800**
2-Methylnaphthalene	ug/g	0.02	0.061	0.057	<0.050	0.055	**1800**
Naphthalene	ug/g	0.05	<0.160	<0.140	<0.036	<0.083	**1400**
Phenanthrene	ug/g	0.036	0.052	0.042	0.034	0.159	**580**
Pyrene	ug/g	0.02					**68**

**	*O.Reg. 153/04 (as amended) -*
-	*No analytical result*
No SCS	*No Site Condition Standard*
ND	*Non Detectable (i.e. the analytical result was below the method reporting limit for the test)*
100	*Exceeds Table 3 SCS*

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
78 ROSEMOUNT AVENUE, OTTAWA, ON

APPENDIX A: BOREHOLE LOGS

McINTOSH PERRY

McINTOSH PERRY

McIntosh Perry
115 Walgreen Road
Carp, ON, K0A 1L0
Telephone: (613) 836-2184

BORING NUMBER 78Ros-BH1

CLIENT JSL Holdings
PROJECT NAME Phase II ESA
PROJECT NUMBER CCO-22-1129
PROJECT LOCATION 78 Rosemount Avenue, Ottawa, Ontario
DATE STARTED 21-7-12 **COMPLETED** 21-7-12
GROUND ELEVATION _____ **HOLE SIZE** 0.05
DRILLING CONTRACTOR Strata
GROUND WATER LEVELS:
DRILLING METHOD Hollow stem
AT TIME OF DRILLING ---
LOGGED BY S.H **CHECKED BY** _____
AT END OF DRILLING ---
NOTES _____
AFTER DRILLING ---

DEPTH (m)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
	SS1		PID = 1 Vapor = 15		0.15 ASPHALT SAND - black, dry, gravel 0.61	SAND
1	SS2		PID = 0 Vapor = 10		SAND - brown, some black sand, dry, gravel 1.37	
2	SS3		PID = 2 Vapor = 20		SAND - brown, fine, dry, layers of rock 2.13	BENTONITE
	SS4		PID = 2 Vapor = 25		SAND - moist, brown, gravel 2.74	
3					BEDROCK	
4						SAND
5						SCREEN
6					6.00	

Bottom of hole at 6.10 m.

McINTOSH PERRY

McIntosh Perry
115 Walgreen Road
Carp, ON, K0A 1L0
Telephone: (613) 836-2184

BORING NUMBER 78Ros-BH2

CLIENT JSL Holdings
PROJECT NAME Phase II ESA
PROJECT NUMBER CCO-22-1129
PROJECT LOCATION 78 Rosemount Avenue, Ottawa, Ontario
DATE STARTED 21-7-12 **COMPLETED** 21-7-12
GROUND ELEVATION _____ **HOLE SIZE** 0.05
DRILLING CONTRACTOR Strata
GROUND WATER LEVELS:
DRILLING METHOD Hollow stem
AT TIME OF DRILLING ---
LOGGED BY S.H **CHECKED BY** _____
AT END OF DRILLING ---
NOTES _____
AFTER DRILLING ---

DEPTH (m)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
	SS1		PID = 0 Vapor = 5		0.02 ASPHALT SAND - brown, fine, dry, gravel 0.60	SAND
1	SS2		PID = 0 Vapor = 5		SAND - brown, dry, fine, layers of rock 1.37	
2	SS3		PID = 0 Vapor = 5		SAND - brown, fine, moist, white rock mixed in, orange tinge 2.13 BEDROCK	BENTONITE
3						
4						SAND
5						SCREEN
6					6.00	

Bottom of hole at 6.10 m.

McINTOSH PERRY

McIntosh Perry
115 Walgreen Road
Carp, ON, K0A 1L0
Telephone: (613) 836-2184

BORING NUMBER 78Ros-BH3

CLIENT JSL Holdings
PROJECT NAME Phase II ESA
PROJECT NUMBER CCO-22-1129
PROJECT LOCATION 78 Rosemount Avenue, Ottawa, Ontario
DATE STARTED 21-7-12 **COMPLETED** 21-7-12
GROUND ELEVATION _____ **HOLE SIZE** 0.05
DRILLING CONTRACTOR Strata
GROUND WATER LEVELS:
DRILLING METHOD Hollow stem
AT TIME OF DRILLING ---
LOGGED BY S.H **CHECKED BY** _____
AT END OF DRILLING ---
NOTES _____
AFTER DRILLING ---

DEPTH (m)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
	SS1		PID = 0 Vapor = 0		0.10 ASPHALT SAND - coarse, dry, black, some gravel, dry, no odour 0.60	SAND
1	SS2		PID = 1 Vapor = 0		SAND - black/brown, fine, dry, gravel, layer of white rock, no odour 1.37	
2	SS3		PID = 0 Vapor = 0		SAND - brown, moist 2.13	BENTONITE
	SS4		PID = 1 Vapor = 0		SAND - brown, moist to wet, layers of white rock 2.89	
3					BEDROCK	SAND
4						
5						SCREEN
6					6.00	

Bottom of hole at 6.10 m.

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
78 ROSEMOUNT AVENUE, OTTAWA, ON

APPENDIX B: LABORATORY CERTIFICATES OF ANALYSIS AND GRAIN SIZE ANALYSIS

McINTOSH PERRY

Mcintosh Perry Limited (Vaughan)
ATTN: STEFAN HOLIK
2010 Winston Park Dr
Oakville, ON L6H 5R7

Date Received: 13-JUL-21
Report Date: 09-AUG-21 08:42 (MT)
Version: FINAL REV. 3

Client Phone: 289-351-1546

Certificate of Analysis

Lab Work Order #: L2613337

Project P.O. #: NOT SUBMITTED
Job Reference: CC0-22-1129
C of C Numbers:
Legal Site Desc:

Comments: Report revised to update criteria for comparison - E. Smith (08 Aug 2021).
Report revised to update criteria for comparison - E. Smith (09 Aug 2021).

Emily Smith
Account Manager

Mcintosh Perry Limited (Vaughan)
ATTN: STEFAN HOLIK
2010 Winston Park Dr
Oakville, ON L6H 5R7

Date Received: 13-JUL-21
Report Date: 09-AUG-21 08:42 (MT)
Version: FINAL REV. 3

Client Phone: 289-351-1546

Certificate of Analysis

Lab Work Order #: L2613337

Project P.O. #: NOT SUBMITTED
Job Reference: CC0-22-1129
C of C Numbers:
Legal Site Desc:

Comments: Report revised to update criteria for comparison. E. Smith (08 Aug 2021).
Report revised to update criteria for comparison. E. Smith (09 Aug 2021).

Sample Details / Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits
L2613337-1 78ROS-BH1-SS3						
Sampled By: CLIENT on 12-JUL-21 @ 16:50						
Matrix: SOIL						#1
Physical Tests						
% Moisture	11.6		0.25	%	15-JUL-21	
Metals						
Antimony (Sb)	1.1		1.0	ug/g	23-JUL-21	1.3
Arsenic (As)	2.3		1.0	ug/g	23-JUL-21	18
Barium (Ba)	63.5		1.0	ug/g	23-JUL-21	220
Beryllium (Be)	<0.50		0.50	ug/g	23-JUL-21	2.5
Boron (B)	<5.0		5.0	ug/g	23-JUL-21	36
Boron (B), Hot Water Ext.	0.18		0.10	ug/g	23-JUL-21	36
Cadmium (Cd)	<0.50		0.50	ug/g	23-JUL-21	1.2
Chromium (Cr)	9.7		1.0	ug/g	23-JUL-21	70
Cobalt (Co)	3.4		1.0	ug/g	23-JUL-21	21
Copper (Cu)	32.4		1.0	ug/g	23-JUL-21	92
Lead (Pb)	82.9		1.0	ug/g	23-JUL-21	120
Mercury (Hg)	0.0309		0.0050	ug/g	23-JUL-21	0.27
Molybdenum (Mo)	<1.0		1.0	ug/g	23-JUL-21	2
Nickel (Ni)	8.9		1.0	ug/g	23-JUL-21	82
Selenium (Se)	<1.0		1.0	ug/g	23-JUL-21	1.5
Silver (Ag)	<0.20		0.20	ug/g	23-JUL-21	0.5
Thallium (Tl)	<0.50		0.50	ug/g	23-JUL-21	1
Uranium (U)	<1.0		1.0	ug/g	23-JUL-21	2.5
Vanadium (V)	19.2		1.0	ug/g	23-JUL-21	86
Zinc (Zn)	50.1		5.0	ug/g	23-JUL-21	290
Speciated Metals						
Chromium, Hexavalent	<0.20		0.20	ug/g	20-JUL-21	0.66
L2613337-2 78ROS-BH1-SS4						
Sampled By: CLIENT on 12-JUL-21 @ 16:50						
Matrix: SOIL						#1
Physical Tests						
% Moisture	7.09		0.25	%	15-JUL-21	
Volatile Organic Compounds						
Acetone	<0.50		0.50	ug/g	19-JUL-21	0.5
Benzene	<0.0068		0.0068	ug/g	19-JUL-21	0.02
Bromodichloromethane	<0.050		0.050	ug/g	19-JUL-21	0.05
Bromoform	<0.050		0.050	ug/g	19-JUL-21	0.05
Bromomethane	<0.050		0.050	ug/g	19-JUL-21	0.05
Carbon tetrachloride	<0.050		0.050	ug/g	19-JUL-21	0.05
Chlorobenzene	<0.050		0.050	ug/g	19-JUL-21	0.05
Dibromochloromethane	<0.050		0.050	ug/g	19-JUL-21	0.05
Chloroform	<0.050		0.050	ug/g	19-JUL-21	0.05
1,2-Dibromoethane	<0.050		0.050	ug/g	19-JUL-21	0.05
1,2-Dichlorobenzene	<0.050		0.050	ug/g	19-JUL-21	0.05
1,3-Dichlorobenzene	<0.050		0.050	ug/g	19-JUL-21	0.05
1,4-Dichlorobenzene	<0.050		0.050	ug/g	19-JUL-21	0.05
Dichlorodifluoromethane	<0.050		0.050	ug/g	19-JUL-21	0.05

Emily Smith
Account Manager

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

#1: T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits
L2613337-1	78ROS-BH1-SS4						#1
Sampled By:	CLIENT on 12-JUL-21 @ 16:50						
Matrix:	SOIL						
Physical Tests							
	% Moisture	11.0		0.25	%	15-JUL-21	
Metals							
	Antimony (Sb)	1.1		1.0	ug/g	23-JUL-21	1.3
	Arsenic (As)	2.8		1.0	ug/g	23-JUL-21	18
	Barium (Ba)	63.5		1.0	ug/g	23-JUL-21	220
	Beryllium (Be)	<0.50		0.50	ug/g	23-JUL-21	2.5
	Boron (B)	<5.0		5.0	ug/g	23-JUL-21	36
	Boron (B), Hot Water Ext.	<0.050		0.050	ug/g	23-JUL-21	36
	Cadmium (Cd)	<0.50		0.50	ug/g	23-JUL-21	1.2
	Chromium (Cr)	9.42		1.0	ug/g	23-JUL-21	70
	Cobalt (Co)	3.46		1.0	ug/g	23-JUL-21	21
	Copper (Cu)	32.6		1.0	ug/g	23-JUL-21	92
	Lead (Pb)	82.9		1.0	ug/g	23-JUL-21	120
	Mercury (Hg)	0.0309		0.0050	ug/g	23-JUL-21	0.27
	Molybdenum (Mo)	1.05		1.0	ug/g	23-JUL-21	2
	Nickel (Ni)	8.9		1.0	ug/g	23-JUL-21	82
	Selenium (Se)	<1.0		1.0	ug/g	23-JUL-21	1.5
	Silver (Ag)	<0.20		0.20	ug/g	23-JUL-21	0.5
	Thallium (Tl)	0.068		0.050	ug/g	23-JUL-21	1
	Uranium (U)	0.606		0.050	ug/g	23-JUL-21	2.3
	Vanadium (V)	19.2		1.0	ug/g	23-JUL-21	86
	Zinc (Zn)	90.1		5.0	ug/g	23-JUL-21	290
Speciated Metals							
	Chromium, Hexavalent	<0.20		0.20	ug/g	20-JUL-21	0.66
Volatile Organic Compounds							
	1,1-Dichloroethane	<0.050		0.050	ug/g	19-JUL-21	0.05
	1,2-Dichloroethane	<0.050		0.050	ug/g	19-JUL-21	0.05
	1,1-Dichloroethylene	<0.050		0.050	ug/g	19-JUL-21	0.05
	cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	19-JUL-21	0.05
	trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	19-JUL-21	0.05
	Methylene Chloride	<0.050		0.050	ug/g	19-JUL-21	0.05
	1,2-Dichloropropane	<0.050		0.050	ug/g	19-JUL-21	0.05
	cis-1,3-Dichloropropene	<0.030		0.030	ug/g	19-JUL-21	
	trans-1,3-Dichloropropene	<0.030		0.030	ug/g	19-JUL-21	
	1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g	19-JUL-21	
	Ethylbenzene	<0.018		0.018	ug/g	19-JUL-21	0.05
	n-Hexane	<0.050		0.050	ug/g	19-JUL-21	0.05
	Methyl Ethyl Ketone	<0.50		0.50	ug/g	19-JUL-21	0.5
	Methyl Isobutyl Ketone	<0.50		0.50	ug/g	19-JUL-21	0.5
	MTBE	<0.050		0.050	ug/g	19-JUL-21	0.05
	Styrene	<0.050		0.050	ug/g	19-JUL-21	0.05
	1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	19-JUL-21	0.05
	1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	19-JUL-21	0.05
	Tetrachloroethylene	<0.050		0.050	ug/g	19-JUL-21	0.05
	Toluene	<0.080		0.080	ug/g	19-JUL-21	0.2
	1,1,1-Trichloroethane	<0.050		0.050	ug/g	19-JUL-21	0.05
	1,1,2-Trichloroethane	<0.050		0.050	ug/g	19-JUL-21	0.05
	Trichloroethylene	<0.010		0.010	ug/g	19-JUL-21	0.05
	Trichlorofluoromethane	<0.050		0.050	ug/g	19-JUL-21	0.25
	Vinyl chloride	<0.020		0.020	ug/g	19-JUL-21	0.02
	o-Xylene	<0.020		0.020	ug/g	19-JUL-21	
	m+p-Xylenes	<0.030		0.030	ug/g	19-JUL-21	
	Xylenes (Total)	<0.050		0.050	ug/g	19-JUL-21	0.05
	Surrogate: 4-Bromofluorobenzene	112.1		50-140	%	19-JUL-21	
	Surrogate: 1,4-Difluorobenzene	117.0		50-140	%	19-JUL-21	
Hydrocarbons							
	F1 (C6-C10)	<5.0		5.0	ug/g	19-JUL-21	25
	F1-BTEX	<5.0		5.0	ug/g	19-JUL-21	25
	F2 (C10-C16)	<10		10	ug/g	16-JUL-21	10
	F2-Naphth	<10		10	ug/g	19-JUL-21	
	F3 (C16-C34)	<50		50	ug/g	16-JUL-21	240
	F3-PAH	<50		50	ug/g	19-JUL-21	
	F4 (C34-C50)	<50		50	ug/g	16-JUL-21	120
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	19-JUL-21	
	Chrom. to baseline at nC50	YES			No Unit	16-JUL-21	
	Surrogate: 2-Bromobenzotrifluoride	77.0		60-140	%	19-JUL-21	
	Surrogate: 3,4-Dichlorotoluene	96.2		60-140	%	19-JUL-21	
Polycyclic Aromatic Hydrocarbons							
	Acenaphthene	<0.050		0.050	ug/g	19-JUL-21	0.05
	Acenaphthylene	<0.050		0.050	ug/g	19-JUL-21	0.05
	Anthracene	<0.050		0.050	ug/g	19-JUL-21	0.093

Lab Work Order #: L2613337

Project P.O. #: NOT SUBMITTED

Job Reference: CC0-22-1129

C of C Numbers:

Legal Site Desc:

Comments: Report revised to update criteria for comparison/E. Smith (09Aug 2021).
Report revised to update criteria for comparison/E. Smith (09Aug 2021).

Mcintosh Perry Limited (Vaughan)
ATTN: STEFAN HOLIK
2010 Winston Park Dr
Oakville, ON L6H 5R7

Client Phone: 289-351-1546

Date Received: 13-JUL-21
Report Date: 09-AUG-21 08:42 (MT)
Version: FINAL REV. 3

Emily Smith
Account Manager

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

#1: T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

ANALYTICAL GUIDELINE REPORT

CC0-22-1129

Certificate of Analysis

Mcintosh Perry Limited (Vaughan)
ATTN: STEFAN HOLIK
2010 Winston Park Dr
Oakville, ON L6H 5R7
Client Phone: 289-351-1546

Date Received: 13-JUL-21
Report Date: 09-AUG-21 08:42 (MT)
Version: FINAL REV. 3

Lab Work Order #: L2613337
Project P.O. #: NOT SUBMITTED
Job Reference: CC0-22-1129
C of C Numbers:
Legal Site Desc:

Comments: Report revised to update criteria for comparison (E. Smith 09 Aug 2021).
Report revised to update criteria for comparison (E. Smith 09 Aug 2021).

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits
L2613337-1 78ROS-BH1-SS1							
Sampled By: CLIENT on 12-JUL-21 @ 16:50							
Matrix: SOIL							#1
L2613337-2 78ROS-BH1-SS4							
Sampled By: CLIENT on 12-JUL-21 @ 16:50							
Matrix: SOIL							
L2613337-3 78ROS-BH2-SS1							
Sampled By: CLIENT on 12-JUL-21 @ 15:30							
Matrix: SOIL							
Physical Tests	% Moisture	7.09		0.25	%	15-JUL-21	
Volatile Organic Compounds	Tetrachloroethylene	<0.050		0.050	ug/g	19-JUL-21	0.05
	Toluene	<0.080		0.080	ug/g	19-JUL-21	0.2
	1,1,1-Trichloroethane	<0.050		0.050	ug/g	19-JUL-21	0.05
	1,1,2-Trichloroethane	<0.050		0.050	ug/g	19-JUL-21	0.05
	Trichloroethylene	<0.010		0.010	ug/g	19-JUL-21	0.05
	Trichlorofluoromethane	<0.050		0.050	ug/g	19-JUL-21	0.25
	Vinyl chloride	<0.020		0.020	ug/g	19-JUL-21	0.02
	o-Xylene	<0.020		0.020	ug/g	19-JUL-21	
	m+p-Xylenes	<0.030		0.030	ug/g	19-JUL-21	
	Xylenes (Total)	<0.050		0.050	ug/g	19-JUL-21	0.05
	Surrogate: 4-Bromofluorobenzene	112.1		50-140	%	19-JUL-21	
	Surrogate: 1,4-Difluorobenzene	117.0		50-140	%	19-JUL-21	
Metals	Antimony (Sb)	<1.0		1.0	ug/g	23-JUL-21	1.3
	Arsenic (As)	1.1		1.0	ug/g	23-JUL-21	18
	Barium (Ba)	35.3		1.0	ug/g	23-JUL-21	220
	Boron, Hot Water Ext.	0.30		0.10	ug/g	23-JUL-21	36
	Chromium, Hexavalent	<0.20		0.20	ug/g	23-JUL-21	0.66
	Uranium (U)	<1.0		1.0	ug/g	23-JUL-21	2.5
	Vanadium (V)	19.2		1.0	ug/g	23-JUL-21	86
	Zinc (Zn)	50.1		5.0	ug/g	23-JUL-21	290
Hydrocarbons	F1 (C6-C10)	<5.0		5.0	ug/g	19-JUL-21	25
	F1-BTEX	<5.0		5.0	ug/g	19-JUL-21	25
	F2 (C10-C16)	<10		10	ug/g	16-JUL-21	10
	F2-Naphth	<10		10	ug/g	16-JUL-21	
	F3 (C16-C34)	<50		50	ug/g	16-JUL-21	240
	F3-PAH	<50		50	ug/g	16-JUL-21	
	F4 (C34-C50)	<50		50	ug/g	16-JUL-21	120
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	16-JUL-21	
	Chrom. to baseline at nC50	YES			No Unit	16-JUL-21	
	Surrogate: 2-Bromobenzotrifluoride	77.0		60-140	%	16-JUL-21	
	Surrogate: 3,4-Dichlorotoluene	96.2		60-140	%	19-JUL-21	
Polycyclic Aromatic Hydrocarbons	Acenaphthene	<0.050		0.050	ug/g	19-JUL-21	0.072
	Acenaphthylene	<0.050		0.050	ug/g	19-JUL-21	0.093
	Anthracene	<0.050		0.050	ug/g	19-JUL-21	0.16

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T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

#1: T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits
L2613337-2 78ROS-BH2-SS1							
Sampled By: CLIENT on 12-JUL-21 @ 16:50							
Matrix: SOIL							#1
L2613337-4 78ROS-BH2-SS2							
Sampled By: CLIENT on 12-JUL-21 @ 15:30							
Matrix: SOIL							
L2613337-3 78ROS-BH2-SS1							
Sampled By: CLIENT on 12-JUL-21 @ 15:30							
Matrix: SOIL							
L2613337-2 78ROS-BH1-SS4							
Sampled By: CLIENT on 12-JUL-21 @ 16:50							
Matrix: SOIL							

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Report Date: 09-AUG-21 08:42 (MT)
Version: FINAL REV. 3

Client Phone: 289-351-1546

Certificate of Analysis

Lab Work Order #: L2613337

Project P.O. #: NOT SUBMITTED
Job Reference: CC0-22-1129
C of C Numbers:
Legal Site Desc:

Comments: Report revised to update criteria for comparison (E. Smith 09 Aug 2021).

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ALS Environmental

ANALYTICAL GUIDELINE REPORT

CC0-22-1129

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits

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#1: T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

ALS Environmental

ANALYTICAL GUIDELINE REPORT

CC0-22-1129

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits
L2613337-4 78ROS-BH2-SS2							
Sampled By: CLIENT on 12-JUL-21 @ 15:30							
Matrix: SOIL							#1
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]

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#1: T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

ANALYTICAL GUIDELINE REPORT

CC0-22-1129

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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Job Reference: CC0-22-1129
C of C Numbers:
Legal Site Desc:

L2613337-4 78ROS-BH2-SS2
Sampled By: CLIENT on 12-JUL-21 @ 15:30
Matrix: SOIL

Report revised to update criteria for comparison (E. Smith 09 Aug 2021).

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Account Manager

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T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

#1: T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

ANALYTICAL GUIDELINE REPORT

CC0-22-1129

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits

L2613337-4 78ROS-BH2-SS2-DUP
Sampled By: CLIENT on 12-JUL-21 @ 15:30
Matrix: SOIL

Physical Tests

Hydrocarbons

Volatile Organic Compounds

Polycyclic Aromatic Hydrocarbons

L2613337-5 78ROS-BH2-SS3
Sampled By: CLIENT on 12-JUL-21 @ 15:30
Matrix: SOIL

Physical Tests

Hydrocarbons

Volatile Organic Compounds

Polycyclic Aromatic Hydrocarbons

L2613337-6 78ROS-BH2-SS4
Sampled By: CLIENT on 12-JUL-21 @ 16:50
Matrix: SOIL

Physical Tests

Hydrocarbons

Volatile Organic Compounds

Polycyclic Aromatic Hydrocarbons

L2613337-7 78ROS-BH2-SS2-DUP
Sampled By: CLIENT on 12-JUL-21 @ 15:30
Matrix: SOIL

Physical Tests

Hydrocarbons

Volatile Organic Compounds

Polycyclic Aromatic Hydrocarbons

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Version: #1 FINAL REV. 3

Certificate of Analysis

Lab Work Order #: L2613337

Project P.O. #: NOT SUBMITTED
Job Reference: CC0-22-1129
Lot of C Numbers:
Legal Site Desc:

Report revised to update criteria for comparison (E. Smith, 11-Aug-2021).
Report revised to update criteria for comparison (E. Smith, 11-Aug-2021).

Emily Smith
Account Manager

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#1: T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

ANALYTICAL GUIDELINE REPORT

CC0-22-1129

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits
L2613337-4 78ROS-BH2-SS2							
Sampled By: CLIENT on 12-JUL-21 @ 15:30							
Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
Physical Tests	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
Hydrocarbons	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
Volatile Organic Compounds	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
Metals	Molybdenum (Mo)	[illegible]		[illegible]	ug/g	[illegible]	*120

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Legal Site Desc:

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#1: T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

ANALYTICAL GUIDELINE REPORT

CC0-22-1129

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits

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#1: T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

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Report revised to update criteria for comparison (E. Smith, 09 Aug 2021).
Report revised to update criteria for comparison (E. Smith, 09 Aug 2021).

Emily Smith
Account Manager

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits #1
L2613337-4 78ROS-BH2-SS2							
Sampled By: CLIENT on 12-JUL-21 @ 15:30							
Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Physical Tests							
Hydrocarbons							
Volatile Organic Compounds							
L2613337-5 78ROS-BH3-SS4							
Sampled By: CLIENT on 12-JUL-21 @ 11:31							
Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Physical Tests							
Hydrocarbons							
Volatile Organic Compounds							
L2613337-6 78ROS-BH3-SS5							
Sampled By: CLIENT on 12-JUL-21 @ 15:30							
Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Physical Tests							
Hydrocarbons							
Volatile Organic Compounds							
L2613337-7 78ROS-BH4-SS1							
Sampled By: CLIENT on 12-JUL-21 @ 16:50							
Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Physical Tests							
Hydrocarbons							
Volatile Organic Compounds							
L2613337-8 78ROS-BH4-SS3							
Sampled By: CLIENT on 12-JUL-21 @ 15:30							
Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Physical Tests							
Hydrocarbons							
Volatile Organic Compounds							
L2613337-9 78ROS-BH2-SS2-DUP							
Sampled By: CLIENT on 12-JUL-21 @ 15:30							
Matrix: SOIL							
Polycyclic Aromatic Hydrocarbons							
Physical Tests							
Hydrocarbons							
Volatile Organic Compounds							

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T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

#1: T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

ANALYTICAL GUIDELINE REPORT

CC0-22-1129

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits
L2613337-4 78ROS-BH2-SS2							
Sampled By: CLIENT on 12-JUL-21 @ 15:30							
Matrix: SOIL							
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]

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Client Phone: 289-351-1546

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Lab Work Order #: L2613337

Project P.O. #: NOT SUBMITTED
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Legal Site Desc:

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Emily Smith
Account Manager

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Reference Information

ANALYTICAL GUIDELINE REPORT

L2613337 CONTD....
09-AUG-21 08:42 (MT)
CC0-22-1129

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
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 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

CR-CR6-HANDBOOK-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 ...

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental ...

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 result where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

Report revised to update criteria for comparison (E. Smith 09 Aug 2021).

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.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:
1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT	Soil	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS

Fraction F1 is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/FID.

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 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

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T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

#1: T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

Reference Information

ANALYTICAL GUIDELINE REPORT

Methods Listed (if applicable):

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

Certificate of Analysis

Lab Work Order #: L2613337

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Petroleum Hydrocarbons (F2-F4 fractions) are extracted from soil with 1:1 hexane:acetone using a rotary extractor. Extracts are treated with silica gel

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 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

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

Report revised to update criteria for comparison (E. Smith 09 Aug 2021).

Emily Smith
Account Manager

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Soil and sediment samples are extracted in methanol and analyzed by headspace-GC/MS.

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 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

#1: T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

Reference Information

ANALYTICAL GUIDELINE REPORT

Methods Listed (if applicable):

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Laboratory Location

ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

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#1: T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use

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 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

Quality Control Report

Workorder: L2613337 Report Date: 09-AUG-21

Client: Mcintosh Perry Limited (Vaughan)
2010 Winston Park Dr
Oakville, ON L6H 5R7
Contact: STEFAN HOLIK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
B-HWS-R511-WT	**Soil**							
Batch R5528090								
WG3582010-4 DUP		**L2613747-2**						
Boron (B), Hot Water Ext.		0.19	0.19		ug/g	1.4	30	23-JUL-21
WG3582010-2 IRM		**WT SAR4**						
Boron (B), Hot Water Ext.			102.1		%		70-130	23-JUL-21
WG3582010-3 LCS								
Boron (B), Hot Water Ext.			101.0		%		70-130	23-JUL-21
WG3582010-1 MB								
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	23-JUL-21
CR-CR6-IC-WT	**Soil**							
Batch R5525871								
WG3576223-4 CRM		**WT-SQC012**						
Chromium, Hexavalent			90.9		%		70-130	20-JUL-21
WG3576223-3 DUP		**L2612755-3**						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	20-JUL-21
WG3576223-2 LCS								
Chromium, Hexavalent			97.8		%		80-120	20-JUL-21
WG3576223-1 MB								
Chromium, Hexavalent			<0.20		ug/g		0.2	20-JUL-21
F1-HS-511-WT	**Soil**							
Batch R5524889								
WG3575896-4 DUP		**WG3575896-3**						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	19-JUL-21
WG3575896-2 LCS								
F1 (C6-C10)			106.6		%		80-120	19-JUL-21
WG3575896-1 MB								
F1 (C6-C10)			<5.0		ug/g		5	19-JUL-21
Surrogate: 3,4-Dichlorotoluene			119.3		%		60-140	19-JUL-21
WG3575896-5 MS		**WG3575896-3**						
F1 (C6-C10)			118.7		%		60-140	19-JUL-21
F2-F4-511-WT	**Soil**							
Batch R5524271								
WG3576240-3 DUP		**WG3576240-5**						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	16-JUL-21
F3 (C16-C34)		<50	69	RPD-NA	ug/g	N/A	30	16-JUL-21
F4 (C34-C50)		54	122	J	ug/g	68	100	16-JUL-21
WG3576240-2 LCS								
F2 (C10-C16)			90.3		%		80-120	16-JUL-21

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-511-WT	**Soil**							
Batch R5524271								
WG3576240-2 LCS								
F3 (C16-C34)			89.3		%		80-120	16-JUL-21
F4 (C34-C50)			83.0		%		80-120	16-JUL-21
WG3576240-1 MB								
F2 (C10-C16)			<10		ug/g		10	16-JUL-21
F3 (C16-C34)			<50		ug/g		50	16-JUL-21
F4 (C34-C50)			<50		ug/g		50	16-JUL-21
Surrogate: 2-Bromobenzotrifluoride			74.8		%		60-140	16-JUL-21
WG3576240-4 MS		**WG3576240-5**						
F2 (C10-C16)			87.9		%		60-140	16-JUL-21
F3 (C16-C34)			93.1		%		60-140	16-JUL-21
F4 (C34-C50)			103.0		%		60-140	16-JUL-21
HG-200.2-CVAA-WT	**Soil**							
Batch R5527992								
WG3582009-2 CRM		**WT-SS-2**						
Mercury (Hg)			93.0		%		70-130	23-JUL-21
WG3582009-6 DUP		**WG3582009-5**						
Mercury (Hg)		<0.0050	<0.0050	RPD-NA	ug/g	N/A	40	23-JUL-21
WG3582009-3 LCS								
Mercury (Hg)			98.5		%		80-120	23-JUL-21
WG3582009-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	23-JUL-21
MET-200.2-CCMS-WT	**Soil**							
Batch R5528203								
WG3582009-2 CRM		**WT-SS-2**						
Antimony (Sb)			103.6		%		70-130	23-JUL-21
Arsenic (As)			103.9		%		70-130	23-JUL-21
Barium (Ba)			105.0		%		70-130	23-JUL-21
Beryllium (Be)			99.6		%		70-130	23-JUL-21
Boron (B)			8.9		mg/kg		3.5-13.5	23-JUL-21
Cadmium (Cd)			104.3		%		70-130	23-JUL-21
Chromium (Cr)			99.3		%		70-130	23-JUL-21
Cobalt (Co)			100.6		%		70-130	23-JUL-21
Copper (Cu)			98.2		%		70-130	23-JUL-21
Lead (Pb)			97.8		%		70-130	23-JUL-21
Molybdenum (Mo)			101.6		%		70-130	23-JUL-21

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5528203								
WG3582009-2 CRM		**WT-SS-2**						
Nickel (Ni)			99.2		%		70-130	23-JUL-21
Selenium (Se)			0.13		mg/kg		0-0.34	23-JUL-21
Silver (Ag)			88.1		%		70-130	23-JUL-21
Thallium (Tl)			0.076		mg/kg		0.029-0.129	23-JUL-21
Uranium (U)			96.0		%		70-130	23-JUL-21
Vanadium (V)			103.8		%		70-130	23-JUL-21
Zinc (Zn)			96.2		%		70-130	23-JUL-21
WG3582009-6 DUP		**WG3582009-5**						
Antimony (Sb)		<0.10	0.12	RPD-NA	ug/g	N/A	30	23-JUL-21
Arsenic (As)		1.16	1.13		ug/g	2.7	30	23-JUL-21
Barium (Ba)		44.2	44.1		ug/g	0.2	40	23-JUL-21
Beryllium (Be)		0.25	0.24		ug/g	5.2	30	23-JUL-21
Boron (B)		6.4	5.7		ug/g	11	30	23-JUL-21
Cadmium (Cd)		0.042	0.047		ug/g	11	30	23-JUL-21
Chromium (Cr)		11.0	10.6		ug/g	4.3	30	23-JUL-21
Cobalt (Co)		3.57	3.46		ug/g	3.0	30	23-JUL-21
Copper (Cu)		7.13	7.55		ug/g	5.8	30	23-JUL-21
Lead (Pb)		3.17	3.13		ug/g	1.3	40	23-JUL-21
Molybdenum (Mo)		0.17	0.18		ug/g	4.8	40	23-JUL-21
Nickel (Ni)		7.04	6.95		ug/g	1.3	30	23-JUL-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	23-JUL-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	23-JUL-21
Thallium (Tl)		0.069	0.060		ug/g	14	30	23-JUL-21
Uranium (U)		1.59	1.57		ug/g	1.4	30	23-JUL-21
Vanadium (V)		20.0	19.3		ug/g	3.7	30	23-JUL-21
Zinc (Zn)		21.1	21.1		ug/g	0.2	30	23-JUL-21
WG3582009-4 LCS								
Antimony (Sb)			102.5		%		80-120	23-JUL-21
Arsenic (As)			104.6		%		80-120	23-JUL-21
Barium (Ba)			103.8		%		80-120	23-JUL-21
Beryllium (Be)			96.7		%		80-120	23-JUL-21
Boron (B)			92.9		%		80-120	23-JUL-21
Cadmium (Cd)			100.5		%		80-120	23-JUL-21

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	**Soil**							
Batch R5528203								
WG3582009-4 LCS								
Chromium (Cr)			100.9		%		80-120	23-JUL-21
Cobalt (Co)			101.8		%		80-120	23-JUL-21
Copper (Cu)			98.9		%		80-120	23-JUL-21
Lead (Pb)			99.2		%		80-120	23-JUL-21
Molybdenum (Mo)			103.0		%		80-120	23-JUL-21
Nickel (Ni)			99.95		%		80-120	23-JUL-21
Selenium (Se)			101.4		%		80-120	23-JUL-21
Silver (Ag)			102.3		%		80-120	23-JUL-21
Thallium (Tl)			99.1		%		80-120	23-JUL-21
Uranium (U)			101.5		%		80-120	23-JUL-21
Vanadium (V)			105.1		%		80-120	23-JUL-21
Zinc (Zn)			99.95		%		80-120	23-JUL-21
WG3582009-1 MB								
Antimony (Sb)			<0.10		mg/kg		0.1	23-JUL-21
Arsenic (As)			<0.10		mg/kg		0.1	23-JUL-21
Barium (Ba)			<0.50		mg/kg		0.5	23-JUL-21
Beryllium (Be)			<0.10		mg/kg		0.1	23-JUL-21
Boron (B)			<5.0		mg/kg		5	23-JUL-21
Cadmium (Cd)			<0.020		mg/kg		0.02	23-JUL-21
Chromium (Cr)			<0.50		mg/kg		0.5	23-JUL-21
Cobalt (Co)			<0.10		mg/kg		0.1	23-JUL-21
Copper (Cu)			<0.50		mg/kg		0.5	23-JUL-21
Lead (Pb)			<0.50		mg/kg		0.5	23-JUL-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	23-JUL-21
Nickel (Ni)			<0.50		mg/kg		0.5	23-JUL-21
Selenium (Se)			<0.20		mg/kg		0.2	23-JUL-21
Silver (Ag)			<0.10		mg/kg		0.1	23-JUL-21
Thallium (Tl)			<0.050		mg/kg		0.05	23-JUL-21
Uranium (U)			<0.050		mg/kg		0.05	23-JUL-21
Vanadium (V)			<0.20		mg/kg		0.2	23-JUL-21
Zinc (Zn)			<2.0		mg/kg		2	23-JUL-21
MOISTURE-WT	**Soil**							

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R5521776								
WG3576048-3 DUP		**L2614031-1**						
% Moisture		5.91	6.44		%	8.5	20	15-JUL-21
WG3576048-2 LCS								
% Moisture			99.2		%		90-110	15-JUL-21
WG3576048-1 MB								
% Moisture			<0.25		%		0.25	15-JUL-21
PAH-511-WT	**Soil**							
Batch R5523417								
WG3576221-3 DUP		**WG3576221-5**						
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	16-JUL-21
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	16-JUL-21
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	16-JUL-21
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	16-JUL-21
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	16-JUL-21
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	16-JUL-21
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	16-JUL-21
Benzo(b&j)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	16-JUL-21
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	16-JUL-21
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	16-JUL-21
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	16-JUL-21
Dibenz(a,h)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	16-JUL-21
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	16-JUL-21
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	16-JUL-21
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	16-JUL-21
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	16-JUL-21
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	16-JUL-21
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	16-JUL-21
WG3576221-2 LCS								
1-Methylnaphthalene			93.0		%		50-140	16-JUL-21
2-Methylnaphthalene			88.8		%		50-140	16-JUL-21
Acenaphthene			87.7		%		50-140	16-JUL-21
Acenaphthylene			81.8		%		50-140	16-JUL-21
Anthracene			77.8		%		50-140	16-JUL-21
Benzo(a)anthracene			88.4		%		50-140	16-JUL-21
Benzo(a)pyrene			75.5		%		50-140	16-JUL-21

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Soil**							
Batch R5523417								
WG3576221-2 LCS								
Benzo(b&j)fluoranthene			77.6		%		50-140	16-JUL-21
Benzo(g,h,i)perylene			76.2		%		50-140	16-JUL-21
Benzo(k)fluoranthene			90.9		%		50-140	16-JUL-21
Chrysene			93.8		%		50-140	16-JUL-21
Dibenz(a,h)anthracene			81.5		%		50-140	16-JUL-21
Fluoranthene			85.5		%		50-140	16-JUL-21
Fluorene			80.7		%		50-140	16-JUL-21
Indeno(1,2,3-cd)pyrene			77.4		%		50-140	16-JUL-21
Naphthalene			88.2		%		50-140	16-JUL-21
Phenanthrene			90.9		%		50-140	16-JUL-21
Pyrene			87.5		%		50-140	16-JUL-21
WG3576221-1 MB								
1-Methylnaphthalene			<0.030		ug/g		0.03	16-JUL-21
2-Methylnaphthalene			<0.030		ug/g		0.03	16-JUL-21
Acenaphthene			<0.050		ug/g		0.05	16-JUL-21
Acenaphthylene			<0.050		ug/g		0.05	16-JUL-21
Anthracene			<0.050		ug/g		0.05	16-JUL-21
Benzo(a)anthracene			<0.050		ug/g		0.05	16-JUL-21
Benzo(a)pyrene			<0.050		ug/g		0.05	16-JUL-21
Benzo(b&j)fluoranthene			<0.050		ug/g		0.05	16-JUL-21
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	16-JUL-21
Benzo(k)fluoranthene			<0.050		ug/g		0.05	16-JUL-21
Chrysene			<0.050		ug/g		0.05	16-JUL-21
Dibenz(a,h)anthracene			<0.050		ug/g		0.05	16-JUL-21
Fluoranthene			<0.050		ug/g		0.05	16-JUL-21
Fluorene			<0.050		ug/g		0.05	16-JUL-21
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	16-JUL-21
Naphthalene			<0.013		ug/g		0.013	16-JUL-21
Phenanthrene			<0.046		ug/g		0.046	16-JUL-21
Pyrene			<0.050		ug/g		0.05	16-JUL-21
Surrogate: 2-Fluorobiphenyl			83.2		%		50-140	16-JUL-21
Surrogate: d14-Terphenyl			83.9		%		50-140	16-JUL-21
WG3576221-4 MS		**WG3576221-5**						
1-Methylnaphthalene			94.3		%		50-140	16-JUL-21

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Soil**							
Batch R5523417								
WG3576221-4 MS		**WG3576221-5**						
2-Methylnaphthalene			91.3		%		50-140	16-JUL-21
Acenaphthene			89.3		%		50-140	16-JUL-21
Acenaphthylene			80.0		%		50-140	16-JUL-21
Anthracene			80.3		%		50-140	16-JUL-21
Benzo(a)anthracene			90.7		%		50-140	16-JUL-21
Benzo(a)pyrene			75.8		%		50-140	16-JUL-21
Benzo(b&j)fluoranthene			79.0		%		50-140	16-JUL-21
Benzo(g,h,i)perylene			81.9		%		50-140	16-JUL-21
Benzo(k)fluoranthene			90.0		%		50-140	16-JUL-21
Chrysene			95.3		%		50-140	16-JUL-21
Dibenz(a,h)anthracene			81.4		%		50-140	16-JUL-21
Fluoranthene			91.6		%		50-140	16-JUL-21
Fluorene			83.4		%		50-140	16-JUL-21
Indeno(1,2,3-cd)pyrene			79.6		%		50-140	16-JUL-21
Naphthalene			90.0		%		50-140	16-JUL-21
Phenanthrene			93.0		%		50-140	16-JUL-21
Pyrene			91.9		%		50-140	16-JUL-21
PSA-MUST-SK	**Soil**							
Batch R5529503								
WG3583688-1 DUP		**L2613337-9**						
MUST PSA % > 75um		76.7	74.9	J	%	1.8	5	26-JUL-21
WG3583688-2 IRM		**2020-PSA_SOIL**						
MUST PSA % > 75um			42.0		%		37.9-47.9	26-JUL-21
VOC-511-HS-WT	**Soil**							
Batch R5524889								
WG3575896-4 DUP		**WG3575896-3**						
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R5524889								
WG3575896-4 DUP		**WG3575896-3**						
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	19-JUL-21
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	19-JUL-21
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	19-JUL-21
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	19-JUL-21
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	19-JUL-21
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	19-JUL-21
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	19-JUL-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	19-JUL-21
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	19-JUL-21
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	19-JUL-21
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	19-JUL-21
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-JUL-21
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	19-JUL-21
WG3575896-2 LCS								

Quality Control Report

Client: Mcintosh Perry Limited (Vaughan)
2010 Winston Park Dr
Oakville, ON L6H 5R7
Contact: STEFAN HOLIK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R5524889								
WG3575896-2 LCS								
1,1,1,2-Tetrachloroethane			100.9		%		60-130	19-JUL-21
1,1,2,2-Tetrachloroethane			97.4		%		60-130	19-JUL-21
1,1,1-Trichloroethane			101.5		%		60-130	19-JUL-21
1,1,2-Trichloroethane			97.3		%		60-130	19-JUL-21
1,1-Dichloroethane			102.5		%		60-130	19-JUL-21
1,1-Dichloroethylene			101.1		%		60-130	19-JUL-21
1,2-Dibromoethane			93.7		%		70-130	19-JUL-21
1,2-Dichlorobenzene			105.9		%		70-130	19-JUL-21
1,2-Dichloroethane			87.0		%		60-130	19-JUL-21
1,2-Dichloropropane			100.5		%		70-130	19-JUL-21
1,3-Dichlorobenzene			112.2		%		70-130	19-JUL-21
1,4-Dichlorobenzene			111.2		%		70-130	19-JUL-21
Acetone			93.0		%		60-140	19-JUL-21
Benzene			100.4		%		70-130	19-JUL-21
Bromodichloromethane			103.2		%		50-140	19-JUL-21
Bromoform			93.6		%		70-130	19-JUL-21
Bromomethane			86.4		%		50-140	19-JUL-21
Carbon tetrachloride			100.5		%		70-130	19-JUL-21
Chlorobenzene			106.4		%		70-130	19-JUL-21
Chloroform			98.6		%		70-130	19-JUL-21
cis-1,2-Dichloroethylene			100.3		%		70-130	19-JUL-21
cis-1,3-Dichloropropene			103.6		%		70-130	19-JUL-21
Dibromochloromethane			94.3		%		60-130	19-JUL-21
Dichlorodifluoromethane			48.2	MES	%		50-140	19-JUL-21
Ethylbenzene			111.3		%		70-130	19-JUL-21
n-Hexane			99.9		%		70-130	19-JUL-21
Methylene Chloride			91.9		%		70-130	19-JUL-21
MTBE			105.5		%		70-130	19-JUL-21
m+p-Xylenes			111.5		%		70-130	19-JUL-21
Methyl Ethyl Ketone			90.9		%		60-140	19-JUL-21
Methyl Isobutyl Ketone			95.4		%		60-140	19-JUL-21
o-Xylene			109.0		%		70-130	19-JUL-21
Styrene			106.8		%		70-130	19-JUL-21

Quality Control Report

Client: Mcintosh Perry Limited (Vaughan)
2010 Winston Park Dr
Oakville, ON L6H 5R7
Contact: STEFAN HOLIK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R5524889								
WG3575896-2 LCS								
Tetrachloroethylene			110.6		%		60-130	19-JUL-21
Toluene			107.9		%		70-130	19-JUL-21
trans-1,2-Dichloroethylene			107.9		%		60-130	19-JUL-21
trans-1,3-Dichloropropene			103.0		%		70-130	19-JUL-21
Trichloroethylene			102.5		%		60-130	19-JUL-21
Trichlorofluoromethane			89.4		%		50-140	19-JUL-21
Vinyl chloride			77.2		%		60-140	19-JUL-21
WG3575896-1 MB								
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	19-JUL-21
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	19-JUL-21
1,1,1-Trichloroethane			<0.050		ug/g		0.05	19-JUL-21
1,1,2-Trichloroethane			<0.050		ug/g		0.05	19-JUL-21
1,1-Dichloroethane			<0.050		ug/g		0.05	19-JUL-21
1,1-Dichloroethylene			<0.050		ug/g		0.05	19-JUL-21
1,2-Dibromoethane			<0.050		ug/g		0.05	19-JUL-21
1,2-Dichlorobenzene			<0.050		ug/g		0.05	19-JUL-21
1,2-Dichloroethane			<0.050		ug/g		0.05	19-JUL-21
1,2-Dichloropropane			<0.050		ug/g		0.05	19-JUL-21
1,3-Dichlorobenzene			<0.050		ug/g		0.05	19-JUL-21
1,4-Dichlorobenzene			<0.050		ug/g		0.05	19-JUL-21
Acetone			<0.50		ug/g		0.5	19-JUL-21
Benzene			<0.0068		ug/g		0.0068	19-JUL-21
Bromodichloromethane			<0.050		ug/g		0.05	19-JUL-21
Bromoform			<0.050		ug/g		0.05	19-JUL-21
Bromomethane			<0.050		ug/g		0.05	19-JUL-21
Carbon tetrachloride			<0.050		ug/g		0.05	19-JUL-21
Chlorobenzene			<0.050		ug/g		0.05	19-JUL-21
Chloroform			<0.050		ug/g		0.05	19-JUL-21
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	19-JUL-21
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	19-JUL-21
Dibromochloromethane			<0.050		ug/g		0.05	19-JUL-21
Dichlorodifluoromethane			<0.050		ug/g		0.05	19-JUL-21
Ethylbenzene			<0.018		ug/g		0.018	19-JUL-21
n-Hexane			<0.050		ug/g		0.05	19-JUL-21

Quality Control Report

Client: Mcintosh Perry Limited (Vaughan)
2010 Winston Park Dr
Oakville, ON L6H 5R7
Contact: STEFAN HOLIK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R5524889								
WG3575896-1 MB								
Methylene Chloride			<0.050		ug/g		0.05	19-JUL-21
MTBE			<0.050		ug/g		0.05	19-JUL-21
m+p-Xylenes			<0.030		ug/g		0.03	19-JUL-21
Methyl Ethyl Ketone			<0.50		ug/g		0.5	19-JUL-21
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	19-JUL-21
o-Xylene			<0.020		ug/g		0.02	19-JUL-21
Styrene			<0.050		ug/g		0.05	19-JUL-21
Tetrachloroethylene			<0.050		ug/g		0.05	19-JUL-21
Toluene			<0.080		ug/g		0.08	19-JUL-21
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	19-JUL-21
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	19-JUL-21
Trichloroethylene			<0.010		ug/g		0.01	19-JUL-21
Trichlorofluoromethane			<0.050		ug/g		0.05	19-JUL-21
Vinyl chloride			<0.020		ug/g		0.02	19-JUL-21
Surrogate: 1,4-Difluorobenzene			114.9		%		50-140	19-JUL-21
Surrogate: 4-Bromofluorobenzene			111.0		%		50-140	19-JUL-21
WG3575896-5 MS		**WG3575896-3**						
1,1,1,2-Tetrachloroethane			113.1		%		50-140	19-JUL-21
1,1,2,2-Tetrachloroethane			120.9		%		50-140	19-JUL-21
1,1,1-Trichloroethane			110.0		%		50-140	19-JUL-21
1,1,2-Trichloroethane			115.8		%		50-140	19-JUL-21
1,1-Dichloroethane			115.3		%		50-140	19-JUL-21
1,1-Dichloroethylene			114.6		%		50-140	19-JUL-21
1,2-Dibromoethane			112.9		%		50-140	19-JUL-21
1,2-Dichlorobenzene			114.4		%		50-140	19-JUL-21
1,2-Dichloroethane			104.4		%		50-140	19-JUL-21
1,2-Dichloropropane			115.2		%		50-140	19-JUL-21
1,3-Dichlorobenzene			122.1		%		50-140	19-JUL-21
1,4-Dichlorobenzene			121.8		%		50-140	19-JUL-21
Acetone			118.7		%		50-140	19-JUL-21
Benzene			112.7		%		50-140	19-JUL-21
Bromodichloromethane			119.2		%		50-140	19-JUL-21
Bromoform			113.1		%		50-140	19-JUL-21
Bromomethane			107.4		%		50-140	19-JUL-21

Quality Control Report

Client: Mcintosh Perry Limited (Vaughan)
2010 Winston Park Dr
Oakville, ON L6H 5R7
Contact: STEFAN HOLIK

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Soil**							
Batch R5524889								
WG3575896-5 MS		**WG3575896-3**						
Carbon tetrachloride			108.0		%		50-140	19-JUL-21
Chlorobenzene			118.1		%		50-140	19-JUL-21
Chloroform			111.1		%		50-140	19-JUL-21
cis-1,2-Dichloroethylene			114.3		%		50-140	19-JUL-21
cis-1,3-Dichloropropene			118.4		%		50-140	19-JUL-21
Dibromochloromethane			110.2		%		50-140	19-JUL-21
Dichlorodifluoromethane			89.7		%		50-140	19-JUL-21
Ethylbenzene			119.3		%		50-140	19-JUL-21
n-Hexane			113.8		%		50-140	19-JUL-21
Methylene Chloride			107.9		%		50-140	19-JUL-21
MTBE			121.5		%		50-140	19-JUL-21
m+p-Xylenes			119.6		%		50-140	19-JUL-21
Methyl Ethyl Ketone			111.2		%		50-140	19-JUL-21
Methyl Isobutyl Ketone			121.6		%		50-140	19-JUL-21
o-Xylene			118.8		%		50-140	19-JUL-21
Styrene			119.3		%		50-140	19-JUL-21
Tetrachloroethylene			116.1		%		50-140	19-JUL-21
Toluene			117.2		%		50-140	19-JUL-21
trans-1,2-Dichloroethylene			119.6		%		50-140	19-JUL-21
trans-1,3-Dichloropropene			118.4		%		50-140	19-JUL-21
Trichloroethylene			110.8		%		50-140	19-JUL-21
Trichlorofluoromethane			104.7		%		50-140	19-JUL-21
Vinyl chloride			100.2		%		50-140	19-JUL-21

Quality Control Report

Workorder: L2613337 Report Date: 09-AUG-21

Client: Mcintosh Perry Limited (Vaughan)
2010 Winston Park Dr
Oakville, ON L6H 5R7
Contact: STEFAN HOLIK

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
J	Duplicate results and limits are expressed in terms of absolute difference.
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).
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.

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.

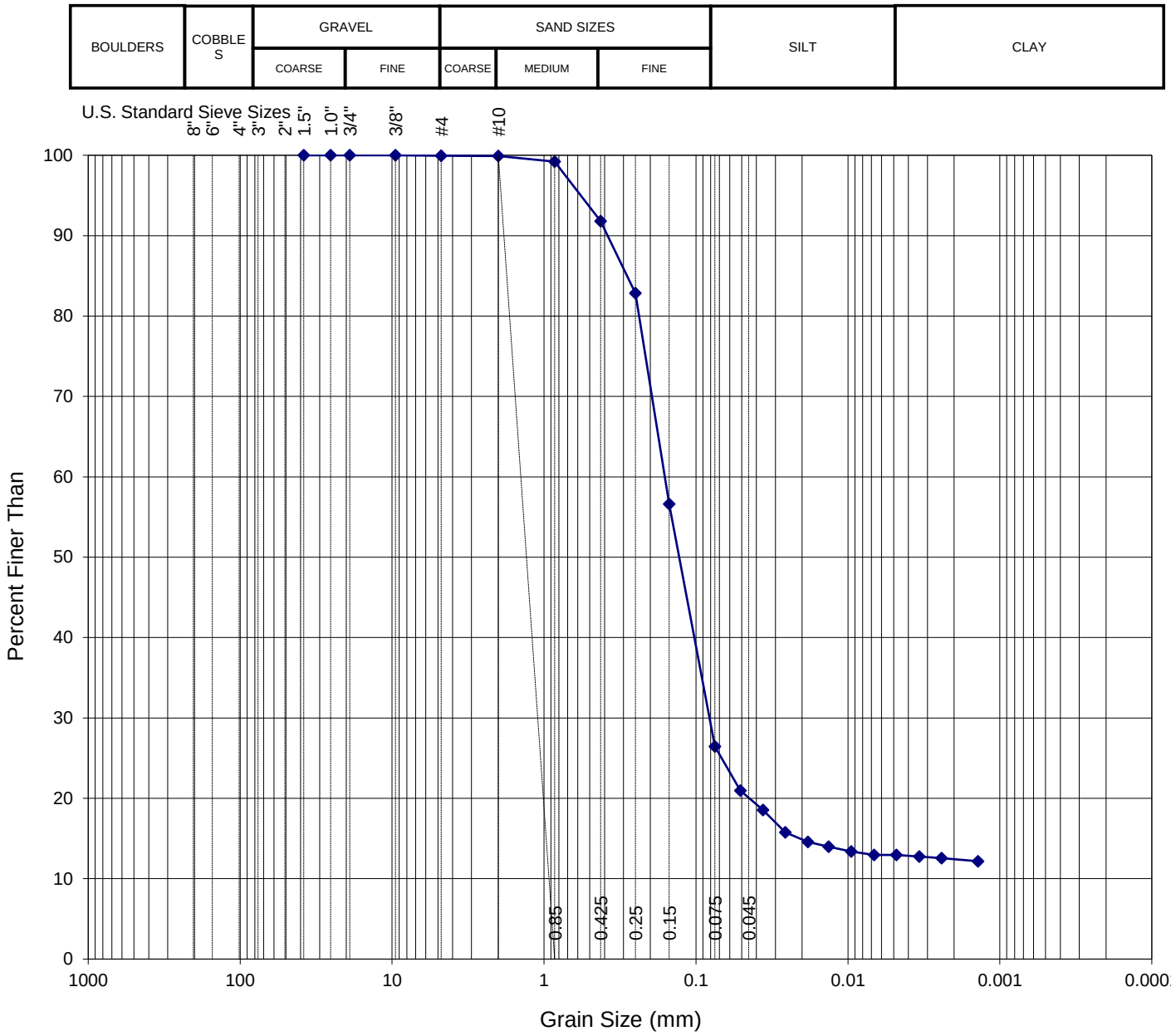
Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

ALS Laboratory Group

819-58th Street, Saskatoon,SK

PARTICLE SIZE DISTRIBUTION CURVE

Client Name:	Mcintosh Perry Limited (Vaughan)
Project Number:	
Client Sample ID	78R05-BH1-SS2
Lab Sample ID	L2613337-9
Date Sample Received	13-Jul-21
Test Completion Date:	22-Jul-21
Analyst:	SIH



METHOD DESCRIPTION

Method Reference: ASTM D 422 - 63 (2002)

Dispersion method: Mechanical

Dispesion period: 1 minute cm/s

Soil classification system used: ASTM D422-63 Classification

DESCRIPTION OF SAND AND GRAVEL PARTICLES

Shape: Angular

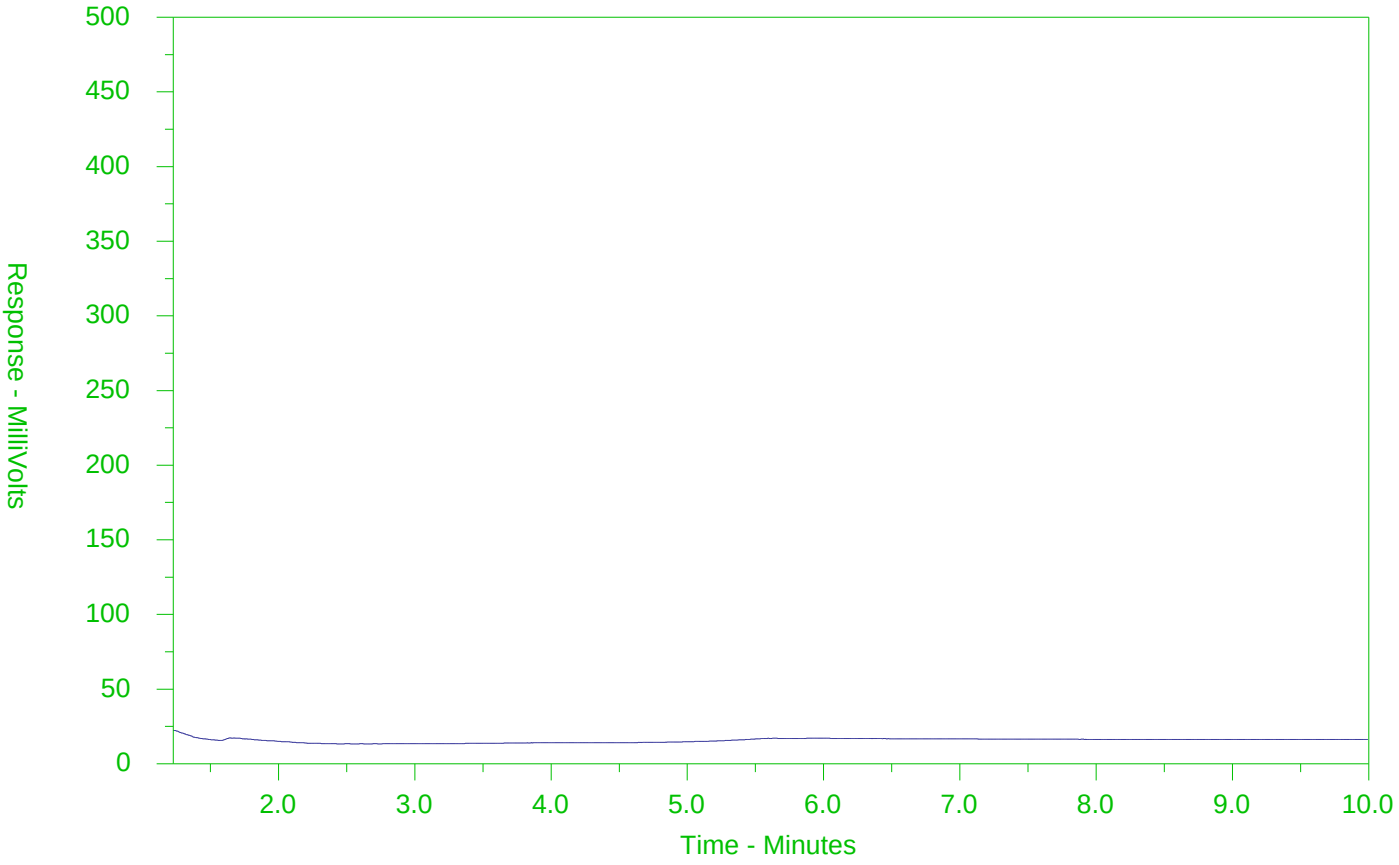
Hardness: Hard

SUMMARY OF RESULTS

GRAIN SIZE	WT %	DIA. RANGE (mm)
% GRAVEL :	<1	> 4.75
% COARSE SAND :	<1	2.0 - 4.75
% MEDIUM SAND :	8.08	0.425 - 2.0
% FINE SAND :	65.38	0.075 - 0.425
% SILT :	13.46	0.075 - 0.005
% CLAY :	12.97	< 0.005

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2613337-2
Client Sample ID: 78R05-BH1-SS4



←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.

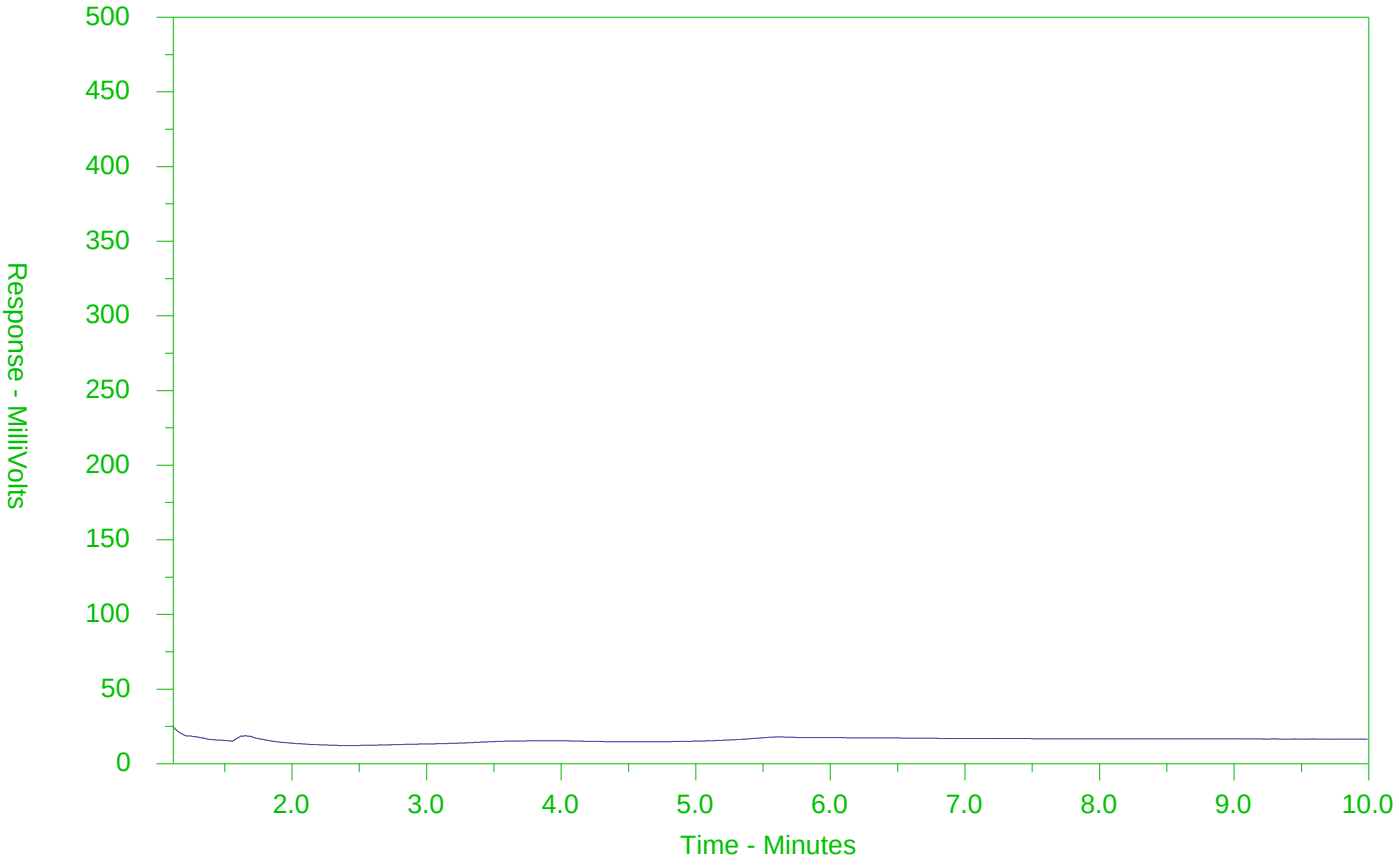
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2613337-4
Client Sample ID: 78R05-BH2-SS2



←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.

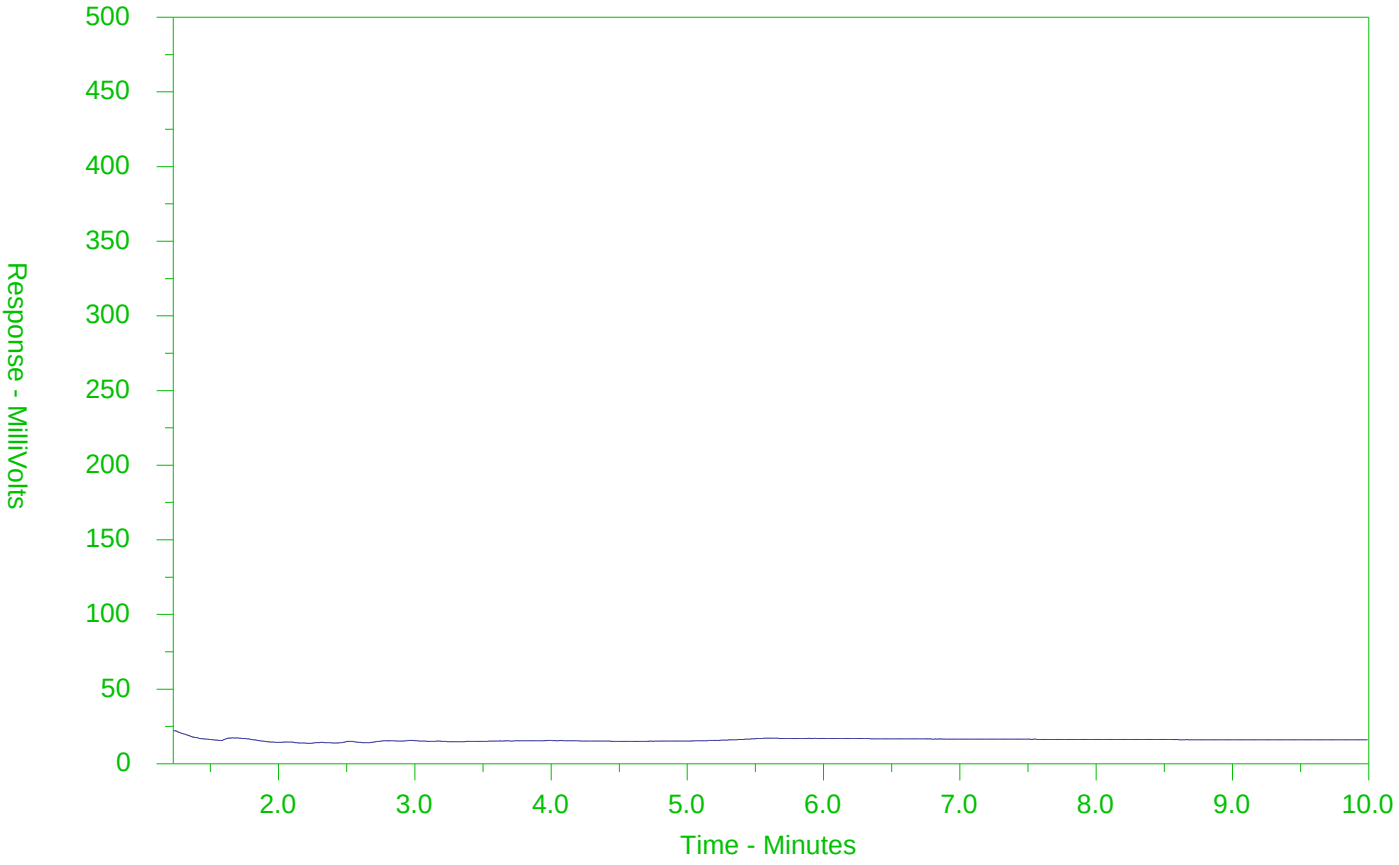
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2613337-5
Client Sample ID: 78R05-BH2-SS2-DUP



←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.

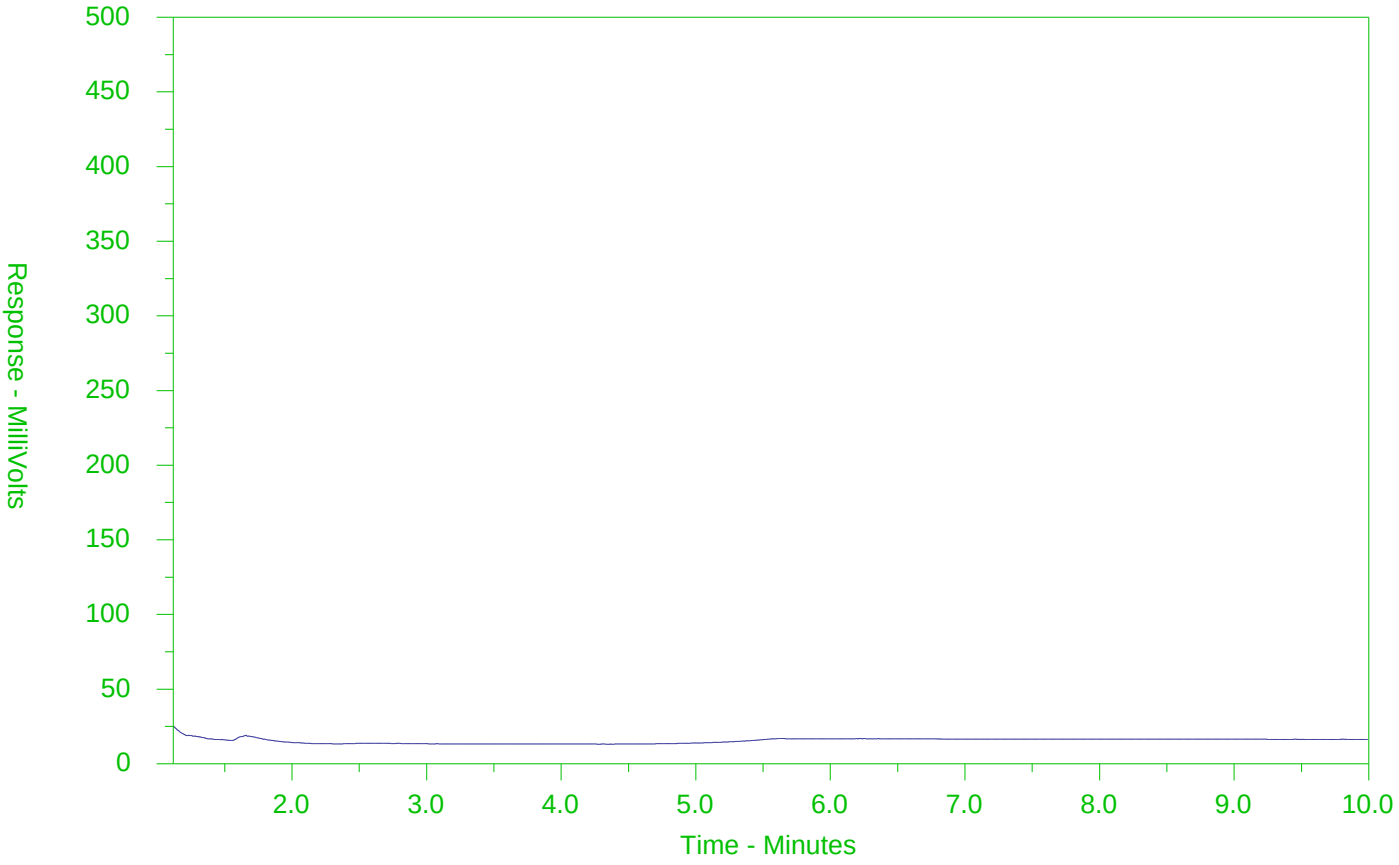
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2613337-6
Client Sample ID: 78R05-BH2-SS3



←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.

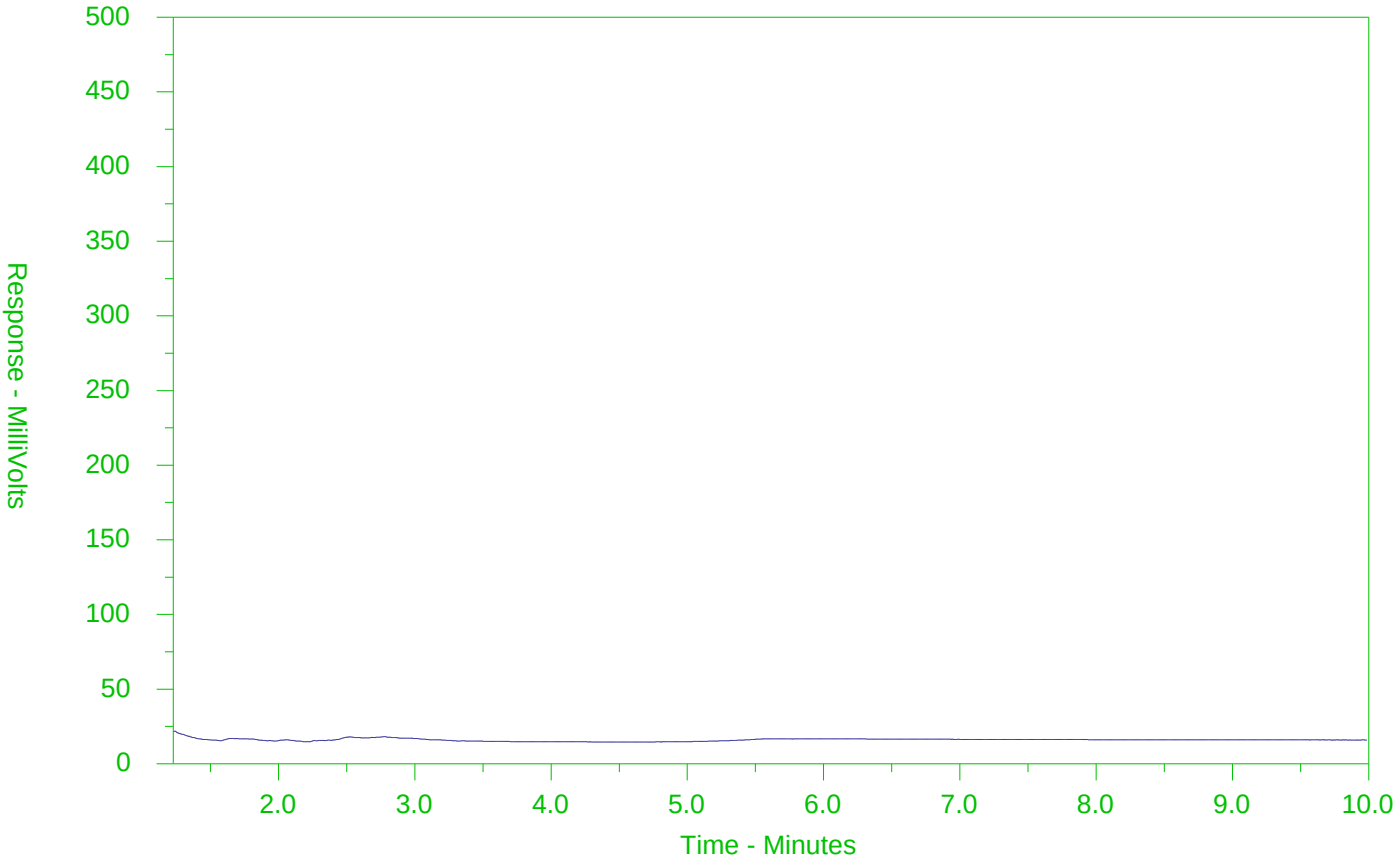
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2613337-8
Client Sample ID: 78R05-BH3-SS4



←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.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

L2613337-COFC

COC Number: 17 -

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	McIntosh Perry (Oakville) ACCT # 26017
Contact:	Stefan Holik
Phone:	613-897-8818
	Company address below will appear on the final report
Street:	2010 Winston Park Dr, Suite 400
City/Province:	Oakville, ON
Postal Code:	L6H 5R7
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☐ EXCEL ☐ EDD (DIGITAL)

Quality Control (QC) Report with Report ☐ YES ☐ NO

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: s.holik@mcintoshperry.com

Email 2: d.arnott@mcintoshperry.com

Email 3:

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

s.holik@mcintoshperry.com

m.innes@mcintoshperry.com, AP@Mcintoshperry.com

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4-20%] ☐ | 3 day [P3-25%] ☐ | 2 day [P2-50%] ☐

EMERGENCY: 1 Business day [E - 100%] ☐ | Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] ☐

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Project Information

ALS Account # / Quote #: Q78221 (2021 SOA)

Job #: CC0-22-1129

PO / AFE:

LSD:

AY

Oil and Gas Required Fields (client use)

AFE/Cost Center: | PO#

Major/Minor Code: | Routing Code:

Requisitioner:

Location:

ALS Lab Work Order # (lab use only): L2613337

ALS Contact: Emily Smith | Sampler:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Metals incl. Cr6+ and Hg (MET-R511-P-WT)	VOCs/PHCs (VOC-R511,F1-F4-P-WT)	PAHs (PAH-511-WT)	VOCs (VOC-511-HS-WT)	Drain Size Analysis	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	78ROS-BH1-SS1	12-Jul-21	4:50pm	Soil	1	/						
	78ROS-BH1-SS4	12-Jul-21	4:50pm	Soil	3		/	/				
	78ROS-BH2-SS1	12-Jul-21	3:30pm	Soil	1	/						
	78ROS-BH2-SS2	12-Jul-21	3:30pm	Soil	3		/	/				
	78ROS-BH2-SS2-DUP	12-Jul-21	3:30pm	Soil	3		/	/				
	78ROS-BH2-SS3	12-Jul-21	3:30pm	Soil	3		/	/				
	78ROS-BH3-SS1	12-Jul-21	11:31am	Soil	1	/						
	78ROS-BH3-SS4	12-Jul-21	11:31am	Soil	3		/	/				
	78ROS-BH1-SS2	12-Jun-21	7:00pm	Soil	1					/		
				Soil								
				Soil								
				Soil								

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO

Are samples for human consumption/ use? ☐ YES ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ | SIF Observations Yes ☐ No ☐

Ice Packs ☐ Ice Cubes ☒ | Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
6.4				10.4			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
S. Holik	July 12/21	7:00pm

INITIAL SHIPMENT RECEPTION (lab use only)

Received by:	Date:	Time:
COSTAT T	7/13/21	9:00am

FINAL SHIPMENT RECEPTION (lab use only)

Received by:	Date:	Time:
SV	7/14/21	11:10

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2018 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

McIntosh Perry Engineering Consultants (Ottawa)
ATTN: Stefan Holik
115 Walgreen Road, R.R. 3
Carp ON K0A1L0

Date Received: 23-JUL-21
Report Date: 15-AUG-21 19:44 (MT)
Version: FINAL REV. 3

Client Phone: 613-903-5785

Certificate of Analysis

Lab Work Order #: L2618106

Project P.O. #: NOT SUBMITTED
Job Reference: CCO-22-1129
C of C Numbers:
Legal Site Desc:

Comments: Report revised to update criteria for comparison - E. Smith (08 Aug 2021).

Emily Smith
Account Manager

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits #1
L2618106-1 78 ROS-BH1(MW)						
Sampled By: CLIENT on 23-JUL-21 @ 12:25						
Matrix: WATER						
Dissolved Metals						
Dissolved Mercury Filtration Location	FIELD			No Unit	30-JUL-21	
Dissolved Metals Filtration Location	FIELD			No Unit	29-JUL-21	
Antimony (Sb)-Dissolved	<1.0	PDM	1.0	ug/L	29-JUL-21	20000
Arsenic (As)-Dissolved	<1.0	PDM	1.0	ug/L	29-JUL-21	1900
Barium (Ba)-Dissolved	174	PDM	1.0	ug/L	29-JUL-21	29000
Beryllium (Be)-Dissolved	<1.0	PDM	1.0	ug/L	29-JUL-21	67
Boron (B)-Dissolved	<100	PDM	100	ug/L	29-JUL-21	45000
Cadmium (Cd)-Dissolved	<0.050	PDM	0.050	ug/L	29-JUL-21	2.7
Chromium (Cr)-Dissolved	<5.0	PDM	5.0	ug/L	29-JUL-21	810
Cobalt (Co)-Dissolved	1.2	PDM	1.0	ug/L	29-JUL-21	66
Copper (Cu)-Dissolved	<2.0	PDM	2.0	ug/L	29-JUL-21	87
Lead (Pb)-Dissolved	4.76	PDM	0.50	ug/L	29-JUL-21	25
Mercury (Hg)-Dissolved	<0.0050		0.0050	ug/L	30-JUL-21	0.29
Molybdenum (Mo)-Dissolved	7.18	PDM	0.50	ug/L	29-JUL-21	9200
Nickel (Ni)-Dissolved	<5.0	PDM	5.0	ug/L	29-JUL-21	490
Selenium (Se)-Dissolved	1.11	PDM	0.50	ug/L	29-JUL-21	63
Silver (Ag)-Dissolved	<0.50	PDM	0.50	ug/L	29-JUL-21	1.5
Sodium (Na)-Dissolved	58500	PDM	500	ug/L	29-JUL-21	2300000
Thallium (Tl)-Dissolved	<0.10	PDM	0.10	ug/L	29-JUL-21	510
Uranium (U)-Dissolved	1.88	PDM	0.10	ug/L	29-JUL-21	420
Vanadium (V)-Dissolved	<5.0	PDM	5.0	ug/L	29-JUL-21	250
Zinc (Zn)-Dissolved	<10	PDM	10	ug/L	29-JUL-21	1100
Speciated Metals						
Chromium, Hexavalent	<0.50		0.50	ug/L	26-JUL-21	140
Volatile Organic Compounds						
Acetone	<30	OWP	30	ug/L	29-JUL-21	130000
Benzene	<0.50	OWP	0.50	ug/L	29-JUL-21	44
Bromodichloromethane	<2.0	OWP	2.0	ug/L	29-JUL-21	85000
Bromoform	<5.0	OWP	5.0	ug/L	29-JUL-21	380
Bromomethane	<0.50	OWP	0.50	ug/L	29-JUL-21	5.6
Carbon tetrachloride	<0.20	OWP	0.20	ug/L	29-JUL-21	0.79
Chlorobenzene	<0.50	OWP	0.50	ug/L	29-JUL-21	630
Dibromochloromethane	<2.0	OWP	2.0	ug/L	29-JUL-21	82000
Chloroform	<1.0	OWP	1.0	ug/L	29-JUL-21	2.4
1,2-Dibromoethane	<0.20	OWP	0.20	ug/L	29-JUL-21	0.25
1,2-Dichlorobenzene	<0.50	OWP	0.50	ug/L	29-JUL-21	4600
1,3-Dichlorobenzene	<0.50	OWP	0.50	ug/L	29-JUL-21	9600
1,4-Dichlorobenzene	<0.50	OWP	0.50	ug/L	29-JUL-21	8
Dichlorodifluoromethane	<2.0	OWP	2.0	ug/L	29-JUL-21	4400
1,1-Dichloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	320
1,2-Dichloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
1,1-Dichloroethylene	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
cis-1,2-Dichloroethylene	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
trans-1,2-Dichloroethylene	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
Methylene Chloride	<5.0	OWP	5.0	ug/L	29-JUL-21	610

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

#1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits #1
L2618106-1 78 ROS-BH1(MW)						
Sampled By: CLIENT on 23-JUL-21 @ 12:25						
Matrix: WATER						
Volatile Organic Compounds						
1,2-Dichloropropane	<0.50	OWP	0.50	ug/L	29-JUL-21	16
cis-1,3-Dichloropropene	<0.30	OWP	0.30	ug/L	29-JUL-21	
trans-1,3-Dichloropropene	<0.30	OWP	0.30	ug/L	29-JUL-21	
1,3-Dichloropropene (cis & trans)	<0.50		0.50	ug/L	29-JUL-21	5.2
Ethylbenzene	<0.50	OWP	0.50	ug/L	29-JUL-21	2300
n-Hexane	<0.50	OWP	0.50	ug/L	29-JUL-21	51
Methyl Ethyl Ketone	<20	OWP	20	ug/L	29-JUL-21	470000
Methyl Isobutyl Ketone	<20	OWP	20	ug/L	29-JUL-21	140000
MTBE	<2.0	OWP	2.0	ug/L	29-JUL-21	190
Styrene	<0.50	OWP	0.50	ug/L	29-JUL-21	1300
1,1,1,2-Tetrachloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	3.3
1,1,2,2-Tetrachloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	3.2
Tetrachloroethylene	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
Toluene	<0.50	OWP	0.50	ug/L	29-JUL-21	18000
1,1,1-Trichloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	640
1,1,2-Trichloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	4.7
Trichloroethylene	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
Trichlorofluoromethane	<5.0	OWP	5.0	ug/L	29-JUL-21	2500
Vinyl chloride	<0.50	OWP	0.50	ug/L	29-JUL-21	0.5
o-Xylene	<0.30	OWP	0.30	ug/L	29-JUL-21	
m+p-Xylenes	<0.40	OWP	0.40	ug/L	29-JUL-21	
Xylenes (Total)	<0.50		0.50	ug/L	29-JUL-21	4200
Surrogate: 4-Bromofluorobenzene	90.7		70-130	%	29-JUL-21	
Surrogate: 1,4-Difluorobenzene	98.7		70-130	%	29-JUL-21	
Hydrocarbons						
F1 (C6-C10)	<25	OWP	25	ug/L	29-JUL-21	750
F1-BTEX	<25		25	ug/L	30-JUL-21	750
F2 (C10-C16)	<100	OWP	100	ug/L	28-JUL-21	150
F2-Naphth	<100		100	ug/L	30-JUL-21	
F3 (C16-C34)	<250	OWP	250	ug/L	28-JUL-21	500
F3-PAH	<250		250	ug/L	30-JUL-21	
F4 (C34-C50)	<250	OWP	250	ug/L	28-JUL-21	500
Total Hydrocarbons (C6-C50)	<370		370	ug/L	30-JUL-21	
Chrom. to baseline at nC50	YES			No Unit	28-JUL-21	
Surrogate: 2-Bromobenzotrifluoride	85.5		60-140	%	28-JUL-21	
Surrogate: 3,4-Dichlorotoluene	74.2		60-140	%	29-JUL-21	
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.028		0.020	ug/L	30-JUL-21	600
Acenaphthylene	<0.020		0.020	ug/L	30-JUL-21	1.8
Anthracene	<0.020		0.020	ug/L	30-JUL-21	2.4
Benzo(a)anthracene	<0.020		0.020	ug/L	30-JUL-21	4.7
Benzo(a)pyrene	<0.010		0.010	ug/L	30-JUL-21	0.81
Benzo(b&j)fluoranthene	<0.020		0.020	ug/L	30-JUL-21	0.75
Benzo(g,h,i)perylene	<0.020		0.020	ug/L	30-JUL-21	0.2
Benzo(k)fluoranthene	<0.020		0.020	ug/L	30-JUL-21	0.4
Chrysene	<0.020		0.020	ug/L	30-JUL-21	1

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
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T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

#1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits
L2618106-1 78 ROS-BH1(MW)						
Sampled By: CLIENT on 23-JUL-21 @ 12:25						
Matrix: WATER						#1
Polycyclic Aromatic Hydrocarbons						
Dibenz(a,h)anthracene	<0.020		0.020	ug/L	30-JUL-21	0.52
Fluoranthene	0.025		0.020	ug/L	30-JUL-21	130
Fluorene	0.050		0.020	ug/L	30-JUL-21	400
Indeno(1,2,3-cd)pyrene	<0.020		0.020	ug/L	30-JUL-21	0.2
1+2-Methylnaphthalenes	0.188		0.028	ug/L	30-JUL-21	1800
1-Methylnaphthalene	0.060		0.020	ug/L	30-JUL-21	1800
2-Methylnaphthalene	0.128		0.020	ug/L	30-JUL-21	1800
Naphthalene	0.061		0.050	ug/L	30-JUL-21	1400
Phenanthrene	<0.160	RRR	0.16	ug/L	30-JUL-21	580
Pyrene	0.052		0.020	ug/L	30-JUL-21	68
Surrogate: Chrysene d12	87.7		50-150	%	30-JUL-21	
Surrogate: Naphthalene d8	75.9		60-140	%	30-JUL-21	
Surrogate: Phenanthrene d10	115.3		60-140	%	30-JUL-21	
L2618106-2 78 ROS-BH2(MW)						
Sampled By: CLIENT on 23-JUL-21 @ 12:35						
Matrix: WATER						#1
Dissolved Metals						
Dissolved Mercury Filtration Location	FIELD			No Unit	30-JUL-21	
Dissolved Metals Filtration Location	FIELD			No Unit	29-JUL-21	
Antimony (Sb)-Dissolved	1.14		0.10	ug/L	31-JUL-21	20000
Arsenic (As)-Dissolved	0.51		0.10	ug/L	31-JUL-21	1900
Barium (Ba)-Dissolved	228		0.10	ug/L	31-JUL-21	29000
Beryllium (Be)-Dissolved	<0.10		0.10	ug/L	31-JUL-21	67
Boron (B)-Dissolved	81		10	ug/L	31-JUL-21	45000
Cadmium (Cd)-Dissolved	<0.010		0.010	ug/L	31-JUL-21	2.7
Chromium (Cr)-Dissolved	<0.50		0.50	ug/L	31-JUL-21	810
Cobalt (Co)-Dissolved	0.60		0.10	ug/L	31-JUL-21	66
Copper (Cu)-Dissolved	1.17		0.20	ug/L	31-JUL-21	87
Lead (Pb)-Dissolved	0.138		0.050	ug/L	31-JUL-21	25
Mercury (Hg)-Dissolved	<0.0050		0.0050	ug/L	30-JUL-21	0.29
Molybdenum (Mo)-Dissolved	5.00		0.050	ug/L	31-JUL-21	9200
Nickel (Ni)-Dissolved	3.67		0.50	ug/L	31-JUL-21	490
Selenium (Se)-Dissolved	1.82		0.050	ug/L	31-JUL-21	63
Silver (Ag)-Dissolved	<0.050		0.050	ug/L	31-JUL-21	1.5
Sodium (Na)-Dissolved	22200		500	ug/L	31-JUL-21	2300000
Thallium (Tl)-Dissolved	0.033		0.010	ug/L	31-JUL-21	510
Uranium (U)-Dissolved	2.30		0.010	ug/L	31-JUL-21	420
Vanadium (V)-Dissolved	<0.50		0.50	ug/L	31-JUL-21	250
Zinc (Zn)-Dissolved	3.8		1.0	ug/L	31-JUL-21	1100
Speciated Metals						
Chromium, Hexavalent	<0.50		0.50	ug/L	26-JUL-21	140
Volatile Organic Compounds						
Acetone	<30	OWP	30	ug/L	29-JUL-21	130000
Benzene	<0.50	OWP	0.50	ug/L	29-JUL-21	44

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

#1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits #1
L2618106-2 78 ROS-BH2(MW)						
Sampled By: CLIENT on 23-JUL-21 @ 12:35						
Matrix: WATER						
Volatile Organic Compounds						
Bromodichloromethane	<2.0	OWP	2.0	ug/L	29-JUL-21	85000
Bromoform	<5.0	OWP	5.0	ug/L	29-JUL-21	380
Bromomethane	<0.50	OWP	0.50	ug/L	29-JUL-21	5.6
Carbon tetrachloride	<0.20	OWP	0.20	ug/L	29-JUL-21	0.79
Chlorobenzene	<0.50	OWP	0.50	ug/L	29-JUL-21	630
Dibromochloromethane	<2.0	OWP	2.0	ug/L	29-JUL-21	82000
Chloroform	<1.0	OWP	1.0	ug/L	29-JUL-21	2.4
1,2-Dibromoethane	<0.20	OWP	0.20	ug/L	29-JUL-21	0.25
1,2-Dichlorobenzene	<0.50	OWP	0.50	ug/L	29-JUL-21	4600
1,3-Dichlorobenzene	<0.50	OWP	0.50	ug/L	29-JUL-21	9600
1,4-Dichlorobenzene	<0.50	OWP	0.50	ug/L	29-JUL-21	8
Dichlorodifluoromethane	<2.0	OWP	2.0	ug/L	29-JUL-21	4400
1,1-Dichloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	320
1,2-Dichloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
1,1-Dichloroethylene	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
cis-1,2-Dichloroethylene	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
trans-1,2-Dichloroethylene	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
Methylene Chloride	<5.0	OWP	5.0	ug/L	29-JUL-21	610
1,2-Dichloropropane	<0.50	OWP	0.50	ug/L	29-JUL-21	16
cis-1,3-Dichloropropene	<0.30	OWP	0.30	ug/L	29-JUL-21	
trans-1,3-Dichloropropene	<0.30	OWP	0.30	ug/L	29-JUL-21	
1,3-Dichloropropene (cis & trans)	<0.50		0.50	ug/L	29-JUL-21	5.2
Ethylbenzene	<0.50	OWP	0.50	ug/L	29-JUL-21	2300
n-Hexane	<0.50	OWP	0.50	ug/L	29-JUL-21	51
Methyl Ethyl Ketone	<20	OWP	20	ug/L	29-JUL-21	470000
Methyl Isobutyl Ketone	<20	OWP	20	ug/L	29-JUL-21	140000
MTBE	<2.0	OWP	2.0	ug/L	29-JUL-21	190
Styrene	<0.50	OWP	0.50	ug/L	29-JUL-21	1300
1,1,1,2-Tetrachloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	3.3
1,1,2,2-Tetrachloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	3.2
Tetrachloroethylene	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
Toluene	<0.50	OWP	0.50	ug/L	29-JUL-21	18000
1,1,1-Trichloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	640
1,1,2-Trichloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	4.7
Trichloroethylene	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
Trichlorofluoromethane	<5.0	OWP	5.0	ug/L	29-JUL-21	2500
Vinyl chloride	<0.50	OWP	0.50	ug/L	29-JUL-21	0.5
o-Xylene	<0.30	OWP	0.30	ug/L	29-JUL-21	
m+p-Xylenes	<0.40	OWP	0.40	ug/L	29-JUL-21	
Xylenes (Total)	<0.50		0.50	ug/L	29-JUL-21	4200
Surrogate: 4-Bromofluorobenzene	90.3		70-130	%	29-JUL-21	
Surrogate: 1,4-Difluorobenzene	98.1		70-130	%	29-JUL-21	
Hydrocarbons						
F1 (C6-C10)	<25	OWP	25	ug/L	29-JUL-21	750
F1-BTEX	<25		25	ug/L	30-JUL-21	750
F2 (C10-C16)	<100		100	ug/L	28-JUL-21	150

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

#1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits
L2618106-2 78 ROS-BH2(MW)						
Sampled By: CLIENT on 23-JUL-21 @ 12:35						
Matrix: WATER						#1
Hydrocarbons						
F2-Naphth	<100		100	ug/L	30-JUL-21	
F3 (C16-C34)	<250		250	ug/L	28-JUL-21	500
F3-PAH	<250		250	ug/L	30-JUL-21	
F4 (C34-C50)	<250		250	ug/L	28-JUL-21	500
Total Hydrocarbons (C6-C50)	<370		370	ug/L	30-JUL-21	
Chrom. to baseline at nC50	YES			No Unit	28-JUL-21	
Surrogate: 2-Bromobenzotrifluoride	89.1		60-140	%	28-JUL-21	
Surrogate: 3,4-Dichlorotoluene	76.9		60-140	%	29-JUL-21	
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	<0.020		0.020	ug/L	30-JUL-21	600
Acenaphthylene	<0.020		0.020	ug/L	30-JUL-21	1.8
Anthracene	<0.020		0.020	ug/L	30-JUL-21	2.4
Benzo(a)anthracene	<0.020		0.020	ug/L	30-JUL-21	4.7
Benzo(a)pyrene	<0.010		0.010	ug/L	30-JUL-21	0.81
Benzo(b&j)fluoranthene	<0.020		0.020	ug/L	30-JUL-21	0.75
Benzo(g,h,i)perylene	<0.020		0.020	ug/L	30-JUL-21	0.2
Benzo(k)fluoranthene	<0.020		0.020	ug/L	30-JUL-21	0.4
Chrysene	<0.020		0.020	ug/L	30-JUL-21	1
Dibenz(a,h)anthracene	<0.020		0.020	ug/L	30-JUL-21	0.52
Fluoranthene	<0.020		0.020	ug/L	30-JUL-21	130
Fluorene	<0.020		0.020	ug/L	30-JUL-21	400
Indeno(1,2,3-cd)pyrene	<0.020		0.020	ug/L	30-JUL-21	0.2
1+2-Methylnaphthalenes	0.058		0.028	ug/L	30-JUL-21	1800
1-Methylnaphthalene	0.023		0.020	ug/L	30-JUL-21	1800
2-Methylnaphthalene	0.035		0.020	ug/L	30-JUL-21	1800
Naphthalene	<0.050		0.050	ug/L	30-JUL-21	1400
Phenanthrene	<0.036	RRR	0.036	ug/L	30-JUL-21	580
Pyrene	0.034		0.020	ug/L	30-JUL-21	68
Surrogate: Chrysene d12	133.3		50-150	%	30-JUL-21	
Surrogate: Naphthalene d8	98.2		60-140	%	30-JUL-21	
Surrogate: Phenanthrene d10	118.7		60-140	%	30-JUL-21	
L2618106-3 78 ROS-BH3(MW)						
Sampled By: CLIENT on 23-JUL-21 @ 11:55						
Matrix: WATER						#1
Dissolved Metals						
Dissolved Mercury Filtration Location	FIELD			No Unit	30-JUL-21	
Dissolved Metals Filtration Location	FIELD			No Unit	29-JUL-21	
Antimony (Sb)-Dissolved	0.90		0.10	ug/L	31-JUL-21	20000
Arsenic (As)-Dissolved	0.46		0.10	ug/L	31-JUL-21	1900
Barium (Ba)-Dissolved	224		0.10	ug/L	31-JUL-21	29000
Beryllium (Be)-Dissolved	<0.10		0.10	ug/L	31-JUL-21	67
Boron (B)-Dissolved	92		10	ug/L	31-JUL-21	45000
Cadmium (Cd)-Dissolved	<0.010		0.010	ug/L	31-JUL-21	2.7
Chromium (Cr)-Dissolved	<0.50		0.50	ug/L	31-JUL-21	810
Cobalt (Co)-Dissolved	0.44		0.10	ug/L	31-JUL-21	66

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

#1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits #1
L2618106-3 78 ROS-BH3(MW)						
Sampled By: CLIENT on 23-JUL-21 @ 11:55						
Matrix: WATER						
Dissolved Metals						
Copper (Cu)-Dissolved	0.72		0.20	ug/L	31-JUL-21	87
Lead (Pb)-Dissolved	0.113		0.050	ug/L	31-JUL-21	25
Mercury (Hg)-Dissolved	<0.0050		0.0050	ug/L	30-JUL-21	0.29
Molybdenum (Mo)-Dissolved	5.65		0.050	ug/L	31-JUL-21	9200
Nickel (Ni)-Dissolved	2.72		0.50	ug/L	31-JUL-21	490
Selenium (Se)-Dissolved	1.24		0.050	ug/L	31-JUL-21	63
Silver (Ag)-Dissolved	<0.050		0.050	ug/L	31-JUL-21	1.5
Sodium (Na)-Dissolved	60100		500	ug/L	31-JUL-21	2300000
Thallium (Tl)-Dissolved	0.032		0.010	ug/L	31-JUL-21	510
Uranium (U)-Dissolved	3.23		0.010	ug/L	31-JUL-21	420
Vanadium (V)-Dissolved	<0.50		0.50	ug/L	31-JUL-21	250
Zinc (Zn)-Dissolved	<1.0		1.0	ug/L	31-JUL-21	1100
Speciated Metals						
Chromium, Hexavalent	<0.50		0.50	ug/L	26-JUL-21	140
Volatile Organic Compounds						
Acetone	<30	OWP	30	ug/L	29-JUL-21	130000
Benzene	<0.50	OWP	0.50	ug/L	29-JUL-21	44
Bromodichloromethane	<2.0	OWP	2.0	ug/L	29-JUL-21	85000
Bromoform	<5.0	OWP	5.0	ug/L	29-JUL-21	380
Bromomethane	<0.50	OWP	0.50	ug/L	29-JUL-21	5.6
Carbon tetrachloride	<0.20	OWP	0.20	ug/L	29-JUL-21	0.79
Chlorobenzene	<0.50	OWP	0.50	ug/L	29-JUL-21	630
Dibromochloromethane	<2.0	OWP	2.0	ug/L	29-JUL-21	82000
Chloroform	<1.0	OWP	1.0	ug/L	29-JUL-21	2.4
1,2-Dibromoethane	<0.20	OWP	0.20	ug/L	29-JUL-21	0.25
1,2-Dichlorobenzene	<0.50	OWP	0.50	ug/L	29-JUL-21	4600
1,3-Dichlorobenzene	<0.50	OWP	0.50	ug/L	29-JUL-21	9600
1,4-Dichlorobenzene	<0.50	OWP	0.50	ug/L	29-JUL-21	8
Dichlorodifluoromethane	<2.0	OWP	2.0	ug/L	29-JUL-21	4400
1,1-Dichloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	320
1,2-Dichloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
1,1-Dichloroethylene	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
cis-1,2-Dichloroethylene	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
trans-1,2-Dichloroethylene	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
Methylene Chloride	<5.0	OWP	5.0	ug/L	29-JUL-21	610
1,2-Dichloropropane	<0.50	OWP	0.50	ug/L	29-JUL-21	16
cis-1,3-Dichloropropene	<0.30	OWP	0.30	ug/L	29-JUL-21	
trans-1,3-Dichloropropene	<0.30	OWP	0.30	ug/L	29-JUL-21	
1,3-Dichloropropene (cis & trans)	<0.50		0.50	ug/L	29-JUL-21	5.2
Ethylbenzene	<0.50	OWP	0.50	ug/L	29-JUL-21	2300
n-Hexane	<0.50	OWP	0.50	ug/L	29-JUL-21	51
Methyl Ethyl Ketone	<20	OWP	20	ug/L	29-JUL-21	470000
Methyl Isobutyl Ketone	<20	OWP	20	ug/L	29-JUL-21	140000
MTBE	<2.0	OWP	2.0	ug/L	29-JUL-21	190
Styrene	<0.50	OWP	0.50	ug/L	29-JUL-21	1300

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

#1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits #1
L2618106-3 78 ROS-BH3(MW)						
Sampled By: CLIENT on 23-JUL-21 @ 11:55						
Matrix: WATER						
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	3.3
1,1,2,2-Tetrachloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	3.2
Tetrachloroethylene	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
Toluene	0.53	OWP	0.50	ug/L	29-JUL-21	18000
1,1,1-Trichloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	640
1,1,2-Trichloroethane	<0.50	OWP	0.50	ug/L	29-JUL-21	4.7
Trichloroethylene	<0.50	OWP	0.50	ug/L	29-JUL-21	1.6
Trichlorofluoromethane	<5.0	OWP	5.0	ug/L	29-JUL-21	2500
Vinyl chloride	<0.50	OWP	0.50	ug/L	29-JUL-21	0.5
o-Xylene	<0.30	OWP	0.30	ug/L	29-JUL-21	
m+p-Xylenes	<0.40	OWP	0.40	ug/L	29-JUL-21	
Xylenes (Total)	<0.50		0.50	ug/L	29-JUL-21	4200
Surrogate: 4-Bromofluorobenzene	89.9		70-130	%	29-JUL-21	
Surrogate: 1,4-Difluorobenzene	98.1		70-130	%	29-JUL-21	
Hydrocarbons						
F1 (C6-C10)	<25	OWP	25	ug/L	29-JUL-21	750
F1-BTEX	<25		25	ug/L	30-JUL-21	750
F2 (C10-C16)	<100	OWP	100	ug/L	28-JUL-21	150
F2-Naphth	<100		100	ug/L	30-JUL-21	
F3 (C16-C34)	410	OWP	250	ug/L	28-JUL-21	500
F3-PAH	410		250	ug/L	30-JUL-21	
F4 (C34-C50)	490	OWP	250	ug/L	28-JUL-21	500
Total Hydrocarbons (C6-C50)	890		370	ug/L	30-JUL-21	
Chrom. to baseline at nC50	YES			No Unit	28-JUL-21	
Surrogate: 2-Bromobenzotrifluoride	86.8		60-140	%	28-JUL-21	
Surrogate: 3,4-Dichlorotoluene	64.9		60-140	%	29-JUL-21	
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	<0.020		0.020	ug/L	30-JUL-21	600
Acenaphthylene	<0.020		0.020	ug/L	30-JUL-21	1.8
Anthracene	<0.020		0.020	ug/L	30-JUL-21	2.4
Benzo(a)anthracene	<0.020		0.020	ug/L	30-JUL-21	4.7
Benzo(a)pyrene	<0.010		0.010	ug/L	30-JUL-21	0.81
Benzo(b&j)fluoranthene	<0.020		0.020	ug/L	30-JUL-21	0.75
Benzo(g,h,i)perylene	<0.020		0.020	ug/L	30-JUL-21	0.2
Benzo(k)fluoranthene	<0.020		0.020	ug/L	30-JUL-21	0.4
Chrysene	<0.020		0.020	ug/L	30-JUL-21	1
Dibenz(a,h)anthracene	<0.020		0.020	ug/L	30-JUL-21	0.52
Fluoranthene	0.067		0.020	ug/L	30-JUL-21	130
Fluorene	0.026		0.020	ug/L	30-JUL-21	400
Indeno(1,2,3-cd)pyrene	<0.020		0.020	ug/L	30-JUL-21	0.2
1+2-Methylnaphthalenes	0.104		0.028	ug/L	30-JUL-21	1800
1-Methylnaphthalene	0.043		0.020	ug/L	30-JUL-21	1800
2-Methylnaphthalene	0.061		0.020	ug/L	30-JUL-21	1800
Naphthalene	0.055		0.050	ug/L	30-JUL-21	1400
Phenanthrene	<0.083	RRR	0.083	ug/L	30-JUL-21	580
Pyrene	0.159		0.020	ug/L	30-JUL-21	68

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
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T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

#1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits
L2618106-3 78 ROS-BH3(MW)						
Sampled By: CLIENT on 23-JUL-21 @ 11:55						
Matrix: WATER						#1
Polycyclic Aromatic Hydrocarbons						
Surrogate: Chrysene d12	85.7		50-150	%	30-JUL-21	
Surrogate: Naphthalene d8	77.1		60-140	%	30-JUL-21	
Surrogate: Phenanthrene d10	91.1		60-140	%	30-JUL-21	
L2618106-4 MW1-DUP						
Sampled By: CLIENT on 23-JUL-21 @ 12:25						
Matrix: WATER						#1
Dissolved Metals						
Dissolved Mercury Filtration Location	FIELD			No Unit	30-JUL-21	
Dissolved Metals Filtration Location	FIELD			No Unit	29-JUL-21	
Antimony (Sb)-Dissolved	<1.0	PDM	1.0	ug/L	29-JUL-21	20000
Arsenic (As)-Dissolved	<1.0	PDM	1.0	ug/L	29-JUL-21	1900
Barium (Ba)-Dissolved	154	PDM	1.0	ug/L	29-JUL-21	29000
Beryllium (Be)-Dissolved	<1.0	PDM	1.0	ug/L	29-JUL-21	67
Boron (B)-Dissolved	<100	PDM	100	ug/L	29-JUL-21	45000
Cadmium (Cd)-Dissolved	<0.050	PDM	0.050	ug/L	29-JUL-21	2.7
Chromium (Cr)-Dissolved	<5.0	PDM	5.0	ug/L	29-JUL-21	810
Cobalt (Co)-Dissolved	1.2	PDM	1.0	ug/L	29-JUL-21	66
Copper (Cu)-Dissolved	<2.0	PDM	2.0	ug/L	29-JUL-21	87
Lead (Pb)-Dissolved	4.14	PDM	0.50	ug/L	29-JUL-21	25
Mercury (Hg)-Dissolved	<0.0050		0.0050	ug/L	30-JUL-21	0.29
Molybdenum (Mo)-Dissolved	7.35	PDM	0.50	ug/L	29-JUL-21	9200
Nickel (Ni)-Dissolved	<5.0	PDM	5.0	ug/L	29-JUL-21	490
Selenium (Se)-Dissolved	1.28	PDM	0.50	ug/L	29-JUL-21	63
Silver (Ag)-Dissolved	<0.50	PDM	0.50	ug/L	29-JUL-21	1.5
Sodium (Na)-Dissolved	64100	PDM	500	ug/L	29-JUL-21	2300000
Thallium (Tl)-Dissolved	<0.10	PDM	0.10	ug/L	29-JUL-21	510
Uranium (U)-Dissolved	1.88	PDM	0.10	ug/L	29-JUL-21	420
Vanadium (V)-Dissolved	<5.0	PDM	5.0	ug/L	29-JUL-21	250
Zinc (Zn)-Dissolved	15	PDM	10	ug/L	29-JUL-21	1100
Speciated Metals						
Chromium, Hexavalent	<0.50		0.50	ug/L	26-JUL-21	140
Volatile Organic Compounds						
Acetone	<30	OWP	30	ug/L	30-JUL-21	130000
Benzene	<0.50	OWP	0.50	ug/L	30-JUL-21	44
Bromodichloromethane	<2.0	OWP	2.0	ug/L	30-JUL-21	85000
Bromoform	<5.0	OWP	5.0	ug/L	30-JUL-21	380
Bromomethane	<0.50	OWP	0.50	ug/L	30-JUL-21	5.6
Carbon tetrachloride	<0.20	OWP	0.20	ug/L	30-JUL-21	0.79
Chlorobenzene	<0.50	OWP	0.50	ug/L	30-JUL-21	630
Dibromochloromethane	<2.0	OWP	2.0	ug/L	30-JUL-21	82000
Chloroform	<1.0	OWP	1.0	ug/L	30-JUL-21	2.4
1,2-Dibromoethane	<0.20	OWP	0.20	ug/L	30-JUL-21	0.25
1,2-Dichlorobenzene	<0.50	OWP	0.50	ug/L	30-JUL-21	4600
1,3-Dichlorobenzene	<0.50	OWP	0.50	ug/L	30-JUL-21	9600

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T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

#1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits #1
L2618106-4 MW1-DUP						
Sampled By: CLIENT on 23-JUL-21 @ 12:25						
Matrix: WATER						
Volatile Organic Compounds						
1,4-Dichlorobenzene	<0.50	OWP	0.50	ug/L	30-JUL-21	8
Dichlorodifluoromethane	<2.0	OWP	2.0	ug/L	30-JUL-21	4400
1,1-Dichloroethane	<0.50	OWP	0.50	ug/L	30-JUL-21	320
1,2-Dichloroethane	<0.50	OWP	0.50	ug/L	30-JUL-21	1.6
1,1-Dichloroethylene	<0.50	OWP	0.50	ug/L	30-JUL-21	1.6
cis-1,2-Dichloroethylene	<0.50	OWP	0.50	ug/L	30-JUL-21	1.6
trans-1,2-Dichloroethylene	<0.50	OWP	0.50	ug/L	30-JUL-21	1.6
Methylene Chloride	<5.0	OWP	5.0	ug/L	30-JUL-21	610
1,2-Dichloropropane	<0.50	OWP	0.50	ug/L	30-JUL-21	16
cis-1,3-Dichloropropene	<0.30	OWP	0.30	ug/L	30-JUL-21	
trans-1,3-Dichloropropene	<0.30	OWP	0.30	ug/L	30-JUL-21	
1,3-Dichloropropene (cis & trans)	<0.50		0.50	ug/L	30-JUL-21	5.2
Ethylbenzene	<0.50	OWP	0.50	ug/L	30-JUL-21	2300
n-Hexane	<0.50	OWP	0.50	ug/L	30-JUL-21	51
Methyl Ethyl Ketone	<20	OWP	20	ug/L	30-JUL-21	470000
Methyl Isobutyl Ketone	<20	OWP	20	ug/L	30-JUL-21	140000
MTBE	<2.0	OWP	2.0	ug/L	30-JUL-21	190
Styrene	<0.50	OWP	0.50	ug/L	30-JUL-21	1300
1,1,1,2-Tetrachloroethane	<0.50	OWP	0.50	ug/L	30-JUL-21	3.3
1,1,2,2-Tetrachloroethane	<0.50	OWP	0.50	ug/L	30-JUL-21	3.2
Tetrachloroethylene	<0.50	OWP	0.50	ug/L	30-JUL-21	1.6
Toluene	<0.50	OWP	0.50	ug/L	30-JUL-21	18000
1,1,1-Trichloroethane	<0.50	OWP	0.50	ug/L	30-JUL-21	640
1,1,2-Trichloroethane	<0.50	OWP	0.50	ug/L	30-JUL-21	4.7
Trichloroethylene	<0.50	OWP	0.50	ug/L	30-JUL-21	1.6
Trichlorofluoromethane	<5.0	OWP	5.0	ug/L	30-JUL-21	2500
Vinyl chloride	<0.50	OWP	0.50	ug/L	30-JUL-21	0.5
o-Xylene	<0.30	OWP	0.30	ug/L	30-JUL-21	
m+p-Xylenes	<0.40	OWP	0.40	ug/L	30-JUL-21	
Xylenes (Total)	<0.50		0.50	ug/L	30-JUL-21	4200
Surrogate: 4-Bromofluorobenzene	100.4		70-130	%	30-JUL-21	
Surrogate: 1,4-Difluorobenzene	99.3		70-130	%	30-JUL-21	
Hydrocarbons						
F1 (C6-C10)	<25	OWP	25	ug/L	30-JUL-21	750
F1-BTEX	<25		25	ug/L	30-JUL-21	750
F2 (C10-C16)	<100	OWP	100	ug/L	28-JUL-21	150
F2-Naphth	<100		100	ug/L	30-JUL-21	
F3 (C16-C34)	<250	OWP	250	ug/L	28-JUL-21	500
F3-PAH	<250		250	ug/L	30-JUL-21	
F4 (C34-C50)	<250	OWP	250	ug/L	28-JUL-21	500
Total Hydrocarbons (C6-C50)	<370		370	ug/L	30-JUL-21	
Chrom. to baseline at nC50	YES			No Unit	28-JUL-21	
Surrogate: 2-Bromobenzotrifluoride	87.7		60-140	%	28-JUL-21	
Surrogate: 3,4-Dichlorotoluene	85.4		60-140	%	30-JUL-21	
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.024		0.020	ug/L	30-JUL-21	600

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
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T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

#1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits
L2618106-4 MW1-DUP Sampled By: CLIENT on 23-JUL-21 @ 12:25 Matrix: WATER						#1
Polycyclic Aromatic Hydrocarbons						
Acenaphthylene	<0.020		0.020	ug/L	30-JUL-21	1.8
Anthracene	<0.020		0.020	ug/L	30-JUL-21	2.4
Benzo(a)anthracene	<0.020		0.020	ug/L	30-JUL-21	4.7
Benzo(a)pyrene	<0.010		0.010	ug/L	30-JUL-21	0.81
Benzo(b&j)fluoranthene	<0.020		0.020	ug/L	30-JUL-21	0.75
Benzo(g,h,i)perylene	<0.020		0.020	ug/L	30-JUL-21	0.2
Benzo(k)fluoranthene	<0.020		0.020	ug/L	30-JUL-21	0.4
Chrysene	<0.020		0.020	ug/L	30-JUL-21	1
Dibenz(a,h)anthracene	<0.020		0.020	ug/L	30-JUL-21	0.52
Fluoranthene	<0.020		0.020	ug/L	30-JUL-21	130
Fluorene	0.051		0.020	ug/L	30-JUL-21	400
Indeno(1,2,3-cd)pyrene	<0.020		0.020	ug/L	30-JUL-21	0.2
1+2-Methylnaphthalenes	0.166		0.028	ug/L	30-JUL-21	1800
1-Methylnaphthalene	0.048		0.020	ug/L	30-JUL-21	1800
2-Methylnaphthalene	0.118		0.020	ug/L	30-JUL-21	1800
Naphthalene	0.057		0.050	ug/L	30-JUL-21	1400
Phenanthrene	<0.140	RRR	0.14	ug/L	30-JUL-21	580
Pyrene	0.042		0.020	ug/L	30-JUL-21	68
Surrogate: Chrysene d12	87.8		50-150	%	30-JUL-21	
Surrogate: Naphthalene d8	69.7		60-140	%	30-JUL-21	
Surrogate: Phenanthrene d10	107.7		60-140	%	30-JUL-21	
L2618106-5 78 ROS-BH1(MW) Sampled By: CLIENT on 09-AUG-21 @ 11:00 Matrix: WATER						#1
Physical Tests						
Conductivity	0.680		0.0030	mS/cm	10-AUG-21	
pH	7.79		0.10	pH units	10-AUG-21	
Anions and Nutrients						
Chloride (Cl)	54.3		0.50	mg/L	10-AUG-21	2300
Cyanides						
Cyanide, Weak Acid Diss	<2.0		2.0	ug/L	11-AUG-21	66
L2618106-6 78 ROS-BH2(MW) Sampled By: CLIENT on 09-AUG-21 @ 10:40 Matrix: WATER						#1
Physical Tests						
Conductivity	0.718		0.0030	mS/cm	10-AUG-21	
pH	8.02		0.10	pH units	10-AUG-21	
Anions and Nutrients						
Chloride (Cl)	23.6		0.50	mg/L	10-AUG-21	2300
Cyanides						
Cyanide, Weak Acid Diss	<2.0		2.0	ug/L	11-AUG-21	66

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

#1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

Sample Details Grouping / Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits			
L2618106-7 78 ROS-BH3(MW) Sampled By: CLIENT on 09-AUG-21 @ 10:25 Matrix: WATER						#1			
Physical Tests									
Conductivity	0.876		0.0030	mS/cm	10-AUG-21				
pH	7.72		0.10	pH units	10-AUG-21				
Anions and Nutrients									
Chloride (Cl)	44.4		0.50	mg/L	10-AUG-21	2300			
Cyanides									
Cyanide, Weak Acid Diss	<2.0		2.0	ug/L	11-AUG-21	66			
L2618106-8 78 ROS-DUP Sampled By: CLIENT on 09-AUG-21 @ 10:40 Matrix: WATER						#1			
Physical Tests									
Conductivity	0.728		0.0030	mS/cm	10-AUG-21				
pH	7.80		0.10	pH units	10-AUG-21				
Anions and Nutrients									
Chloride (Cl)	23.2		0.50	mg/L	10-AUG-21	2300			
Cyanides									
Cyanide, Weak Acid Diss	<2.0		2.0	ug/L	11-AUG-21	66			

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

#1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

Reference Information

Sample Parameter Qualifier key listed:

Qualifier	Description
PDM	Particulate was observed in preserved Dissolved Metals sample. Associated results may be biased low.
OWP	Organic water sample contained visible sediment (must be included as part of analysis). Measured concentrations of organic substances in water can be biased high due to presence of sediment.
RRR	Refer to Report Remarks for issues regarding this analysis

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
CL-IC-N-WT	Water	Chloride by IC	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

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	Water	Cyanide (WAD)-O.Reg 153/04	APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. 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 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

CR-CR6-IC-R511-WT	Water	Hex Chrom-O.Reg 153/04 (July 2011)	EPA 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. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

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 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

EC-R511-WT	Water	Conductivity-O.Reg 153/04 (July 2011)	APHA 2510 B

Water samples can be measured directly by immersing the conductivity cell into the sample.

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 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

EC-SCREEN-WT	Water	Conductivity Screen (Internal Use Only)	APHA 2510

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F1-F4-511-CALC-WT	Water	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-L

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

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.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:
1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

Reference Information

F1-HS-511-WT	Water	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS

Fraction F1 is determined by analyzing by headspace-GC/FID.

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 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

F2-F4-511-WT	Water	F2-F4-O.Reg 153/04 (July 2011)	EPA 3511/CCME Tier 1

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.

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 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

HG-D-UG/L-CVAA-WT	Water	Diss. Mercury in Water by CVAAS (ug/L)	EPA 1631E (mod)

Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

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).

MET-D-UG/L-MS-WT	Water	Diss. Metals in Water by ICPMS (ug/L)	EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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).

METHYLNAPS-CALC-WT	Water	PAH-Calculated Parameters	SW846 8270
PAH-511-WT	Water	PAH-O. Reg 153/04 (July 2011)	SW846 3510/8270

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using GC/MS. Results for benzo(b) fluoranthene may include contributions from benzo(j)fluoranthene, if also present in the sample.

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 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

PH-WT	Water	pH	APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH 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). Holdtime for samples under this regulation is 28 days

VOC-1,3-DCP-CALC-WT	Water	Regulation 153 VOCs	SW8260B/SW8270C
VOC-511-HS-WT	Water	VOC by GCMS HS O.Reg 153/04 (July 2011)	SW846 8260

Liquid samples are analyzed by headspace GC/MSD.

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 and as of November 30, 2020), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

XYLENES-SUM-CALC-WT	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.

Chain of Custody numbers:

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:

Reference Information

Laboratory Definition Code	Laboratory Location	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: L2618106 Report Date: 15-AUG-21

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WT	**Water**							
Batch R5547829								
WG3594045-4 DUP		**WG3594045-3**						
Chloride (Cl)		23.6	23.6		mg/L	0.1	20	10-AUG-21
WG3594045-2 LCS								
Chloride (Cl)			101.6		%		90-110	10-AUG-21
WG3594045-1 MB								
Chloride (Cl)			<0.50		mg/L		0.5	10-AUG-21
WG3594045-5 MS		**WG3594045-3**						
Chloride (Cl)			99.3		%		75-125	10-AUG-21
CN-WAD-R511-WT	**Water**							
Batch R5548992								
WG3594886-20 DUP		**WG3594886-18**						
Cyanide, Weak Acid Diss		<2.0	<2.0	RPD-NA	ug/L	N/A	20	11-AUG-21
WG3594886-17 LCS								
Cyanide, Weak Acid Diss			107.1		%		80-120	11-AUG-21
WG3594886-16 MB								
Cyanide, Weak Acid Diss			<2.0		ug/L		2	11-AUG-21
WG3594886-19 MS		**WG3594886-18**						
Cyanide, Weak Acid Diss			111.5		%		75-125	11-AUG-21
CR-CR6-IC-R511-WT	**Water**							
Batch R5529993								
WG3583840-4 DUP		**WG3583840-3**						
Chromium, Hexavalent		<0.50	<0.50	RPD-NA	ug/L	N/A	20	26-JUL-21
WG3583840-2 LCS								
Chromium, Hexavalent			100.6		%		80-120	26-JUL-21
WG3583840-1 MB								
Chromium, Hexavalent			<0.50		ug/L		0.5	26-JUL-21
WG3583840-5 MS		**WG3583840-3**						
Chromium, Hexavalent			102.3		%		70-130	26-JUL-21
EC-R511-WT	**Water**							
Batch R5547828								
WG3593569-4 DUP		**WG3593569-3**						
Conductivity		2.15	2.14		mS/cm	0.5	10	10-AUG-21
WG3593569-2 LCS								
Conductivity			99.5		%		90-110	10-AUG-21
WG3593569-1 MB								
Conductivity			<0.0030		mS/cm		0.003	10-AUG-21
F1-HS-511-WT	**Water**							

Quality Control Report

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	**Water**							
Batch R5532017								
WG3586155-4 DUP		**WG3586155-3**						
F1 (C6-C10)		<25	<25	RPD-NA	ug/L	N/A	30	30-JUL-21
WG3586155-1 LCS								
F1 (C6-C10)			89.1		%		80-120	29-JUL-21
WG3586155-2 MB								
F1 (C6-C10)			<25		ug/L		25	29-JUL-21
Surrogate: 3,4-Dichlorotoluene			101.1		%		60-140	29-JUL-21
WG3586155-5 MS		**WG3586155-3**						
F1 (C6-C10)			67.6		%		60-140	30-JUL-21
Batch R5532317								
WG3586041-4 DUP		**WG3586041-3**						
F1 (C6-C10)		<25	<25	RPD-NA	ug/L	N/A	30	29-JUL-21
WG3586041-1 LCS								
F1 (C6-C10)			99.3		%		80-120	29-JUL-21
WG3586041-2 MB								
F1 (C6-C10)			<25		ug/L		25	29-JUL-21
Surrogate: 3,4-Dichlorotoluene			85.3		%		60-140	29-JUL-21
WG3586041-5 MS		**WG3586041-3**						
F1 (C6-C10)			93.7		%		60-140	29-JUL-21
F2-F4-511-WT	**Water**							
Batch R5531023								
WG3583407-2 LCS								
F2 (C10-C16)			98.2		%		70-130	28-JUL-21
F3 (C16-C34)			99.1		%		70-130	28-JUL-21
F4 (C34-C50)			129.5		%		70-130	28-JUL-21
WG3583407-1 MB								
F2 (C10-C16)			<100		ug/L		100	28-JUL-21
F3 (C16-C34)			<250		ug/L		250	28-JUL-21
F4 (C34-C50)			<250		ug/L		250	28-JUL-21
Surrogate: 2-Bromobenzotrifluoride			89.9		%		60-140	28-JUL-21
HG-D-UG/L-CVAA-WT	**Water**							
Batch R5534709								
WG3587228-4 DUP		**WG3587228-3**						
Mercury (Hg)-Dissolved		<0.0050	<0.0050	RPD-NA	ug/L	N/A	20	30-JUL-21
WG3587228-2 LCS								
Mercury (Hg)-Dissolved			108.0		%		80-120	30-JUL-21
WG3587228-1 MB								

Quality Control Report

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-D-UG/L-CVAA-WT	**Water**							
Batch R5534709								
WG3587228-1 MB								
Mercury (Hg)-Dissolved			<0.0050		ug/L		0.005	30-JUL-21
WG3587228-6 MS		**WG3587228-5**						
Mercury (Hg)-Dissolved			100.3		%		70-130	30-JUL-21
MET-D-UG/L-MS-WT	**Water**							
Batch R5534037								
WG3586935-4 DUP		**WG3586935-3**						
Antimony (Sb)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	29-JUL-21
Arsenic (As)-Dissolved		3.1	2.8		ug/L	13	20	29-JUL-21
Barium (Ba)-Dissolved		902	921		ug/L	2.0	20	29-JUL-21
Beryllium (Be)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	29-JUL-21
Boron (B)-Dissolved		<100	<100	RPD-NA	ug/L	N/A	20	29-JUL-21
Cadmium (Cd)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	29-JUL-21
Chromium (Cr)-Dissolved		<5.0	<5.0	RPD-NA	ug/L	N/A	20	29-JUL-21
Cobalt (Co)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	29-JUL-21
Copper (Cu)-Dissolved		<2.0	<2.0	RPD-NA	ug/L	N/A	20	29-JUL-21
Lead (Pb)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	29-JUL-21
Molybdenum (Mo)-Dissolved		1.08	1.11		ug/L	3.1	20	29-JUL-21
Nickel (Ni)-Dissolved		<5.0	<5.0	RPD-NA	ug/L	N/A	20	29-JUL-21
Selenium (Se)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	29-JUL-21
Silver (Ag)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	29-JUL-21
Sodium (Na)-Dissolved		281000	285000		ug/L	1.2	20	29-JUL-21
Thallium (Tl)-Dissolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	29-JUL-21
Uranium (U)-Dissolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	29-JUL-21
Vanadium (V)-Dissolved		<5.0	<5.0	RPD-NA	ug/L	N/A	20	29-JUL-21
Zinc (Zn)-Dissolved		12	13		ug/L	6.7	20	29-JUL-21
WG3586935-2 LCS								
Antimony (Sb)-Dissolved			99.4		%		80-120	29-JUL-21
Arsenic (As)-Dissolved			100.8		%		80-120	29-JUL-21
Barium (Ba)-Dissolved			100.7		%		80-120	29-JUL-21
Beryllium (Be)-Dissolved			99.7		%		80-120	29-JUL-21
Boron (B)-Dissolved			93.2		%		80-120	29-JUL-21
Cadmium (Cd)-Dissolved			99.6		%		80-120	29-JUL-21
Chromium (Cr)-Dissolved			99.3		%		80-120	29-JUL-21

Quality Control Report

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	**Water**							
Batch R5534037								
WG3586935-2 LCS								
Cobalt (Co)-Dissolved			99.6		%		80-120	29-JUL-21
Copper (Cu)-Dissolved			97.7		%		80-120	29-JUL-21
Lead (Pb)-Dissolved			101.3		%		80-120	29-JUL-21
Molybdenum (Mo)-Dissolved			100.8		%		80-120	29-JUL-21
Nickel (Ni)-Dissolved			97.9		%		80-120	29-JUL-21
Selenium (Se)-Dissolved			99.3		%		80-120	29-JUL-21
Silver (Ag)-Dissolved			101.7		%		80-120	29-JUL-21
Sodium (Na)-Dissolved			98.7		%		80-120	29-JUL-21
Thallium (Tl)-Dissolved			100.3		%		80-120	29-JUL-21
Uranium (U)-Dissolved			103.4		%		80-120	29-JUL-21
Vanadium (V)-Dissolved			100.1		%		80-120	29-JUL-21
Zinc (Zn)-Dissolved			102.5		%		80-120	29-JUL-21
WG3586935-1 MB								
Antimony (Sb)-Dissolved			<0.10		ug/L		0.1	29-JUL-21
Arsenic (As)-Dissolved			<0.10		ug/L		0.1	29-JUL-21
Barium (Ba)-Dissolved			<0.10		ug/L		0.1	29-JUL-21
Beryllium (Be)-Dissolved			<0.10		ug/L		0.1	29-JUL-21
Boron (B)-Dissolved			<10		ug/L		10	29-JUL-21
Cadmium (Cd)-Dissolved			<0.0050		ug/L		0.005	29-JUL-21
Chromium (Cr)-Dissolved			<0.50		ug/L		0.5	29-JUL-21
Cobalt (Co)-Dissolved			<0.10		ug/L		0.1	29-JUL-21
Copper (Cu)-Dissolved			<0.20		ug/L		0.2	29-JUL-21
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	29-JUL-21
Molybdenum (Mo)-Dissolved			<0.050		ug/L		0.05	29-JUL-21
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	29-JUL-21
Selenium (Se)-Dissolved			<0.050		ug/L		0.05	29-JUL-21
Silver (Ag)-Dissolved			<0.050		ug/L		0.05	29-JUL-21
Sodium (Na)-Dissolved			<50		ug/L		50	29-JUL-21
Thallium (Tl)-Dissolved			<0.010		ug/L		0.01	29-JUL-21
Uranium (U)-Dissolved			<0.010		ug/L		0.01	29-JUL-21
Vanadium (V)-Dissolved			<0.50		ug/L		0.5	29-JUL-21
Zinc (Zn)-Dissolved			<1.0		ug/L		1	29-JUL-21
WG3586935-5 MS		**WG3586935-6**						
Antimony (Sb)-Dissolved			96.0		%		70-130	29-JUL-21

Quality Control Report

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	**Water**							
Batch R5534037								
WG3586935-5 MS		**WG3586935-6**						
Arsenic (As)-Dissolved			99.0		%		70-130	29-JUL-21
Barium (Ba)-Dissolved			N/A	MS-B	%		-	29-JUL-21
Beryllium (Be)-Dissolved			98.9		%		70-130	29-JUL-21
Boron (B)-Dissolved			N/A	MS-B	%		-	29-JUL-21
Cadmium (Cd)-Dissolved			95.3		%		70-130	29-JUL-21
Chromium (Cr)-Dissolved			95.3		%		70-130	29-JUL-21
Cobalt (Co)-Dissolved			91.1		%		70-130	29-JUL-21
Copper (Cu)-Dissolved			88.7		%		70-130	29-JUL-21
Lead (Pb)-Dissolved			91.5		%		70-130	29-JUL-21
Molybdenum (Mo)-Dissolved			N/A	MS-B	%		-	29-JUL-21
Nickel (Ni)-Dissolved			83.5		%		70-130	29-JUL-21
Selenium (Se)-Dissolved			99.2		%		70-130	29-JUL-21
Silver (Ag)-Dissolved			63.5	MES	%		70-130	29-JUL-21
Sodium (Na)-Dissolved			N/A	MS-B	%		-	29-JUL-21
Thallium (Tl)-Dissolved			91.1		%		70-130	29-JUL-21
Uranium (U)-Dissolved			N/A	MS-B	%		-	29-JUL-21
Vanadium (V)-Dissolved			100.8		%		70-130	29-JUL-21
PAH-511-WT	**Water**							
Batch R5534517								
WG3583407-2 LCS								
1-Methylnaphthalene			94.0		%		50-140	30-JUL-21
2-Methylnaphthalene			89.4		%		50-140	30-JUL-21
Acenaphthene			93.7		%		50-140	30-JUL-21
Acenaphthylene			96.1		%		50-140	30-JUL-21
Anthracene			141.0	LCS-H	%		50-140	30-JUL-21
Benzo(a)anthracene			112.0		%		50-140	30-JUL-21
Benzo(a)pyrene			93.0		%		50-140	30-JUL-21
Benzo(b&j)fluoranthene			95.8		%		50-140	30-JUL-21
Benzo(g,h,i)perylene			107.9		%		50-140	30-JUL-21
Benzo(k)fluoranthene			103.7		%		50-140	30-JUL-21
Chrysene			109.2		%		50-140	30-JUL-21
Dibenz(a,h)anthracene			102.3		%		50-140	30-JUL-21
Fluoranthene			107.9		%		50-140	30-JUL-21
Fluorene			103.0		%		50-140	

Quality Control Report

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	**Water**							
Batch R5534517								
WG3583407-2 LCS								
Fluorene			103.0		%		50-140	30-JUL-21
Indeno(1,2,3-cd)pyrene			107.7		%		50-140	30-JUL-21
Naphthalene			99.6		%		50-140	30-JUL-21
Phenanthrene			164.5	LCS-H	%		50-140	30-JUL-21
Pyrene			100.0		%		50-140	30-JUL-21
WG3583407-1 MB								
1-Methylnaphthalene			<0.020		ug/L		0.02	30-JUL-21
2-Methylnaphthalene			<0.020		ug/L		0.02	30-JUL-21
Acenaphthene			<0.020		ug/L		0.02	30-JUL-21
Acenaphthylene			<0.020		ug/L		0.02	30-JUL-21
Anthracene			<0.020		ug/L		0.02	30-JUL-21
Benzo(a)anthracene			<0.020		ug/L		0.02	30-JUL-21
Benzo(a)pyrene			<0.010		ug/L		0.01	30-JUL-21
Benzo(b&j)fluoranthene			<0.020		ug/L		0.02	30-JUL-21
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	30-JUL-21
Benzo(k)fluoranthene			<0.020		ug/L		0.02	30-JUL-21
Chrysene			<0.020		ug/L		0.02	30-JUL-21
Dibenz(a,h)anthracene			<0.020		ug/L		0.02	30-JUL-21
Fluoranthene			<0.020		ug/L		0.02	30-JUL-21
Fluorene			<0.020		ug/L		0.02	30-JUL-21
Indeno(1,2,3-cd)pyrene			<0.020		ug/L		0.02	30-JUL-21
Naphthalene			<0.050		ug/L		0.05	30-JUL-21
Phenanthrene			<0.020		ug/L		0.02	30-JUL-21
Pyrene			<0.020		ug/L		0.02	30-JUL-21
Surrogate: Naphthalene d8			66.8		%		60-140	30-JUL-21
Surrogate: Phenanthrene d10			127.1		%		60-140	30-JUL-21
Surrogate: Chrysene d12			101.2		%		50-150	30-JUL-21
PH-WT	**Water**							
Batch R5547828								
WG3593569-4 DUP		**WG3593569-3**						
pH		7.45	7.38	J	pH units	0.07	0.2	10-AUG-21
WG3593569-2 LCS								
pH			7.00		pH units		6.9-7.1	10-AUG-21
VOC-511-HS-WT	**Water**							

Quality Control Report

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R5532017								
WG3586155-4 DUP		**WG3586155-3**						
1,1,1,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
1,1,2,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	30-JUL-21
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	30-JUL-21
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	30-JUL-21
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	30-JUL-21
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	30-JUL-21
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	30-JUL-21
cis-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
cis-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	30-JUL-21
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	30-JUL-21
Dichlorodifluoromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	30-JUL-21
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	30-JUL-21
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	30-JUL-21
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	30-JUL-21
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	30-JUL-21
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	30-JUL-21
o-Xylene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	30-JUL-21
Styrene		<0.50	<0.50		ug/L			30-JUL-21

Quality Control Report

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R5532017								
WG3586155-4 DUP		**WG3586155-3**						
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
trans-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
trans-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	30-JUL-21
Trichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	30-JUL-21
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	30-JUL-21
WG3586155-1 LCS								
1,1,1,2-Tetrachloroethane			95.9		%		70-130	29-JUL-21
1,1,2,2-Tetrachloroethane			89.2		%		70-130	29-JUL-21
1,1,1-Trichloroethane			95.9		%		70-130	29-JUL-21
1,1,2-Trichloroethane			94.4		%		70-130	29-JUL-21
1,1-Dichloroethane			104.4		%		70-130	29-JUL-21
1,1-Dichloroethylene			100.6		%		70-130	29-JUL-21
1,2-Dibromoethane			92.4		%		70-130	29-JUL-21
1,2-Dichlorobenzene			101.0		%		70-130	29-JUL-21
1,2-Dichloroethane			95.2		%		70-130	29-JUL-21
1,2-Dichloropropane			95.9		%		70-130	29-JUL-21
1,3-Dichlorobenzene			105.7		%		70-130	29-JUL-21
1,4-Dichlorobenzene			106.9		%		70-130	29-JUL-21
Acetone			105.9		%		60-140	29-JUL-21
Benzene			97.7		%		70-130	29-JUL-21
Bromodichloromethane			102.9		%		70-130	29-JUL-21
Bromoform			87.3		%		70-130	29-JUL-21
Bromomethane			96.4		%		60-140	29-JUL-21
Carbon tetrachloride			94.8		%		70-130	29-JUL-21
Chlorobenzene			99.5		%		70-130	29-JUL-21
Chloroform			97.3		%		70-130	29-JUL-21
cis-1,2-Dichloroethylene			95.6		%		70-130	29-JUL-21
cis-1,3-Dichloropropene			96.0		%		70-130	29-JUL-21
Dibromochloromethane			92.6		%		70-130	29-JUL-21
Dichlorodifluoromethane			86.0		%		50-140	29-JUL-21

Quality Control Report

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115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R5532017								
WG3586155-1 LCS								
Ethylbenzene			100.9		%		70-130	29-JUL-21
n-Hexane			101.3		%		70-130	29-JUL-21
m+p-Xylenes			101.6		%		70-130	29-JUL-21
Methyl Ethyl Ketone			95.4		%		60-140	29-JUL-21
Methyl Isobutyl Ketone			93.3		%		60-140	29-JUL-21
Methylene Chloride			97.6		%		70-130	29-JUL-21
MTBE			99.1		%		70-130	29-JUL-21
o-Xylene			98.7		%		70-130	29-JUL-21
Styrene			98.9		%		70-130	29-JUL-21
Tetrachloroethylene			101.5		%		70-130	29-JUL-21
Toluene			100.3		%		70-130	29-JUL-21
trans-1,2-Dichloroethylene			108.3		%		70-130	29-JUL-21
trans-1,3-Dichloropropene			93.2		%		70-130	29-JUL-21
Trichloroethylene			96.7		%		70-130	29-JUL-21
Trichlorofluoromethane			97.6		%		60-140	29-JUL-21
Vinyl chloride			87.8		%		60-140	29-JUL-21
WG3586155-2 MB								
1,1,1,2-Tetrachloroethane			<0.50		ug/L		0.5	29-JUL-21
1,1,2,2-Tetrachloroethane			<0.50		ug/L		0.5	29-JUL-21
1,1,1-Trichloroethane			<0.50		ug/L		0.5	29-JUL-21
1,1,2-Trichloroethane			<0.50		ug/L		0.5	29-JUL-21
1,1-Dichloroethane			<0.50		ug/L		0.5	29-JUL-21
1,1-Dichloroethylene			<0.50		ug/L		0.5	29-JUL-21
1,2-Dibromoethane			<0.20		ug/L		0.2	29-JUL-21
1,2-Dichlorobenzene			<0.50		ug/L		0.5	29-JUL-21
1,2-Dichloroethane			<0.50		ug/L		0.5	29-JUL-21
1,2-Dichloropropane			<0.50		ug/L		0.5	29-JUL-21
1,3-Dichlorobenzene			<0.50		ug/L		0.5	29-JUL-21
1,4-Dichlorobenzene			<0.50		ug/L		0.5	29-JUL-21
Acetone			<30		ug/L		30	29-JUL-21
Benzene			<0.50		ug/L		0.5	29-JUL-21
Bromodichloromethane			<2.0		ug/L		2	29-JUL-21
Bromoform			<5.0		ug/L		5	29-JUL-21
Bromomethane			<0.50		ug/L		0.5	29-JUL-21

Quality Control Report

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R5532017								
WG3586155-2 MB								
Carbon tetrachloride			<0.20		ug/L		0.2	29-JUL-21
Chlorobenzene			<0.50		ug/L		0.5	29-JUL-21
Chloroform			<1.0		ug/L		1	29-JUL-21
cis-1,2-Dichloroethylene			<0.50		ug/L		0.5	29-JUL-21
cis-1,3-Dichloropropene			<0.30		ug/L		0.3	29-JUL-21
Dibromochloromethane			<2.0		ug/L		2	29-JUL-21
Dichlorodifluoromethane			<2.0		ug/L		2	29-JUL-21
Ethylbenzene			<0.50		ug/L		0.5	29-JUL-21
n-Hexane			<0.50		ug/L		0.5	29-JUL-21
m+p-Xylenes			<0.40		ug/L		0.4	29-JUL-21
Methyl Ethyl Ketone			<20		ug/L		20	29-JUL-21
Methyl Isobutyl Ketone			<20		ug/L		20	29-JUL-21
Methylene Chloride			<5.0		ug/L		5	29-JUL-21
MTBE			<2.0		ug/L		2	29-JUL-21
o-Xylene			<0.30		ug/L		0.3	29-JUL-21
Styrene			<0.50		ug/L		0.5	29-JUL-21
Tetrachloroethylene			<0.50		ug/L		0.5	29-JUL-21
Toluene			<0.50		ug/L		0.5	29-JUL-21
trans-1,2-Dichloroethylene			<0.50		ug/L		0.5	29-JUL-21
trans-1,3-Dichloropropene			<0.30		ug/L		0.3	29-JUL-21
Trichloroethylene			<0.50		ug/L		0.5	29-JUL-21
Trichlorofluoromethane			<5.0		ug/L		5	29-JUL-21
Vinyl chloride			<0.50		ug/L		0.5	29-JUL-21
Surrogate: 1,4-Difluorobenzene			100.2		%		70-130	29-JUL-21
Surrogate: 4-Bromofluorobenzene			103.3		%		70-130	29-JUL-21
WG3586155-5 MS		**WG3586155-3**						
1,1,1,2-Tetrachloroethane			100.5		%		50-140	30-JUL-21
1,1,2,2-Tetrachloroethane			86.3		%		50-140	30-JUL-21
1,1,1-Trichloroethane			103.2		%		50-140	30-JUL-21
1,1,2-Trichloroethane			91.6		%		50-140	30-JUL-21
1,1-Dichloroethane			113.4		%		50-140	30-JUL-21
1,1-Dichloroethylene			107.7		%		50-140	30-JUL-21
1,2-Dibromoethane			86.6		%		50-140	30-JUL-21
1,2-Dichlorobenzene			104.6		%		50-140	30-JUL-21

Quality Control Report

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R5532017								
WG3586155-5 MS		**WG3586155-3**						
1,2-Dichloroethane			91.8		%		50-140	30-JUL-21
1,2-Dichloropropane			98.0		%		50-140	30-JUL-21
1,3-Dichlorobenzene			110.4		%		50-140	30-JUL-21
1,4-Dichlorobenzene			111.3		%		50-140	30-JUL-21
Acetone			96.6		%		50-140	30-JUL-21
Benzene			101.7		%		50-140	30-JUL-21
Bromodichloromethane			106.7		%		50-140	30-JUL-21
Bromoform			86.0		%		50-140	30-JUL-21
Bromomethane			95.7		%		50-140	30-JUL-21
Carbon tetrachloride			103.5		%		50-140	30-JUL-21
Chlorobenzene			103.4		%		50-140	30-JUL-21
Chloroform			101.0		%		50-140	30-JUL-21
cis-1,2-Dichloroethylene			96.7		%		50-140	30-JUL-21
cis-1,3-Dichloropropene			95.6		%		50-140	30-JUL-21
Dibromochloromethane			93.1		%		50-140	30-JUL-21
Dichlorodifluoromethane			89.8		%		50-140	30-JUL-21
Ethylbenzene			107.2		%		50-140	30-JUL-21
n-Hexane			110.0		%		50-140	30-JUL-21
m+p-Xylenes			110.0		%		50-140	30-JUL-21
Methyl Ethyl Ketone			80.1		%		50-140	30-JUL-21
Methyl Isobutyl Ketone			83.1		%		50-140	30-JUL-21
Methylene Chloride			97.5		%		50-140	30-JUL-21
MTBE			103.3		%		50-140	30-JUL-21
o-Xylene			104.1		%		50-140	30-JUL-21
Styrene			101.2		%		50-140	30-JUL-21
Tetrachloroethylene			105.4		%		50-140	30-JUL-21
Toluene			104.8		%		50-140	30-JUL-21
trans-1,2-Dichloroethylene			113.4		%		50-140	30-JUL-21
trans-1,3-Dichloropropene			89.5		%		50-140	30-JUL-21
Trichloroethylene			100.8		%		50-140	30-JUL-21
Trichlorofluoromethane			105.2		%		50-140	30-JUL-21
Vinyl chloride			91.5		%		50-140	30-JUL-21

Quality Control Report

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R5532317								
WG3586041-4 DUP		**WG3586041-3**						
1,1,1,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
1,1,2,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	29-JUL-21
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	29-JUL-21
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	29-JUL-21
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	29-JUL-21
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	29-JUL-21
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	29-JUL-21
cis-1,2-Dichloroethylene		0.54	0.55		ug/L	1.8	30	29-JUL-21
cis-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	29-JUL-21
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	29-JUL-21
Dichlorodifluoromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	29-JUL-21
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	29-JUL-21
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	29-JUL-21
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	29-JUL-21
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	29-JUL-21
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	29-JUL-21
o-Xylene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	29-JUL-21
Styrene		<0.50	<0.50		ug/L			29-JUL-21

Quality Control Report

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R5532317								
WG3586041-4 DUP		**WG3586041-3**						
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
trans-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
trans-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	29-JUL-21
Trichloroethylene		1.21	1.26		ug/L	4.0	30	29-JUL-21
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	29-JUL-21
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	29-JUL-21
WG3586041-1 LCS								
1,1,1,2-Tetrachloroethane			101.1		%		70-130	29-JUL-21
1,1,2,2-Tetrachloroethane			103.5		%		70-130	29-JUL-21
1,1,1-Trichloroethane			110.9		%		70-130	29-JUL-21
1,1,2-Trichloroethane			97.4		%		70-130	29-JUL-21
1,1-Dichloroethane			118.2		%		70-130	29-JUL-21
1,1-Dichloroethylene			119.5		%		70-130	29-JUL-21
1,2-Dibromoethane			95.7		%		70-130	29-JUL-21
1,2-Dichlorobenzene			98.8		%		70-130	29-JUL-21
1,2-Dichloroethane			113.6		%		70-130	29-JUL-21
1,2-Dichloropropane			111.2		%		70-130	29-JUL-21
1,3-Dichlorobenzene			97.4		%		70-130	29-JUL-21
1,4-Dichlorobenzene			98.5		%		70-130	29-JUL-21
Acetone			123.6		%		60-140	29-JUL-21
Benzene			105.6		%		70-130	29-JUL-21
Bromodichloromethane			127.0		%		70-130	29-JUL-21
Bromoform			95.6		%		70-130	29-JUL-21
Bromomethane			108.5		%		60-140	29-JUL-21
Carbon tetrachloride			110.9		%		70-130	29-JUL-21
Chlorobenzene			100.5		%		70-130	29-JUL-21
Chloroform			116.9		%		70-130	29-JUL-21
cis-1,2-Dichloroethylene			102.2		%		70-130	29-JUL-21
cis-1,3-Dichloropropene			105.5		%		70-130	29-JUL-21
Dibromochloromethane			100.2		%		70-130	29-JUL-21
Dichlorodifluoromethane			106.0		%		50-140	29-JUL-21

Quality Control Report

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R5532317								
WG3586041-1 LCS								
Ethylbenzene			92.8		%		70-130	29-JUL-21
n-Hexane			114.4		%		70-130	29-JUL-21
m+p-Xylenes			102.0		%		70-130	29-JUL-21
Methyl Ethyl Ketone			103.6		%		60-140	29-JUL-21
Methyl Isobutyl Ketone			102.4		%		60-140	29-JUL-21
Methylene Chloride			114.1		%		70-130	29-JUL-21
MTBE			99.8		%		70-130	29-JUL-21
o-Xylene			92.3		%		70-130	29-JUL-21
Styrene			94.1		%		70-130	29-JUL-21
Tetrachloroethylene			88.1		%		70-130	29-JUL-21
Toluene			93.7		%		70-130	29-JUL-21
trans-1,2-Dichloroethylene			117.2		%		70-130	29-JUL-21
trans-1,3-Dichloropropene			92.0		%		70-130	29-JUL-21
Trichloroethylene			105.4		%		70-130	29-JUL-21
Trichlorofluoromethane			114.8		%		60-140	29-JUL-21
Vinyl chloride			100.5		%		60-140	29-JUL-21
WG3586041-2 MB								
1,1,1,2-Tetrachloroethane			<0.50		ug/L		0.5	29-JUL-21
1,1,2,2-Tetrachloroethane			<0.50		ug/L		0.5	29-JUL-21
1,1,1-Trichloroethane			<0.50		ug/L		0.5	29-JUL-21
1,1,2-Trichloroethane			<0.50		ug/L		0.5	29-JUL-21
1,1-Dichloroethane			<0.50		ug/L		0.5	29-JUL-21
1,1-Dichloroethylene			<0.50		ug/L		0.5	29-JUL-21
1,2-Dibromoethane			<0.20		ug/L		0.2	29-JUL-21
1,2-Dichlorobenzene			<0.50		ug/L		0.5	29-JUL-21
1,2-Dichloroethane			<0.50		ug/L		0.5	29-JUL-21
1,2-Dichloropropane			<0.50		ug/L		0.5	29-JUL-21
1,3-Dichlorobenzene			<0.50		ug/L		0.5	29-JUL-21
1,4-Dichlorobenzene			<0.50		ug/L		0.5	29-JUL-21
Acetone			<30		ug/L		30	29-JUL-21
Benzene			<0.50		ug/L		0.5	29-JUL-21
Bromodichloromethane			<2.0		ug/L		2	29-JUL-21
Bromoform			<5.0		ug/L		5	29-JUL-21
Bromomethane			<0.50		ug/L		0.5	29-JUL-21

Quality Control Report

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R5532317								
WG3586041-2 MB								
Carbon tetrachloride			<0.20		ug/L		0.2	29-JUL-21
Chlorobenzene			<0.50		ug/L		0.5	29-JUL-21
Chloroform			<1.0		ug/L		1	29-JUL-21
cis-1,2-Dichloroethylene			<0.50		ug/L		0.5	29-JUL-21
cis-1,3-Dichloropropene			<0.30		ug/L		0.3	29-JUL-21
Dibromochloromethane			<2.0		ug/L		2	29-JUL-21
Dichlorodifluoromethane			<2.0		ug/L		2	29-JUL-21
Ethylbenzene			<0.50		ug/L		0.5	29-JUL-21
n-Hexane			<0.50		ug/L		0.5	29-JUL-21
m+p-Xylenes			<0.40		ug/L		0.4	29-JUL-21
Methyl Ethyl Ketone			<20		ug/L		20	29-JUL-21
Methyl Isobutyl Ketone			<20		ug/L		20	29-JUL-21
Methylene Chloride			<5.0		ug/L		5	29-JUL-21
MTBE			<2.0		ug/L		2	29-JUL-21
o-Xylene			<0.30		ug/L		0.3	29-JUL-21
Styrene			<0.50		ug/L		0.5	29-JUL-21
Tetrachloroethylene			<0.50		ug/L		0.5	29-JUL-21
Toluene			<0.50		ug/L		0.5	29-JUL-21
trans-1,2-Dichloroethylene			<0.50		ug/L		0.5	29-JUL-21
trans-1,3-Dichloropropene			<0.30		ug/L		0.3	29-JUL-21
Trichloroethylene			<0.50		ug/L		0.5	29-JUL-21
Trichlorofluoromethane			<5.0		ug/L		5	29-JUL-21
Vinyl chloride			<0.50		ug/L		0.5	29-JUL-21
Surrogate: 1,4-Difluorobenzene			99.1		%		70-130	29-JUL-21
Surrogate: 4-Bromofluorobenzene			89.1		%		70-130	29-JUL-21
WG3586041-5 MS		**WG3586041-3**						
1,1,1,2-Tetrachloroethane			100.8		%		50-140	29-JUL-21
1,1,2,2-Tetrachloroethane			95.9		%		50-140	29-JUL-21
1,1,1-Trichloroethane			110.2		%		50-140	29-JUL-21
1,1,2-Trichloroethane			91.2		%		50-140	29-JUL-21
1,1-Dichloroethane			114.8		%		50-140	29-JUL-21
1,1-Dichloroethylene			113.9		%		50-140	29-JUL-21
1,2-Dibromoethane			87.7		%		50-140	29-JUL-21
1,2-Dichlorobenzene			100.7		%		50-140	29-JUL-21

Quality Control Report

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	**Water**							
Batch R5532317								
WG3586041-5 MS		**WG3586041-3**						
1,2-Dichloroethane			104.2		%		50-140	29-JUL-21
1,2-Dichloropropane			106.6		%		50-140	29-JUL-21
1,3-Dichlorobenzene			102.2		%		50-140	29-JUL-21
1,4-Dichlorobenzene			102.1		%		50-140	29-JUL-21
Acetone			108.9		%		50-140	29-JUL-21
Benzene			102.6		%		50-140	29-JUL-21
Bromodichloromethane			121.7		%		50-140	29-JUL-21
Bromoform			89.2		%		50-140	29-JUL-21
Bromomethane			94.8		%		50-140	29-JUL-21
Carbon tetrachloride			111.5		%		50-140	29-JUL-21
Chlorobenzene			100.9		%		50-140	29-JUL-21
Chloroform			114.1		%		50-140	29-JUL-21
cis-1,2-Dichloroethylene			97.1		%		50-140	29-JUL-21
cis-1,3-Dichloropropene			99.4		%		50-140	29-JUL-21
Dibromochloromethane			95.9		%		50-140	29-JUL-21
Dichlorodifluoromethane			80.9		%		50-140	29-JUL-21
Ethylbenzene			95.7		%		50-140	29-JUL-21
n-Hexane			107.5		%		50-140	29-JUL-21
m+p-Xylenes			105.4		%		50-140	29-JUL-21
Methyl Ethyl Ketone			87.0		%		50-140	29-JUL-21
Methyl Isobutyl Ketone			87.6		%		50-140	29-JUL-21
Methylene Chloride			105.7		%		50-140	29-JUL-21
MTBE			100.2		%		50-140	29-JUL-21
o-Xylene			94.0		%		50-140	29-JUL-21
Styrene			93.6		%		50-140	29-JUL-21
Tetrachloroethylene			91.5		%		50-140	29-JUL-21
Toluene			94.1		%		50-140	29-JUL-21
trans-1,2-Dichloroethylene			113.5		%		50-140	29-JUL-21
trans-1,3-Dichloropropene			87.9		%		50-140	29-JUL-21
Trichloroethylene			105.2		%		50-140	29-JUL-21
Trichlorofluoromethane			105.8		%		50-140	29-JUL-21
Vinyl chloride			86.9		%		50-140	29-JUL-21

Quality Control Report

Workorder: L2618106 Report Date: 15-AUG-21

Client: McIntosh Perry Engineering Consultants (Ottawa)
115 Walgreen Road, R.R. 3
Carp ON K0A1L0
Contact: Stefan Holik

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
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.
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.

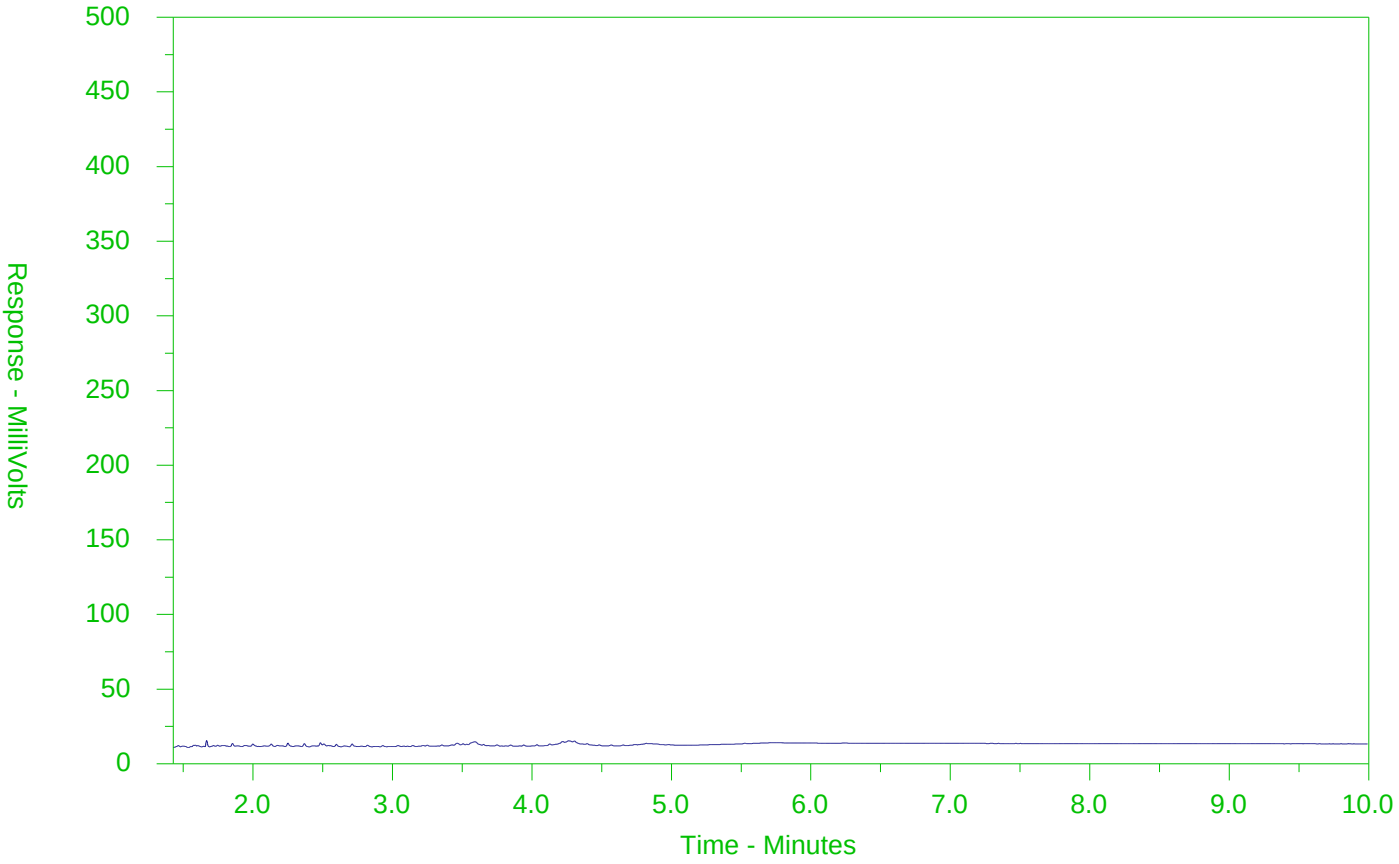
ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where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

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: L2618106-1
Client Sample ID: 78 ROS-BH1(MW)



←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.

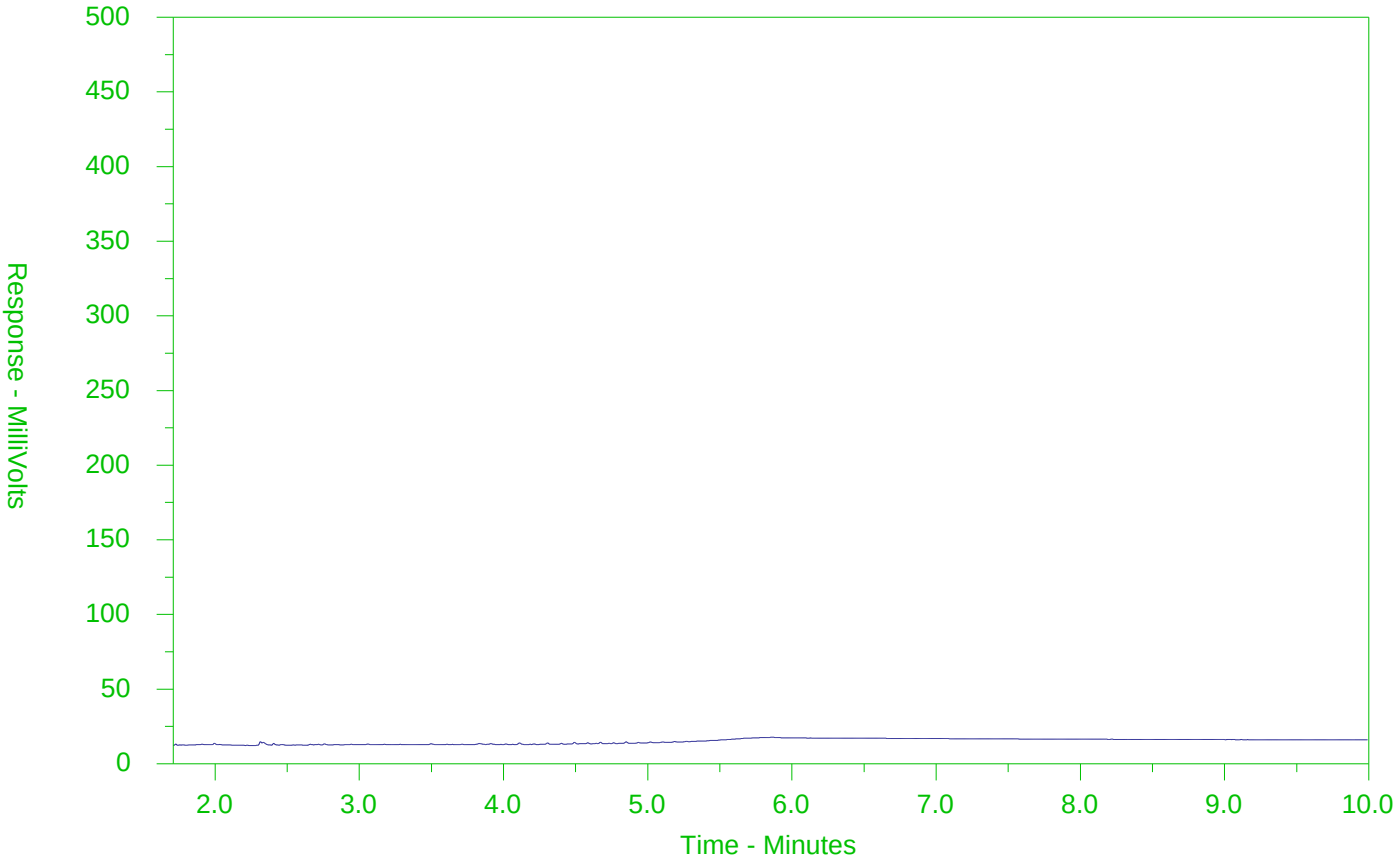
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2618106-2
Client Sample ID: 78 ROS-BH2(MW)



←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.

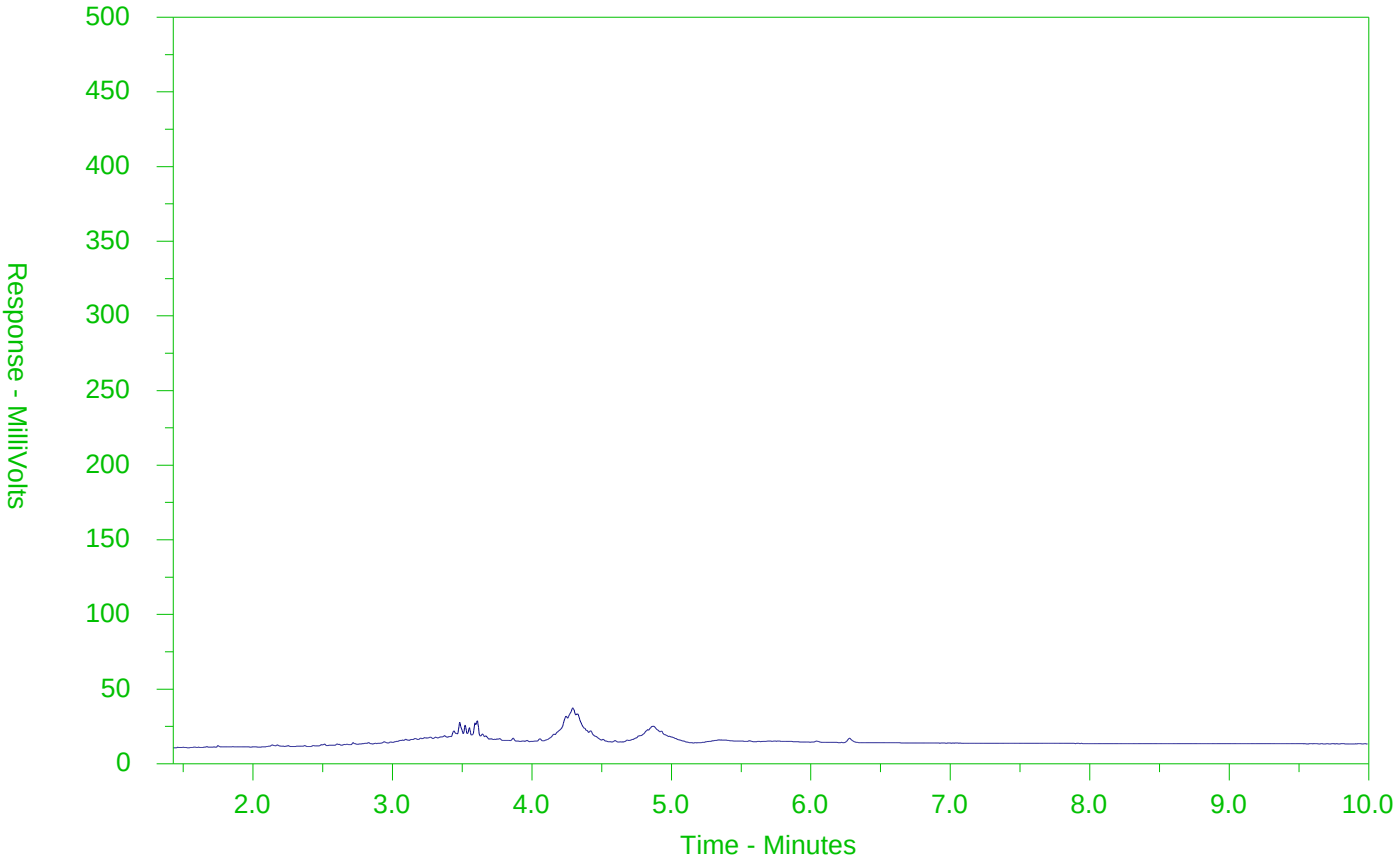
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2618106-3
Client Sample ID: 78 ROS-BH3(MW)



←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.

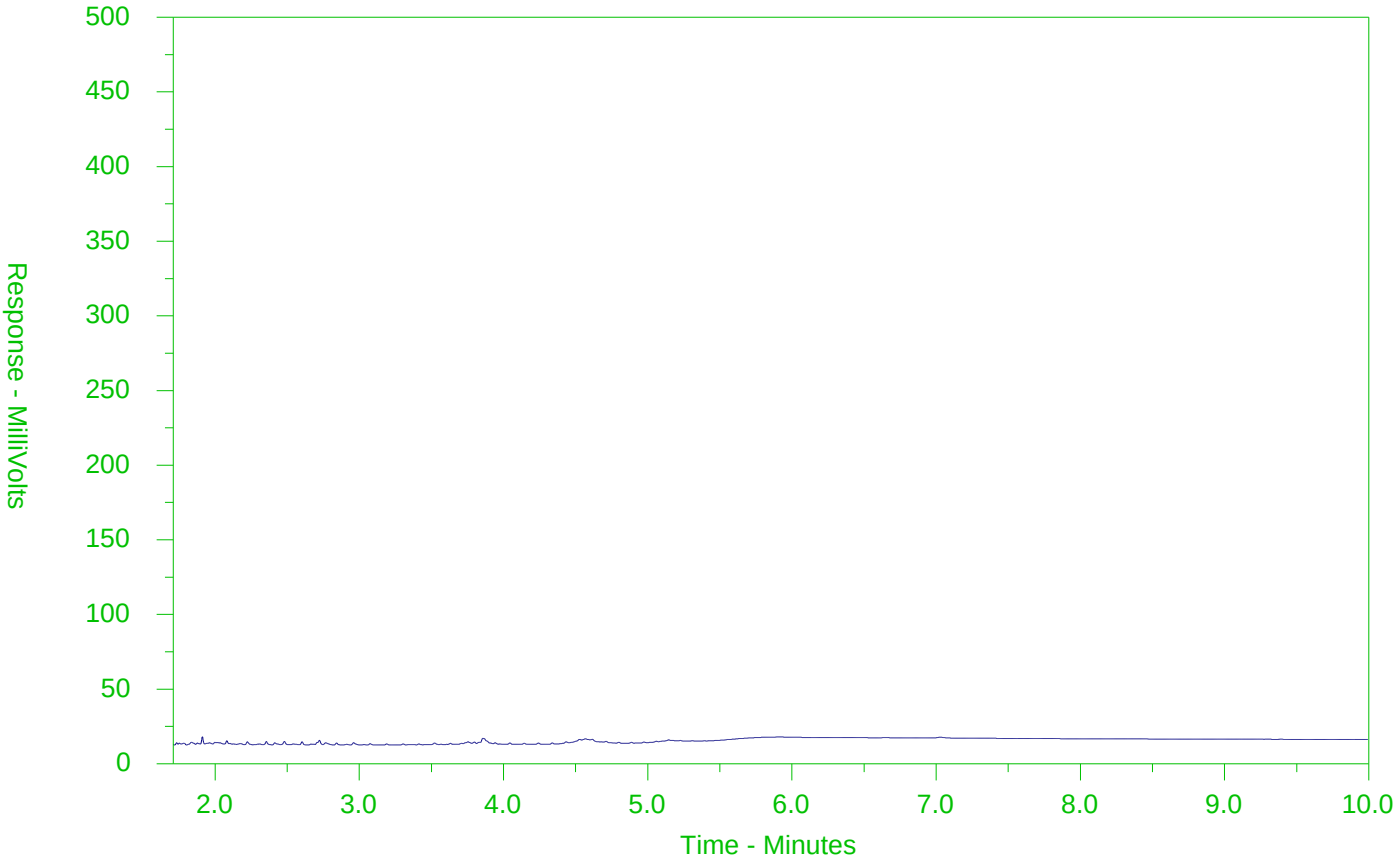
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2618106-4
Client Sample ID: MW1-DUP



←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.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental
www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2618106-COFC

COC Number: 17 -

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	McIntosh Perry - 23229
Contact:	Stefan Holik
Phone:	613-903-5785
	Company address below will appear on the final report
Street:	115 Walgreen Road RR3
City/Province:	Carp, ON
Postal Code:	K0A 1L0
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Quality Control (QC) Report with Report ☐ YES ☐ NO
☐ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☐ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: s.holik@mcintoshperry.com
Email 2: d.orcutt@mcintoshperry.com
Email 3:

Invoice Distribution

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
s.holik@mcintoshperry.com
AP@Mcintoshperry.com

Project Information

ALS Account # / Quote #: Q78918 (SOA)
Job #: CCO-22-1129
PO / AFE:
LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: PO#
Major/Minor Code: Routing Code:
Requisitioner:
Location:

ALS Lab Work Order # (lab use only): L2618106

ALS Contact: Emily Smith Sampler:

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4-20%] ☐ | 3 day [P3-25%] ☐ | 2 day [P2-50%] ☐

EMERGENCY: 1 Business day [E - 100%] ☐ | Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] ☐

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	PAH	METALS & Inorganics (RSC - inclusive)	VOCs	BTEX	F1	F2-F4	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	78RCS-BH1 (MW)	23-Jul-21	12:25pm	WATER	7	✓	✓	✓		✓	✓		
	78RCS-BH2 (MW)	23-Jul-21	12:35pm	WATER	7	✓	✓	✓		✓	✓		
	78RCS-BH3 (MW)	23-Jul-21	11:55am	WATER	7	✓	✓	✓		✓	✓		
	MW1-Dup	23-Jul-21	12:25pm	WATER	7	✓	✓	✓		✓	✓		
				WATER									
				WATER									
				WATER									
				WATER									
				WATER									
				WATER									
				WATER									
				WATER									
				WATER									

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ YES ☑ NO
Are samples for human consumption/ use? ☐ YES ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐
Ice Packs ☑ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐
Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
16.9			16.0		

SHIPMENT RELEASE (client use)

Released by: S Holik Date: July 23/21 Time:

INITIAL SHIPMENT RECEPTION (lab use only)

Received by: Date: 23 JUL Time: 13:35

FINAL SHIPMENT RECEPTION (lab use only)

Received by: Date: 27-7-21 Time: 11:00

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2018 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.