



# Omni-McCann

## Phase Two Environmental Site Assessment

555, 591, 595, and 603 March  
Road, Ottawa, ON

**Produced for:**  
March and Main Developments Inc.

**Produced by:**  
Omni-McCann Inc.

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Geoscience | Engineering | Environment



## 1. EXECUTIVE SUMMARY

**IMPORTANT:** *This executive summary provides an overview of the main findings of the study to which it pertains. This executive summary does not provide a comprehensive report, and its review should not be considered a substitute for reading the report in its entirety.*

Omni-McCann Inc. (OMI) was retained by March and Main Developments Inc. (Owner) to conduct a Phase Two Environmental Site Assessment (ESA) of the combined properties located at 555, 591, 595, and 603 March Road in Ottawa, Ontario (herein referred to as the 'phase two property').

The phase two property is located on the west side of March Road running south from the intersection of Terry Fox Drive and March Road in the Kanata Technology Park of Ottawa, Ontario. The phase two property covers municipal addresses 555, 591, 595, and 603 March Road and are legally described as the following:

- **555 March Road** - Part of Lot 9, Concession 3, Part 1, Plan 5R9546 except Part 1, Plan 4R7933, Part 15, Plan 4R12735, Kanata (PIN 04518-0067). Lot size – 2.44 ha
- **591 March Road** - Part of Lot 9, Concession 3, Part 1, Plan 5R12441 save and except part 1 on 4R94, Kanata (PIN 04518-0061). Lot size – 0.37 ha
- **595 March Road** - Block 1, Plan 4M1104 (PIN 04518-0115). Lot size – 0.86 ha
- **603 March Road** - Part of Lot 9, Concession 3, March (PIN 04518-0065). Lot size – 1.88 ha

The phase two property is irregular in shape, is oriented northwest to southeast, and is approximately 5.55 ha in plan area based on information available through the City of Ottawa's Interactive Online Mapping Tool (GeoOttawa). The phase two property location and boundary are shown on Figure 1A and 1C, respectively.

This Phase Two ESA was carried out in general accordance with O. Reg. 153/04 to address the APECs identified in the Phase One ESA for the phase two property. It is OMI's understanding that the Phase Two ESA is required by the Owner in order to redevelop all or a portion of the phase two property into a mixed-use commercial/residential complex. Existing structures will be demolished in phases as development and construction progresses. All new structures are proposed to have sub-surface parking where bedrock surfaces allow. Initial site clearing and preparation are planned for the second quarter of 2023. The proposed redevelopment will have eleven (11) new buildings between six (6) and thirty (30) storeys with below grade levels extending to bedrock, up to 3 m below grade. The Phase Two ESA was conducted building upon previous investigations completed at the phase two property.

Based on the physical conditions and proposed site use, Table 7: Generic Site Condition Standards (Table 7 SCS) for Shallow Soils in a Non-Potable Groundwater Condition for coarse textured soils



Residential/Parkland/Institutional Property Use of the Soil, Ground Water, and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (MECP, 2021 a).

Analytical results for soil samples collected at the phase two property returned concentrations of all parameters below the MDL and/or relevant Table 7 SCS, with the exception of the sodium adsorption ratio (SAR) and petroleum hydrocarbon compounds heavier than fraction 4 (PHC F4G) concentrations in the sample collected at MW22-13B from 0.0 to 0.6 mbgs. SAR concentrations were returned to be 8.15 compared to Table 7 SCS of 5 (SAR is a unitless measurement). PHC F4G concentrations were returned to be 7130 mg/kg compared to Table 7 SCS of 5600 mg/kg.

PHC F4G that exceeded applicable SCS in surface samples are attributed to inclusion of surficial asphalt material in the sample from MW22-13B. This location is within the paved area of 603 March Road adjacent to a pedestrian walkway. Similarly, elevated SAR is attributed to the application of salt for the purposes of de-icing roadways and walkways. Neither parameter is believed to be caused by the APECs being investigated.

No PHC, PAH, and/or metals parameters at concentrations above the Table 7 SCS were identified in the groundwater samples analysed. Concentrations of VOCs were identified in groundwater exceeding the Table 7 SCS throughout the phase two property including tetrachloroethylene (PCE) in MW22-39-1 and MW22-41-1 along with trichloroethylene (TCE) in twenty (20) monitoring wells, as summarized in Table 6.

Based on the investigation completed and interpretation of results, OMI offers the following conclusions:

- PHC F4G and SAR in concentrations above applicable SCS were returned in a surficial soil sample at MW22-14B but were not considered representative of PCAs associated with APEC D or APEC G and did not warrant additional investigation or remediation.
- All other soil samples collected on the phase two property did not return any contaminants of concern (COC) concentrations above applicable SCS.
- VOCs at concentrations above SCS were returned in groundwater samples from APEC B and APEC C across the central area of the phase two property, encompassing the majority of 595 March Road and the central and southern portion of 603 March Road.
- All other groundwater samples collected on the phase two property did not return any COC concentrations above applicable SCS.
- No free phase product was encountered in soil or groundwater during the investigation.
- Prior to remedial work on the phase two property Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, Table 7: Generic



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Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition have not been met.

- Remediation of VOC impacted groundwater is recommended prior to redevelopment of the phase two property.



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## 2 INTRODUCTION

Omni-McCann Inc. (OMI) was retained by March & Main Developments Inc. and 591 & 595 March Road Developments Inc. (Owner) to conduct a Phase Two Environmental Site Assessment (ESA) of the combined properties located at 555, 591, 595, and 603 March Road in Ottawa, Ontario (herein referred to as the 'phase two property'). The phase two property location and boundaries are shown in Figure 1A and 1C, respectively.

It was reported to OMI that the Phase Two ESA is required by the Owner to address the conclusions and recommendations of the Phase One ESA which was completed by OMI in August 2022. The Phase One ESA identified multiple Areas of Potential Environmental Concern (APECs) associated with potentially contaminating activities (PCAs) both at the phase two property and in the immediate surrounding area. Details of the Phase One ESA are provided in Section 3.2.

### 2.1 SITE DESCRIPTION

The phase two property is located on the west side of March Road running south from the intersection of Terry Fox Drive and March Road in the Kanata Technology Park of Ottawa, Ontario. The phase two property covers municipal addresses 555, 591, 595, and 603 March Road and are legally described as the following:

- **555 March Road** - Part of Lot 9, Concession 3, Part 1, Plan 5R9546 except Part 1, Plan 4R7933, Part 15, Plan 4R12735, Kanata (PIN 04518-0067). Lot size – 2.44 ha
- **591 March Road** - Part of Lot 9, Concession 3, Part 1, Plan 5R12441 save and except part 1 on 4R94, Kanata (PIN 04518-0061). Lot size – 0.37 ha
- **595 March Road** - Block 1, Plan 4M1104 (PIN 04518-0115). Lot size – 0.86 ha
- **603 March Road** - Part of Lot 9, Concession 3, March (PIN 04518-0065). Lot size – 1.88 ha

The phase two property is irregular in shape, is oriented northwest to southeast, and is approximately 5.55 ha in plan area based on information available through the City of Ottawa's Interactive Online Mapping Tool (GeoOttawa). The phase two property location and boundary are shown on Figure 1A and 1C, respectively. Property boundaries and adjacent land uses are described as follows:

- **North boundary:** Terry Fox Drive followed by a residential sub-division.
- **East boundary:** March Road followed by the Nokia office campus.
- **West boundary:** The Ciena office campus, Hines Road, and small high-tech services and supply businesses.



- **South boundary:** Small high-tech services and supply businesses and an insurance company office (Allan Mann Insurance Ltd.).

## 2.2 PROPERTY OWNERSHIP

The phase two property is owned by March & Main Developments Inc. and 591 & 595 March Road Developments Inc. (jointly referred to as the ‘Owner’). Authorization to proceed with the Phase Two ESA was provided by the Owner’s representative, Fel Petti, on October 5, 2022. Fel Petti acted as the Owner’s representative and project manager for the Phase Two ESA. Contact information for Fel Petti is provided in Table 2-1 below.

**Table 2-1: Owner Representative Contact Information**

<b>Project Contact:</b>	Fel Petti
<b>Address:</b>	March and Main Developments Inc. 109 Atlantic Avenue, Suite 302B Toronto, ON M6K 1X4
<b>Phone Number:</b>	(416) 530-2438
<b>Mobile Number:</b>	(613) 407-0553

## 2.3 CURRENT AND PROPOSED FUTURE USES

The phase two property has a variety of current uses and structures. A brief description of each municipal address associated with the phase two property is provided below and in Figure 1C:

- **555 March Road:** The eastern half of the phase two property consists of landscaped areas, a single structure, and parking/drive lanes connected to March Road and the adjoining parcel (591 March Road). The structure is a single storey with an approximate footprint area of 1,654.4 m<sup>2</sup>, it sits between the landscaped area adjacent to March Road and a paved parking area to the rear (west) of the structure. Presently, the structure is used as a fitness club. A drive lane connects to the adjacent municipal address to the north, 591 March Road, via the rear parking area. The remaining areas are undeveloped vacant land that wraps around the western boundary of 591 March Road to boarder on the southwestern boundary of 595 March Road.
- **591 March Road:** This portion of the phase two property is surrounded on the south and west by 555 March Road and on the north by 595 March Road. There is a multi-unit commercial plaza in an ‘L’ shape running along the north and west boundaries. The structure is single-storey with an approximate footprint area of 1,748 m<sup>2</sup> with parking and drive lanes occupying the remainder of this portion of the phase two property.



- **595 March Road:** This address consists of vacant, undeveloped land running from March Road to the east to Hanes Road and a municipal walkway to the west. There are no permanent structures, and the property has significant vegetation growth.
- **603 March Road:** This address occupies the northern most portion of the phase two property and consists of a single, two-storey structure, paved parking lot, and landscaped areas. The structure is approximately 7,060.6 m<sup>2</sup> in footprint area and primarily used as office space and high-tech electronic component research and development. This portion of the property extends from March Road to a municipal walkway on the western boundary. The parking lot extends from the structure to the western boundary of the phase two property.

It was reported to OMI that the Phase Two ESA is required by the Owner in order to redevelop all or a portion of the phase two property into a mixed-use commercial/residential complex with commercial and parking space on the ground floors and residences on upper floors and two office towers. This redevelopment requires a Record of Site Condition (RSC) to be filed in order to change the use from industrial/ commercial to mixed commercial and residential.

## 2.4 APPLICABLE SITE CONDITION STANDARD

The following conditions were used in the selection of appropriate assessment standard for the phase two property:

- The phase two property is currently operating as fitness club (555 March Road), multi-unit commercial businesses (591 March Road), vacant (595 March Road), and office/ research and development (603 March Road). The current land use is therefore characterised as 'commercial' under O.Reg. 153/04. However, the proposed use of the phase two property includes residential units, therefore, the 'residential' land use criteria under O.Reg. 153/04 is required.
- Drill locations MW22-21, MW22-24, BH22-25, and MW22-37 advanced as part of this Phase Two ESA had a depth to bedrock deeper than 2 m; however, more than one third (1/3) of the phase two property had a depth to bedrock less than 2 m as confirmed through thirty-four (34) additional drill locations.
- Groundwater beneath the phase two property and within the immediately surrounding area is not used as a source of potable drinking water with no plans to be used as potable drinking water.
- The closest permanent surface water body (Shirleys Brook) is located more than 30 m from the phase two property (i.e., approximately 513 m northeast at its closest point).
- Overburden beneath the phase two property is a mixture of coarse fill materials and medium-fine grained native materials based on grainsize analysis conducted on three (3) samples collected as part of the Phase Two ESA. As coarse textured soil criteria are generally



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more stringent, soil parameters will be compared to coarse grained criteria. Since no permanent or significant water was found in soil, and a bedrock groundwater table was confirmed by the investigation, coarse textured criteria were adopted for groundwater.

Based on the above, analytical results of soil and groundwater samples collected as part of the Phase Two ESA were compared to:

- Table 7: Generic Site Condition Standards (Table 7 SCS) for Shallow Soils in a Non-Potable Groundwater Condition for coarse textured soils Residential/Parkland/Institutional Property Use of the Soil, Ground Water, and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (MECP, 2022).



## 3 BACKGROUND INFORMATION

### 3.1 PHYSICAL SETTING

#### 3.1.1 WATER BODIES

There are no permanent surface water bodies or areas of standing water on the phase two property or in the immediately surrounding area. Surface runoff is directed to parking lot edges, infiltration swales or March Road stormwater catchments. Shirleys Brook is the closest natural surface water body to the phase two property at a distance of approximately 513 m northeast at its closest point. Shirleys Bay, in Lac Deschenes on the Ottawa River is located approximately 2.8 km northeast of the phase two property.

#### 3.1.2 AREAS OF NATURAL AND SCIENTIFIC INTEREST

Based on the Ontario Ministry of Natural Resources Areas of Natural and Scientific Interest (ANSI) map, there are no ANSI on the phase two property or within the phase two study area as shown on Figure 2.

#### 3.1.3 TOPOGRAPHY AND SURFACE WATER DRAINAGE FEATURES

The phase two property is located on a local topographic slope falling from the southwest to the northeast with an elevation of approximately 82.25 m above sea level (masl) at the center of the phase two property. The phase two property is generally flat lying with the exception of drainage swales that runs along the east, south, and west sides of the 555 March Road property, the north side of the 603 March Road property, and localized variations in topography to direct stormwater runoff toward storm drains and away from buildings.

#### 3.1.4 WATER WELLS AND SOURCE WATER PROTECTION

The Ontario water well records database was accessed during OMI's Phase One ESA. A total of seven (7) well records were identified including five (5) for the phase two property (four water supply well records and one monitoring well record) and two (2) for the phase one study area (both records relate to monitoring wells). No water supply wells were observed or reported on the phase two property during reconnaissance. Monitoring wells installed as part of a past investigation on the 595 March Road property were observed (refer to section 3.1).



The City of Ottawa source water protection plan encompasses the Mississippi-Rideau Source Protection Plan and the Raisin-South Nation Source Protection Plan. The phase two property and study area do not fall within a source water protection area.

### **3.1.5 SERVICING WITH MUNICIPAL DRINKING WATER SYSTEM**

As mentioned above, domestic water wells were noted in the records review; however, municipal water supply has reportedly been provided to the phase two property since its development between 1985 and 1991.

No evidence of water supply wells for suspected human consumption or agricultural use was noted during either the Phase One ESA or Phase Two ESA. All properties in the vicinity of the site are therefore expected to be connected to the City of Ottawa's closed-loop municipal drinking water supply system.

## **3.2 PAST INVESTIGATIONS**

OMI reviewed the following reports and documents related to the environmental condition of the phase two property during the Phase One ESA:

- Oliver, Mangione, McCalla & Associates (OMM), 2000. Phase I Environmental Site Assessment, 603 March Road, Kanata, Ontario.
- Golder Associates (Golder), 2001. Phase I Environmental Site Assessment and Limited Asbestos Sampling Program, 603 March Road, Kanata, Ontario.
- Paterson Group (Paterson), 2016. Phase II Environmental Site Assessment, 555, 591, 595 March Road, Ottawa, Ontario.
- Concentric Geoscience Inc. (CGI), 2022. Phase I Environmental Site Assessment Update and Phase II Environmental Site Assessment, 603 March Road, Ottawa, Ontario.
- Omni-McCann Inc. (OMI), 2022. Phase One Environmental Site Assessment, 555, 591, 595, and 603 March Road, Kanata, Ontario.

A summary of information relevant to the environmental condition of the phase two property from each report is provided in the following subsections.

### **OMM, 2000**

- The 603 March Road portion of the phase two property was first developed with a single storey workshop and office space in 1969. Additional renovations, including a second storey office space, were completed in the 1970's, 1980's and 1990's.



- At the time of the 2000 ESA, 603 March Road was being used for research and development of semi-conductors. Small volumes of acetone, isopropanol, solvents, inks, and propane were reportedly used on the phase two property. All generated wastes were handled by Newbridge, the owner at the time.
- Records provided by the MECP indicated that larger quantities of chlorinated solvents and acids were historically used at 603 March Road during electronic component manufacturing. Electrical components manufacturing had been discontinued by the time the 2000 ESA was conducted.
- A liquid nitrogen tank located on the western exterior of the building was noted during the site visit. A smaller tank of liquid nitrogen was noted inside the building adjacent to the clean room.
- Potential asbestos containing materials (ACMs) were noted on rain downspout and pipe elbows.
- Based on the age of the building at 603 March Road, lead paint and polychlorinated biphenyl (PCB) containing equipment were noted as potential hazards in building materials.
- OMM recommended that any further renovations be preceded by a hazardous substance survey and remedial measures to safely remove ACMs, lead containing materials, and PCB containing materials. No other work was recommended at the time.

### **Golder, 2001**

- At the time of the 2001 ESA, the 603 March Road portion of the phase two property consisted of a combined one and two storey permanent building and three mobile structures used for offices and storage.
- The city directory search indicated the presence of two dry cleaning companies at 591 March Road, approximately 48 m south of 603 March Road in 1991 and 1996. A third dry cleaner was identified at 700 March Road approximately 140 m north of 603 March Road.
- The three dry cleaning facilities identified were not considered PCAs for the 603 March Road property due to the inferred direction of groundwater flow.
- The limited asbestos survey confirmed the presence of asbestos (Chrysotile) in pipe insulation in the former main electrical room.
- No recommendations were made with respect to the subsurface investigation or the presence of ACMs at the 603 March Road property.



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## **Paterson, 2016**

- A brief review of previous environmental studies conducted on 591 and 595 March Road is provided in this report. The previous reports were not available for OMI to review but are listed by Paterson to be:
  - “Phase I Environmental Site Assessment, 591 March Road, Kanata, Ontario” prepared by AMEC Earth and Environmental Ltd., dated February 2002.
  - “Subsurface Investigation, Cisco Systems, Block E, 595 March Road, Kanata, Ontario, Canada” prepared by Environmental Resource Management (ERM), dated December 2007.
  - “Phase II Environmental Site Assessment, Existing Commercial Development, 591 March Road, Ottawa, Ontario” prepared by Paterson, dated March 10, 2008.
  - “Groundwater Monitoring, 595 March Road, Kanata, Ontario, Canada” prepared by ERM, dated August 2009.
  - “Supplemental Phase II Environmental Site Assessment, Existing Commercial Development, 591 March Road, Ottawa, Ontario” prepared by Paterson, dated February 14, 2011.
  - “Groundwater Treatment Program, 591 and 595 March Road, Ottawa, Ontario” prepared by Paterson, dated September 30, 2012.
  - Groundwater monitoring reports prepared by Paterson, 2011-2014.
- Previous reports indicated the presence of chlorinated solvent contamination in the subsurface attributed to the dry cleaning facility previously located at 591 March Road. The main points of the previous reports reviewed by Paterson include:
  - AMEC’s 2002 Phase I ESA highlighted the presence of a dry cleaning facility on the 591 March Road portion of the phase two property for a short period in the early 1990’s. A camera inspection of the 591 March Road buildings drain system was completed, confirming the integrity and ruling out a preferential pathway.
  - The 2007 ERM subsurface investigation of 595 March Road installed three monitoring wells, in addition to four existing wells on the 595 March Road portion of the phase two property. A total of seven (7) groundwater samples were analyzed, several of which returned concentrations of chloroform and tetrachloroethylene (PCE) above regulatory standards at the time.
  - The 2008 Paterson Phase II ESA at 591 March Road advanced three boreholes, one (1) of which was completed as a monitoring well. Soil from the area located adjacent to the rear door of the former dry cleaning facility was impacted with PCE at concentration above the regulatory guidelines. Groundwater samples from the monitoring well installed as part of the Phase II ESA returned concentrations of PCE and trichloroethylene (TCE) above the regulatory standards.
  - The 2011 Supplemental Phase II ESA completed by Paterson added five (5) monitoring wells to the 591 March Road portion of the phase two property. Soil analytical results





were in compliance with regulatory standards of the time, whereas groundwater results returned concentrations of PCE above regulatory standards.

- An amendment program of groundwater remediation to address chlorinated solvent contamination through in-situ chemical injections was implemented by Paterson in 2012. It was reported that the remediation program initially reduced overall solvent concentrations in groundwater, however, concentrations remained above the applicable provincial SCS at the conclusion of the program and concentration re-bounding was observed in subsequent monitoring events.
- Groundwater sampling conducted by Paterson in October 2015 identified concentrations of PCE, TCE, and cis-1,2-dichloroethylene (DCE) at concentrations exceeding the applicable SCS in monitoring wells located inside the commercial building at 591 March Road and throughout the adjacent property to the northwest at 595 March Road.

### **CGI, 2022**

- The Phase I ESA update highlighted past electronic component manufacturing activities and the presence of heating oil storage on the 603 March Road portion of the phase two property, as well as the former dry cleaning facility located at 591 March Road as PCAs requiring investigation.
- Contaminants of potential concern (COPCs) for 603 March Road were determined to be volatile organic compounds (VOCs), petroleum hydrocarbon fractions 1 to 4 (PHC F1-F4), and benzene, toluene, ethylbenzene, and xylene (BTEX).
- The Phase II ESA conducted at 603 March Road consisted of the advancement of eighteen (18) boreholes, the installation of monitoring wells in all boreholes, and the installation of two (2) indoor sub-slab vapour monitoring wells. A total of five (5) soil samples, twenty-four (24) groundwater samples, and two (2) vapour samples were submitted for analysis of one or more of the COCs.
- Soil was found to be shallow, mostly non-native fill ranging in thickness from 0.15 m to 1.2 m. Bedrock was interbedded dolostone and sandstone to the maximum investigation depth of 12.8 m.
- Analytical results in soil indicated that there were no COCs present.
- Groundwater elevations in shallow monitoring wells indicated a flow direction to the northeast in November 2021 and radially outward from an indoor sump pit in January 2022. In deeper monitoring wells, the flow direction was inferred to be north-northeast in January 2022.
- Analytical results from groundwater collected in January 2022 showed concentrations of TCE above the applicable Table 7 SCS under and around the southwest portion of building located at 603 March Road. A potential secondary source of PCE and TCE at concentrations



exceeding the Table 7 SCS was also identified coming on onto 603 March Road from the south adjacent property (595 March Road).

## **OMI, 2022**

- OMI identified eight (8) APECs and associated COPCs on the phase two property as follows:
  - APEC A: Interior and immediately surrounding area of the 555 March Road building.
    - Former (1985 – 2005) use of the building as an electronic component manufacturing facility.
    - COPCs associated to APEC A are VOCs.
  - APEC B: Interior and immediately surrounding area of the 591 March Road building; area of known contamination north of building.
    - Former (1991 – 2000) dry cleaning operation where chemicals are used.
    - COPCs associated to APEC B are VOCs.
  - APEC C: Interior and surrounding area of 603 March Road building; area of known groundwater contamination.
    - Former (1997 – 2007) use of building as an electronic component manufacturing facility.
    - COPCs associated to APEC C are VOCs.
  - APEC D: Interior and immediately surrounding area adjacent to elevator at 603 March Road.
    - Storage of hydraulic oil in a fixed tank.
    - COPCs associated with APEC D include PHC and BTEX.
  - APEC E: Northern property boundary, 591 March Road parking area, and southern corner of 555 March Road building.
    - Presence of two, oil filled, pad mounted, high voltage transformers along the northern boundary. One additional transformer adjacent to the 591 March Road parking area as well as one transformer adjacent to the southern most corner of 555 March Road.
    - COPCs associated with APEC E include PHC, BTEX and polychlorinated biphenyls (PCBs).
  - APEC F: Southern and southwestern phase two property boundary.
    - Potential bulk chemical and ink storage. Electronic component manufacturing in surrounding buildings. Metal fabrication and manufacturing operations in nearby buildings.
    - COPCs associated with APEC F include PHC, BTEX, VOC, and metals.
  - APEC G: Northern and southeastern paved areas; West central area of the phase two property.
    - Imported fill of unknown or quality.



- COPCs associated with APEC G include PHC, BTEX, polycyclic aromatic hydrocarbons (PAHs), and metals.
- APEC H: All exterior areas of the phase two property.
  - Potential chlorinated solvent contamination in groundwater from the former March Landfill which operated from 1963 to 1974.
  - COPCs associated with APEC H are VOCs.
- Based on information gathered and the age of the buildings on the phase two property, the potential for various special attention substances including asbestos, lead, mercury, PCBs and crystalline silica to be present in building materials was identified. OMI recommended that a hazardous materials/designated substances survey be completed prior to any major renovations or demolition of the buildings being undertaken.
- Based on a review of the available information and the exercise of professional judgment, OMI concluded that there is potential for the identified COPCs to have affected land and/or water within the identified APECs and a Phase Two ESA would be required prior to redevelopment.

### **3.2.1 SUMMARY & ASSESSMENT OF PAST INVESTIGATIONS**

While OMI is unable to verify the information and data from investigations completed prior to 2022 (i.e. work completed by OMM, Golder and Paterson), the work completed by CGI (amalgamated into OMI in April 2022) and OMI was completed with the same general project team and overseen by the same Project Manager and, as such, is fully verified by OMI as being of adequate quality for informing this Phase Two ESA.

As work completed by previous consultants was not completed with the objective of achieving an RSC, it was used to inform CGI/OMI investigations but was independently verified and/or supplemented by OMI personnel to the maximum extent possible. As such, limited validation of pre-2022 results was required to inform this Phase Two ESA and the adequacy of information or data collected and reported by others is not considered directly relevant to the methods employed during nor results, evaluation and conclusion of this report.

The following information relevant to the environmental condition of the phase two property was obtained through review of the environmental reports and drawings provided by the Owner.

- Shallow groundwater flow across the phase two property appears to vary depending on season, but generally shows a northeastern flow direction. Deeper groundwater flow is to the north-northeast.
- Overburden materials at the phase two property are predominantly coarse textured with bedrock close to surface in many areas. Fill of unknown quality is present under hard capped areas of the phase two property.



- 
- Eight (8) APECs were identified on or surrounding the phase two property due to various PCAs including electrical manufacturing, dry cleaning, bulk chemical storage, imported fill storage, and landfilling. COPCs associated with the identified APECs include VOCs, PHC, BTEX, PCBs, PAHs, and metals.
  - Groundwater impacts have been confirmed at 591, 595, and 603 March Road. Remedial actions taken to resolve subsurface contamination at 591 and 595 March Road by Patterson in 2012 were unsuccessful at bringing concentrations below applicable SCS. Concentration re-bounding following remediation was observed at 591 and 595 March Road over subsequent monitoring years.



## 4 SCOPE OF INVESTIGATION

### 4.1 OVERVIEW OF SITE INVESTIGATION

The objective of the Phase Two ESA is to complete an assessment of the phase two property to determine the location and concentration of one or more COPCs in the land or water on, in or under the phase two property. In order to achieve the objective, OMI carried out the following scope of work:

- Coordinated public and private utility locates prior to commencement of field work and the advancement of boreholes at the phase two property.
- Completed a subsurface investigation including the advancement thirty-four (34) boreholes across the phase two property to assess the underlying phase two property geology and collect soil samples for laboratory analysis. Groundwater monitoring wells were installed in thirty-two (32) of the new boreholes. Table 4-1 summarizes borehole and monitoring well details.
- Collected groundwater samples for laboratory analysis from the new wells and nineteen (19) previously installed wells at the phase two property. Details of previously installed monitoring wells are included in Table 4-1.
- Surveyed the horizontal and vertical position of all monitoring wells on the phase two property.
- Designed and adhered to a quality assurance and quality control (QA/QC) program including the collection of blind duplicate soil and groundwater samples as well as trip blanks and field blanks for groundwater samples.
- Submitted representative soil and groundwater samples with blind duplicate, trip blank, and field blank samples collected as part of the QA/QC program to ALS Environmental Laboratories (ALS) for analyses of relevant COPCs.
- Evaluated all collected data and sample analytical results in comparison to applicable provincial SCS.
- Completed this Phase Two ESA report in accordance with O. Reg. 153/04 – Record of Site Condition (MECP, 2021 a) and Canadian Standards Association (CSA) National Standard of Canada Z769-00 – Phase II Environmental Site Assessment (CSA, R2018).

Details of the Sampling and Analysis Plan are provided in Appendix A, with deviations and impediments from the proposed plan discussed in sections 4.4 and 4.5, respectively.



**Table 4-1: Summary of Borehole Details**

Borehole ID	Location	Total Depth (m)	Purpose
BH4-10	East of 591 March Road multi-unit commercial building	7.62	Previously installed; Completed by Paterson in 2010 as monitoring well
MW21-01A*	Adjacent to bay door on the west side of 603 March Road building	7.62	Investigate APEC B, APEC C, APEC G, and APEC H; Completed as monitoring well
MW21-01B*	Nested with MW21-01A	12.2	
MW22-01C	Nested with MW21-01A	18.4	
MW21-02A*	Northern parking area across from accessible door of 603 March Road building	7.32	Investigate APEC B, APEC C, APEC G, and APEC H; Completed as monitoring well
MW21-02B*	Nested with MW21-02A	12.2	
MW21-03A*	South across the parking area from main Shipping and Receiving door of 603 March Road building	7.32	Investigate APEC B and APEC H; Completed as monitoring well
MW21-03B*	Nested with MW21-03A	12.2	
MW22-03C	Nested with MW21-03A	18.3	
MW21-04A*	Southeastern corner of 603 March Road property	9.0	Investigate APEC B and APEC H; Completed as monitoring well
MW21-04B*	Nested with MW21-04A	12.8	
MW22-04C	Nested with MW21-04A	18.3	
MW21-05A*	East of 603 March Road building in landscaped area adjacent to March Road	8.1	Investigate APEC B, APEC C, and APEC H; Completed as monitoring well
MW21-05B*	Nested with MW21-05A	12.2	
MW22-05C	Nested with MW21-05A	18.3	
MW21-06A*	North of 603 March Road building in landscaped area adjacent to Terry Fox Drive	8.1	Investigate APEC B, APEC C, APEC E, and APEC H; Completed as monitoring well
MW22-06B	Nested with MW21-06A	12.7	
MW21-07*	Former sump, interior of 603 March Road building	7.0	Investigate APEC C, APEC D, and APEC H; Completed as monitoring well
MW21-08*	Existing sump, interior of 603 March Road building	7.3	Investigate APEC C, APEC D, and APEC H; Completed as monitoring well
MW21-13A*	West of emergency exit door on the northwestern side of the 603 March Road building	7.6	Investigate APEC B, APEC C, APEC D, APEC G, and APEC H; Completed as monitoring well
MW22-13B*	Nested with MW21-13B	12.2	

**Table 4-1: Summary of Borehole Details**

Borehole ID	Location	Total Depth (m)	Purpose
MW21-14A*	Middle of western parking area of 603 March Road property	8.2	Investigate APEC B, APEC C, APEC G, and APEC H; Completed as monitoring well
MW22-14B	Nested with MW21-14A	12.8	
MW21-15A*	Adjacent to southwestern corner of 603 March Road building	7.9	Investigate APEC B, APEC C, APEC G, and APEC H; Completed as monitoring well
MW22-15B	Nested with MW21-15A	12.8	
MW21-16A*	Southern parking area across from accessible door of 603 March Road building	7.6	Investigate APEC B, APEC C, APEC G, and APEC H; Completed as monitoring well
MW22-16B	Nested with MW21-16A	12.2	
MW21-17A*	South of cafeteria eating area of 603 March Road building	7.6	Investigate APEC B, APEC C, APEC G, and APEC H; Completed as monitoring well
MW22-17B	Nested with MW21-17A	12.3	
MW22-18	Adjacent to bay door on the west side of 555 March Road building	9.8	Investigate APEC A, APEC G, and APEC H; Completed as monitoring well
BH22-19	South of pad mounted transformer for the 555 March Road property	1.2	Investigation APEC E
MW22-20	South-central phase two property boundary	8.2	Investigate APEC F, APEC G, and APEC H; Completed as monitoring well
MW22-21	South central side of the 555 March Road building	10.7	Investigate APEC A, APEC G, and APEC H; Completed as monitoring well
MW22-22	Southeastern corner of the 555 March Road parking area	8.8	Investigate APEC F, APEC G, and APEC H; Completed as monitoring well
MW22-23	East central side of the 555 March Road building	9.1	Investigate APEC A, APEC G, and APEC H; Completed as monitoring well
MW22-24	North central side of the 555 March Road building	9.8	Investigate APEC A, APEC G, and APEC H; Completed as monitoring well
BH22-25	South of pad mounted transformer located on 591 March Road	2.7	Investigation APEC E
MW22-26	Southwestern corner of phase two property adjacent to Hines Road	8.2	Investigate APEC F and APEC H; Completed as monitoring well
MW22-27	Southwestern property boundary of the phase two property	8.2	Investigate APEC F and APEC H; Completed as monitoring well



**Table 4-1: Summary of Borehole Details**

Borehole ID	Location	Total Depth (m)	Purpose
MW22-28	Southwestern corner of the 603 March Road parking area	8.2	Investigate APEC C, APEC G, and APEC H; Completed as monitoring well
MW22-29	West central parking area of the 603 March Road property	9.8	Investigate APEC C, APEC G, and APEC H; Completed as monitoring well
MW22-30	Northwestern corner of the phase two property	9.1	Investigate APEC H; Completed as monitoring well
MW22-31	South central fence line of 603 March Road property.	7.6	Investigate APEC C and APEC H; Completed as monitoring well
MW22-32	South central area of vacant portion of the 555 March Road property, immediately north of desire path	8.2	Investigate APEC H; Completed as monitoring well
MW22-33	Center of the vacant portion of the 555 March Road property	8.1	Investigate APEC H; Completed as monitoring well
MW22-34	Western central portion of the 595 March Road property	7.9	Investigate APEC B and APEC H; Completed as monitoring well
MW22-35	Adjacent to northwestern entrance to 603 March Road building	8.0	Investigate APEC C, APEC G, and APEC H; Completed as monitoring well
MW22-36	Western central phase two property boundary	7.9	Investigate APEC F and APEC H; Completed as monitoring well
MW22-37	Western property boundary of 595 March Road, adjacent to Hines Road turn around.	8.8	Investigate APEC G and APEC H; Completed as monitoring well
MW22-38	Northern corner of phase two property, adjacent to pad mounted transformer at Terry Fox Drive and March Road	8.5	Investigate APEC C, APEC E, and APEC H; Completed as monitoring well
MW22-39-1	Northeastern property boundary of 595 March Road property	9.1	Investigate APEC B and APEC H; Completed as monitoring well
MW22-39-3	Installed within MW22-39-1	16.2	
MW22-39-4	Installed within MW22-39-1	19.8	
MW22-39-5	Installed within MW22-39-1	22.9	
MW22-19-7	Installed within MW22-39-1	25.9	
MW22-39-7	Installed within MW22-39-1	30.5	
MW22-40-1	Northern property boundary of 595 March Road property	9.1	Investigate APEC B and APEC H; Completed as monitoring well
MW22-40-2	Installed within MW22-40-1	13.7	





**Table 4-1: Summary of Borehole Details**

Borehole ID	Location	Total Depth (m)	Purpose	
MW22-40-3	Installed within MW22-40-1	18.3		
MW22-40-4	Installed within MW22-40-1	23.8		
MW22-40-5	Installed within MW22-40-1	26.5		
MW22-40-6	Installed within MW22-40-1	28.0		
MW22-40-7	Installed within MW22-40-1	30.5		
MW22-41-1	Chlorinated solvent release point on 595 March Road property behind commercial plaza on 591 March Road	9.1		Investigate APEC B and APEC H; Completed as monitoring well
MW22-41-2	Installed within MW22-41-1	16.8		
MW22-41-3	Installed within MW22-41-1	20.7		
MW22-41-4	Installed within MW22-41-1	23.5		
MW22-41-5	Installed within MW22-41-1	25.6		
MW22-41-6	Installed within MW22-41-1	27.7		
MW22-41-7	Installed within MW22-41-1	30.5		

Notes:

\*: previously installed by CGI in 2021 (CGI, 2022)

## 4.2 MEDIA INVESTIGATED

The nature of the COPCs and the APECs identified during the Phase One ESA dictated the need to collect soil and groundwater samples from the phase two property. Due to the physical setting of the phase two property, sediment was determined not to be present on the phase two property and, therefore, no sediment sampling was required. A description of the APECs (including the associated PCA from the Phase One ESA as described in Section 3.2), associated COPCs, and potentially impacted media can be found in Table 4-2 below.

**Table 4-2: Areas of Potential Environmental Concern**

APEC	Location of APEC	PCA No. (153/04 Schd. D)	PCA on/off phase two prop.	COPCs	Media Potentially Impacted
<b>APEC A</b> Former electronic component manufacturing	Interior and immediately surrounding area of the 555 March Road building on the phase two property.	19	On	VOC	Soil and Groundwater
<b>APEC B</b>	Interior and immediately surrounding area of	37	On	VOC	Soil and Groundwater



APEC	Location of APEC	PCA No. (153/04 Schd. D)	PCA on/off phase two prop.	COPCs	Media Potentially Impacted
Former dry cleaning facility	the 591 March Road building; area of known contamination north of building on the phase two property				
<b>APEC C</b> Former electronic component manufacturing	Interior and surrounding area of 603 March Road building; area of known groundwater contamination on the phase two property.	8 19	On	VOC	Soil and Groundwater
<b>APEC D</b> Storage of hydraulic oil	Interior and immediately surrounding area adjacent to elevator at 603 March Road on the phase two property.	28	On	PHC BTEX	Soil and Groundwater
<b>APEC E</b> High voltage electrical transformers	Northern phase two property boundary; 591 March Road parking area; 555 March Road building	55	On	PHC BTEX PCB	Soil and Groundwater
<b>APEC F</b> Potential bulk chemical and ink storage; electronic component manufacturing; metal fabrication	Southern and southwestern phase two property boundaries	8 19 31 34	Off	PHC VOC Metals	Soil and Groundwater
<b>APEC G</b> Imported fill used as base for roads and parking areas; broken rock fill adjacent to Hines Road	Northern and southeastern paved areas; West central area of the phase two property	30	On	PHC BTEX PAH Metals	Soil



<b>APEC</b>	<b>Location of APEC</b>	<b>PCA No. (153/04 Sched. D)</b>	<b>PCA on/off phase two prop.</b>	<b>COPCs</b>	<b>Media Potentially Impacted</b>
<b>APEC H</b> Former March Landfill risk management area	All exterior areas of the phase two property.	55	Off	VOC	Groundwater

Given the overlapping nature of the APECs identified as part of the Phase One ESA, sample locations and depths were typically selected to assess multiple APECs on the phase two property. Soil samples collected during the investigation are summarized in Table 5-1 (Section 5.3) and groundwater samples collected during the investigation are summarized in Table 5-3 (Section 5.7).

### 4.3 PHASE ONE CONCEPTUAL SITE MODEL

As part of the requirements of Part V in Schedule D of O. Reg. 153/04, a phase one Conceptual Site Model (CSM) was developed as part of the Phase One ESA (MECP, 2021a).

The phase one CSM consists of a figure and narrative descriptions that are intended to illustrate the results of the Phase One ESA and to provide a basis of further work if required. The phase one CSM is illustrated in Figure 1B.

#### 4.3.1 AREAS OF PCAS POTENTIALLY AFFECTING THE PHASE TWO PROPERTY

A description of areas of PCAs identified on the phase two property and study area is provided in Table 4-3 below.

**Table 4-3: PCAs Identified During Phase One ESA**

<b>O.Reg. 153/04 Schedule D, Table 2 PCA Category</b>	<b>Location/Description</b>
8. Chemical manufacturing, processing and bulk storage	Various waste generator records indicating chemical usage at properties around the phase two property.
19. Electronic and computer equipment manufacturing	Electronic equipment manufacturing operations within the 555 March Road building. Electronic equipment manufacturing operations on properties adjacent to the phase two property and up gradient across Hines Road.
28. Gasoline and associated products storage in fixed tanks	603 March Road building elevator and associated hydraulic oil pump and storage tank.
30. Importation of fill of unknown quality	Fill identified from borehole logs beneath asphalt driveways and parking areas across the phase two property.



O.Reg. 153/04 Schedule D, Table 2 PCA Category	Location/Description
31. Ink manufacturing, processing and bulk storage	Carbon paper and ink ribbon manufacturer adjacent to the phase two property.
34. Metal fabrication	Tool and die fabrication facility across Hines Road from the phase two property.
37. Operation of dry-cleaning equipment (where chemicals are used)	Dry cleaning facility within 591 March Road, known subsurface contamination due to release of dry cleaning chemicals.
55. Transformer manufacturing, processing and use	One transformer adjacent to the 591 March Road parking area. One transformer adjacent to the 555 March Road building.
58. Waste disposal and waste management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	The phase two property is within the risk management area of the former March Landfill, located approximately 1.6 km to the west of the phase two property.

Refer to Section 4.2 for a description of APECs on the phase two property based on the identified PCAs.

#### **4.3.2 POTENTIAL INFLUENCE OF UNDERGROUND UTILITIES**

COPCs have the potential to preferentially migrate in utility corridors at the phase two property. The current location of some buried utilities is shown on Figure 1C.

Native soil sitting on bedrock at the phase two property is fine textured thus providing a layer of low permeability material above the bedrock aquifer. Buried utilities on the phase two property placed directly on top of bedrock and backfilled with typical utility corridor fills, these corridors potentially provide preferential pathways for migration to the underlying bedrock water table.

#### **4.3.3 GEOLOGICAL/HYDROGEOLOGICAL INFORMATION**

Based on the records review and information gathered during the phase two investigation the following is known of the phase two property:

- The phase two property is generally flat lying and has a slight slope down from northwest to southeast with an elevation of approximately 82.25 masl in the center of the phase two property.
- Fill materials are present below paved surfaces.
- Native overburden material consists of sandy silt or clay with some to no gravel.



- Depth to bedrock undulates and varies across the phase two property but ranges from 0.30 m to 2.74 m. Generally, the depth to bedrock is greatest in the southwestern portion of the phase two property north of the 555 March Road building.
- Native material is described as quaternary age, stone-poor, sandy silt to silty sand textured till.
- Bedrock beneath the phase two property and the immediately surrounding area is Lower Ordovician age interbedded dolostone and sandstone of the Beekmantown Group.
- There are no permanent surface water bodies on the phase two property or within the immediately surrounding area. The closest surface water bodies are Shirleys Brook approximately 513 m to the northeast. Shirleys Bay, in Lac Deschenes on the Ottawa River is located approximately 2.8 km northeast.

Shallow groundwater flow under the phase two property varies with surface influences, generally it flows to the northeast. Regional groundwater flow is expected to be influenced by the presence of the Ottawa River to the northeast. As the water table is within bedrock, and no permanent or substantial aquifer has been observed in overburden, groundwater flow is somewhat likely to be affected by subsurface utilities. Measured groundwater elevations show preferential mounding in areas of increased infiltration such as swales and drainage ditches.

#### 4.4 DEVIATIONS FROM SAMPLING AND ANALYSIS PLAN

As required by Section 3 (2) of Part II in Schedule E, O. Reg. 153/04 (MECP, 2021a), a sampling and analysis plan was developed to address the APECs identified in the Phase One ESA. The sampling and analysis plan developed for this phase two investigation is included in Appendix A. Table 4-4 shows the deviations from the sampling and analysis plan and descriptions of conditions contributing to the deviation.

**Table 4-4: Deviations from the Sample and Analysis Plan**

Plan	Deviation	Explanation	Solution
Collect and submit for Metals, VOC, PHC, and PAH analysis two (2) soil samples from location MW22-18	Only one (1) soil sample, 22-18 0-1, was analyzed from MW22-18	ALS was unable to report VOC results from the sample collected from 0.76-1.14 mbgs due to insufficient quantities of unpreserved sample. No sample remained to submit to ALS	Add VOC analysis to sample 22-18 0-1
Collect and submit for Metals, VOC, PHC, and PAH analysis two (2) soil	Only one (1) soil sample, 22-20 0-1, was analyzed from MW22-20	ALS was unable to report VOC results from the sample collected from 0.61-1.22 mbgs due to insufficient quantities of unpreserved	Re-sample the 0.61 to 1.22 mbgs interval immediately adjacent to the



Plan	Deviation	Explanation	Solution
samples from location MW22-20		sample. No sample remained to submit to ALS	original location using a hand auger
Collect and submit for Metals, VOC, PHC, and PAH analysis two (2) soil samples from location MW22-21	Only one (1) soil sample, 22-21 0-0.5, was analyzed from MW22-21	ALS was unable to report VOC results from the sample collected from 0.76-1.37 mbgs due to insufficient quantities of unpreserved sample. No sample remained to submit to ALS	Exclude sample from program as the primary concern for VOCs was related to groundwater
Collect and submit for Metals, VOC, PHC, and PAH analysis two (2) soil samples from location MW22-22	Only one (1) soil sample, 22-22 0-1.25, was analyzed from MW22-22	ALS was unable to report VOC results from the sample collected from 0.76-0.91 mbgs due to insufficient quantities of unpreserved sample. No sample remained to submit to ALS	Re-sample the 0.76 to 0.91 mbgs interval immediately adjacent to the original location using a hand auger
Collect and submit for VOC analysis two (2) soil samples from location MW22-23	Only one (1) soil sample, 22-23 0-1, was analyzed from MW22-23	ALS was unable to report VOC results from the sample collected from 0.30-0.61 mbgs due to insufficient quantities of unpreserved sample. No sample remained to submit to ALS	Re-sample the 0.30 to 0.61 mbgs interval immediately adjacent to the original location using a hand auger
Collect a duplicate from each APEC on the phase two property	No duplicate was collected from APEC G	During drilling activities a blind duplicate soil sample was not collected from APEC G at location MW22-24	Re-sample the 0 to 0.38 mbgs interval and collect a duplicate immediate adjacent to the original location using a hand auger
Collect one (1) groundwater sample from each monitoring well	MW22-33 and MW22-36 were re-sampled for VOCs	Analytical results from MW22-33 and MW22-36 returned chloroform concentrations above Table 7 SCS	Re-develop and resample locations for VOCs to determine the potential cause of the exceedance
Advance one (1) borehole north of the northwest entrance to the 603 March Road building	No borehole was advanced north of the northwestern entrance to the 603 March Road building	Sub-surface utilities in the area combined with a cobble infiltration swale and the proximity to the property boundary prevented the advancement of a borehole in that area	Adjust the location of a nearby borehole to the south side of the infiltration swale while staying close enough to the original location
Sample all ports of the installed	Port 2 of MW22-39 was not sampled	Port 2 of MW22-39 did not maintain the seal and became cross	Licensed well technician backfilled Port 2 with grout to



Plan	Deviation	Explanation	Solution
multilevel monitoring well.		connected to the bottom of the borehole, Port 7	prevent continued cross connection.
Conduct rising head hydraulic testing of select monitoring wells	Both rising and falling head tests were conducted at select monitoring wells	The rate of recharge in monitoring wells was faster than manual and mechanical pumping methods. OMI field staff was unable to conduct only rising head tests	A physical slug was used to conduct falling and rising head hydraulic tests on selected monitoring wells

Procedures set in the Sampling and Analysis Plan were followed throughout the field investigation portion of the Phase Two ESA. Deviations from the Sampling and Analysis Plan are not considered to have affected the overall quality of the data collected and will have no material effect on the conclusions and recommendations of the investigation.

#### **4.5 IMPEDIMENTS**

Due to subsurface utilities, one (1) proposed location along the northwestern property boundary was removed from the program and another proposed location, MW22-35, was adjusted to cover the area of interest. No other physical impediments or denial of access were encountered during the investigation.



## 5 INVESTIGATION METHOD

### 5.1 GENERAL

The Phase Two ESA was conducted in accordance with Schedule E of O. Reg. 153/04 (MECP, 2021 a), as required for filing an RSC.

Marking of public and private underground utility locates was completed by USL-1 Underground Service Locators (USL-1) in advance of the phase two property subsurface investigation activities. The intended borehole locations were marked on the ground surface by OMI in advance of the locates being completed.

Boreholes were advanced on the phase two property between October 17 to November 24, 2022. All the boreholes were advanced through the overburden and into bedrock to total depth of 7.6 to 30.5 mbgs, with the exception of two (2) locations that were advanced through the overburden to refusal on bedrock at 1.2 and 2.7 mbgs (BH22-19 and BH22-25, respectively). During drilling activities, soil stratigraphy was logged by OMI personnel using the modified Unified Soil Classification System (USCS). Soil samples were collected at regular intervals, where recovery allowed, in addition to observed changes in soil colour, texture, and/or an indication of possible contaminants (visual or olfactory evidence). Samples were split at the time of collection for field screening with half of the sample placed in laboratory supplied containers and the other half placed into single use sealed bags. Further details on drilling and soil sampling methods are provided in section 5.2 through 5.4.

Monitoring wells were installed in all but two (2) locations, BH22-19 and BH22-25 (see Figure 1C for locations). Monitoring well installations were completed immediately after a borehole was extended to its target depth or there was evidence of intersection with saturated conditions in the desired hydrostratigraphic unit. Monitoring well installation methods are provided in section 5.5.

Monitoring wells were developed by vigorously removing up to ten (10) times the well volume or until purge water was observed to be clear and free of sediment. Prior to groundwater sample collection, groundwater elevations were measured in all monitoring wells on the phase two property. Following measurement of water levels, groundwater was purged from each. During purging, field water quality parameters were measured in the purge water including temperature, pH, conductivity (EC), dissolved oxygen (DO), and oxidation-reduction potential (ORP). When parameters were observed to stabilize over three (3) consecutive readings to within specified limits, groundwater samples were collected into laboratory supplied containers. Groundwater development, testing and sampling procedures are provided in sections 5.6 through 5.8.





No sediment sampling was completed as part of the Phase Two ESA, as noted in section 5.9. Analytical testing and elevation surveying methods are provided in sections 5.10 and 5.12, respectively.

All soil, groundwater, and wash water wastes were contained within sealed drums. Samples of the waste were collected as appropriate to be analyzed for COPCs and other parameters as required by disposal facilities. Residue management practices implemented during the Phase two ESA are described in Section 5.11.

## **5.2 DRILLING AND EXCAVATING**

All boreholes were advanced by Aardvark Drilling Inc. using a CME 55 track mounted drilling rig equipped with hollow stem augers and split spoon samplers for overburden and downhole air percussion drilling head (air hammer) for bedrock, with the exception of eight (8) locations which were rock was cored with a triple tube diamond coring system.

Split spoon samplers were advanced 0.61 m (2 ft) into undisturbed soil ahead of the hollow stem auger with a 0.15 m (0.5 ft) space between sample intervals. As boreholes were advanced through the overburden, soil samples were collected at regular depth intervals to a maximum of 0.61 m (2 ft), where recovery allowed, in addition to when there was a change in soil colour, texture, and/or an indication of possible contaminants (visual or olfactory evidence).

Following soil strata logging and sample collection, split spoon samplers were washed using a stiff brush and an Alconox solution before being returned to use to minimize the potential for cross contamination. In addition, any equipment or surfaces that were in contact with soil were cleaned with the Alconox solution. New, single use, disposable nitrile gloves were donned prior to handling each split spoon sampler.

Upon reaching refusal with the split spoon samplers, the augers were turned into the top of rock with reasonable effort in order to create a temporary seal between the soil-rock interface prior to rock drilling. An air hammer was then deployed to advance boreholes into the water table or target depths between 7.6 and 18.4 mbgs within the bedrock, based on information obtained from previous environmental investigations (Section 3.2). Rock cuttings from the air hammer were examined every 1.5 m. Drilling rods were not removed from the borehole between sampling intervals so as to prevent cross contamination between strata. At locations MW22-32, MW22-33, MW22-34, MW22-35, MW22-36, MW22-39, MW22-40, and MW22-41 a triple tube diamond coring system was deployed in order to recover rock core for geotechnical logging purposes. At cored locations boreholes were advanced to between 7.9 and 30.5 mbgs. Core runs were recovered every 1.5 m with core tube components cleaned using the same methods described above.



### 5.3 SOIL: SAMPLING

At the time of collection, each soil sample was split in the field where half of the sample was placed in laboratory supplied jars, either 150 or 250 mL depending on required analytical parameters, and stored in coolers with ice for possible laboratory analysis, and the other half of the sample was placed in single use sealed food grade plastic bags for field screening of headspace organic vapour concentrations (OVCs). All soil samples collected for potential analysis of VOCs, BTEX and light-fraction PHCs were preserved at the time of sample collection in clear, glass vials pre-charged with 10 mL of methanol. Using a new QED Terra Core disposable soil sampler provided by ALS, a representative sub-sample of approximately 10 mg was collected and placed into the methanol, care was taken to ensure no methanol was lost. Table 5-1 lists the soil samples collected and a description of the soil, with full borehole log descriptions in Appendix B.

**Table 5-1: Geologic Descriptions of Soil Samples**

Location ID	Sample ID	Sample Depth (m)	Soil Description
MW22-01C	22-01C 0.25-2	0.1 – 0.6	Sand and gravel fill, trace clay, loose, grey, moist
	22-01C 2.5-3	0.8 – 0.9	Sand and gravel fill, trace clay, loose, grey, moist
MW22-03C	22-03C 0-1	0.0 – 0.3	Silt, sand, and gravel, some clay, organics, loose, brown, moist
	22-03C 2.5-2.75	0.8 – 0.8	Clay, some sand, high plasticity, soft, brown, moist
MW22-04C	22-04C 2.5-4.25	0.8 – 1.3	Sandy clay, some gravel, low plasticity, firm, brown grey, dry
MW22-05C	22-05C 0-1	0.0 – 0.3	Sandy silt, organics, loose, dark brown, moist
MW22-06B	22-06B 0.75-1.75	0.2 – 0.5	Sand and clay, some gravel, medium plasticity, soft, loose, brown, moist
	22-06C 2.5-3.25	0.8 – 1.0	Sand and clay, low plasticity, firm, loose, brown, moist
MW22-13B	22-13B 0-2	0.0 – 0.6	Sand and gravel fill, trace silt and clay, loose, brown-grey, moist
MW22-14B	22-14B 0-2	0.0 – 0.6	Sand and gravel fill, silt, firm, compact, brown, dry
	22-14B 2.5-4	0.8 – 1.2	Sandy silt, firm, dark brown, moist
MW22-15B	22-15B 0-1	0.0 – 0.3	Sand, gravel, silt, and clay, low plasticity, firm, loose, brown, moist
	22-15B 4-4.25	1.2 – 1.3	Sandy clay, low plasticity, firm, tan, moist
MW22-16B	22-16B 0-1	0.0 – 0.3	Sand and gravel fill, loose, grey, moist
	22-16B 2.5-3	0.8 – 0.9	Silty sand, some clay, some gravel, loose, tan, dry
MW22-17B	22-17B 0-0.75	0.0 – 0.2	Sand and gravel fill, loose, grey, moist
	22-17B 2.5-3.5	0.8 – 1.1	Sandy clay, some gravel, high plasticity, soft, dark brown, moist
MW22-18	22-18 0-1	0.0 – 0.3	Sand and gravel fill, loose, grey, moist
BH22-19	22-19 2-3.5	0.6 – 1.1	Clay, some gravel, with a 0.02 m sand pocket, firm, high plasticity, grey, moist



Location ID	Sample ID	Sample Depth (m)	Soil Description
MW22-20	22-20 0-1	0.0 – 0.3	Sand and gravel fill, loose, grey, moist
	22-20 2-4	0.6 – 1.2	Clay, some sand, soft, medium plasticity, grey-brown, moist
MW22-21	22-21 0-0.5	0.0 – 0.2	Sand and gravel fill, loose, grey, moist; Gravelly clay fill, soft, medium plasticity, grey, moist
MW22-22	22-22 0-1.25	0.0 – 0.4	Topsoil – sandy silt, organics, loose, soft, dark brown, moist; Gravelly sand fill, loose, brown and grey, moist becoming wet
	22-22 2.5-3	0.8 – 0.9	Sand and clay, loose, firm, non-plastic, brown and grey, moist
MW22-23	22-23 0-1	0.0 – 0.3	Topsoil – clayey silt, some sand, firm, non-plastic, brown, moist
	22-23 1-2	0.3 – 0.6	Sandy clay, some gravel, loose, non-plastic, tan
MW22-24	22-24 0-1.25	0.0 – 0.4	Topsoil – sandy silt, some clay, organics, non-plastic, loose, firm, dark brown; Sandy clay, firm, non-plastic, grey-brown, moist
BH22-25	22-25 3-4.5	0.9 – 1.4	Clay, some sand, firm, non-plastic, dark brown, moist
	22-25 7-8.5	2.1 – 2.6	Clay, some sand, 0.15 m sand and gravel pocket, firm, non-plastic, dark brown, moist
MW22-26	22-26 0-1	0.0 – 0.3	Topsoil – sandy silt, some clay, trace gravel, organics, soft, non-plastic, dark brown, moist; Sandy clay, low plastic, soft, grey-brown, moist
MW22-27	22-27 0-1	0.0 – 0.3	Topsoil – sandy silt, organics, loose, dark brown, moist
MW22-28	22-28 0-1	0.0 – 0.3	Sand and gravel fill, some clay, loose, grey, moist
MW22-29	22-29 0.25-2.5	0.1 – 0.8	Sand and gravel fill, silt, loose, brown, moist
	22-29 2.5-3.75	0.8 – 1.1	Sandy silt and clay, medium plasticity, soft, brown, moist
MW22-30	22-30 0-1.75	0.0 – 0.5	Topsoil – Sandy silt, some gravel, organics, loose, brown, moist
MW22-31	22-31 0-1	0.0 – 0.3	Topsoil – Sandy silt, organics, loose, dark brown, dry
	22-31 2.5-3.5	0.8 – 1.1	Sandy clay, soft to firm, grey-brown, moist
MW22-35	22-35 0-1	0.0 – 0.3	Topsoil – Sandy silt, gravelly, loose becoming more compact, brown, moist
MW22-36	22-36 0-0.75	0.0 – 0.2	Topsoil – Sandy silt, organics, soft, dark brown, moist; Sand, some silt, loose, tan, moist
MW22-37	22-37 0-0.5	0.0 – 0.2	Topsoil – Sandy silt, loose, dark brown, moist
MW22-38	22-38 0-0.75	0.0 – 0.2	Topsoil – Silty sand, trace gravel, loose, soft, dark brown, dry



Location ID	Sample ID	Sample Depth (m)	Soil Description
	22-38 0.75-2	0.2 – 0.6	Sand and clay, some gravel, low plasticity, loose, firm, dark brown, moist
MW22-39	22-39 0.5-1	0.2 – 0.3	Sandy clay, medium plasticity, soft, light brown, moist
	22-39 2.5-3.5	0.8 – 1.1	Clay, some sand, low plasticity, firm, grey, moist
MW22-40	22-40 0-1.5	0.0 – 0.5	Topsoil – Sandy clay, organics, high plasticity, soft, brown, moist
	22-40 2-3	0.6 – 0.9	Sandy clay, organics, high plasticity, soft, brown, moist
MW22-41	22-41 2.75-4	0.8 – 1.2	Sandy clay, trace gravel, trace silt, high plasticity, firm, brown, moist
	22-41 4-4.5	1.2 – 1.4	Sandy clay, trace gravel, trace silt, high plasticity, firm, brown, moist

#### 5.4 FIELD SCREENING MEASUREMENTS

Headspace OVCs were measured and recorded from the bag sample headspace using an RKI GX 6000 photoionization detector (PID) organic vapour meter calibrated to an isobutylene standard with an indication accuracy of  $\pm 10\%$  of the reading or  $\pm 1$  increment (whichever is greater). The PID was configured to detect VOCs in the 0 – 6000 ppm range. The OVCs were measured in parts per million by volume of gas (ppmv) and recorded on the borehole logs (Appendix B). The PID was bench top calibrated by Maxim Environmental and Safety Inc. (Maxim) prior to deployment in the field, certificates of calibration are included in Appendix B. The PID calibration was checked each morning using an isobutylene standard to ensure readings were within the manufacturer's recommended  $\pm 20\%$ . If the calibration was outside of the manufacturer's recommendation, a span calibration was completed on the device. Records of daily calibration checks can be found in Appendix B. No variations from these field screening methods occurred during the Phase Two ESA.

Field screening results, in conjunction with observed soil conditions, the specific APEC(s) being investigated, and an objective of obtaining lateral and vertical coverage of the phase two property were used to select soils for laboratory analysis. Samples were submitted under chain of custody documentation to ALS for analysis of the relevant COPCs. As summarized in Table 5-2, a total of fifty-seven (57) soil samples were submitted for laboratory analysis including nine (9) blind duplicate samples.

**Table 5-2: Sample Summary and OVC Readings**

Location ID	Sample ID	Sample Depth (m)	OVC (ppm)	Analysis Completed
MW22-01C	22-01C 0.25-2	0.1 – 0.6	2.0	Metals, BTEX, PHC, PAH



Location ID	Sample ID	Sample Depth (m)	OVC (ppm)	Analysis Completed
	22-01C 2.5-3	0.8 – 0.9	3.2	VOC
MW22-03C	22-03C 0-1	0.0 – 0.3	1.4	Metals, BTEX, PHC, PAH
	22-03C 2.5-2.75	0.8 – 0.8	1.4	VOC
MW22-04C	22-04C 2.5-4.25	0.8 – 1.3	0.0	VOC
MW22-05C	22-05C 0-1	0.0 – 0.3	0.2	VOC
MW22-06B	22-06B 0.75-1.75 (DUP5)	0.2 – 0.5	0.1	BTEX, PHC, PCB
	22-06C 2.5-3.25	0.8 – 1.0	0.2	VOC, PHC, PCB
MW22-13B	22-13B 0-2 (DUP6)	0.0 – 0.6	0.8	pH, Metals, SAR, VOC, PHC, PAH
MW22-14B	22-14B 0-2 (DUP2)	0.0 – 0.6	0.9	Metals, BTEX, PHC, PAH
	22-14B 2.5-4	0.8 – 1.2	0.0	Metals, BTEX, PHC, PAH
MW22-15B	22-15B 0-1	0.0 – 0.3	0.0	Metals, BTEX, PHC, PAH
	22-15B 4-4.25	1.2 – 1.3	1.2	VOC
MW22-16B	22-16B 0-1	0.0 – 0.3	0.0	Metals, BTEX, PHC, PAH
	22-16B 2.5-3	0.8 – 0.9	0.0	VOC
MW22-17B	22-17B 0-0.75	0.0 – 0.2	1.0	Metals, BTEX, PHC, PAH
	22-17B 2.5-3.5 (DUP3)	0.8 – 1.1	0.0	VOC
MW22-18	22-18 0-1	0 – 0.3	0.6	Metals, VOC, PHC, PAH
BH22-19	22-19 2-3.5	0.6 – 1.1	0.0	BTEX, PHC, PCB
MW22-20	22-20 0-1	0 – 0.3	0.7	Metals, BTEX, PHC, PAH
	22-20 2-4	0.6 – 1.2	0.4	VOC
MW22-21	22-21 0-0.5	0 – 0.2	0.0	BTEX, PHC
MW22-22	22-22 0-1.25	0 – 0.4	0.8	Metals, BTEX, PHC, PAH
	22-22 2.5-3	0.8 – 0.9	0.3	VOC
MW22-23	22-23 0-1	0 – 0.3	4.0	PHC, BTEX, PAH, Metals
	22-23 1-2 (DUP4)	0.3 – 0.6	0.0	VOC
MW22-24	22-24 0-1.25 (DUP9)	0 – 0.4	0.7	Metals, VOC, PHC, PAH
BH22-25	22-25 3-4.5	0.9 – 1.4	0.0	Grain Size, SAR, BTEX, PHC, PCB
	22-25 7-8.5	2.1 – 2.6	0.3	pH, BTEX, PHC, PCB
MW22-26	22-26 0-1	0 – 0.3	0.0	Metals, VOC, PHC
MW22-27	22-27 0-1	0 – 0.3	0.0	Metals, VOC, PHC
MW22-28	22-28 0-1	0.0 – 0.3	0.1	Metals, BTEX, PHC, PAH
MW22-29	22-29 0.25-2.5	0.1 – 0.8	1.1	Metals, BTEX, PHC, PAH
	22-29 2.5-3.75	0.8 – 1.1	0.0	Metals, BTEX, PHC, PAH
MW22-30	22-30 0-1.75 (DUP1)	0.0 – 0.5	0.0	Metals, BTEX, PHC, PAH
MW22-31	22-31 0-1	0.0 – 0.3	0.4	Metals, BTEX, PHC, PAH
	22-31 2.5-3.5	0.8 – 1.1	0.7	pH, Grain size
MW22-35	22-35 0-1	0.0 – 0.3	0.7	Metals, VOC, PHC, PAH
MW22-36	22-36 0-0.75	0 – 0.2	0.6	Grain Size, Metals, VOC, PHC
MW22-37	22-37 0-0.5	0.0 – 0.2	0.3	Metals, BTEX, PHC, PAH
MW22-38	22-38 0-0.75	0.0 – 0.2	0.2	BTEX, PHC, PCB
	22-38 0.75-2	0.2 – 0.6	0.8	BTEX, PHC, PCB



Location ID	Sample ID	Sample Depth (m)	OVC (ppm)	Analysis Completed
MW22-39	22-39 0.5-1 (DUP7)	0.2 – 0.3	3.8	VOC
	22-39 2.5-3.5	0.8 – 1.1	0.7	VOC
MW22-40	22-40 0-1.5	0.0 – 0.5	1.3	VOC
	22-40 2-3	0.6 – 0.9	2000	VOC
MW22-41	22-41 2.75-4 (DUP8)	0.8 – 1.2	3.4	VOC
	22-41 4-4.5	1.2 – 1.4	3.7	VOC

## 5.5 GROUNDWATER: MONITORING WELL INSTALLATION

All monitoring wells were installed by Aardvark Drilling Inc. immediately following the advancement of a given borehole. Of the thirty-four (34) boreholes advanced on the phase two property, thirty-two (32) were completed with monitoring wells. Monitoring well construction details are shown on the borehole logs in Appendix B and summarised on Table 1. Monitoring well screens were placed to intercept the perceived location of the water table as determined by moisture in rock cuttings returned during air hammering (i.e., screen placed at depth where saturated cuttings were observed). At MW22-32, MW22-33, MW22-34, MW22-35, and MW22-36, coring was completed to targeted depths based on water table observations from nearby monitoring wells previously completed. Locations MW22-39, MW22-40, and MW22-41 were completed to a target depth to allow for installation of Solinst 7 channel CMT multilevel monitoring systems.

Monitoring well construction at all locations, except MW22-39, MW22-40, and MW22-41, consisted of threaded 50.8 mm (2 inch) diameter, schedule 40 polyvinylchloride (PVC) 10 slot well screens and solid riser pipe. All pipe was contained within clean plastic sheaths until installation where it was handled with clean nitrile gloves. A threaded cap was fitted to the bottom of the well screen and clean quartz sand pack was placed around each well screen to no more than 0.6 m above the screened interval. Monitoring wells were sealed with bentonite from the top of the sand pack to surface and completed below grade with locking flush mount protective casing in parking lots and landscaped areas or with locking stick-up monuments in the vacant areas of the phase two property. The tops of all monitoring wells were sealed with a removable, water-tight J-plug.

Three (3) locations, MW22-39, MW22-40, and MW22-41, were selected for the installation of a Solinst 7 channel CMT multilevel monitoring system. The CMT tubing, stainless steel screens, port blocks, and tubing centralizers were supplied by Solinst Canada Ltd. Ports were measured and cut into the CMT tubing per the manufacturer's instructions. The port blocks were installed to ensure no cross connection between each of the designed monitoring intervals. Stainless steel mesh was placed over each port and wrapped around the tube then secured to the CMT tubing with stainless steel compression clamps. Centralizers were secured to the CMT tubing using stainless steel compression clamps at regular intervals to ensure the tubing remained within the center of the borehole upon installation. Once installed in the borehole, silica sand was used as filter pack around each port.



Monitoring intervals were designed to be no longer than 3 m. Coated bentonite pellets were used to create seals between each monitoring interval. At the top of the shallowest monitoring interval, bentonite chips were used to seal the remainder of the borehole to surface. All CMTs were finished as stick ups with a steel monument to protect the capped well head.

After installation, wells were left to recover prior to being developed. Well development was staged, starting on November 16, 2022, with the wells that were installed earliest. Depth to groundwater and total well depth was measured at each well using a Heron Instruments electronic oil-water interface probe. The probe was decontaminated between each well following the methods described in Section 5.12.1. Total well depths and water levels were collected from the highest point of the top of casing and used to calculate the standing water volume in each well. Monitoring wells were then developed using dedicated 0.02 m diameter Waterra™ tubing and foot valves. All tubing and foot valves were retained in clean plastic bags until deployment within the well. The wells were developed to ensure that subsequent groundwater samples collected were relatively free of sediment and representative of groundwater conditions within the surrounding soil. Well development was accomplished by removing water from the well at a rate fast enough to hydraulically stress the formation and to re-suspend and extract sediment from the well bottom and well screen, where present. The tubing intake (foot valve) was positioned at the bottom of the well and was agitated during pumping to disturb and extract any sediment. The CMT multilevel monitoring wells were developed using dedicated 6 mm polyethylene tubing fed down to the bottom of each port. The tubing was then connected to a peristaltic pump and water was drawn as rapidly as possible from the port. The well, or port, was developed until a minimum of ten (10) standing well water volumes were removed or the purge water was observed to be relatively clear and sediment free; whichever occurred first. All purge water was contained for later disposal as discussed in Section 5.10.

Following well development, all onsite monitoring wells were left to recover until December 5, 2022. Water levels in all onsite wells were measured on December 5, 2022 and measured groundwater levels in meters below the top of casing (TOC) and meters above sea level (masl) are provided in Table 2.

## **5.6 GROUNDWATER: FIELD MEASUREMENT OF WATER QUALITY PARAMETERS**

Prior to groundwater sample collection, monitoring wells were purged through a turbulence reducing flow through cell with a YSI Pro Plus multiparameter meter mounted within. The multiparameter meter was equipped with Temperature, pH, conductivity/specific conductance (EC), DO, and ORP probes. The multiparameter probe was bench top calibrated by prior to use in the field, certificates of calibration are provided in Appendix B. Calibration standard solutions were provided by Maxim for pH and EC. The calibration of pH and EC were checked at the start of each sampling event.



Dedicated 6 mm polyethylene tubing was inserted into the well so the intake was located at approximately the center of the screened interval. The other end of the tubing was connected to a peristaltic pump using dedicated silicone pump tubing. The outlet of the peristaltic pump was then connected with dedicated polyethylene tubing to the bottom port of the flow through cell with and bit of silicon tubing. The peristaltic pump was set to pump from the well at a rate which did not decrease the overall water level of the well by more than 0.1 m of the static water level. Once the flow through cell was filled, a three (3) minute timer was started to mark collection of the first set of parameters. Parameters were recorded every three (3) minutes until three (3) consecutive measurements were within set limits. The three (3) consecutive readings should be within  $\pm 0.1$  for pH,  $\pm 3\%$  for EC, and  $\pm 10\%$  for DO and ORP over the average of the last three (3) consecutive readings. All purge water was collected and retained for disposal as discussed in Section 5.10. The flow through cell and multiparameter meter were cleaned using the methods specified in Section 5.12.1 prior to use at a new location.

## 5.7 GROUNDWATER: SAMPLING

Groundwater monitoring and sampling was conducted from December 1 to 15, 2022. The depth to groundwater was measured in each monitoring well and the depth was recorded to the nearest millimetre from the highest point of the well riser to the water surface. The oil-water interface probe was cleaned following the methods described in Section 5.12.1 between each water level measurement to prevent potential cross contamination.

Following measurement of water levels, groundwater was pumped from each well using a peristaltic pump connected to dedicated 6 mm diameter polyethylene tubing. Prior to sample collection, each well was purged and field parameters (temperature, pH, EC, DO, ORP) were measured and recorded using a YSI Pro Plus multiparameter probe. When parameters were observed to stabilize over three (3) consecutive readings to within specified limits (see Section 5.6), the multiparameter probe was disconnected from the pump outlet and the groundwater samples were collected. Groundwater samples were collected in laboratory supplied sample containers directly from the open end of the dedicated polyethylene tubing connected to the peristaltic pump.

A total of seventy-six (76) groundwater samples were collected for laboratory analysis including one (1) from each monitoring well and eight (8) blind duplicate samples. Five (5) field blank and trip blank samples were also collected for the QA/QC program. Table 5-3 below summarizes details the groundwater samples collected.

**Table 5-3: Groundwater Sample Summary**

Location	Sample ID	Screen Interval (mbgs)	Parameters Analyzed
BH4-10	BH4-10-6DEC22	4.6 – 7.6	VOC
MW21-01A	MW21-01A-6DEC22 DUP5-6DEC22	4.6 – 7.6	VOC





Location	Sample ID	Screen Interval (mbgs)	Parameters Analyzed
MW21-01B	MW21-01B-6DEC22	9.1 – 12.2	VOC
MW22-01C	MW22-01C-6DEC22	15.4 – 18.4	VOC
MW21-02A	MW21-02A-6DEC22	4.3 – 7.3	VOC
MW21-03A	MW21-03A-5DEC22	4.3 – 7.3	VOC
MW21-03B	MW21-03B-5DEC22	9.1 – 12.2	VOC
MW22-03C	MW22-03C-5DEC22	15.2 – 18.3	VOC
MW21-04A	MW21-04A-5DEC22	5.9 – 9.0	VOC
MW21-04B	MW21-04B-5DEC22 DUP3-5DEC22	9.8 – 12.8	VOC
MW22-04C	MW22-04C-5DEC22	15.2 – 18.3	VOC
MW21-05A	MW21-05A-5DEC22	5.0 – 8.0	VOC
MW21-05B	MW21-05B-5DEC22	9.1 – 12.2	VOC
MW22-05C	MW22-05C-5DEC22	15.2 – 18.3	VOC
MW21-06A	MW21-06A-6DEC22	5.0 – 8.0	VOC, PHC
MW22-06B	MW22-06B-6DEC22	9.7 – 12.7	VOC
MW21-07	MW21-07-6DEC22	4.0 – 7.0	VOC
MW21-08	MW21-08-5DEC22	4.3 – 7.3	VOC
MW21-13A	MW21-13A-7DEC22 DUP6-7DEC22	4.6 – 7.6	VOC, PHC
MW22-13B	MW22-13B-7DEC22	9.1 – 12.2	VOC
MW21-14A	MW21-14A-6DEC22	5.2 – 8.2	Metals, VOC, PHC, PAH
MW22-14B	MW22-14B-6DEC22	9.8 – 12.8	VOC
MW21-15A	MW21-15A-6DEC22	4.9 – 7.9	VOC
MW22-15B	MW22-15B-6DEC22	9.8 – 12.8	VOC
MW21-16A	MW21-16A-6DEC22	4.6 – 7.6	VOC
MW22-16B	MW22-16B-6DEC22	9.1 – 12.2	VOC
MW21-17A	MW21-17A-5DEC22	4.6 – 7.6	VOC
MW22-17B	MW22-17B-5DEC22	9.3 – 12.3	VOC
MW22-18	22-18-01DEC22	6.7 – 9.8	VOC
MW22-20	22-20-01DEC22	5.2 – 8.2	Metals, VOC, PHC, PAH
MW22-21	22-21-01DEC22	7.6 – 10.7	VOC
MW22-22	22-22-01DEC22	5.8 – 8.8	Metals, VOC, PHC, PAH
MW22-23	22-23-01DEC22	6.1 – 9.1	VOC
MW22-24	22-24-01DEC22 DUP1-01DEC22	6.7 – 9.8	VOC
MW22-26	22-26-01DEC22 DUP2-01DEC22	5.2 – 8.2	Metals, VOC, PHC, PAH
MW22-27	22-27-01DEC22	5.2 – 8.2	Metals, VOC, PHC, PAH
MW22-28	MW22-28-6DEC22	5.0 – 8.1	Metals, VOC, PHC, PAH
MW22-29	MW22-29-6DEC22	6.7 – 9.8	Metals, VOC, PHC, PAH
MW22-30	MW22-30-6DEC22	6.1 – 9.1	VOC
MW22-31	MW22-31-6DEC22	4.6 – 7.6	VOC



Location	Sample ID	Screen Interval (mbgs)	Parameters Analyzed
MW22-32	22-32-01DEC22	5.2 – 8.2	VOC
MW22-33	22-33-01DEC22 22-33-15DEC22	5.2 – 8.2	VOC
MW22-34	MW22-34-5DEC22	4.8 – 7.9	VOC
MW22-35	MW22-35-6DEC22	5.0 – 7.9	VOC
MW22-36	22-36-01DEC22 22-36-15DEC22	4.9 – 7.9	Metals, VOC, PHC, PAH
MW22-37	MW22-37-5DEC22	5.7 – 8.8	Metals, VOC, PHC, PAH
MW22-38	MW22-38-6DEC22 DUP4-6DEC22	5.4 – 8.5	VOC, PHC
MW22-39 Port 1	MW22-39-01-07DEC22	7.6 – 9.1	VOC
MW22-39 Port 3	MW22-39-03-07DEC22	14.3 – 16.2	VOC
MW22-39 Port 4	MW22-39-04-07DEC22	18.3 – 19.1	VOC
MW22-39 Port 5	MW22-39-05-07DEC22	21.3 – 22.9	VOC
MW22-39 Port 6	MW22-39-06-07DEC22 DUP7-07DEC22	24.9 – 25.9	VOC
MW22-39 Port 7	MW22-39-07-07DEC22	27.4 – 30.5	VOC
MW22-40 Port 1	MW22-40-01-07DEC22	6.1 – 9.1	VOC
MW22-40 Port 2	MW22-40-02-07DEC22	10.7 – 13.7	VOC
MW22-40 Port 3	MW22-40-03-07DEC22	15.2 – 18.3	VOC
MW22-40 Port 4	MW22-40-04-07DEC22	20.7 – 23.8	VOC
MW22-40 Port 5	MW22-40-05-07DEC22	24.4 – 26.5	VOC
MW22-40 Port 6	MW22-40-06-07DEC22	27.1 – 28.0	VOC
MW22-40 Port 7	MW22-40-07-07DEC22	28.5 – 30.5	VOC
MW22-41 Port 1	MW22-41-01-07DEC22 DUP8-07DEC22	6.1 – 9.1	VOC
MW22-41 Port 2	MW22-41-02-07DEC22	13.7 – 16.8	VOC
MW22-41 Port 3	MW22-41-03-07DEC22	17.7 – 20.7	VOC
MW22-41 Port 4	MW22-41-04-07DEC22	21.3 – 23.5	VOC
MW22-41 Port 5	MW22-41-05-07DEC22	24.1 – 25.6	VOC
MW22-41 Port 6	MW22-41-06-07DEC22	26.2 – 27.7	VOC
MW22-41 Port 7	MW22-41-07-07DEC22	28.6 – 30.5	VOC

Once collected, the samples were placed in coolers with ice packs and submitted under chain of custody documentation to ALS for analyses of COPCs. Groundwater quality results are provided in Table 4.

## 5.8 GROUNDWATER: HYDRAULIC CONDUCTIVITY TESTING

The hydraulic conductivity of select monitoring wells was conducted on December 19, 2022. Twelve (12) locations considered representative of the range of hydraulic conditions of the phase two



property were selected; MW21-01A, MW21-01B, MW22-01C, MW21-03A, MW21-03B, MW21-04A, MW21-04B, MW22-04C, MW22-21, MW22-23, and MW22-36.

Due to the speed of groundwater recharge in monitoring wells on the phase two property, a Solinst Levellogger pressure transducer and data logger with 10 m resolution was used in conjunction with a physical slug made of high-density PVC. The pressure transducer was programmed to log at a one (1) second interval in order to capture the change in water level during the test. Prior to deployment of the transducer, the water level of the monitoring well was measured and recorded. The transducer was deployed to the bottom of the monitoring well with a nylon string for recovery. The slug was then rapidly deployed into the water column with a nylon rope for recovery, such that the top of the slug was submerged after the water column in the well had returned to static conditions. Once the water level in the well had returned to static conditions, the slug was rapidly removed from the well casing. Again, the water column was allowed to return to static conditions. Hydraulic conductivity data was evaluated using the Bouwer & Rice method on the rising head portions of the tests. All reusable equipment was cleaned following methods described in Section 5.12.1.

## **5.9 SEDIMENT: SAMPLING**

This section intentionally left blank. No sediment sampling as part of Phase Two ESA.

## **5.10 ANALYTICAL TESTING**

As discussed in previous Sections 4.1, 5.3, and 5.6, all soil and groundwater samples were submitted to ALS for analytical testing.

## **5.11 RESIDUE MANAGEMENT**

All soil cuttings, rock cuttings, purge water, and wash water was contained in sealed drums on the phase two property until analytical testing was complete. A composite sample of soil and rock cuttings was collected and submitted to ALS for toxic characteristic leachate procedure (TCLP). Results from the TCLP sample, when compared to leachate quality criteria Schedule 4 of O. Reg. 558, indicate that the cuttings were not classified as hazardous. The waste soil drums were removed from the phase two property and disposed of by Drain-All Inc.

Purge water and wash water generated during soil and groundwater investigations on the phase two property was contained in water-tight, sealed totes. Once analytical results indicated the purge and wash water was non-hazardous, the water was removed from the phase two property.



Information pertaining to the management of residue on the phase two property including the laboratory certificate of analysis is provided in Appendix D.

## **5.12 ELEVATION SURVEYING**

A vertical and horizontal survey was completed using a Sokkia GCX3 high resolution GPS survey system. Several survey points collected for the plan of survey completed by Annis O’Sullivan Vollebakk Ltd. were repeated in order to ground truth or correct the survey completed by OMI. The concrete pad for the west bay door of the 603 March Road building was used as the benchmark for the survey.

## **5.13 QUALITY ASSURANCE AND QUALITY CONTROL MEASURES**

A QA/QC program was followed to ensure that the sampling and analytical data were interpretable, meaningful, and reproducible. Two (2) stages of QA/QC were completed, with one (1) stage completed as part of the standard field procedures performed by OMI and the other completed by the laboratory.

### **5.13.1 FIELD SAMPLING QUALITY ASSURANCE/QUALITY CONTROL**

Soil and groundwater samples for laboratory analysis were placed in appropriate laboratory-supplied, clean sample containers and labeled with the project name and number, date, sample identification, and type of analyses required. After collection, all samples were placed in laboratory-supplied, insulated coolers with the appropriate packing materials (i.e., bubble wrap and plastic bags) and ice packs for delivery to ALS under chain of custody documentation. Chain of custody forms were filled out and double checked against samples before coolers were submitted. Field sampling was completed according to standard protocols, including:

- Decontaminating non-dedicated sampling equipment with sulphate-free detergent and distilled water between sample locations;
- Donning a new pair of disposable nitrile gloves at each sample location;
- Calibration of field equipment prior to use in accordance with manufacturer instructions, at least once daily.

To demonstrate that the field sampling techniques utilized by OMI personnel are capable of yielding reproducible results and to verify the reproducibility of the laboratory analyses, OMI collected blind duplicate, field blank, and trip blank samples. The blind duplicate samples were collected by evenly splitting the original sample into two sets of sample containers at the time of sampling, with separate labelling on the duplicate sample containers. The blind duplicate samples



were analysed for the same parameters as the original samples. The blind duplicate sample pairs are summarized in Table 5-4.

**Table 5-4: Duplicate Pairs**

Media	Sample ID	Duplicate ID
Soil	22-30 0-1.75	DUP1
	22-14B 0-2	DUP2
	22-17B 2.5-3.5	DUP3
	22-23 1-2	DUP4
	22-06B 0.75-1.75	DUP5
	22-13B 0-2	DUP6
	22-39 0.5-1	DUP7
	22-41 2.75-4	DUP8
	22-24 0-1.25	DUP9
Groundwater	22-24-01DEC22	DUP1-01DEC22
	22-26-01DEC22	DUP2-01DEC22
	MW21-04B-5DEC22	DUP3-5DEC22
	MW22-38-6DEC22	DUP4-6DEC22
	MW21-01A-6DEC22	DUP5-6DEC22
	MW21-13A-07DEC22	DUP6-07DEC22
	MW22-39-06-07DEC22	DUP7-07DEC22
	MW22-41-01-07DEC22	DUP8-07DEC22

Sampling precision is measured by calculating the relative percentage difference (RPD) for the duplicate samples. Standards for evaluating the repeatability of duplicate samples are described by the Canadian Council of Ministers of Environment (CCME, 2016). This guidance document suggests the use of 60% RPD for solids and 40% RPD for liquids as QA/QC acceptance criteria. Concentration results less than 5 times the Method Detection Limit (MDL) become increasingly imprecise. Acceptance criteria are therefore relaxed for concentrations within 5 times the MDL; for concentrations less than 5 times the MDL it is recommended that the difference between duplicate sample concentrations should be less than 2 times the MDL (CCME, 2016). RPD is calculated as follows:

$$RPD = \frac{|X1 - X2|}{(X1 + X2)/2} \times 100$$

RPD calculation results for the duplicate soil and groundwater sample pairs are provided in Table 8.

Five (5) field blanks were collected during groundwater sampling to ensure ambient conditions on the phase two property were not interfering with collection of groundwater VOC samples. The field blanks were collected using laboratory supplied distilled water once a day during the collection of regular samples as outlined below in Table 5-5. The field blanks were poured through open air into laboratory supplied sample containers. Field blanks were then packed into coolers with ice packs and submitted to ALS for VOC analysis under chain of custody.



A trip blank remained with groundwater sample containers throughout the sample collection and transportation process to measure potential interference during each transportation event. Five (5) trip blanks for PHCs and/or VOCs were supplied by ALS and remained within the cooler used to transport and store groundwater samples for each event. The trip blanks were submitted to ALS for analysis of PHC and VOC under chain of custody with all other groundwater samples collected from the phase two property. Trip blanks are summarized in Table 5-5.

Analytical results for the collected field blanks and trip blanks can be found in Table 7.

**Table 5-5: Trip Blanks and Field Blanks**

QA/QC	Sample ID	Sample Event
Trip Blanks	TB1-1DEC22	December 1, 2022
	TB2-5DEC22	December 5, 2022
	TB3-6DEC-22	December 6, 2022
	TB4-07DEC22	December 7, 2022
	TB5-15DEC22	December 15, 2022
Field Blanks	FB1-1DEC-22	December 1, 2022
	FB2-5DEC22	December 5, 2022
	FB3-6DEC22	December 6, 2022
	FB4-07DEC22	December 7, 2022
	FB5-15DEC22	December 15, 2022

### 5.13.2 LABORATORY ANALYTICAL QUALITY ASSURANCE/QUALITY CONTROL

All samples were analyzed by ALS, a Canadian Association of Laboratory Accreditation (CALA) accredited laboratory that uses provincially recognized methods to conduct laboratory analyses (MECP, 2021b).

As conveyed by the laboratory, method blanks, control standards samples, certified reference material standards, method spikes, replicates, duplicates, and instrument blanks are routinely analyzed as part of their internal QA/QC programs. As an internal quality control measure, the project laboratory reports the results of laboratory prepared QA/QC analyses. If these criteria are not met, the laboratory is asked by OMI to either reanalyze the affected samples or qualify the results. The QA/QC reports supplied by ALS are provided in Appendix C.



## 6 REVIEW AND EVALUATION

### 6.1 GEOLOGY

The geologic strata of the phase two property were determined based on the observations made during borehole advancement and soil sampling. Details of the observed stratigraphy are shown on the borehole logs in Appendix B. A summary of geologic units observed, and the elevation range is provided in Table 6-1.

**Table 6-1: Geologic Units and Elevations**

Strata Description	Aquifer Present	Top Elevation Range (masl)	Bottom Elevation Range (masl)	Estimated Thickness (m)	Locations Observed
Asphalt	No	84.39 – 81.94	84.31 – 81.87	0.08 – 0.07	MW22-01C MW22-13B MW22-14B MW22-16B MW22-17B MW22-18 MW22-20 MW22-21 MW22-28 MW22-29
Imported Topsoil	No	84.12 – 81.93	83.51 – 81.86	0.07 – 0.61	MW22-03C MW22-04C MW22-05C MW22-06B MW22-15B BH22-19 MW22-23 MW22-24 BH22-25 MW22-30 MW22-31 MW22-35 MW22-38
Humic Topsoil	No	84.06 – 82.27	83.45 – 82.12	0.15 – 0.61	MW22-26 MW22-27 MW22-32 MW22-33 MW22-34 MW22-36 MW22-37



Strata Description	Aquifer Present	Top Elevation Range (masl)	Bottom Elevation Range (masl)	Estimated Thickness (m)	Locations Observed
					MW22-39 MW22-40 MW22-41
Sand and Gravel Fill (broken stone at MW22-37)	No	84.31 – 81.87	84.16 – 81.18	0.15 – 0.69	MW22-01C MW22-03C MW22-06B MW22-13B MW22-14B MW22-15B MW22-16B MW22-17B MW22-18 BH22-19 MW22-20 MW22-21 MW22-22 MW22-28 MW22-29 MW22-31 MW22-37 MW22-38
Gravelly clay to clay with some gravel, suspected fill	No	81.97 – 81.62	81.36 – 81.01	0.61	MW22-18 BH22-19 MW22-21
Non-plastic or low-plastic sandy silt/clay to silt/clay with some sand	No	83.21 – 81.18	82.34 – 79.78	0.87 – 1.4	MW22-04C MW22-6B MW22-15B MW22-22 MW22-23 MW22-24 BH22-25 MW22-26 MW22-27 MW22-31 MW22-32 MW22-34 MW22-38
Medium to high plasticity sandy silt/clay to	No	83.48 – 80.80	83.01 – 79.87	0.47 – 0.93	MW22-03C MW22-06B MW22-16B





Strata Description	Aquifer Present	Top Elevation Range (masl)	Bottom Elevation Range (masl)	Estimated Thickness (m)	Locations Observed
silt/clay with some sand/gravel					MW22-17B MW22-18 BH22-19 MW22-20 MW22-21 MW22-23 BH22-25 MW22-27 MW22-33 MW22-28 MW22-39 MW22-40 MW22-41
Bedrock (aquifer) Interbedded dolostone and sandstone	Yes	83.51 – 79.80	N/A bedrock extends beyond base depth of investigation	31.91	All

No significant quantities of water were observed in soil under the phase two property. As such, no monitoring wells were installed within the overburden. The investigation of the bedrock aquifer was founded in information gathered from previous investigations and the APEC being investigated.

During bedrock drilling activities for all APECs, with the exception of APEC B, the presence of the water table was based on moisture returned to surface with rock cuttings. Once the upper most hydraulically active zone was encountered, drilling ceased, and a monitoring well was installed. The shallow bedrock aquifer under the phase two property was targeted as the most likely area to show evidence of COCs identified during the Phase One ESA (CGI, 2022). Any PCAs on the phase two property would have released COCs to the surface before migrating down to the shallow bedrock aquifer. Similarly, off-site PCAs would require COCs to infiltrate to the shallow bedrock aquifer to migrate.

Known VOC impacts in groundwater related to APEC B extended to 69.2 masl in locations surrounding the 603 March Road building. Since the VOCs identified during previous investigations are denser than water, the investigation proceeded to 64.2 masl within the bedrock aquifer in order to determine the vertical limit of impacts. No further groundwater impacts were returned from any of the monitoring wells within the 68.4 to 64.2 masl monitoring interval. From core collected within the former source zone, the geologic unit was consistently interbedded dolostone and sandstone of the Beekmantown Group.



Investigations outside of the former source area were not continued below 64.2 masl since no evidence of downward contaminant migration or retention was observed. Former source zone coring conducted from ground surface, at approximately 83.0 masl, to 51.6 masl showed interbedded dolostone and sandstone of the Beekmantown Group to the full depth of the investigation. Groundwater analytical results showed no impacts at the bottom of the investigation; therefore, deeper investigations were not completed. Further commentary on groundwater quality results can be found in Section 6.5.

## 6.2 GROUNDWATER: ELEVATIONS AND FLOW DIRECTION

Water levels were measured prior to well development on November 16, 2022, and again on December 5, 2022. Pre-development water levels collected on November 16, 2022, were not considered for the development of groundwater elevations and flow direction as they are not an accurate representation of groundwater conditions on the phase two property. Groundwater elevations were separated into six (6) elevation ranges based on the monitoring wells installed during the investigation. Table 6-2 below shows the monitoring interval range and corresponding groundwater elevation range.

**Table 6-2: Groundwater Monitoring Intervals and Elevation Ranges**

Elevation Range (masl)	Boreholes Included in Range	Groundwater Elevation Range (masl)
79.43 – 71.45	BH4-10, MW21-01A, MW21-02A, MW21-03A, MW21-04A, MW21-05A, MW21-06A, MW21-07, MW21-08, MW21-13A, MW21-14A, MW21-15A, MW21-16A, MW21-17A, MW22-18, MW22-20, MW22-21, MW22-22, MW22-23, MW22-24, MW22-26, MW22-27, MW22-28, MW22-29, MW22-30, MW22-31, MW22-32, MW22-33, MW22-34, MW22-35, MW22-36, MW22-37, MW22-38, MW22-39-1, MW22-40-1, MW22-41-1	79.29 – 76.38
74.57 – 69.29	MW21-01B, MW21-02B, MW21-03B, MW21-04B, MW21-05B, MW22-06B, MW22-13B, MW22-14B, MW22-15B, MW22-16B, MW22-17B, MW22-40-2	77.17 – 76.02
68.39 – 64.16	MW22-01C, MW22-03C, MW22-04C, MW22-05C, MW22-39-3, MW22-40-3, MW22-41-2	77.09 – 76.31
64.38 – 59.23	MW22-39-4, MW22-40-4, MW22-41-3	78.00 – 77.09
58.62 – 56.36	MW22-39-6, MW22-40-5, MW22-41-5	78.11 – 77.86
54.84 – 51.55	MW22-39-7, MW22-40-7, MW22-41-7	79.18 – 78.10

Monitoring well locations and screen intervals were based on the APECs being addressed and to ensure lateral and vertical coverage of the phase two property. See Table 4-1 in Section 4.1 for



a list of monitoring well locations and associated APECs. Screen intervals chosen to intersect the top of the water table, between 79.43 and 71.45 masl, had water levels above the top of the screened interval in select wells. This is due to groundwater conditions in a fractured bedrock environment, which can lead to confinement of an aquifer based on the connectivity of the fracture network laterally and vertically.

Using the methods and equipment specified in Section 5.7 groundwater measurements were recorded and no free product was detected during groundwater elevation collection. Water levels were subtracted from the surveyed elevation of the top of casing to obtain the groundwater elevations indicated in Table 2.

Groundwater elevations from BH4-10 and MW22-30 appeared to be anomalous and were not included in the interpretation of flow direction. Generally, shallow groundwater elevations were observed to be highest on the southern portion of the phase two property as well as around the southern end of the 603 March Road building. Flow was interpreted to be in a north to northeastern direction across much of the phase two property with flow in the northwestern portion of the phase two property moving toward the northwest. Assuming minimal or coarse textured material atop bedrock, infiltration within utility corridors, drainage/infiltration ditches or foundation backfill would cause groundwater mounding and skew groundwater elevations as shown in Figure 3A.

Similar to shallow conditions, groundwater flows in elevation ranges 74.57 – 69.29 masl, 68.39 – 64.16 masl, and 64.38 – 59.23 masl were observed to be towards the northeast or east-northeast, as shown in Figures 3B, 3C and 3D, respectively. Groundwater flow for monitoring wells installed to capture deep groundwater conditions in elevation ranges 58.62 – 56.36 masl and 54.84 – 51.55 masl were observed to flow towards the southeast as illustrated in Figures 3E and 3F, respectively.

Groundwater elevations are expected to experience seasonal variation consistent with the surrounding area. However, thin overburden and the presence of coarse textured fill, typical of utility corridors, drainage/infiltration ditches or foundation backfill, sitting directly on bedrock, create preferential pathways for infiltration into the subsurface will have an exaggerated effect on the shallow flow regime. These preferential infiltration areas will cause mounding of groundwater, as interpreted from the December 5, 2022, elevations.

### **6.3 GROUNDWATER: HYDRAULIC GRADIENTS**

Horizontal gradients at the phase two property were calculated for each of the monitoring intervals noted in Table 6-2 above. Table 6-3 below shows the horizontal gradients calculated for each interval.



**Table 6-3: Horizontal Gradients**

Monitoring Interval (masl)	Maximum Gradient	Minimum Gradient	Average Gradient
79.43 – 71.45	$6.1 \times 10^{-2}$	$6.3 \times 10^{-5}$	$7.5 \times 10^{-3}$
74.57 – 69.29	$1.1 \times 10^{-2}$	$8.0 \times 10^{-4}$	$5.9 \times 10^{-3}$
68.39 – 64.16	$2.9 \times 10^{-2}$	$2.5 \times 10^{-4}$	$8.3 \times 10^{-3}$
64.38 – 59.23	$2.9 \times 10^{-2}$	$6.2 \times 10^{-3}$	$1.8 \times 10^{-2}$
58.62 – 56.36	$6.0 \times 10^{-3}$	$3.6 \times 10^{-3}$	$4.8 \times 10^{-3}$
54.84 – 51.55	$3.3 \times 10^{-2}$	$5.7 \times 10^{-4}$	$2.0 \times 10^{-2}$

Vertical hydraulic gradients were calculated for the well clusters on 603 March Road and the multilevel wells in the former source zone. Vertical gradient calculations were completed between an interval and the interval below it. Table 6-4 shows the calculated vertical gradient maximums, minimums, average, and direction of flow. The bottom interval had none below it and was not calculated.

**Table 6-4: Vertical Gradients**

Monitoring Interval (masl)	Maximum Gradient	Minimum Gradient	Average Gradient	Direction of Flow
79.43 – 71.45	0.363	-0.005	0.239	Down
74.57 – 69.29	1.154	-0.075	0.305	Down
68.39 – 64.16	-0.356	0.000	-0.213	Up
64.38 – 59.23	-0.181	0.008	-0.060	Up
58.62 – 56.36	-0.233	-0.042	-0.112	Up
54.84 – 51.55	N/C	N/C	N/C	N/C

Vertical gradients show the upper portion of the bedrock aquifer act together with a similar average gradient across the phase two property. Average gradients show a hydraulic confinement between the intervals 74.57 – 69.29 and 68.39 – 64.16 with an overall change in the system to an upward vertical flow. The hydraulic confinement and upward flow would provide a barrier to contaminant transport and migration to deeper strata and fracture network.

In addition, hydraulic conductivity tests were conducted at locations MW21-01A/B/C, MW21-03A/B/C, MW21-04A/B/C, MW22-21, MW22-32, and MW22-36. The upper three (3) monitoring intervals were tested since the multilevel monitoring wells could not be tested for hydraulic response. For each of the intervals the overall average hydraulic conductivity was calculated. Where multiple tests were completed per monitoring well, the average of the tests was calculated to provide the maximum and minimum values, as shown in Table 6-5 below. The overall average for each interval is also shown in Table 6-5 below. Hydraulic test analysis can be found in Appendix B.



**Table 6-5: Hydraulic Conductivity**

Interval (masl)	Maximum (m/s)	Minimum (m/s)	Average (m/s)
79.43 – 71.45	$7.85 \times 10^{-5}$	$1.20 \times 10^{-5}$	$3.32 \times 10^{-5}$
74.57 – 69.29	$4.92 \times 10^{-5}$	$8.85 \times 10^{-7}$	$2.97 \times 10^{-5}$
68.39 – 64.16	$6.01 \times 10^{-5}$	$3.54 \times 10^{-7}$	$2.79 \times 10^{-5}$

## 6.4 FINE-MEDIUM SOIL TEXTURE

This section intentionally left blank. As discussed in section 2.4, Fine-medium soil texture site condition standards not used.

## 6.5 SOIL: FIELD SCREENING

Soil field screening results showed little to no presence of volatile organic vapours within soil samples collected during the investigation with the exception to OVC reading of 2,000 parts per million (ppm) at MW22-40 from 0.6 to 0.9 mbgs. All other OVC measurements were below 4 ppm with some locations having no detectable organic vapours. Given the overall low level of OVC readings and no odours or staining indicative of COCs were noted during advancement of any boreholes or during soil sample collection, no recent significant releases of volatile or semi-volatile materials were suspected to have occurred at the test locations. Headspace OVC readings are shown on borehole logs in Appendix B. Headspace OVC readings in soil samples selected for laboratory analysis are shown on Table 5-2 in Section 5.4.

## 6.6 SOIL QUALITY

Soil sample information is summarized in Table 5-2, with analytical results for all parameters summarized in Table 3 and shown in Figures 4A through 4E. Soil quality maximums are summarized in Table 5. Laboratory certificates of analysis are provided in Appendix C.

Analytical results for soil samples collected at the phase two property returned concentrations of all parameters below the MDL and/or relevant Table 7 SCS, with the exception of the sodium adsorption ratio (SAR) and petroleum hydrocarbon compound heavier than fraction 4 (PHC F4G) in the sample collected at MW22-13B from 0.0 to 0.6 mbgs. SAR concentrations were returned to be 8.15 compared to a Table 7 SCS value of 5 (SAR is a unitless measurement). PHC F4G concentrations were returned to be 7130 mg/kg compared to Table 7 SCS of 5600 mg/kg.

PHC F4G that exceeded applicable SCS in surface samples is attributed to inclusion of surficial asphalt material in the sample from MW22-13B. This location is within the paved area of 603 March Road adjacent to a pedestrian walkway. Similarly, elevated SAR is attributed to the



application of salt for the purposes of de-icing roadways and walkways. Neither parameter is believed to be caused by the APECs being investigated.

PHC F4G and SAR were not shown to migrate to the groundwater table. Concentrations of both parameters were low enough that they are not believed to be a concern for leaching to the water table. No non-aqueous phase liquids are expected based on the soil concentrations/ Table 7 SCS exceedances.

## **6.7 GROUNDWATER QUALITY**

Groundwater samples are summarized in Table 5-3 above while analytical results for all parameters are summarized in Table 4 and shown in Figures 5A through 5I. Groundwater maximum concentrations are summarized in Table 6. Laboratory certificates of analysis are provided in Appendix C.

No PHC, PAH, and/or dissolved metals parameters at concentrations above Table 7 SCS were identified in the groundwater samples analysed. All dissolved metals analyzed as part of the Phase Two ESA were field filtered by OMI staff prior to preservation using single-use, 45-micron in-line filters.

Concentrations of several chlorinated solvents (part of the VOC analyte package) were identified in groundwater exceeding Table 7 SCS throughout the phase two property including PCE in MW22-39-1 and MW22-41-1 along with TCE in twenty (20) monitoring wells, as summarized in Table 6.

PCE and TCE exceedances were detected in the top two (2) monitoring intervals, 79.43 – 71.45 masl and 74.57 – 69.29 masl, as well as in the 58.62 – 56.36 masl monitoring interval in the former source zone.

TCE concentrations above Table 7 SCS within the shallow monitoring intervals only exceeded the applicable SCS of 0.5 µg/L by more than three (3) times. Similarly, TCE concentrations above applicable SCS in the 58.62 – 56.36 masl monitoring interval were less than two (2) times applicable SCS.

Concentrations of PCE below applicable SCS were not detected in any other monitoring well on the phase two property. Based on analytical results there is no evidence that soils are acting as a source of continued contaminant flux into groundwater. There was no evidence of free phase product recovered from any of the monitoring wells. It appears that two (2) sources of TCE are present on the phase two property, from the former electronic component manufacturer at 603 March Road and from anaerobic reduction of PCE released by the former dry cleaning facility at 591 March Road.



Low concentrations of PCE and TCE observed in groundwater indicate that past amendment applications were successful in reducing the overall contaminant mass. Since previous amendment application and removal of the source, the contaminant plumes have intermixed and show temporal variability. Remaining groundwater impacts are the product of back diffusion from the rock matrix or migration from off-site sources.

Concentrations of chloroform exceeding Table 7 SCS were returned in the samples from MW22-33 and MW22-36. As indicated on Table 4-4 in Section 4.4, when the samples were collected on December 1, 2022, both MW22-33 and MW22-36 returned concentrations of chloroform exceeding Table 7 SCS. In addition to these exceedances, chloroform concentrations below Table 7 SCS were also detected in MW21-04B, MW22-27, MW22-32, MW22-39-3, MW22-40-2, MW22-40-3, and MW22-40-6.

Chloroform has been identified as a common disinfection by-product of water by chlorination (Rook, 1974). Therefore, when analytical results were received, MW22-33 and MW22-36 were re-developed to remove any residual drilling fluid prior to collection of a second sample set on December 15, 2022. As shown in Table 4, chloroform concentrations in December 15 samples decreased at both locations. OMI noted the heavy usage of a municipally authorized commercial filling station (hydrant) was in close proximity to MW22-27, MW22-33, and MW22-36, see Figure 1C. Since locations MW22-32, MW22-33, MW22-36, MW22-29, and MW22-40 were advanced by rock coring using treated municipal water and, given MW22-27 was not cored using municipal water, is upgradient of MW22-33, and cross gradient of MW22-36, the most likely source of chloroform in groundwater is spillage or seepage from the hydrant during water truck filling activities. Paragraph 2 of Section 49.1 under O. Reg. 153/04 indicates that SCS are met if a Qualified Person (QP) has determined there has been a discharge of drinking water. Based on the evidence collected during the investigation, groundwater samples with chloroform exceedances are interpreted to meet Table 7 SCS.

## **6.8 SEDIMENT QUALITY**

This section intentionally left blank. No sediment sampling as part of Phase Two ESA.

## **6.9 QUALITY ASSURANCE AND QUALITY CONTROL RESULTS**

### **6.9.1 FIELD QA/QC**

Analytical results for all groundwater field and trip blanks can be found in Table 7. Calculated RPD values for the blind duplicate soil and groundwater sample pairs are provided in Table 8.



Groundwater field and trip blanks were used to determine if groundwater samples collected for VOC analysis were being affected during sample collection and transportation to the laboratory. Both field and trip blanks returned no VOC or PHC concentrations above applicable SCS.

Analytical results for VOC parameters in soil duplicate pairs did not return any concentrations above method detection limits; therefore, RPDs could not be calculated. Only select physical, PHC, PAH, soluble ions, and metal parameters in soil duplicate pairs returned concentrations above method detection limits. All RPDs calculated met the recommended 60% guideline or the relaxed criteria for concentrations within five times the MDL with the exception of blind duplicate pair 22-23 1-2/DUP4 for moisture. This RPD exceedance is interpreted to be due sample heterogeneity and not expected to affect the overall findings of the report.

For groundwater blind duplicate pairs, all of the parameters with detectable concentrations had RPD results meeting the recommended 40% guideline or criteria for concentrations within five times the MDL.

Throughout the field and analytical program of the Phase Two ESA all samples were handled in accordance with the Analytical protocol (MECP, 2021b). No variation from the protocol occurred with respect to hold times, preservation methods, storage requirements, or container type.

## **6.9.2 LABORATORY QA/QC**

ALS laboratory QA/QC reports are included in the laboratory certificates of analysis provided in Appendix C. ALS reported eight (8) different qualifiers on multiple samples as outlined below along with an explanation of how the qualifiers effect interpretation of the analytical data:

### **DL – Reported lowest detection limit is higher than requested analyte lowest detection limit.**

- Hexavalent Chromium (Soil): 22-18 0-1, 22-20 0-1, 22-22 0-1.25, 22-23 0-1, 22-24 0-1.25, 22-26 0-1, and 22-27 0-1 [ALS Work Order: WT2219243].
- All sample results were below the detection limit of 0.50 mg/kg, which is still below the Table 7 SCS of 8 mg/kg. This qualifier does not have an impact on the reliability of the data or conclusions predicated on the data.

### **DLM – Detection limit adjusted due to sample matrix effects (e.g., chemical interference, colour, turbidity).**

- Copper (Soil): 22-28 0.25-1.5, 22-29 0.25-1.5, 22-29 2.5-3.75, 22-30 0-1.75, DUP1, 22-31 0-1, 22-14B 0-2, 22-14B 2.5-4, DUP2, 22-15B 0-1, 22-16B 0-1, 22-17B 0-0.75, 22-03C 0-1 [ALS Work Order: WT2219916].





- PAH (Soil): 22-14B 0-2, DUP2, 22-16B 0-1, 22-17B 0-0.75, 22-03C 0-1 [ALS Work Order: WT2219916].
- F2 (Soil) DUP6 and Chrysene (Soil) 22-13B 0-2 [ALS Work Order: WT2221612].
- All sample results were below the Table 7 SCS. This qualifier does not have an impact on the reliability of the data or conclusions predicated on the data.

**AI – Analytical interferences may be present. Result may be biased high.**

- PAH (Soil): 22-14B 0-2, DUP2, 22-17B 0-0.75 [ALS Work Order: WT2219916].
- No PAHs exceedances were returned; thus this qualifier is not expected to have an affect on the overall results of the data.

**RRR – Reporting limit raised due to suspected laboratory contamination.**

- Dichloromethane (Soil): 22-23 1-2 [ALS Work Order: WT2221344].
- Dichloromethane (Water): TB5-15DEC22 [ALS Work Order: WT2225424]; TB3-6DEC22 [ALS Work Order: WT2224485].
- The concentrations were below the Table 7 SCS; therefore, this qualifier does not have an impact on the reliability of the data or conclusions predicated on the data.

**DLQ – Detection limit raised due to co-eluting interference.**

- BTEX (Soil): 22-38 0-0.75, 22-38 0.75-2 [ALS Work Order: WT2221344].
- All BTEX results were below the raised detection limit, which is still below the Table 7 SCS and is therefore not considered to impact report findings.

**RRV – Reported result verified by repeat analysis.**

- F1 (Soil): DUP6 [ALS Work Order: WT2221612].
- Dichloromethane (Water): TB1-1DEC22 [ALS Work Order: WT2224015], TB2-5DEC22 [ALS Work Order: WT2224326]; TB4-07DEC22 [ALS Work Order: WT2224609].
- Analytical results were below Table 7 SCS. Therefore, this qualifier is not considered to impact report findings.

**DLHC – Detection Limit Raised. Dilution required dur to high concentration of test analyte.**

- Dissolved metals (Water): 22-20-01DEC22, 22-22-01DEC22 [ALS Work Order: WT2224015]; MW21-14A-6DEC22, MW22-28-6DEC22, MW22-29-6DEC22 [ALS Work Order: WT2224485].



- Dissolved sodium (Water): 22-26-01DEC22, 22-27-01DEC22, DUP2-01DEC22 [ALS Work Order: WT2224015]; MW22-37-5DEC22 [WT2224326]
- All sample results were below the Table 7 SCS. This qualifier does not have an impact on the reliability of the data or conclusions predicated on the data.

**OWP – Organic was sample contained visible sediment. Measured concentrations of organic substances in water can be biased high due to presence of sediment.**

- VOCs (Water): 22-23-01DEC22 [ALS Work Order: WT2224015]; MW22-31-6DEC22 [ALS Work Order: WT2224485].
- Sediment within the sample matrix of samples that require VOC analysis will bias results high. In the case of the above sample, all VOC parameter concentrations were below method detection limits. As such, this qualifier does not have an impact on the reliability of the data or conclusions predicated on the data.

The above qualifiers are related to laboratory analysis methods and are not reflective of sample quality.

ALS accepted the results for all of their internal quality control results despite several qualifiers which were the result of one or more of the following for various parameters:

- Laboratory control sample recovery was outside of data quality objectives
- Analysis holding time compliance breaches
- Frequency of quality control samples
- Data quality objective was marginally exceeded
- Sample heterogeneity
- Method blank exceeded data quality objectives

OMI reviewed the qualifiers on the internal QC report and did not conclude that they impact the overall data quality or interpretations of the phase two property condition predicated on the data.

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

The Phase Two ESA Conceptual Site Model (CSM) described below is based on data from previous investigations and the results of this Phase Two ESA. The CSM consists of cross sections and figures that show the condition of the phase two property at the time of writing. The narrative below is intended to support the cross sections and figures. The figures that comprise the Phase Two CSM are as follows:



Figure 1A:	Location
Figure 1B:	Phase One ESA CSM
Figure 1C:	Site Layout
Figure 2:	Areas of Natural Significance and Water Bodies
Figure 3A:	Groundwater Elevations and Interpreted Flow Between 4.0 and 10.7 mbgs
Figure 3B:	Groundwater Elevations and Interpreted Flow Between 9.1 and 13.7 mbgs
Figure 3C:	Groundwater Elevations and Interpreted Flow Between 13.7 and 18.4 mbgs
Figure 3D:	Groundwater Elevations and Interpreted Flow Between 18.3 and 23.8 mbgs
Figure 3E:	Groundwater Elevations and Interpreted Flow Between 24.1 and 26.5 mbgs
Figure 3F:	Groundwater Elevations and Interpreted Flow Between 27.4 and 30.5 mbgs
Figure 4A:	Soil Quality Results: Metals
Figure 4B:	Soil Quality Results: VOC
Figure 4C:	Soil Quality Results: PHC
Figure 4D:	Soil Quality Results: PAH
Figure 4E:	Soil Quality Results: PCB
Figure 5A:	Shallow Groundwater Quality Results: Metals
Figure 5B:	Shallow Groundwater Quality Results: VOC
Figure 5C:	Shallow Groundwater Quality Results: PHC
Figure 5D:	Shallow Groundwater Quality Results: PAH
Figure 5E:	Groundwater Quality Results Between 9.1 and 13.7 mbgs: VOC
Figure 5F:	Groundwater Quality Results Between 13.7 and 18.4 mbgs: VOC
Figure 5G:	Groundwater Quality Results Between 18.3 and 23.8 mbgs: VOC
Figure 5H:	Groundwater Quality Results Between 24.1 and 26.5 mbgs: VOC
Figure 5I:	Groundwater Quality Results Between 27.4 and 30.5 mbgs: VOC
Figure 6A:	Cross Section A-A' Interpreted Geological and Hydrogeological Conditions with Metals Analytical Results
Figure 6B:	Cross Section A-A' Interpreted Geological and Hydrogeological Conditions with VOC Analytical Results
Figure 6C:	Cross Section A-A' Interpreted Geological and Hydrogeological Conditions with PHC Analytical Results
Figure 6D:	Cross Section A-A' Interpreted Geological and Hydrogeological Conditions with PAH Analytical Results
Figure 6E:	Cross Section A-A' Interpreted Geological and Hydrogeological Conditions with PCB Analytical Results
Figure 7A:	Cross Section B-B' Interpreted Geological and Hydrogeological Conditions with Metals Analytical Results
Figure 7B:	Cross Section B-B' Interpreted Geological and Hydrogeological Conditions with VOC Analytical Results
Figure 7C:	Cross Section B-B' Interpreted Geological and Hydrogeological Conditions with PHC Analytical Results
Figure 7D:	Cross Section B-B' Interpreted Geological and Hydrogeological Conditions with PAH Analytical Results
Figure 8A:	Cross Section C-C' Interpreted Geological and Hydrogeological Conditions with Metals Analytical Results
Figure 8B:	Cross Section C-C' Interpreted Geological and Hydrogeological Conditions with VOC Analytical Results



- Figure 8C: Cross Section C-C' Interpreted Geological and Hydrogeological Conditions with PHC Analytical Results
- Figure 8D: Cross Section C-C' Interpreted Geological and Hydrogeological Conditions with PAH Analytical Results
- Figure 9A: Cross Section D-D' Interpreted Geological and Hydrogeological Conditions with Metals Analytical Results
- Figure 9B: Cross Section D-D' Interpreted Geological and Hydrogeological Conditions with VOC Analytical Results
- Figure 9C: Cross Section D-D' Interpreted Geological and Hydrogeological Conditions with PHC Analytical Results
- Figure 9D: Cross Section D-D' Interpreted Geological and Hydrogeological Conditions with PAH Analytical Results
- Figure 10A: Cross Section E-E' Interpreted Geological and Hydrogeological Conditions with Metals Analytical Results
- Figure 10B: Cross Section E-E' Interpreted Geological and Hydrogeological Conditions with VOC Analytical Results
- Figure 10C: Cross Section E-E' Interpreted Geological and Hydrogeological Conditions with PHC Analytical Results
- Figure 10D: Cross Section E-E' Interpreted Geological and Hydrogeological Conditions with PAH Analytical Results
- Figure 11: Exposure Pathways for Volatile Organic Compounds

### 6.10.1 DESCRIPTION AND ASSESMENT OF PCAS AND APECS

#### Areas of Potentially Contaminating Activities and Areas of Potential Environmental Concern

The following table summarizes the PCAs resulting in APECs identified during the Phase One ESA. Figure 1B shows the locations and extents of APECs.

**Table 6-6: Table of APECs**

APEC	Location of APEC	PCA No.	PCA on/off phase two property	COCs	Media Potentially Impacted
<b>APEC A</b> Former electronic component manufacturing	Interior and immediately surrounding area of the 555 March Road building on the phone one property.	19	On	VOC	Soil and Groundwater
<b>APEC B</b> Former dry cleaning facility	Interior and immediately surrounding area of the 591 March Road building; area of known contamination north of	37	On	VOC	Soil and Groundwater



APEC	Location of APEC	PCA No.	PCA on/off phase two property	COCs	Media Potentially Impacted
	building on the phase one property				
<b>APEC C</b> Former electronic component manufacturing	Interior and surrounding area of 603 March Road building; area of known groundwater contamination on the phase one property.	8 19	On	VOC	Soil and Groundwater
<b>APEC D</b> Storage of hydraulic oil	Interior and immediately surrounding area adjacent to elevator at 603 March Road on the phase one property.	28	On	PHC BTEX	Soil and Groundwater
<b>APEC E</b> High voltage electrical transformers	Northern phase one property boundary; 591 March Road parking area; 555 March Road building	55	On	PHC BTEX PCB	Soil and Groundwater
<b>APEC F</b> Potential bulk chemical and ink storage; electronic component manufacturing; metal fabrication	Southern and southwestern phase one property boundaries	8 19 31 34	Off	PHC VOC Metals	Soil and Groundwater
<b>APEC G</b> Imported fill used as base for roads and parking areas; broken rock fill adjacent to Hines Road	Northern and southeastern paved areas; West central area of the phase one property	30	On	PHC BTEX PAH Metals	Soil



APEC	Location of APEC	PCA No.	PCA on/off phase two property	COCs	Media Potentially Impacted
<b>APEC H</b> Former March Landfill risk management area	All exterior areas of the phase one property.	55	Off	VOC	Groundwater

### Subsurface Structures and Utilities

All buildings are slab on grade construction due to the shallow depth to bedrock. Subsurface utility corridors are present at various locations throughout the phase two property; however, these utilities do not extend into bedrock far enough to encounter the groundwater table. Figure 1C displays the approximate locations of sewer and water utilities. Since native soils on the phase two property generally consist of silt and clay based soils, the utility corridors would act as preferential infiltration pathways to the bedrock and bedrock aquifer. The shallow groundwater flow regime may be affected by preferential infiltration. Utility corridors are not likely to act as distribution mechanisms because no permanent or significant groundwater table was found in the overburden.

## 6.10.2 SITE PHYSICAL SETTING

### Stratigraphy

Geologic units for each borehole location can be found on completed borehole logs in Appendix B and on cross section in Figures 6A to 6E, 7A to 7D, 8A to 8D, 9A to 9D, and 10A to 10D.

Surface soil across the phase two property varied depending upon location. Hard covered areas such as drive lanes and parking lots were asphalt covered immediately followed by engineered sand and gravel fill. Landscaped areas were typically covered with imported topsoil followed by other imported fill containing gravel. Vegetated areas, which had not been developed previously, had a layer of organic rich humic topsoil. These various surficial coverings were underlain by sandy silt or clay with plasticity ranging from low to high and depth extending to the top of rock.

Bedrock beneath the phase two property consisted of interbedded dolostone and sandstone of the Beekmantown Group of the Lower Ordovician.

### Hydrogeological Characteristics

Soils on the phase two property did not contain any significant quantities of water to indicate the presence of a water table. The groundwater table was found in the bedrock under the phase two



property. Within the bedrock aquifer, six (6) monitoring intervals were installed as indicated by Table 6-7 below. Groundwater elevations can be found in Table 2.

**Table 6-7: Groundwater Monitoring Intervals**

Elevation Range (masl)	Boreholes Included in Range	Groundwater Elevation Range (masl)
79.43 – 71.45	BH4-10, MW21-01A, MW21-02A, MW21-03A, MW21-04A, MW21-05A, MW21-06A, MW21-07, MW21-08, MW21-13A, MW21-14A, MW21-15A, MW21-16A, MW21-17A, MW22-18, MW22-20, MW22-21, MW22-22, MW22-23, MW22-24, MW22-26, MW22-27, MW22-28, MW22-29, MW22-30, MW22-31, MW22-32, MW22-33, MW22-34, MW22-35, MW22-36, MW22-37, MW22-38, MW22-39-1, MW22-40-1, MW22-41-1	79.29 – 76.38
74.57 – 69.29	MW21-01B, MW21-02B, MW21-03B, MW21-04B, MW21-05B, MW22-06B, MW22-13B, MW22-14B, MW22-15B, MW22-16B, MW22-17B, MW22-40-2	77.17 – 76.02
68.39 – 64.16	MW22-01C, MW22-03C, MW22-04C, MW22-05C, MW22-39-3, MW22-40-3, MW22-41-2	77.09 – 76.31
64.38 – 59.23	MW22-39-4, MW22-40-4, MW22-41-3	78.00 – 77.09
58.62 – 56.36	MW22-39-6, MW22-40-5, MW22-41-5	78.11 – 77.86
54.84 – 51.55	MW22-39-7, MW22-40-7, MW22-41-7	79.18 – 78.10

Shallow groundwater elevations were observed to be highest on the southern portion of the phase two property as well as around the southern end of the 603 March Road building. Flow was interpreted to be in a north to northeastern direction across much of the phase two property. Groundwater flows in elevation ranges 74.57 – 69.29 masl, 68.39 – 64.16 masl, and 64.38 – 59.23 masl were observed to be towards the northeast or east-northeast, as shown in Figures 3B, 3C and 3D, respectively. Groundwater flow interpreted from monitoring wells installed to capture deep groundwater conditions in elevation ranges 58.62 – 56.36 masl and 54.84 – 51.55 masl were observed to flow towards the southeast as illustrated in Figures 3E and 3F, respectively.

Vertical gradients show the upper monitoring intervals 79.43 – 71.45 masl and 74.57 – 69.29 masl act together with average vertical gradients 0.239 and 0.305 downward. Average gradients show a hydraulic confinement between the intervals 74.57 – 69.29 masl and 68.39 – 64.16 masl with an overall change in the system to an upward vertical flow. Monitoring intervals 68.39 – 64.16 masl, 64.38 – 59.23 masl, and 58.62 – 56.36 masl had vertical hydraulic gradients of -0.213, -0.060, and -0.112, respectively, where the negative values indicate an upward flow direction.

Hydraulic conductivity testing was completed for monitoring intervals 79.43 – 71.45 masl, 74.57 – 69.29 masl, and 68.39 – 64.16 masl. The average hydraulic conductivity of each interval was 3.32



$\times 10^{-5}$  m/s,  $2.97 \times 10^{-5}$  m/s, and  $2.79 \times 10^{-5}$  m/s, respectively. These hydraulic conductivity values are consistent with fractured bedrock environments.

### **Depth to Bedrock**

The thickest overburden was observed in the east-central area of the phase two property at BH22-25 with an overburden thickness of 2.7 m. The thinnest overburden was measured at MW21-05A at only 0.15 m. The overburden thickness of the majority of the phase two property was between 0.6 and 1.2 m.

Given the above thicknesses, depth to bedrock is expressed as elevations to provide context based on surface elevation. Elevations to bedrock varied between 83.52 masl and 79.83 masl across the phase two property. Bedrock was highest in the northwestern corner at MW22-30 and lowest at MW22-24. The bedrock elevation of majority of the phase two property fell between 82 and 81 masl.

### **Depth to Water Table**

All measured water elevations can be found in Table 2. The water table elevation ranged between 78.77 masl and 76.38 masl. The deepest water table elevation was measured at MW22-22 in the southeastern corner of the phase two property while the shallowest water table elevation was measured in Port 1 of MW22-40 in the northeastern property boundary.

Water elevations from monitoring intervals below the upper most were not considered as part of this section as a hydraulic barrier was observed in the multilevel wells and an upward vertical gradient was measured in the deeper portions of well clusters and multilevel wells.

### **Section 35 of the Regulation**

The phase two property and all properties within 250 m are supplied with municipal drinking water. The City of Ottawa municipal clerk was provided written notice of the intention to apply non-potable drinking water site condition standards to the phase two property. At the time of writing, no response has been received to the written notice.

### **Section 41 of the Regulation**

Section 41 of O. Reg. 153/04 does not apply to the phase two property.

### **Section 43.1 of the Regulation**

More than one third (1/3) of the phase two property has a soil thickness of less than 2 m. As such, the phase two property has had shallow soil site condition standards applied.





### **Areas On, In, or Under the Phase Two Property Where Excess Soil is Finally Placed**

No excess soil was placed on the phase two property. Broken rock from infrastructure projects was placed on the phase two property along the south-central property boundary, adjacent to the Hines Road turn around. MW22-37 was placed to assess potential impacts from the broken rock.

### **Existing Buildings and Structures**

There are three (3) existing buildings on the phase two property. One (1) fitness club on the southeastern portion of the 555 March Road property. One (1) commercial plaza with various retail, commercial, restaurant, and animal care tenants on the 591 March Road Property. One (1) office building with technology research and development as well as recruitment tenants on the 603 March Road property. All buildings are slab on grade construction with footings extending to bedrock.

Subsurface water, sewer, and power corridors are located across the phase two property. No records were available for review to determine if bedrock had been excavated for the utilities. Four (4) pad mounted transformers were located across the site, one (1) each supplying 555 and 591 March Road and two (2) supplying 603 March Road.

### **Proposed Buildings**

Existing structures will be demolished in phases as development and construction progresses. All new structures are proposed to have sub-surface parking where bedrock surfaces allow. Initial site clearing and preparation are planned for the second quarter of 2023. The proposed redevelopment includes eleven (11) new buildings between six (6) and thirty (30) storeys with below grade levels extending to bedrock, up to 3 m below grade.

## **6.10.3 ENVIRONMENTAL CONDITION**

### **Findings of Assessment**

To address the PCAs and APECs identified, soil and groundwater sampling and analysis for COCs was completed as part of the Phase Two ESA. MECP Table 7 SCS were used to evaluate analytical results. A summary of findings is provided in Table 6-8 below.

**Table 6-8: Summary of Exceedances from PCAs and APECs Identified by Phase One ESA**

<b>APEC</b>	<b>Location ID</b>	<b>COCs Analyzed</b>	<b>Results Exceeding Applied SCS</b>
<b>APEC A</b>	MW22-18	Soil: Metals, VOC, PHC, PAH	None
		Groundwater: VOC	None
	MW22-21	Soil: BTEX, PHC	None



APEC	Location ID	COCs Analyzed	Results Exceeding Applied SCS
Former electronic component manufacturing	MW22-23	Groundwater: VOC	None
		Soil: Metals, VOC, PHC, PAH	None
	MW22-24	Groundwater: VOC	None
		Soil: Metals, VOC, PHC, PAH	None
<b>APEC B</b> Former dry cleaning facility	BH10-4	Groundwater: VOC	None
	MW21-03A	Groundwater: VOC	None
	MW21-03B	Groundwater: VOC	VOC
	MW22-03C	Soil: Metals, VOC, PHC, PAH	None
		Groundwater: VOC	None
	MW21-04A	Groundwater: VOC	None
	MW21-04B	Groundwater: VOC	None
	MW22-04C	Soil: VOC	None
		Groundwater: VOC	None
	MW22-34	Groundwater: VOC	VOC
	MW22-39	Soil: VOC	None
		Groundwater: VOC	VOC
	MW22-40	Soil: VOC	None
		Groundwater: VOC	VOC
MW22-41	Soil: VOC	None	
	Groundwater: VOC	VOC	
<b>APEC C</b> Former electronic component manufacturing	MW21-01A	Groundwater: VOC	VOC
	MW21-01B	Groundwater: VOC	VOC
	MW22-01C	Soil: Metals, VOC, PHC, PAH	None
		Groundwater: VOC	None
	MW21-02A	Groundwater: VOC	VOC
	MW21-02B	Groundwater: VOC	VOC
	MW21-03A	Groundwater: VOC	None
	MW21-03B	Groundwater: VOC	VOC
	MW22-03C	Soil: Metals, VOC, PHC, PAH	None
		Groundwater: VOC	None
	MW21-04A	Groundwater: VOC	None
	MW21-04B	Groundwater: VOC	None
	MW22-04C	Soil: VOC	None
		Groundwater: VOC	None
MW21-05A	Groundwater: VOC	None	
MW21-05B	Groundwater: VOC	None	
MW22-05C	Soil: VOC	None	
	Groundwater: VOC	None	
MW21-06A	Groundwater: VOC, PHC	None	
MW22-06B	Soil: VOC, PHC, PCB	None	



APEC	Location ID	COCs Analyzed	Results Exceeding Applied SCS
		Groundwater: VOC	None
	MW21-07	Groundwater: VOC	VOC
	MW21-08	Groundwater: VOC	VOC
	MW21-13A	Groundwater: VOC, PHC	VOC
	MW22-13B	Soil: pH, Metals, SAR, VOC, PHC, PAH	PHC, SAR
		Groundwater: VOC	None
	MW21-14A	Groundwater: Metals, VOC, PHC, PAH	VOC
	MW22-14B	Soil: Metals, BTEX, PHC, PAH	None
		Groundwater: VOC	None
	MW21-15A	Groundwater: VOC	VOC
	MW22-15B	Soil: Metals, VOC, PHC, PAH	None
		Groundwater: VOC	None
	MW21-16A	Groundwater: VOC	VOC
	MW22-16B	Soil: Metals, VOC, PHC, PAH	None
		Groundwater: VOC	None
	MW21-17A	Groundwater: VOC	VOC
	MW22-17B	Soil: Metals, VOC, PHC, PAH	None
		Groundwater: VOC	None
	MW22-31	Soil: pH, Grain Size, Metals, BTEX, PHC, PAH	None
		Groundwater: VOC	VOC
MW22-35	Soil: Metals, VOC, PHC, PAH	None	
	Groundwater: VOC	None	
MW22-38	Soil: BTEX, PHC, PCB	None	
	Groundwater: VOC, PHC	None	
<b>APEC D</b> Storage of hydraulic oil	MW21-13A	Groundwater: VOC, PHC	VOC
	MW22-13B	Soil: pH, Metals, SAR, VOC, PHC, PAH	PHC, SAR
Groundwater: VOC		None	
<b>APEC E</b> High voltage electrical transformers	MW21-06A	Groundwater: VOC, PHC	None
	MW22-06B	Soil: VOC, PHC, PCB	None
		Groundwater: VOC	None
	MW22-18	Soil: Metals, VOC, PHC, PAH	None
		Groundwater: VOC	None
	BH22-19	Soil: BTEX, PHC, PCB	None
	MW22-21	Soil: BTEX, PHC	None
		Groundwater: VOC	None
MW22-24	Soil: Metals, VOC, PHC, PAH	None	
	Groundwater: VOC	None	



APEC	Location ID	COCs Analyzed	Results Exceeding Applied SCS	
	BH22-25	Soil: BTEX, PHC, PCB	None	
	MW22-38	Soil: BTEX, PHC, PCB	None	
		Groundwater: VOC, PHC	None	
<b>APEC F</b> Potential bulk chemical and ink storage; electronic component manufacturing; metal fabrication	MW22-20	Soil: Metals, VOC, PHC, PAH	None	
		Groundwater: Metals, VOC, PHC, PAH	None	
	MW22-22	Soil: Metals, VOC, PHC, PAH	None	
		Groundwater: Metals, VOC, PHC, PAH	None	
	MW22-26	Soil: Metals, VOC, PHC, PAH	None	
		Groundwater: Metals, VOC, PHC, PAH	None	
	MW22-27	Soil: Metals, VOC, PHC	None	
		Groundwater: Metals, VOC, PHC, PAH	None	
	MW22-36	Soil: Metals, VOC, PHC	None	
		Groundwater: Metals, VOC, PHC, PAH	None*	
	<b>APEC G</b> Imported fill used as base for roads and parking areas; broken rock fill adjacent to Hines Road	MW22-01C	Soil: Metals, VOC, PHC, PAH	None
		MW22-03C	Soil: Metals, VOC, PHC, PAH	None
MW22-13B		Soil: pH, Metals, SAR, VOC, PHC, PAH	PHC, SAR	
MW21-14A		Groundwater: Metals, VOC, PHC, PAH	VOC	
MW22-14B		Soil: Metals, VOC, PHC, PAH	None	
MW22-15B		Soil: Metals, VOC, PHC, PAH	None	
MW22-16B		Soil: Metals, VOC, PHC, PAH	None	
MW22-17B		Soil: Metals, VOC, PHC, PAH	None	
MW22-18		Soil: Metals, VOC, PHC, PAH	None	
MW22-20		Soil: Metals, VOC, PHC, PAH	None	
		Groundwater: Metals, VOC, PHC, PAH	None	
MW22-22		Soil: Metals, VOC, PHC, PAH	None	
		Groundwater: Metals, VOC, PHC, PAH	None	
MW22-28		Soil: Metals, BTEX, PHC, PAH	None	
		Groundwater: Metals, VOC, PHC, PAH	VOC	
MW22-29	Soil: Metals, BTEX, PHC, PAH	None		
	Groundwater: Metals, VOC, PHC, PAH	None		



APEC	Location ID	COCs Analyzed	Results Exceeding Applied SCS
	MW22-30	Soil: Metals, BTEX, PHC, PAH	None
	MW22-37	Soil: Metals, VOC, PHC, PAH	None
		Groundwater: Metals, VOC, PHC, PAH	None



APEC	Location ID	COCs Analyzed	Results Exceeding Applied SCS
<b>APEC H</b> Former March Landfill risk management area	MW21-01A	Groundwater: VOC	VOC
	MW21-01B	Groundwater: VOC	VOC
	MW22-01C	Groundwater: VOC	None
	MW21-02A	Groundwater: VOC	VOC
	MW21-02B	Groundwater: VOC	VOC
	MW21-03A	Groundwater: VOC	None
	MW21-03B	Groundwater: VOC	VOC
	MW22-03C	Groundwater: VOC	None
	MW21-04A	Groundwater: VOC	None
	MW21-04B	Groundwater: VOC	None
	MW22-04C	Groundwater: VOC	None
	MW21-05A	Groundwater: VOC	None
	MW22-05B	Groundwater: VOC	None
	MW22-05C	Groundwater: VOC	None
	MW21-06A	Groundwater: VOC, PHC	None
	MW22-06B	Groundwater: VOC	None
	MW21-07	Groundwater: VOC	VOC
	MW21-08	Groundwater: VOC	VOC
	MW21-13A	Groundwater: VOC, PHC	VOC
	MW22-13B	Groundwater: VOC	None
	MW21-14A	Groundwater: Metals, VOC, PHC, PAH	VOC
	MW22-14B	Groundwater: VOC	None
	MW21-15A	Groundwater: VOC	VOC
	MW22-15B	Groundwater: VOC	None
	MW21-16A	Groundwater: VOC	VOC
	MW22-16B	Groundwater: VOC	None
	MW21-17A	Groundwater: VOC	VOC
MW22-17B	Groundwater: VOC	None	
MW22-18	Groundwater: VOC	None	
MW22-20	Groundwater: Metals, VOC, PHC, PAH	None	
MW22-21	Groundwater: VOC	None	
MW22-22	Groundwater: Metals, VOC, PHC, PAH	None	
MW22-23	Groundwater: VOC	None	
MW22-24	Groundwater: VOC	None	
MW22-26	Groundwater: Metals, VOC, PHC, PAH	None	
MW22-27	Groundwater: Metals, VOC, PHC, PAH	None	



APEC	Location ID	COCs Analyzed	Results Exceeding Applied SCS
	MW22-28	Groundwater: Metals, VOC, PHC, PAH	VOC
	MW22-29	Groundwater: Metals, VOC, PHC, PAH	None
	MW22-30	Groundwater: VOC	None
	MW22-31	Groundwater: VOC	VOC
	MW22-32	Groundwater: VOC	None
	MW22-33	Groundwater: VOC	None
	MW22-34	Groundwater: VOC	VOC
	MW22-35	Groundwater: VOC	None
	MW22-36	Groundwater: Metals, VOC, PHC, PAH	None*
	MW22-37	Groundwater: Metals, VOC, PHC, PAH	None
	MW22-38	Groundwater: VOC, PHC	None
	MW22-39	Groundwater: VOC	VOC
	MW22-40	Groundwater: VOC	VOC
	MW22-41	Groundwater: VOC	VOC

Note:

\* Indicates that the concentration of one or more parameter exceeds the applied SCS, however, the parameter falls within a regulatory exemption.

The results of the Phase Two ESA indicate historic activities on or around the phase two property have adversely impacted the soil and/or groundwater on or under the phase two property. In particular, the following were observed:

- **APEC B:** PCE and TCE impacts in groundwater originating from a former dry cleaning facility on the 591 March Road property.
- **APEC C:** TCE impacts in groundwater present under and around the building located at 603 March Road from former electronic component manufacturing. Isolated soil impacts of heavy PHC and SAR due to road maintenance and de-icing
- **APEC D:** Soil impacted with PHC and SAR not related to storage and use of hydraulic oil for elevator operations. TCE impacted groundwater also unrelated to APEC D.
- **APEC G:** Soil impacted with PHC and SAR not related to fill of poor quality used to construct roadways. TCE impacted groundwater also unrelated to APEC G.
- **APEC F:** Shallow and deep groundwater impacted with TCE not related to the former March Landfill.



Soil impacted with PHC F4G and SAR detected within APEC D and APEC G are not related to PCAs or historical site operations. The surficial soil sample that returned concentrations of PHC F4G above the applicable SCS is believed to have included a portion of asphalt from the parking area that the borehole was advanced. Since no other surficial sample collected in APEC G returned results of PHC 4G above applicable SCS, the sample at MW22-14B was considered anomalous with no further investigation or remedial actions are required. SAR exceeding applicable SCS are exempt under Paragraph 1 of Section 49.1 under O. Reg. 153/04 which indicates that de-icing activities conducted within the phase two property and affect the environmental quality are deemed not to exceed the applicable SCS. Since the sample was collected close to the surface at location MW22-14B, which was advanced in the parking area adjacent to a pedestrian walkway where de-icing activities are performed, OMI does not consider the SAR exceedance requires further investigation of remedial actions.

Concentrations of chloroform exceeding Table 7 SCS were returned in the samples from MW22-33 and MW22-36. As indicated on Table 4-4 in Section 4.4, when the samples were collected on December 1, 2022, both MW22-33 and MW22-36 returned concentrations of chloroform exceeding Table 7 SCS. Chloroform concentrations below Table 7 SCS were also detected in MW21-04B, MW22-27, MW22-32, MW22-39-3, MW22-40-2, MW22-40-3, and MW22-40-6.

Chloroform has been identified as a common disinfection by-product of water by chlorination (Rook, 1974). Therefore, when analytical results were received, MW22-33 and MW22-36 were re-developed to remove any residual drilling fluid prior to collection of a second sample set on December 15, 2022. As shown in Table 4, chloroform concentrations in December 15 samples decreased at both locations.

OMI further noted the heavy usage of a municipally authorized commercial filling station (hydrant) was in close proximity to MW22-27, MW22-33, and MW22-36, see Figure 1C. Since locations MW22-32, MW22-33, MW22-36, MW22-29, and MW22-40 were advanced by rock coring using treated municipal water and, given MW22-27 was not cored using municipal water, is upgradient of MW22-33, and cross gradient of MW22-36, the most likely source of chloroform in groundwater is spillage or seepage from the hydrant during water truck filling activities. Paragraph 2 of Section 49.1 under O. Reg. 153/04 indicates that SCS are met if a Qualified Person (QP) has determined there has been a discharge of drinking water. Based on the evidence collected during the investigation, groundwater samples with chloroform exceedances are interpreted to meet Table 7 SCS.

Extents of PCE and TCE impacted groundwater are displayed in plan view Figures 4B, 5B, and 5H as well as cross section Figures 6B, 7B, 8B, and 9B. The distribution of groundwater impacted with PCE and TCE is restricted to the 595 and 603 March Road properties of the phase two property. Groundwater flow regimes in the shallow portion of the bedrock aquifer appears to vary seasonally with influence from subsurface structures that increase infiltration into bedrock. Vertical





distribution of PCE and TCE is limited to the upper portion of the bedrock aquifer across much of the phase two property due to an upward vertical gradient found in bedrock below 69.29 masl. TCE impacted groundwater discovered in the former source zone between 58.62 – 56.36 masl is evidence of potential off-site impacts migrating to the site based on the interpreted groundwater flow regime shown in Figure 3E.

### **Contaminant Discharge**

Discharge of PCE to the environment is believed to have occurred due to improper disposal of dry cleaning fluids from former dry cleaning operations at 591 March Road. Based on information gathered from previous investigations (Paterson, 2016), soil impacted with PCE was observed to the rear of the former dry cleaning facility. During this Phase Two ESA, no PCE impacted soils were observed which indicates that previous remedial amendments were successful in reducing PCE concentrations soil to below applicable SCS. PCE impacts in groundwater were attributed to the migration of PCE from soil into the shallow bedrock aquifer. Since TCE is a common daughter product of anerobic PCE reduction, detected concentrations of TCE in the PCE discharge area are attributed to breakdown of PCE over time. Once within the bedrock aquifer, fracture flow and connectivity in the shallow bedrock distributed PCE and TCE to the wider area.

TCE impacts in groundwater around and under the 603 March Road building and in the surrounding area, as shown in Figures 5B and 5E, are attributed to the use and improper disposal of TCE for electronic component manufacturing. No source of TCE in soil was discovered during previous investigations or this Phase Two ESA (CGI, 2022). As such, TCE impacts in groundwater are likely due to release or leakage from sanitary sewer or stormwater management (sump pit) infrastructure. Aged sanitary sewer infrastructure combined with multiple renovations provides a potential pathway for release of improperly disposed TCE. Migration through coarse materials beneath the building slab into the bedrock aquifer would occur rapidly. The fracture network would then conduct TCE to the wider area.

### **Climatic Conditions**

Based on discharge mechanisms, migration of COCs into the bedrock aquifer was enhanced by meteorological precipitation. Seasonal variability of the bedrock groundwater table would cause COCs to travel through the fracture network at various depths depending on the influx of meteorological precipitation. Likewise, meteorological precipitation could cause shifts in the flow direction creating a fan effect of the COC plume. These combined factors provide a reasonable basis for the COC distribution observed during this Phase Two ESA.



#### **6.10.4 EXPOSURE PATHWAYS**

Potential receptors for the proposed development of the phase two property are humans including residents of all ages, mammals and birds, and terrestrial plants. The most likely exposure pathway is via volatilization of the COCs which would affect indoor and outdoor air. There is also a potential for direct dermal contact or incidental ingestion for construction workers during the redevelopment process. Since the phase two property is and will continue to be supplied with municipal drinking water, there is no risk of residents being exposed to groundwater via direct contact or ingestion. Root uptake by plants is not a viable pathway because no COCs were present in soil samples collected during the investigation and the groundwater table is only present in the bedrock.

The exposure paths via indoor and outdoor air include direct contact by vapours and inhalation or respiration of vapours by residents, workers, mammals and birds, and terrestrial plants. Figure 11 shows a flow chart of potential exposure pathways.



## 7 CONCLUSIONS

This Phase Two ESA was carried out in general accordance with O. Reg. 153/04 to address the APECs identified in the Phase One ESA for the phase two property. Based on the investigation completed and interpretation of results, OMI offers the following conclusions:

- PHC F4G and SAR in concentrations above applicable SCS were returned in a surficial soil sample at MW22-14B but were not considered representative of PCAs associated with APEC D or APEC G and did not warrant additional investigation or remediation.
- All other soil samples collected on the phase two property did not return any contaminants of concern (COC) concentrations above applicable SCS.
- VOCs at concentrations above SCS were returned in groundwater samples from APEC B and APEC C across the central area of the phase two property, encompassing the majority of 595 March Road and the central and southern portion of 603 March Road.
- All other groundwater samples collected on the phase two property did not return any COC concentrations above applicable SCS.
- No free phase product was encountered in soil or groundwater during the investigation.
- Prior to remedial work on the phase two property Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition have not been met.
- Remediation of VOC impacted groundwater is recommended prior to redevelopment of the phase two property.



## 7.1 SIGNATURES

I, Daniel Elliot, as a qualified person confirm that this Phase Two ESA was conducted and/or supervised by me and agree with the findings and conclusions of this report.

Respectfully Submitted,  
**Omni-McCann Inc.**

Chayla Exner, E.I.T

April 14, 2023

Daniel Elliot, P.Ge., QP<sub>ESA</sub>

Grant Barker, P.Ge., QP<sub>ESA</sub>



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## 9 CLOSING

This report was prepared exclusively for the purposes, project, and site locations outlined in the report. The report is based on information provided to, or obtained by Omni-McCann, as indicated in the report, and applies solely to site conditions existing at the time of the site investigation. Although a reasonable investigation was conducted by Omni-McCann, Omni-McCann's investigation was by no means exhaustive and cannot be construed as a certification of the absence of any contaminants from the site. Rather, Omni-McCann's report represents a reasonable review of available information within an established work scope, schedule, and budget. It is therefore possible that currently unrecognized contamination or potentially hazardous materials may exist at the site, and the levels of contamination or hazardous materials may vary across the site. Further review and updating of the report may be required as local and site conditions, and the regulatory and planning frameworks, change over time.

This report was prepared by Omni-McCann for the benefit of March and Main Developments Inc. The material in it reflects Omni-McCann's judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Omni-McCann accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.



# FIGURES AND TABLES



**Table 1: Monitoring Well Construction Details**

Well ID	Top of Casing	Grade	Top of Screen	Bottom of Screen	Screen Length	Top of Screen	Bottom of Screen	Northing	Easting	UTM Zone
	(masl)	(masl)	(mbgs)	(mbgs)	(m)	(masl)	(masl)	(m)	(m)	
BH4-10	82.66	82.78	4.57	7.62	3.05	78.21	75.16	5023188.2	349941.9	18
MW21-01A	83.24	83.29	4.57	7.62	3.05	78.72	75.67	5023251.4	349824.2	18
MW21-01B	83.28	83.34	9.14	12.19	3.05	74.20	71.15	5023250.6	349824.8	18
MW22-01C	83.10	83.26	15.39	18.44	3.05	67.86	64.82	5023250.7	349823.7	18
MW21-02A	82.90	83.04	4.27	7.32	3.05	78.77	75.73	5023251.0	349860.3	18
MW21-02B	82.83	83.02	9.14	12.19	3.05	73.88	70.83	5023250.6	349860.1	18
MW21-03A	82.36	82.45	4.27	7.32	3.05	78.18	75.13	5023240.1	349888.8	18
MW21-03B	82.34	82.40	9.14	12.19	3.05	73.26	70.21	5023239.5	349888.4	18
MW22-03C	82.37	82.44	15.24	18.29	3.05	67.20	64.16	5023241.5	349890.0	18
MW21-04A	82.71	82.84	5.94	8.99	3.05	76.89	73.84	5023263.5	349917.8	18
MW21-04B	82.66	82.82	9.75	12.80	3.05	73.06	70.01	5023261.9	349917.5	18
MW22-04C	82.68	82.86	15.24	18.29	3.05	67.62	64.57	5023262.0	349918.4	18
MW21-05A	83.62	83.72	5.03	8.08	3.05	78.69	75.64	5023317.8	349895.7	18
MW21-05B	83.61	83.72	9.14	12.19	3.05	74.57	71.53	5023318.3	349895.0	18
MW22-05C	83.52	83.63	15.24	18.29	3.05	68.39	65.35	5023319.4	349895.2	18
MW21-06A	82.90	83.04	5.03	8.08	3.05	78.01	74.97	5023323.8	349835.4	18
MW22-06B	82.97	83.05	9.68	12.73	3.05	73.37	70.32	5023324.5	349836.1	18
MW21-07	83.31	83.39	3.96	7.01	3.05	79.43	76.38	5023158.1	349828.0	18
MW21-08	83.34	83.42	4.27	7.32	3.05	79.15	76.10	5923261.5	349941.2	18
MW21-13A	83.12	83.25	4.57	7.62	3.05	78.68	75.63	5023263.8	349813.2	18
MW22-13B	83.16	83.28	9.14	12.19	3.05	74.13	71.08	5023262.8	349813.1	18
MW21-14A	83.64	83.77	5.18	8.23	3.05	78.59	75.54	5023235.2	349807.4	18
MW22-14B	83.85	83.84	9.75	12.80	3.05	74.09	71.04	5023234.4	349806.5	18
MW21-15A	83.28	83.43	4.88	7.92	3.05	78.55	75.50	5023236.2	349843.7	18
MW22-15B	83.38	83.44	9.75	12.80	3.05	73.69	70.64	5023235.3	349842.8	18
MW21-16A	82.61	82.72	4.57	7.62	3.05	78.15	75.10	5023239.8	349870.5	18
MW22-16B	82.64	82.74	9.14	12.19	3.05	73.60	70.55	5023239.2	349870.1	18
MW21-17A	82.64	82.74	4.57	7.62	3.05	78.16	75.12	5023270.2	349884.9	18
MW22-17B	82.63	82.73	9.30	12.34	3.05	73.43	70.38	5023270.8	349885.4	18
MW22-18	82.37	82.50	6.71	9.75	3.05	75.79	72.75	5023134.3	349982.5	18
BH22-19	--	82.23	--	--	--	--	--	5023101.9	350001.5	18
MW22-20	81.91	81.98	5.18	8.23	3.05	76.80	73.75	5023087.3	350004.3	18
MW22-21	82.02	82.12	7.62	10.67	3.05	74.50	71.45	5023117.8	350011.9	18
MW22-22	81.85	81.94	5.79	8.84	3.05	76.15	73.10	5023130.6	350051.0	18
MW22-23	82.22	82.32	6.10	9.14	3.05	76.23	73.18	5023163.4	350016.1	18
MW22-24	81.84	81.93	6.71	9.75	3.05	75.23	72.18	5023175.2	349981.4	18
BH22-25	--	82.61	--	--	--	--	--	5023169.4	349945.8	18
MW22-26	83.98	83.07	5.18	8.23	3.05	77.89	74.84	5023019.3	349926.3	18
MW22-27	84.16	83.11	5.18	8.23	3.05	77.92	74.88	5023062.3	349888.6	18
MW22-28	83.91	83.97	5.03	8.08	3.05	78.94	75.90	5023174.6	349805.4	18
MW22-29	84.30	84.39	6.71	9.75	3.05	77.68	74.63	5023206.8	349776.5	18
MW22-30	84.07	84.12	6.10	9.14	3.05	78.03	74.98	5023239.4	349747.3	18
MW22-31	83.35	83.44	4.57	7.62	3.05	78.87	75.82	5023201.9	349840.7	18
MW22-32	83.51	82.56	5.18	8.23	3.05	77.38	74.33	5023068.6	349939.2	18
MW22-33	83.70	82.73	5.03	8.08	3.05	77.70	74.65	5023113.7	349895.4	18
MW22-34	84.22	83.20	4.83	7.87	3.05	78.38	75.33	5023185.1	349840.4	18
MW22-35	82.88	83.01	4.98	8.03	3.05	78.03	74.98	5023276.9	349790.0	18
MW22-36	83.98	83.19	4.88	7.92	3.05	78.32	75.27	5023108.3	349869.5	18
MW22-37	85.00	84.06	5.72	8.76	3.05	78.35	75.30	5023143.2	349822.7	18
MW22-38	82.99	83.03	5.41	8.46	3.05	77.62	74.57	5023343.3	349857.1	18
MW22-39-1	83.01	82.27	7.62	9.14	1.52	74.65	73.13	5023242.5	349915.2	18
MW22-39-3	83.01	82.27	14.33	16.15	1.83	67.94	66.12			
MW22-39-4	83.01	82.27	18.29	19.81	1.52	63.98	62.46			
MW22-39-5	83.01	82.27	21.34	22.86	1.52	60.93	59.41			
MW22-39-6	83.01	82.27	24.38	25.91	1.52	57.89	56.36			
MW22-39-7	83.01	82.27	27.43	30.48	3.05	54.84	51.79			
MW22-40-1	83.91	83.00	6.10	9.14	3.05	76.91	73.86	5023265.4	349942.8	18
MW22-40-2	83.91	83.00	10.67	13.72	3.05	72.34	69.29			
MW22-40-3	83.91	83.00	15.24	18.29	3.05	67.76	64.72			
MW22-40-4	83.91	83.00	20.73	23.77	3.05	62.28	59.23			
MW22-40-5	83.91	83.00	24.38	26.52	2.13	58.62	56.49			
MW22-40-6	83.91	83.00	27.13	27.97	0.84	55.88	55.04			
MW22-40-7	83.91	83.00	28.52	30.56	2.03	54.48	52.45			
MW22-41-1	83.07	82.06	6.10	9.14	3.05	75.96	72.92	5023219.0	349937.1	18
MW22-41-2	83.07	82.06	13.72	16.76	3.05	68.34	65.30			
MW22-41-3	83.07	82.06	17.68	20.73	3.05	64.38	61.33			
MW22-41-4	83.07	82.06	21.34	23.47	2.13	60.72	58.59			
MW22-41-5	83.07	82.06	24.08	25.60	1.52	57.98	56.46			
MW22-41-6	83.07	82.06	26.21	27.74	1.52	55.85	54.32			
MW22-41-7	83.07	82.06	28.35	30.51	2.16	53.71	51.55			

Notes:

- masl Meters above sea level
- mbgs Meters below ground surface





**Table 2: Water Elevations**

Well ID	Date	Water Level	Water Elevation
	(d/m/y)	(mbtoc)	(masl)
BH4-10	5-Dec-22	3.375	79.289
MW21-01A	5-Dec-22	4.862	78.379
MW21-01B	5-Dec-22	6.242	77.038
MW22-01C	5-Dec-22	6.045	77.056
MW21-02A	5-Dec-22	4.530	78.373
MW21-02B	5-Dec-22	6.018	76.813
MW21-03A	5-Dec-22	4.002	78.357
MW21-03B	5-Dec-22	5.583	76.760
MW22-03C	5-Dec-22	5.382	76.991
MW21-04A	5-Dec-22	6.221	76.484
MW21-04B	5-Dec-22	6.151	76.505
MW22-04C	5-Dec-22	5.766	76.911
MW21-05A	5-Dec-22	6.501	77.120
MW21-05B	5-Dec-22	7.586	76.020
MW22-05C	5-Dec-22	7.205	76.310
MW21-06A	5-Dec-22	5.216	77.683
MW22-06B	5-Dec-22	6.551	76.423
MW21-07	5-Dec-22	4.961	78.347
MW21-08	5-Dec-22	4.953	78.386
MW21-13A	5-Dec-22	4.950	78.172
MW22-13B	5-Dec-22	6.145	77.011
MW21-14A	5-Dec-22	5.643	77.999
MW22-14B	5-Dec-22	6.676	77.170
MW21-15A	5-Dec-22	4.866	78.414
MW22-15B	5-Dec-22	6.427	76.949
MW21-16A	5-Dec-22	4.211	78.400
MW22-16B	5-Dec-22	5.898	76.745
MW21-17A	5-Dec-22	4.777	77.863
MW22-17B	5-Dec-22	6.044	76.582
MW22-18	5-Dec-22	4.333	78.035
BH22-19	--	--	--
MW22-20	5-Dec-22	3.269	78.643
MW22-21	5-Dec-22	4.589	77.432
MW22-22	5-Dec-22	3.084	78.766
MW22-23	5-Dec-22	5.173	77.048
MW22-24	5-Dec-22	4.446	77.396
BH22-25	--	--	--
MW22-26	5-Dec-22	5.302	78.676
MW22-27	5-Dec-22	5.565	78.595
MW22-28	5-Dec-22	5.375	78.530
MW22-29	5-Dec-22	7.034	77.265
MW22-30	5-Dec-22	5.574	78.500
MW22-31	5-Dec-22	4.882	78.463
MW22-32	5-Dec-22	5.061	78.452
MW22-33	5-Dec-22	5.123	78.578
MW22-34	5-Dec-22	5.595	78.627
MW22-35	5-Dec-22	5.973	76.906
MW22-36	5-Dec-22	5.471	78.506
MW22-37	5-Dec-22	6.449	78.548
MW22-38	5-Dec-22	5.709	77.279
MW22-39-1	5-Dec-22	6.415	76.595
MW22-39-3	5-Dec-22	6.364	76.646
MW22-39-4	5-Dec-22	5.006	78.004
MW22-39-5	5-Dec-22	5.148	77.862
MW22-39-6	5-Dec-22	5.054	77.956
MW22-39-7	5-Dec-22	4.895	78.115
MW22-40-1	5-Dec-22	7.531	76.380
MW22-40-2	5-Dec-22	7.640	76.271
MW22-40-3	5-Dec-22	7.638	76.273
MW22-40-4	5-Dec-22	6.081	77.830
MW22-40-5	5-Dec-22	6.056	77.855
MW22-40-6	5-Dec-22	9.750	74.161
MW22-40-7	5-Dec-22	5.812	78.099
MW22-41-1	5-Dec-22	6.011	77.057
MW22-41-2	5-Dec-22	5.983	77.085
MW22-41-3	5-Dec-22	5.983	77.085
MW22-41-4	5-Dec-22	4.960	78.108
MW22-41-5	5-Dec-22	4.960	78.108
MW22-41-6	5-Dec-22	4.890	78.178
MW22-41-7	5-Dec-22	3.891	79.177

Notes:  
 masl Meters above sea level  
 mbtoc Meters below top of casing





Table 3: Soil Quality Results

Parameter	Units	Borehole ID																																																								
		MW22-148					MW22-168																																																			
		Sample ID	22-148 0-2	22-148 2.5-4	DUP 2	22-168 0-1	22-168 4-24	22-168 25-30	22-168 30-35	22-168 35-40	22-168 40-45																																															
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Notes:

Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Plastic Ground Water Condition, Residential/Parkland/Institutional land use with fine grained soil, of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (Ontario, Ministry of the Environment, 2011)

MDL	Concentration below the MDL
NV	No value specified in Table 3 SCS
MDL	Concentration exceeds Table 3 SCS









**Table 3: Soil Quality Results**

Parameter	Units	Borehole ID: MW22-41		DUP 8	
		Sample ID: 22-41-4-A.5		WF2229434-002	
		Lab ID: WF2229434-001		WF2229434-002	
Sample Depth (m)		1.2 - 1.41		1.8 - 1.2	
Sample Date (Date)		23-Nov-2022		23-Nov-2022	
Table 7 SCS					
<b>Physical Characteristics</b>					
moisture	%	0.25	NV	13.5	12.3
pH (1:2 soil-CaCl2-aq)	pH units	0.1	NV	---	---
<b>Particle Size</b>					
passing (0.075 mm)	%	1	NV	---	---
passing (0.15 mm)	%	1	NV	---	---
passing (0.30 mm)	%	1	NV	---	---
passing (0.60 mm)	%	1	NV	---	---
passing (1.0 mm)	%	1	NV	---	---
passing (4.75 mm)	%	1	NV	---	---
passing (0.005 mm)	%	1	NV	---	---
passing (0.841 mm)	%	1	NV	---	---
passing (15 mm)	%	1	NV	---	---
passing (0.004 mm)	%	1	NV	---	---
passing (0.50 mm)	%	1	NV	---	---
passing (25.4 mm)	%	1	NV	---	---
passing (0.002 mm)	%	1	NV	---	---
passing (0.420 mm)	%	1	NV	---	---
passing (38.1 mm)	%	1	NV	---	---
passing (0.250 mm)	%	1	NV	---	---
passing (50.8 mm)	%	1	NV	---	---
passing (0.149 mm)	%	1	NV	---	---
passing (76.2 mm)	%	1	NV	---	---
passing (0.125 mm)	%	1	NV	---	---
passing (0.2 mm)	%	1	NV	---	---
passing (0.85 mm)	%	1	NV	---	---
passing (0.003 mm)	%	1	NV	---	---
passing (0.075 mm)	%	1	NV	---	---
<b>Metals</b>					
antimony	mg/kg	0.1	7.5	---	---
arsenic	mg/kg	0.1	18	---	---
barium	mg/kg	0.5	390	---	---
beryllium	mg/kg	0.1	5	---	---
boron	mg/kg	5	120	---	---
boron, hot water soluble	mg/kg	0.1	1.5	---	---
cadmium	mg/kg	0.02	1.2	---	---
chromium	mg/kg	0.5	100	---	---
chromium, hexavalent	mg/kg	0.1	10	---	---
cobalt	mg/kg	0.1	22	---	---
copper	mg/kg	0.5	100	---	---
lead	mg/kg	0.5	120	---	---
mercury	mg/kg	0.005	1.8	---	---
molybdenum	mg/kg	0.1	6.5	---	---
nickel	mg/kg	0.5	130	---	---
selenium	mg/kg	0.2	2.4	---	---
silver	mg/kg	0.1	29	---	---
thallium	mg/kg	0.05	1	---	---
uranium	mg/kg	0.05	23	---	---
vanadium	mg/kg	0.2	86	---	---
zinc	mg/kg	2	140	---	---
<b>Soluble Ions</b>					
calcium, soluble ion content	mg/L	0.5	NV	---	---
magnesium, soluble ion content	mg/L	0.5	NV	---	---
sodium, soluble ion content	mg/L	0.5	NV	---	---
sodium adsorption ratio (SAR)	---	0.1	5	---	---
<b>Volatiles Organic Compounds (VOC)</b>					
acetone	mg/kg	0.5	28	<0.50	<0.50
benzene	mg/kg	0.005	0.17	<0.0050	<0.0050
bromochloromethane	mg/kg	0.05	13	<0.0050	<0.0050
bromodichloromethane	mg/kg	0.05	13	<0.0050	<0.0050
bromofluoromethane	mg/kg	0.05	13	<0.0050	<0.0050
chlorobenzene	mg/kg	0.05	0.85	<0.0050	<0.0050
carbon tetrachloride	mg/kg	0.05	0.12	<0.0050	<0.0050
chloroethane	mg/kg	0.05	2.7	<0.0050	<0.0050
chloroform	mg/kg	0.05	0.17	<0.0050	<0.0050
chlorodibromomethane	mg/kg	0.05	9.4	<0.0050	<0.0050
chloroethane, 1,2	mg/kg	0.05	0.85	<0.0050	<0.0050
chlorobenzene, 1,2	mg/kg	0.05	4.3	<0.0050	<0.0050
chlorobenzene, 1,3	mg/kg	0.05	6	<0.0050	<0.0050
chlorobenzene, 1,4	mg/kg	0.05	0.997	<0.0050	<0.0050
chlorodifluoromethane	mg/kg	0.05	25	<0.0050	<0.0050
chloroethane, 1,1	mg/kg	0.05	11	<0.0050	<0.0050
chloroethane, 1,2	mg/kg	0.05	0.85	<0.0050	<0.0050
chloroethane, 1,1	mg/kg	0.05	0.95	<0.0050	<0.0050
chloroethane, cis-1,2	mg/kg	0.05	30	<0.0050	<0.0050
chloroethane, trans-1,2	mg/kg	0.05	0.75	<0.0050	<0.0050
chloroethene	mg/kg	0.045	0.96	<0.0450	<0.0450
chloropropane, 1,2	mg/kg	0.05	0.868	<0.0050	<0.0050
chloropropylene, cis-trans-1,3	mg/kg	0.05	0.883	<0.0050	<0.0050
chloropropylene, cis-1,3	mg/kg	0.03	NV	<0.0300	<0.0300
chloropropylene, trans-1,5	mg/kg	0.03	NV	<0.0300	<0.0300
ethylbenzene	mg/kg	0.015	15	<0.0150	<0.0150
hexane, n	mg/kg	0.05	24	<0.0500	<0.0500
methyl ethyl ketone (MEK)	mg/kg	0.5	44	<0.50	<0.50
methyl isobutyl ketone (MIBK)	mg/kg	0.5	4.3	<0.50	<0.50
methyl-tert-butyl ether (MTBE)	mg/kg	0.04	1.4	<0.0400	<0.0400
styrene	mg/kg	0.05	2.2	<0.0500	<0.0500
tetrachloroethane, 1,1,1,2	mg/kg	0.05	0.95	<0.0050	<0.0050
tetrachloroethane, 1,1,2,2	mg/kg	0.05	0.85	<0.0050	<0.0050
tetrachloroethylene	mg/kg	0.05	2.3	<0.0050	<0.0050
trichloroethane	mg/kg	0.05	9	<0.0050	<0.0050
trichloroethane, 1,1,1	mg/kg	0.05	3.4	<0.0050	<0.0050
trichloroethane, 1,1,2	mg/kg	0.05	0.85	<0.0050	<0.0050
trichloroethylene	mg/kg	0.01	0.52	<0.0100	<0.0100
trichlorofluoromethane	mg/kg	0.05	6.8	<0.0050	<0.0050
vinyl chloride	mg/kg	0.02	0.222	<0.0200	<0.0200
xylene, m-p	mg/kg	0.03	NV	<0.0300	<0.0300
xylene, o	mg/kg	0.03	NV	<0.0300	<0.0300
xylene, total	mg/kg	0.05	25	<0.0500	<0.0500
BTEX, total	mg/kg	0.1	NV	<0.10	<0.10
<b>Polycyclic Aromatic Hydrocarbons (PHC)</b>					
F1 (CB-C10)	mg/kg	5.0	65	---	---
F2 (naphthalene)	mg/kg	25	NV	---	---
F3 (PAH)	mg/kg	50	NV	---	---
F1-BTEX	mg/kg	5.0	65	---	---
F2 (C10-C16)	mg/kg	10	150	---	---
F3 (C16-C24)	mg/kg	50	1500	---	---
F4 (C24-C50)	mg/kg	50	6000	---	---
PAH-ag	mg/kg	250	5000	---	---
hydrocarbons, total (CB-C20)	mg/kg	80	NV	---	---
<b>Polycyclic Aromatic Hydrocarbons (PAH)</b>					
acenaphthene	mg/kg	0.05	58	---	---
acenaphthylene	mg/kg	0.05	0.17	---	---
anthracene	mg/kg	0.05	2.74	---	---
benz[a]anthracene	mg/kg	0.05	0.63	---	---
benzo[a]pyrene	mg/kg	0.05	0.3	---	---
benzo[a]fluoranthene	mg/kg	0.05	0.78	---	---
benzo[b]fluoranthene	mg/kg	0.05	7.8	---	---
benzo[e]fluoranthene	mg/kg	0.05	0.78	---	---
chrysene	mg/kg	0.05	7.8	---	---
fluorene	mg/kg	0.05	91	---	---
fluoranthene	mg/kg	0.05	0.89	---	---
fluorene	mg/kg	0.05	89	---	---
indeno[1,2,3-cd]perylene	mg/kg	0.05	8.48	---	---
methylanthracene, 1-2	mg/kg	0.05	3.4	---	---
methylanthracene, 1	mg/kg	0.03	3.4	---	---
methylanthracene, 2	mg/kg	0.03	3.4	---	---
quinoline	mg/kg	0.01	0.76	---	---
phenanthrene	mg/kg	0.05	7.8	---	---
pyrene	mg/kg	0.05	7.8	---	---
<b>PCBs</b>					
Aroclor 1016	mg/kg	0.01	NV	---	---
Aroclor 1221	mg/kg	0.01	NV	---	---
Aroclor 1222	mg/kg	0.01	NV	---	---
Aroclor 1242	mg/kg	0.01	NV	---	---
Aroclor 1248	mg/kg	0.01	NV	---	---
Aroclor 1254	mg/kg	0.01	NV	---	---
Aroclor 1260	mg/kg	0.01	NV	---	---
Aroclor 1262	mg/kg	0.01	NV	---	---
Aroclor 1268	mg/kg	0.01	NV	---	---
PCBs, total	mg/kg	0.03	8.35	---	---

Note:

Table 7 SCS

Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition, Residential/Parkland/Institutional land use with fine grained soil, of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (Ontario, Ministry of the Environment, 2011)

MCL Method Detection Limit Concentration below the MDL  
 ND (0.00) No value specified in Table 3 SCS  
 NV Concentration exceeds Table 3 SCS









Table 4: Groundwater Quality Results

Parameter	Units	Borehole ID								
		Sample ID		MW21-05A	MW21-05B	MW22-05C	MW21-06A	MW22-06B	MW21-07	MW21-08
		MW21-05A-SDEC22	MW21-05B-SDEC22	MW22-05C-SDEC22	MW21-06A-6DEC22	MW22-06B-6DEC22	MW21-07-6DEC22	MW21-08-SDEC22		
Lab ID	WT2224326-006	WT2224326-007	WT2224326-008	WT2224485-007	WT2224485-008	WT2224485-009	WT2224326-002			
Screen Depth (m/bgs)	6.03 - 8.08	9.14 - 12.19	15.24 - 18.29	5.03 - 8.08	9.68 - 12.73	3.96 - 7.01	4.27 - 7.32			
Sample Date (y/m/d)	2022-12-05	2022-12-05	2022-12-05	2022-12-06	2022-12-06	2022-12-06	2022-12-05			
MDL	Table 7 SCS									
<b>Metals</b>										
antimony, dissolved	ug/L	0.10	16000	--	--	--	--	--		
arsenic, dissolved	ug/L	0.10	1500	--	--	--	--	--		
barium, dissolved	ug/L	0.10	23000	--	--	--	--	--		
beryllium, dissolved	ug/L	0.020	53	--	--	--	--	--		
boron, dissolved	ug/L	10	36000	--	--	--	--	--		
cadmium, dissolved	ug/L	0.0050	2.1	--	--	--	--	--		
chromium, dissolved	ug/L	0.50	640	--	--	--	--	--		
chromium, hexavalent [Cr VI], dissolved	ug/L	0.50	110	--	--	--	--	--		
cobalt, dissolved	ug/L	0.10	52	--	--	--	--	--		
copper, dissolved	ug/L	0.20	69	--	--	--	--	--		
lead, dissolved	ug/L	0.050	20	--	--	--	--	--		
mercury, dissolved	ug/L	0.0050	0.1	--	--	--	--	--		
molybdenum, dissolved	ug/L	0.050	7300	--	--	--	--	--		
nickel, dissolved	ug/L	0.50	390	--	--	--	--	--		
selenium, dissolved	ug/L	0.050	50	--	--	--	--	--		
silver, dissolved	ug/L	0.010	1.2	--	--	--	--	--		
sodium, dissolved	ug/L	50	1800000	--	--	--	--	--		
thallium, dissolved	ug/L	0.010	400	--	--	--	--	--		
uranium, dissolved	ug/L	0.010	330	--	--	--	--	--		
vanadium, dissolved	ug/L	0.50	200	--	--	--	--	--		
zinc, dissolved	ug/L	1.0	890	--	--	--	--	--		
<b>Volatiles Organic Compounds (VOC)</b>										
Acetone	ug/L	20	100000	<20	<20	<20	<20	<20		
benzene	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50	<0.50		
bromodichloromethane	ug/L	0.50	67000	<0.50	<0.50	<0.50	<0.50	<0.50		
bromoform	ug/L	0.50	5	<0.50	<0.50	<0.50	<0.50	<0.50		
bromomethane	ug/L	0.50	0.89	<0.50	<0.50	<0.50	<0.50	<0.50		
carbon tetrachloride	ug/L	0.20	0.2	<0.20	<0.20	<0.20	<0.20	<0.20		
chlorobenzene	ug/L	0.50	140	<0.50	<0.50	<0.50	<0.50	<0.50		
chloroform	ug/L	0.50	7	<0.50	<0.50	<0.50	<0.50	<0.50		
dibromochloromethane	ug/L	0.50	65000	<0.50	<0.50	<0.50	<0.50	<0.50		
dibromomethane, 1,2-	ug/L	0.20	0.2	<0.20	<0.20	<0.20	<0.20	<0.20		
dichlorobenzene, 1,2-	ug/L	0.50	150	<0.50	<0.50	<0.50	<0.50	<0.50		
dichlorobenzene, 1,3-	ug/L	0.50	7600	<0.50	<0.50	<0.50	<0.50	<0.50		
dichlorobenzene, 1,4-	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50	<0.50		
dichlorodifluoromethane	ug/L	0.50	3500	<0.50	<0.50	<0.50	<0.50	<0.50		
dichloroethane, 1,1-	ug/L	0.50	11	<0.50	<0.50	<0.50	<0.50	<0.50		
dichloroethane, 1,2-	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50	<0.50		
dichloroethylene, 1,1-	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50	<0.50		
dichloroethylene, cis-1,2-	ug/L	0.50	1.6	<0.50	<0.50	<0.50	<0.50	<0.50		
dichloroethylene, trans-1,2-	ug/L	0.50	1.6	<0.50	<0.50	<0.50	<0.50	<0.50		
dichloromethane	ug/L	1.0	26	<1.0	<1.0	<1.0	<1.0	<1.0		
dichloropropane, 1,2-	ug/L	0.50	0.58	<0.50	<0.50	<0.50	<0.50	<0.50		
dichloropropylene, cis+trans-1,3-	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50	<0.50		
dichloropropylene, cis-1,3-	ug/L	0.30	NV	<0.30	<0.30	<0.30	<0.30	<0.30		
dichloropropylene, trans-1,3-	ug/L	0.30	NV	<0.30	<0.30	<0.30	<0.30	<0.30		
ethylbenzene	ug/L	0.50	54	<0.50	<0.50	<0.50	<0.50	<0.50		
hexane, n-	ug/L	0.50	5	<0.50	<0.50	<0.50	<0.50	<0.50		
methyl ethyl ketone [MEK]	ug/L	20	21000	<20	<20	<20	<20	<20		
methyl isobutyl ketone [MIBK]	ug/L	20	52000	<20	<20	<20	<20	<20		
methyl-tert-butyl ether [MTBE]	ug/L	0.50	15	<0.50	<0.50	<0.50	<0.50	<0.50		
styrene	ug/L	0.50	43	<0.50	<0.50	<0.50	<0.50	<0.50		
tetrachloroethane, 1,1,1,2-	ug/L	0.50	1.1	<0.50	<0.50	<0.50	<0.50	<0.50		
tetrachloroethane, 1,1,2,2-	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50	<0.50		
tetrachloroethylene	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50	<0.50		
toluene	ug/L	0.50	320	<0.50	<0.50	<0.50	<0.50	<0.50		
trichloroethane, 1,1,1-	ug/L	0.50	23	<0.50	<0.50	<0.50	<0.50	<0.50		
trichloroethane, 1,1,2-	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50	<0.50		
trichloroethylene	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50	<0.50		
trichlorofluoromethane	ug/L	0.50	2000	<0.50	<0.50	<0.50	<0.50	<0.50		
vinyl chloride	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50	<0.50		
xylene, m+p-	ug/L	0.40	NV	<0.40	<0.40	<0.40	<0.40	<0.40		
xylene, o-	ug/L	0.30	NV	<0.30	<0.30	<0.30	<0.30	<0.30		
xylene, total	ug/L	0.50	72	<0.50	<0.50	<0.50	<0.50	<0.50		
BTEX, total	ug/L	1.0	NV	<1.0	<1.0	<1.0	<1.0	<1.0		
<b>Petroleum Hydrocarbons (PHC)</b>										
F1 (C6-C10)	ug/L	25	420	--	--	<25	--	--		
F2 (C10-C16)	ug/L	100	150	--	--	<100	--	--		
F2-naphthalene	ug/L	100	NV	--	--	--	--	--		
F3 (C16-C34)	ug/L	250	500	--	--	<250	--	--		
F3-PAH	ug/L	250	NV	--	--	--	--	--		
F4 (C34-C50)	ug/L	250	500	--	--	<250	--	--		
F1-BTEX	ug/L	25	420	--	--	<25	--	--		
hydrocarbons, total (C6-C50)	ug/L	240	NV	--	--	<370	--	--		
<b>Polycyclic Aromatic Hydrocarbons (PAH)</b>										
acenaphthene	ug/L	0.010	17	--	--	--	--	--		
acenaphthylene	ug/L	0.010	1	--	--	--	--	--		
anthracene	ug/L	0.010	1	--	--	--	--	--		
benzo(a)anthracene	ug/L	0.010	1.8	--	--	--	--	--		
benzo(a)pyrene	ug/L	0.0050	0.81	--	--	--	--	--		
benzo(b+g)fluoranthene	ug/L	0.010	0.75	--	--	--	--	--		
benzo(g,h,i)perylene	ug/L	0.010	0.2	--	--	--	--	--		
benzo(k)fluoranthene	ug/L	0.010	0.4	--	--	--	--	--		
chrysene	ug/L	0.010	0.7	--	--	--	--	--		
dibenz(a,h)anthracene	ug/L	0.0050	0.4	--	--	--	--	--		
fluoranthene	ug/L	0.010	44	--	--	--	--	--		
fluorene	ug/L	0.010	290	--	--	--	--	--		
indeno(1,2,3-c,d)pyrene	ug/L	0.010	0.2	--	--	--	--	--		
methylnaphthalene, 1,2-	ug/L	0.015	1500	--	--	--	--	--		
methylnaphthalene, 1-	ug/L	0.010	1500	--	--	--	--	--		
methylnaphthalene, 2-	ug/L	0.010	1500	--	--	--	--	--		
naphthalene	ug/L	0.050	7	--	--	--	--	--		
phenanthrene	ug/L	0.020	380	--	--	--	--	--		
pyrene	ug/L	0.010	5.7	--	--	--	--	--		

Notes:

Table 7 SCS

Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition, all land use with coarse grained soil, of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (Ontario Ministry of the Environment, 2011)

MDL

<0.00

NV

**BOLD**

Method Detection Limit

Concentration below the MDL

No value specified in Table 7 SCS

Concentration exceeds Table 7 SCS

















**Table 4: Groundwater Quality Results**

Borehole ID	MW22-40 Port 1	MW22-40 Port 2	MW22-40 Port 3	MW22-40 Port 4	MW22-40 Port 5	MW22-40 Port 6	MW22-40 Port 7
Sample ID	MW22-40-01-07DEC22	MW22-40-02-07DEC22	MW22-40-03-07DEC22	MW22-40-04-07DEC22	MW22-40-05-07DEC22	MW22-40-06-07DEC22	MW22-40-07-07DEC22
Lab ID	WT2224609-009	WT2224609-010	WT2224609-011	WT2224609-012	WT2224609-013	WT2224609-014	WT2224609-015
Screen Depth (mbgs)	6.10 - 9.14	10.67 - 13.72	15.24 - 18.29	20.73 - 23.77	24.38 - 26.52	27.13 - 27.97	28.52 - 30.56
Sample Date (y/m/d)	2022-12-07	2022-12-07	2022-12-07	2022-12-07	2022-12-07	2022-12-07	2022-12-07
Parameter	Units	MDL	Table 7 SCS				
<b>Metals</b>							
antimony, dissolved	ug/L	0.10	16000	--	--	--	--
arsenic, dissolved	ug/L	0.10	1500	--	--	--	--
barium, dissolved	ug/L	0.10	23000	--	--	--	--
beryllium, dissolved	ug/L	0.020	53	--	--	--	--
boron, dissolved	ug/L	10	36000	--	--	--	--
cadmium, dissolved	ug/L	0.0050	2.1	--	--	--	--
chromium, dissolved	ug/L	0.50	640	--	--	--	--
chromium, hexavalent (Cr VI), dissolved	ug/L	0.50	110	--	--	--	--
cobalt, dissolved	ug/L	0.10	52	--	--	--	--
copper, dissolved	ug/L	0.20	69	--	--	--	--
lead, dissolved	ug/L	0.050	20	--	--	--	--
mercury, dissolved	ug/L	0.0050	0.1	--	--	--	--
molybdenum, dissolved	ug/L	0.050	7300	--	--	--	--
nickel, dissolved	ug/L	0.50	390	--	--	--	--
selenium, dissolved	ug/L	0.050	50	--	--	--	--
silver, dissolved	ug/L	0.010	1.2	--	--	--	--
sodium, dissolved	ug/L	50	1800000	--	--	--	--
thallium, dissolved	ug/L	0.010	400	--	--	--	--
uranium, dissolved	ug/L	0.010	330	--	--	--	--
vanadium, dissolved	ug/L	0.50	200	--	--	--	--
zinc, dissolved	ug/L	1.0	890	--	--	--	--
<b>Volatiles Organic Compounds (VOC)</b>							
Acetone	ug/L	20	100000	<20	<20	<20	27
benzene	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50
bromodichloromethane	ug/L	0.50	67000	<0.50	<0.50	<0.50	<0.50
bromoform	ug/L	0.50	5	<0.50	<0.50	<0.50	<0.50
bromomethane	ug/L	0.50	0.89	<0.50	<0.50	<0.50	<0.50
carbon tetrachloride	ug/L	0.20	0.2	<0.20	<0.20	<0.20	<0.20
chlorobenzene	ug/L	0.50	140	<0.50	<0.50	<0.50	<0.50
chloroform	ug/L	0.50	7	<0.50	1.23	<0.50	0.81
dibromochloromethane	ug/L	0.50	65000	<0.50	<0.50	<0.50	<0.50
dibromomethane, 1,2-	ug/L	0.20	0.2	<0.20	<0.20	<0.20	<0.20
dichlorobenzene, 1,2-	ug/L	0.50	150	<0.50	<0.50	<0.50	<0.50
dichlorobenzene, 1,3-	ug/L	0.50	7600	<0.50	<0.50	<0.50	<0.50
dichlorobenzene, 1,4-	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50
dichlorodifluoromethane	ug/L	0.50	3500	<0.50	<0.50	<0.50	<0.50
dichloroethane, 1,1-	ug/L	0.50	11	<0.50	<0.50	<0.50	<0.50
dichloroethane, 1,2-	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50
dichloroethene, 1,1-	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50
dichloroethene, cis-1,2-	ug/L	0.50	1.6	<0.50	<0.50	<0.50	<0.50
dichloroethene, trans-1,2-	ug/L	0.50	1.6	<0.50	<0.50	<0.50	<0.50
dichloromethane	ug/L	1.0	26	<1.0	<1.0	<1.0	<1.0
dichloropropane, 1,2-	ug/L	0.50	0.58	<0.50	<0.50	<0.50	<0.50
dichloropropylene, cis+trans-1,3-	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50
dichloropropylene, cis-1,3-	ug/L	0.30	NV	<0.30	<0.30	<0.30	<0.30
dichloropropylene, trans-1,3-	ug/L	0.30	NV	<0.30	<0.30	<0.30	<0.30
ethylbenzene	ug/L	0.50	54	<0.50	<0.50	<0.50	<0.50
hexane, n-	ug/L	0.50	5	<0.50	<0.50	<0.50	<0.50
methyl ethyl ketone (MEK)	ug/L	20	21000	<20	<20	<20	<20
methyl isobutyl ketone (MIBK)	ug/L	20	52000	<20	<20	<20	<20
methyl-tert-butyl ether (MTBE)	ug/L	0.50	15	<0.50	<0.50	<0.50	<0.50
styrene	ug/L	0.50	43	<0.50	<0.50	<0.50	<0.50
tetrachloroethane, 1,1,1,2-	ug/L	0.50	1.1	<0.50	0.68	<0.50	<0.50
tetrachloroethane, 1,1,2,2-	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50
tetrachloroethylene	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50
toluene	ug/L	0.50	320	<0.50	0.84	<0.50	<0.50
trichloroethane, 1,1,1-	ug/L	0.50	23	<0.50	<0.50	<0.50	<0.50
trichloroethane, 1,1,2-	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50
trichloroethylene	ug/L	0.50	0.5	0.55	<0.50	0.66	<0.50
trichlorofluoromethane	ug/L	0.50	2000	<0.50	<0.50	<0.50	<0.50
vinyl chloride	ug/L	0.50	0.5	<0.50	<0.50	<0.50	<0.50
xylene, m+p-	ug/L	0.40	NV	<0.40	0.45	<0.40	<0.40
xylene, o-	ug/L	0.30	NV	<0.30	<0.30	<0.30	<0.30
xylene, total	ug/L	0.50	72	<0.50	<0.50	<0.50	<0.50
BTEX, total	ug/L	1.0	NV	<1.0	1.3	<1.0	<1.0
<b>Petroleum Hydrocarbons (PHC)</b>							
F1 (C6-C10)	ug/L	25	420	--	--	--	--
F2 (C10-C16)	ug/L	100	150	--	--	--	--
F2-naphthalene	ug/L	100	NV	--	--	--	--
F3 (C16-C34)	ug/L	250	500	--	--	--	--
F3-PAH	ug/L	250	NV	--	--	--	--
F4 (C34-C50)	ug/L	250	500	--	--	--	--
F1-BTEX	ug/L	25	420	--	--	--	--
hydrocarbons, total (C6-C50)	ug/L	240	NV	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons (PAH)</b>							
acenaphthene	ug/L	0.010	17	--	--	--	--
acenaphthylene	ug/L	0.010	1	--	--	--	--
anthracene	ug/L	0.010	1	--	--	--	--
benz(a)anthracene	ug/L	0.010	1.8	--	--	--	--
benzo(a)pyrene	ug/L	0.0050	0.81	--	--	--	--
benzo(b+g)fluoranthene	ug/L	0.010	0.75	--	--	--	--
benzo(g,h,i)perylene	ug/L	0.010	0.2	--	--	--	--
benzo(k)fluoranthene	ug/L	0.010	0.4	--	--	--	--
chrysene	ug/L	0.010	0.7	--	--	--	--
dibenz(a,h)anthracene	ug/L	0.0050	0.4	--	--	--	--
fluoranthene	ug/L	0.010	44	--	--	--	--
fluorene	ug/L	0.010	290	--	--	--	--
indeno(1,2,3-c,d)pyrene	ug/L	0.010	0.2	--	--	--	--
methylnaphthalene, 1,2-	ug/L	0.015	1500	--	--	--	--
methylnaphthalene, 1-	ug/L	0.010	1500	--	--	--	--
methylnaphthalene, 2-	ug/L	0.010	1500	--	--	--	--
naphthalene	ug/L	0.050	7	--	--	--	--
phenanthrene	ug/L	0.020	380	--	--	--	--
pyrene	ug/L	0.010	5.7	--	--	--	--

Notes:

Table 7 SCS

Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition, all land use with coarse grained soil, of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (Ontario Ministry of the Environment, 2011)

MDL

<0.00

NV

**BOLD**

Method Detection Limit

Concentration below the MDL

No value specified in Table 7 SCS

Concentration exceeds Table 7 SCS





**Table 4: Groundwater Quality Results**

		Borehole ID	MW22-41 Port 7
		Sample ID	MW22-41-07-07DEC22
		Lab ID	WT2224609-022
		Screen Depth (mbgs)	28.35 - 30.51
		Sample Date (y/m/d)	2022-12-07
Parameter	Units	MDL	Table 7 SCS
<b>Metals</b>			
antimony, dissolved	ug/L	0.10	16000
arsenic, dissolved	ug/L	0.10	1500
barium, dissolved	ug/L	0.10	23000
beryllium, dissolved	ug/L	0.020	53
boron, dissolved	ug/L	10	36000
cadmium, dissolved	ug/L	0.0050	2.1
chromium, dissolved	ug/L	0.50	640
chromium, hexavalent [Cr VI], dissolved	ug/L	0.50	110
cobalt, dissolved	ug/L	0.10	52
copper, dissolved	ug/L	0.20	69
lead, dissolved	ug/L	0.050	20
mercury, dissolved	ug/L	0.0050	0.1
molybdenum, dissolved	ug/L	0.050	7300
nickel, dissolved	ug/L	0.50	390
selenium, dissolved	ug/L	0.050	50
silver, dissolved	ug/L	0.010	1.2
sodium, dissolved	ug/L	50	1800000
thallium, dissolved	ug/L	0.010	400
uranium, dissolved	ug/L	0.010	330
vanadium, dissolved	ug/L	0.50	200
zinc, dissolved	ug/L	1.0	890
<b>Volatiles Organic Compounds (VOC)</b>			
Acetone	ug/L	20	100000
benzene	ug/L	0.50	0.5
bromodichloromethane	ug/L	0.50	67000
bromoform	ug/L	0.50	5
bromomethane	ug/L	0.50	0.89
carbon tetrachloride	ug/L	0.20	0.2
chlorobenzene	ug/L	0.50	140
chloroform	ug/L	0.50	2
1,1-dibromochloromethane	ug/L	0.50	65000
1,2-dibromoethane	ug/L	0.20	0.2
1,2-dichlorobenzene	ug/L	0.50	150
1,3-dichlorobenzene	ug/L	0.50	7600
1,4-dichlorobenzene	ug/L	0.50	0.5
1,1-dichlorodifluoromethane	ug/L	0.50	3500
1,1-dichloroethane	ug/L	0.50	11
1,2-dichloroethane	ug/L	0.50	0.5
1,1,1-trichloroethane	ug/L	0.50	0.5
1,1,2-trichloroethane	ug/L	0.50	1.6
1,2,2-trichloroethane	ug/L	0.50	1.6
1,1,1-trichloroethylene	ug/L	1.0	26
1,2-dichloropropane	ug/L	0.50	0.58
1,2-dichloropropylene, cis+trans-1,3-	ug/L	0.50	0.5
1,3-dichloropropylene, cis-1,3-	ug/L	0.30	NV
1,3-dichloropropylene, trans-1,3-	ug/L	0.30	NV
ethylbenzene	ug/L	0.50	54
hexane, n-	ug/L	0.50	5
methyl ethyl ketone [MEK]	ug/L	20	21000
methyl isobutyl ketone [MIBK]	ug/L	20	5200
methyl-tert-butyl ether [MTBE]	ug/L	0.50	15
styrene	ug/L	0.50	43
1,1,1,2-tetrachloroethane	ug/L	0.50	1.1
1,1,2,2-tetrachloroethane	ug/L	0.50	0.5
tetrachloroethylene	ug/L	0.50	0.5
toluene	ug/L	0.50	320
1,1,1-trichloroethane	ug/L	0.50	23
1,1,2-trichloroethane	ug/L	0.50	0.5
1,1,2-trichloroethylene	ug/L	0.50	0.5
1,1,2,2-tetrachloroethane	ug/L	0.50	2000
vinyl chloride	ug/L	0.50	0.5
xylene, m+p-	ug/L	0.40	NV
xylene, o-	ug/L	0.30	NV
xylenes, total	ug/L	0.50	72
BTEX, total	ug/L	1.0	NV
<b>Petroleum Hydrocarbons (PHC)</b>			
F1 (C6-C10)	ug/L	25	420
F2 (C10-C16)	ug/L	100	150
F2-naphthalene	ug/L	100	NV
F3 (C16-C34)	ug/L	250	500
F3-PAH	ug/L	250	NV
F4 (C34-C50)	ug/L	250	500
F1-BTEX	ug/L	25	420
hydrocarbons, total (C6-C50)	ug/L	240	NV
<b>Polycyclic Aromatic Hydrocarbons (PAH)</b>			
acenaphthene	ug/L	0.010	17
acenaphthylene	ug/L	0.010	1
anthracene	ug/L	0.010	1
benz(a)anthracene	ug/L	0.010	1.8
benzo(a)pyrene	ug/L	0.0050	0.81
benzo(b)fluoranthene	ug/L	0.010	0.75
benzo(g,h,i)perylene	ug/L	0.010	0.2
benzo(k)fluoranthene	ug/L	0.010	0.4
chrysene	ug/L	0.010	0.7
1,2,3,4-dibenz(a,h)anthracene	ug/L	0.0050	0.4
fluoranthene	ug/L	0.010	44
fluorene	ug/L	0.010	290
indeno(1,2,3-c,d)pyrene	ug/L	0.010	0.2
1-methylnaphthalene, 1+	ug/L	0.015	1500
1-methylnaphthalene, 1-	ug/L	0.010	1500
2-methylnaphthalene, 2-	ug/L	0.010	1500
naphthalene	ug/L	0.050	7
phenanthrene	ug/L	0.020	380
pyrene	ug/L	0.010	5.7

Notes:

Table 7 SCS

Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition, all land use with coarse grained soil, of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (Ontario Ministry of the Environment, 2011)

MDL

<0.00

NV

**BOLD**

Method Detection Limit

Concentration below the MDL

No value specified in Table 7 SCS

Concentration exceeds Table 7 SCS



**Table 5: Soil Quality Maximums**

Borehole ID				MW22-13B	
Sample ID				22-13B 0-2	DUP6
Lab ID				WT2221612-006	WT2221612-007
Sample Depth (m)				0 - 0.6	0 - 0.6
Sample Date (d/m/y)				10-Nov-2022	10-Nov-2022
Parameter	Units	MDL	Table 7 SCS		
<b>Soluble Ions</b>					
sodium adsorption ratio [SAR]	--	0.1	<b>5</b>	<b>8.15</b>	<b>9.43</b>
<b>Petroleum Hydrocarbons (PHC)</b>					
F4G-sg	mg/kg	250	<b>5600</b>	<b>7130</b>	<b>7740</b>

Notes:

Table 7 SCS

Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition, Residential/Parkland/Institutional land use with fine grained soil, of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (Ontario Ministry of the Environment, 2011)

MDL

Method Detection Limit

ND (0.00)

Concentration below the MDL

NV

No value specified in Table 3 SCS

**BOLD**

Concentration exceeds Table 3 SCS



**Table 6: Groundwater Quality Maximums**

Borehole ID				MW21-01A		MW21-01B	MW21-02A	MW21-02B	MW21-03B	MW21-07
Sample ID				MW21-01A-6DEC22	DUP5-6DEC22	MW21-01B-6DEC22	MW21-02A-6DEC22	MW21-02B-6DEC22	MW21-03B-5DEC22	MW21-07-6DEC22
Lab ID				WT2224485-002	WT2224485-023	WT2224485-003	WT2224485-005	WT2224485-006	WT2224326-010	WT2224485-009
Screen Depth (mbgs)				4.57 - 7.62	4.57 - 7.62	9.14 - 12.19	4.27 - 7.32	9.14 - 12.19	9.14 - 12.19	3.96 - 7.01
Sample Date (y/m/d)				2022-12-06	2022-12-06	2022-12-06	2022-12-06	2022-12-06	2022-12-05	2022-12-06
Parameter	Units	MDL	Table 7 SCS							
<b>Volatiles Organic Compounds (VOC)</b>										
chloroform	ug/L	0.50	<b>2</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
tetrachloroethylene	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trichloroethylene	ug/L	0.50	<b>0.5</b>	<b>0.88</b>	<b>0.67</b>	<b>0.82</b>	<b>0.84</b>	<b>0.65</b>	<b>0.53</b>	<b>0.71</b>

Notes:

Table 7 SCS

Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition, all land use with coarse grained soil, of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (Ontario Ministry of the Environment, 2011)

MDL

Method Detection Limit

<0.00

Concentration below the MDL

NV

No value specified in Table 7 SCS

**BOLD**

Concentration exceeds Table 7 SCS



**Table 6: Groundwater Quality Maximums**

Borehole ID				MW21-08	MW21-13A	MW21-14A	MW21-15A	MW21-16A	MW21-17A	MW22-28
Sample ID				MW21-08-5DEC22	MW21-13A-07DEC22	MW21-14A-6DEC22	MW21-15A-6DEC22	MW21-16A-6DEC22	MW21-17A-5DEC22	MW22-28-6DEC22
Lab ID				WT2224326-002	WT2224609-001	WT2224485-010	WT2224485-012	WT2224485-014	WT2224326-012	WT2224485-016
Screen Depth (mbgs)				4.27 - 7.32	4.57 - 7.62	5.18 - 8.23	4.88 - 7.92	4.57 - 7.62	4.57 - 7.62	5.03 - 8.08
Sample Date (y/m/d)				2022-12-05	2022-12-07	2022-12-06	2022-12-06	2022-12-06	2022-12-05	2022-12-06
Parameter	Units	MDL	Table 7 SCS							
<b>Volatiles Organic Compounds (VOC)</b>										
chloroform	ug/L	0.50	<b>2</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
tetrachloroethylene	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trichloroethylene	ug/L	0.50	<b>0.5</b>	<b>0.89</b>	<b>0.5</b>	<b>0.65</b>	<b>0.73</b>	<b>0.97</b>	<b>1.08</b>	<b>0.84</b>

Notes:

Table 7 SCS

Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition, all land use with coarse grained soil, of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (Ontario Ministry of the Environment, 2011)

MDL

Method Detection Limit

<0.00

Concentration below the MDL

NV

No value specified in Table 7 SCS

**BOLD**

Concentration exceeds Table 7 SC



**Table 6: Groundwater Quality Maximums**

Borehole ID				MW22-31	MW22-33	MW22-34	MW22-36		MW22-39 Port 1	MW22-39 Port 6
Sample ID				MW22-31-6DEC22	22-33-01DEC22	MW22-34-5DEC22	22-36-01DEC22	22-36-15DEC22	MW22-39-01-07DEC22	MW22-39-06-07DEC22
Lab ID				WT2224485-019	WT2224015-010	WT2224485-001	WT2224015-011	WT2225424-002	WT2224609-003	WT2224609-007
Screen Depth (mbgs)				4.57 - 7.62	5.2 - 8.2	4.83 - 7.87	4.9 - 7.9	4.9 - 7.9	7.62 - 9.14	24.38 - 25.91
Sample Date (y/m/d)				2022-12-06	2022-12-01	2022-12-06	2022-12-01	2022-12-15	2022-12-07	2022-12-07
Parameter	Units	MDL	Table 7 SCS							
<b>Volatiles Organic Compounds (VOC)</b>										
chloroform	ug/L	0.50	<b>2</b>	<0.50	<b>2.41</b>	<0.50	<b>3.69</b>	<b>2.40</b>	<0.50	<0.50
tetrachloroethylene	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<b>1.48</b>	<0.50
trichloroethylene	ug/L	0.50	<b>0.5</b>	<b>1.37</b>	<0.50	<b>1.07</b>	<0.50	<0.50	<b>0.7</b>	<b>0.81</b>

Notes:

Table 7 SCS

Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition, all land use with coarse grained soil, of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (Ontario Ministry of the Environment, 2011)

MDL

Method Detection Limit

<0.00

Concentration below the MDL

NV

No value specified in Table 7 SCS

**BOLD**

Concentration exceeds Table 7 SC



**Table 6: Groundwater Quality Maximums**

Borehole ID		MW22-39 Port 6	MW22-40 Port 1	MW22-40 Port 5	MW22-41 Port 1		MW22-41 Port 5
Sample ID		DUP7-07DEC22	MW22-40-01-07DEC22	MW22-40-05-07DEC22	MW22-41-01-07DEC22	DUP8-07DEC22	MW22-41-05-07DEC22
Lab ID		WT2224609-024	WT2224609-009	WT2224609-013	WT2224609-016	WT2224609-025	WT2224609-020
Screen Depth (mbgs)		24.38 - 25.91	6.10 - 9.14	24.38 - 26.52	6.10 - 9.14	6.10 - 9.14	24.08 - 25.60
Sample Date (y/m/d)		2022-12-07	2022-12-07	2022-12-07	2022-12-07	2022-12-07	2022-12-07
Parameter	Units	MDL	Table 7 SCS				
<b>Volatiles Organic Compounds (VOC)</b>							
chloroform	ug/L	0.50	<b>2</b>	<0.50	<0.50	<0.50	<0.50
tetrachloroethylene	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<b>10.2</b>	<b>8.24</b>
trichloroethylene	ug/L	0.50	<b>0.5</b>	<b>0.64</b>	<b>0.53</b>	<b>0.66</b>	<0.50
						<0.50	<0.50
							<b>0.73</b>

Notes:

Table 7 SCS

Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition, all land use with coarse grained soil, of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (Ontario Ministry of the Environment, 2011)

MDL

Method Detection Limit

<0.00

Concentration below the MDL

NV

No value specified in Table 7 SCS

**BOLD**

Concentration exceeds Table 7 SC





Table 7: Groundwater QA/QC - Trip Blanks and Field Blanks

Parameter	Units	MDL	Table 7 SCS	Trip Blanks							
				Sample ID	TB1-1DEC22	TB2-5DEC22	TB3-6DEC22	TB4-07DEC22	TB5-15DEC22	FB1-1DEC22	FB2-5DEC22
				Lab ID	WT2224015-014	WT2224326-015	WT2224485-025	WT2224609-026	WT2225424-004	WT2224015-015	WT2224326-016
Sample Date (y/m/d)				2022-12-01	2022-12-05	2022-12-06	2022-12-07	2022-12-15	2022-12-01	2022-12-05	
<b>Volatiles Organic Compounds (VOC)</b>											
Acetone	ug/L	20	<b>100000</b>	<20	<20	<20	<20	<20	<20	<20	<20
benzene	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
bromodichloromethane	ug/L	0.50	<b>67000</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
bromoform	ug/L	0.50	<b>5</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
bromomethane	ug/L	0.50	<b>0.89</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
carbon tetrachloride	ug/L	0.20	<b>0.2</b>	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
chlorobenzene	ug/L	0.50	<b>140</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
chloroform	ug/L	0.50	<b>2</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
dibromochloromethane	ug/L	0.50	<b>65000</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
dibromoethane, 1,2-	ug/L	0.20	<b>0.2</b>	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
dichlorobenzene, 1,2-	ug/L	0.50	<b>150</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
dichlorobenzene, 1,3-	ug/L	0.50	<b>7600</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
dichlorobenzene, 1,4-	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
dichlorodifluoromethane	ug/L	0.50	<b>3500</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
dichloroethane, 1,1-	ug/L	0.50	<b>11</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
dichloroethane, 1,2-	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
dichloroethylene, 1,1-	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
dichloroethylene, cis-1,2-	ug/L	0.50	<b>1.6</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
dichloroethylene, trans-1,2-	ug/L	0.50	<b>1.6</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
dichloromethane	ug/L	1.0	<b>26</b>	2.2	3	<1.5	1.3	<1.0	<1.0	<1.0	<1.0
dichloropropane, 1,2-	ug/L	0.50	<b>0.58</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
dichloropropylene, cis+trans-1,3-	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
dichloropropylene, cis-1,3-	ug/L	0.30	<b>NV</b>	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
dichloropropylene, trans-1,3-	ug/L	0.30	<b>NV</b>	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
ethylbenzene	ug/L	0.50	<b>54</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
hexane, n-	ug/L	0.50	<b>5</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
methyl ethyl ketone (MEK)	ug/L	20	<b>21000</b>	<20	<20	<20	<20	<20	<20	<20	<20
methyl isobutyl ketone (MIBK)	ug/L	20	<b>5200</b>	<20	<20	<20	<20	<20	<20	<20	<20
methyl-tert-butyl ether (MTBE)	ug/L	0.50	<b>15</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
styrene	ug/L	0.50	<b>43</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
tetrachloroethane, 1,1,1,2-	ug/L	0.50	<b>1.1</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
tetrachloroethane, 1,1,1,2,2-	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
tetrachloroethylene	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
toluene	ug/L	0.50	<b>320</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trichloroethane, 1,1,1-	ug/L	0.50	<b>23</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trichloroethane, 1,1,2-	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trichloroethylene	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trichlorofluoromethane	ug/L	0.50	<b>2000</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
vinyl chloride	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
xylene, m+p-	ug/L	0.40	<b>NV</b>	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
xylene, o-	ug/L	0.30	<b>NV</b>	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
xylenes, total	ug/L	0.50	<b>72</b>	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BTEX, total	ug/L	1.0	<b>NV</b>	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
<b>Petroleum Hydrocarbons (PHC)</b>											
F1 (C6-C10)	ug/L	25	<b>420</b>	<25	--	<25	<25	--	--	--	--
F2 (C10-C16)	ug/L	100	<b>150</b>	<100	--	--	<100	--	--	--	--
F2-naphthalene	ug/L	100	<b>NV</b>	--	--	--	--	--	--	--	--
F3 (C16-C34)	ug/L	250	<b>500</b>	<250	--	--	<250	--	--	--	--
F3-PAH	ug/L	250	<b>NV</b>	--	--	--	--	--	--	--	--
F4 (C34-C50)	ug/L	250	<b>500</b>	<250	--	--	<250	--	--	--	--
F1-BTEX	ug/L	25	<b>420</b>	<25	--	<25	<25	--	--	--	--
hydrocarbons, total (C6-C50)	ug/L	240	<b>NV</b>	<370	--	--	<370	--	--	--	--

Notes:

Table 7 SCS

Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition, all land use with coarse grained soil, of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (2011)

MDL

Method Detection Limit

<0.00

Concentration below the MDL

NV

No value specified in Table 7 SCS

**BOLD**

Concentration exceeds Table 7 SCS



Table 7: Groundwater QA/QC - Trip Blanks and Field Blanks

Parameter	Units	MDL	Table 7 SCS	Field Blanks			
				Sample ID	FB3-6DEC22	FB4-07DEC22	FB5-15DEC22
				Lab ID	WT2224485-026	WT2224609-027	WT2225424-003
Sample Date (y/m/d)				2022-12-06	2022-12-07	2022-12-15	
<b>Volatiles Organic Compounds (VOC)</b>							
Acetone	ug/L	20	<b>100000</b>	<0.50	<0.50	<0.50	
benzene	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	
bromodichloromethane	ug/L	0.50	<b>67000</b>	<0.50	<0.50	<0.50	
bromoform	ug/L	0.50	<b>5</b>	<0.50	<0.50	<0.50	
bromomethane	ug/L	0.50	<b>0.89</b>	<0.50	<0.50	<0.50	
carbon tetrachloride	ug/L	0.20	<b>0.2</b>	<0.20	<0.20	<0.20	
chlorobenzene	ug/L	0.50	<b>140</b>	<0.50	<0.50	<0.50	
chloroform	ug/L	0.50	<b>2</b>	<0.50	<0.50	<0.50	
dicloromethane	ug/L	0.50	<b>65000</b>	<0.50	<0.50	<0.50	
1,2-dibromoethane	ug/L	0.20	<b>0.2</b>	<0.20	<0.20	<0.20	
1,2-dichlorobenzene	ug/L	0.50	<b>150</b>	<0.50	<0.50	<0.50	
1,3-dichlorobenzene	ug/L	0.50	<b>7600</b>	<0.50	<0.50	<0.50	
1,4-dichlorobenzene	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	
1,1-dichlorodifluoromethane	ug/L	0.50	<b>3500</b>	<0.50	<0.50	<0.50	
1,1-dichloroethane	ug/L	0.50	<b>11</b>	<0.50	<0.50	<0.50	
1,2-dichloroethane	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	
1,1-dichloroethylene	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	
cis-1,2-dichloroethylene	ug/L	0.50	<b>1.6</b>	<0.50	<0.50	<0.50	
trans-1,2-dichloroethylene	ug/L	0.50	<b>1.6</b>	<0.50	<0.50	<0.50	
dichloromethane	ug/L	1.0	<b>26</b>	<1.0	<1.0	2.2	
1,2-dichloropropane	ug/L	0.50	<b>0.58</b>	<0.50	<0.50	<0.50	
cis+trans-1,3-dichloropropylene	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	
cis-1,3-dichloropropylene	ug/L	0.30	<b>NV</b>	<0.30	<0.30	<0.30	
trans-1,3-dichloropropylene	ug/L	0.30	<b>NV</b>	<0.30	<0.30	<0.30	
ethylbenzene	ug/L	0.50	<b>54</b>	<0.50	<0.50	<0.50	
n-hexane	ug/L	0.50	<b>5</b>	<0.50	<0.50	<0.50	
methyl ethyl ketone (MEK)	ug/L	20	<b>21000</b>	<20	<20	<20	
methyl isobutyl ketone (MIBK)	ug/L	20	<b>5200</b>	<20	<20	<20	
methyl-tert-butyl ether (MTBE)	ug/L	0.50	<b>15</b>	<0.50	<0.50	<0.50	
styrene	ug/L	0.50	<b>43</b>	<0.50	<0.50	<0.50	
1,1,1,2-tetrachloroethane	ug/L	0.50	<b>1.1</b>	<0.50	<0.50	<0.50	
1,1,1,2,2-tetrachloroethane	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	
tetrachloroethylene	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	
toluene	ug/L	0.50	<b>320</b>	<0.50	<0.50	<0.50	
1,1,1-trichloroethane	ug/L	0.50	<b>23</b>	<0.50	<0.50	<0.50	
1,1,2-trichloroethane	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	
trichloroethylene	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	
trichlorofluoromethane	ug/L	0.50	<b>2000</b>	<0.50	<0.50	<0.50	
vinyl chloride	ug/L	0.50	<b>0.5</b>	<0.50	<0.50	<0.50	
m,p-xylene	ug/L	0.40	<b>NV</b>	<0.40	<0.40	<0.40	
o-xylene	ug/L	0.30	<b>NV</b>	<0.30	<0.30	<0.30	
total xylenes	ug/L	0.50	<b>72</b>	<0.50	<0.50	<0.50	
total BTEX	ug/L	1.0	<b>NV</b>	<1.0	<1.0	<1.0	
<b>Petroleum Hydrocarbons (PHC)</b>							
F1 (C6-C10)	ug/L	25	<b>420</b>	--	--	--	
F2 (C10-C16)	ug/L	100	<b>150</b>	--	--	--	
F2-naphthalene	ug/L	100	<b>NV</b>	--	--	--	
F3 (C16-C34)	ug/L	250	<b>500</b>	--	--	--	
F3-PAH	ug/L	250	<b>NV</b>	--	--	--	
F4 (C34-C50)	ug/L	250	<b>500</b>	--	--	--	
F1-BTEX	ug/L	25	<b>420</b>	--	--	--	
total hydrocarbons (C6-C50)	ug/L	240	<b>NV</b>	--	--	--	

Notes:

Table 7 SCS

Table 7: Generic Site Condition StandProtection Act (Ontario Ministry of the Environment, 2011)

MDL

Method Detection Limit

<0.00

Concentration below the MDL

NV

No value specified in Table 7 SCS

**BOLD**

Concentration exceeds Table 7 SCS



Table 8: Soil QA/QC Results - RPD

Sample ID: 22-36 8-176		DUP1		RPD	RPD Meets CCME (2016) Guideline
Lab ID	WT221916-004	WT221916-005	8-1-8		
Sample Depth (m)	0-1.5	0-1.5	0-1.5		
Sample Date (day)	21-Oct-2022	21-Oct-2022	21-Oct-2022		
Parameter	Units	MDL			
<b>Physical Characteristics</b>					
Moisture	%	0.25	17.9	17.6	1.7
<b>Metals</b>					
arsenic	mg/kg	0.1	0.2	0.14	35.3
barium	mg/kg	0.1	2.28	2.07	9.7
beryllium	mg/kg	0.1	114	109	8.2
bismuth	mg/kg	0.1	0.44	0.4	9.5
boron	mg/kg	5	5.7	5	3.9
boron, hot water soluble	mg/kg	0.1	0.29	0.3	3.4
cadmium	mg/kg	0.02	0.593	0.507	15.9
chromium	mg/kg	0.5	23.9	22.8	4.7
cobalt	mg/kg	0.1	6.3	5.82	7.9
copper	mg/kg	0.1	26	22.3	30.7
lead	mg/kg	0.005	0.0219	0.0257	10.5
mercury	mg/kg	0.1	0.59	0.52	12.6
molybdenum	mg/kg	0.1	12.6	11.5	9.1
nickel	mg/kg	0.2	0.35	0.35	2.8
silver	mg/kg	0.1	0.11	0.11	0.9
thallium	mg/kg	0.05	0.127	0.11	8.2
uranium	mg/kg	0.05	0.858	0.806	6.2
vanadium	mg/kg	0.2	38	33.8	4.3
Zn	mg/kg	2	150	97.2	19.5
<b>Sample ID: 22-148 0-2</b>					
Lab ID	WT221916-006	DUP2	WT221916-010	RPD	RPD Meets CCME (2016) Guideline
Sample Depth (m)	0-1.8	0-1.8	0-1.8		
Sample Date (day)	24-Oct-2022	24-Oct-2022	24-Oct-2022		
Parameter	Units	MDL			
<b>Physical Characteristics</b>					
Moisture	%	0.25	9.4	12	27.1
<b>Metals</b>					
arsenic	mg/kg	0.1	1.68	1.76	4.7
barium	mg/kg	0.5	195	188	3.7
beryllium	mg/kg	0.1	0.31	0.34	9.2
boron	mg/kg	5	7.8	7.4	5.3
boron, hot water soluble	mg/kg	0.1	0.21	0.17	21.1
cadmium	mg/kg	0.02	0.059	0.074	7.0
chromium	mg/kg	0.5	14.8	15.4	4.0
cobalt	mg/kg	0.1	4.84	4.94	8.3
copper	mg/kg	0.5	7.21	7.83	8.2
lead	mg/kg	0.005	0.0178	0.019	1.1
mercury	mg/kg	0.1	0.48	0.49	2.1
molybdenum	mg/kg	0.5	10.1	10.8	6.7
nickel	mg/kg	0.05	0.147	0.152	3.3
thallium	mg/kg	0.05	0.408	0.548	3.2
uranium	mg/kg	0.2	24.2	25.3	4.4
vanadium	mg/kg	2	20.7	22	6.1
<b>Polycyclic Aromatic Hydrocarbons (PAH)</b>					
F3 (C18-C24)	mg/kg	50	536	628	18.8
F4 (C18-C20)	mg/kg	50	1020	1206	18.8
F4-Sq	mg/kg	250	3500	4050	23.7
hydrocarbons, total (C8-C20)	mg/kg	80	1610	1920	17.6
<b>Polycyclic Aromatic Hydrocarbons (PAH)</b>					
benzo(a)h. pyrene	mg/kg	0.05	0.096	0.089	8.7
chrysene	mg/kg	0.05	0.097	0.089	8.6
methylnaphthalene, 1+2	mg/kg	0.05	0.096	0.071	29.0
methylnaphthalene, 1	mg/kg	0.03	0.042	0.033	24.0
methylnaphthalene, 2	mg/kg	0.03	0.054	0.038	34.9
fluoranthene	mg/kg	0.05	0.071	0.057	21.9
<b>Sample ID: 22-178 2.5-2.6</b>					
Lab ID	WT221916-016	DUP3	WT221916-017	RPD	RPD Meets CCME (2016) Guideline
Sample Depth (m)	2.5-3.1	2.5-3.1	2.5-3.1		
Sample Date (day)	26-Oct-2022	26-Oct-2022	26-Oct-2022		
Parameter	Units	MDL			
<b>Physical Characteristics</b>					
Moisture	%	0.25	10.6	11.2	5.5
<b>Sample ID: 22-211 1-2</b>					
Lab ID	WT221916-004	DUP4	WT221916-006	RPD	RPD Meets CCME (2016) Guideline
Sample Depth (m)	0.3-1.8	0.3-1.8	0.3-1.8		
Sample Date (day)	07-Nov-2022	07-Nov-2022	07-Nov-2022		
Parameter	Units	MDL			
<b>Physical Characteristics</b>					
Moisture	%	0.25	23.1	6.22	115.1
<b>Sample ID: 22-069 9.75-1.76</b>					
Lab ID	WT221916-001	DUP5	WT221916-003	RPD	RPD Meets CCME (2016) Guideline
Sample Depth (m)	0.2-1.8	0.2-1.8	0.2-1.8		
Sample Date (day)	08-Nov-2022	08-Nov-2022	08-Nov-2022		
Parameter	Units	MDL			
<b>Physical Characteristics</b>					
Moisture	%	0.25	18.2	18	1.1
<b>Sample ID: 22-138 0-2</b>					
Lab ID	WT221916-006	DUP6	WT221916-007	RPD	RPD Meets CCME (2016) Guideline
Sample Depth (m)	0-1.8	0-1.8	0-1.8		
Sample Date (day)	10-Nov-2022	10-Nov-2022	10-Nov-2022		
Parameter	Units	MDL			
<b>Physical Characteristics</b>					
Moisture	%	0.25	3.91	4.45	12.9
Le 11.2 soil CaCl2-sq	pH units	0.1	8.18	8.13	0.1
<b>Metals</b>					
arsenic	mg/kg	0.1	1.16	1.1	5.3
barium	mg/kg	0.5	66.5	67.7	1.8
beryllium	mg/kg	0.1	0.18	0.16	11.8
boron	mg/kg	5	8.7	8.6	27.6
boron, hot water soluble	mg/kg	0.1	0.23	0.27	16.0
cadmium	mg/kg	0.02	0.03	0.03	0.9
chromium	mg/kg	0.1	0.9	1.2	30.2
cobalt	mg/kg	0.1	2.77	2.52	9.5
copper	mg/kg	0.5	9.25	6.13	40.9
lead	mg/kg	0.5	7.69	7.6	1.2
mercury	mg/kg	0.005	0.0073	0.0074	1.4
molybdenum	mg/kg	0.1	0.63	0.58	11.8
nickel	mg/kg	0.5	7.69	6.88	11.9
thallium	mg/kg	0.05	0.099	0.096	3.1
uranium	mg/kg	0.05	0.293	0.26	15.8
vanadium	mg/kg	0.2	16.4	14.7	10.9
Zn	mg/kg	2	19.6	16.7	16.0
<b>Stable Ions</b>					
calcium, soluble ion content	mg/L	0.5	12.2	8.14	39.9
magnesium, soluble ion content	mg/L	0.5	1.13	0.77	37.9
sodium, soluble ion content	mg/L	0.5	1.11	1.09	9.6
sodium adsorption ratio (SAR)		0.1	8.15	9.43	14.6
<b>Polycyclic Aromatic Hydrocarbons (PAH)</b>					
F3-PAH	mg/kg	50	1230	1090	12.1
F3 (C18-C24)	mg/kg	50	1230	1090	12.1
F4 (C18-C20)	mg/kg	50	2460	2360	3.7
F4-Sq	mg/kg	250	7130	7740	9.1
hydrocarbons, total (C8-C20)	mg/kg	80	3700	3470	6.4
<b>Polycyclic Aromatic Hydrocarbons (PAH)</b>					
benzo(a)h. pyrene	mg/kg	0.05	0.058	0.053	5.5
benzo(b)fluoranthene	mg/kg	0.05	0.08	0.057	33.6
<b>Sample ID: 22-091 0-0.5</b>					
Lab ID	WT222208-001	DUP7	WT222208-003	RPD	RPD Meets CCME (2016) Guideline
Sample Depth (m)	0.2-0.3	0.2-0.3	0.2-0.3		
Sample Date (day)	14-Nov-2022	14-Nov-2022	14-Nov-2022		
Parameter	Units	MDL			
<b>Physical Characteristics</b>					
Moisture	%	0.25	17	17.1	0.6
<b>Sample ID: 22-412 0-26</b>					
Lab ID	WT222334-003	DUP8	WT222334-006	RPD	RPD Meets CCME (2016) Guideline
Sample Depth (m)	0.8-1.2	0.8-1.2	0.8-1.2		
Sample Date (day)	23-Nov-2022	23-Nov-2022	23-Nov-2022		
Parameter	Units	MDL			
<b>Physical Characteristics</b>					
Moisture	%	0.25	12.2	12.3	0.8
<b>Sample ID: 22-04 0-1.0</b>					
Lab ID	WT220995-001	DUP9	WT220995-002	RPD	RPD Meets CCME (2016) Guideline
Sample Depth (m)	0-1.4	0-1.4	0-1.4		
Sample Date (day)	18-Jan-2023	18-Jan-2023	18-Jan-2023		
Parameter	Units	MDL			
<b>Physical Characteristics</b>					
Moisture	%	0.25	23	25.6	10.7
<b>Metals</b>					
arsenic	mg/kg	0.1	1.62	1.86	13.8
barium	mg/kg	0.5	261	327	22.4
beryllium	mg/kg	0.1	0.65	0.78	18.2
boron	mg/kg	0.05	0.177	0.162	2.8
chromium	mg/kg	0.5	48.7	60.4	21.4
chromium hexavalent	mg/kg	0.1	0.3	0.41	31.0
cobalt	mg/kg	0.1	12.5	14.7	16.9
copper	mg/kg	0.5	17.4	20.8	17.9
lead	mg/kg	0.1	7.8	8.46	13.9
mercury	mg/kg	0.005	0.0246	0.0259	5.1
molybdenum	mg/kg	0.1	0.3	0.35	15.4
nickel	mg/kg	0.5	25.1	31.3	23.0
thallium	mg/kg	0.05	0.224	0.285	24.0
uranium	mg/kg	0.05	0.67	0.809	18.7
vanadium	mg/kg	0.2	63.7	78.2	20.9
Zn	mg/kg	2	72.4	88.1	19.6
<b>Notes:</b>					
RPD: Relative percent difference					
MDL: Method Detection Limit					
CCME (2016) Guideline: 80% RPD for soils used as QA/QC acceptance criteria. For concentrations less than 5 times the MDL, it is recommended that the difference between duplicate sample concentrations should be less than 2 times the MDL.					
<b>BOLD:</b> RPD does not meet CCME (2016) Guideline					



**Table 8: Groundwater QA/QC Results - RPD**

Sample ID		22-26-01DEC22	DUP2-01DEC22	RPD	RPD Meets CCME (2016) Guideline	
Lab ID		WT2224015-007	WT2224015-013			
Screen Depth (mbgs)		5.2 - 8.2	5.2 - 8.2			
Sample Date (d/m/y)		2022-12-01	2022-12-01			
Parameter	Units	MDL				
<b>Metals</b>						
arsenic, dissolved	ug/L	0.10	0.12	0.12	0.00	Y
barium, dissolved	ug/L	0.10	87.5	87.6	0.11	Y
boron, dissolved	ug/L	10	15	15	0.00	Y
cobalt, dissolved	ug/L	0.10	0.3	0.3	0.00	Y
copper, dissolved	ug/L	0.20	4.63	4.57	1.30	Y
molybdenum, dissolved	ug/L	0.050	0.701	0.682	2.75	Y
nickel, dissolved	ug/L	0.50	1.05	1.07	1.89	Y
selenium, dissolved	ug/L	0.050	0.254	0.261	2.72	Y
sodium, dissolved	ug/L	50	147000	144000	2.06	Y
thallium, dissolved	ug/L	0.010	0.076	0.075	1.32	Y
uranium, dissolved	ug/L	0.010	1.48	1.5	1.34	Y

Sample ID		MW21-01A-6DEC22	DUP5-6DEC22	RPD	RPD Meets CCME (2016) Guideline	
Lab ID		WT2224485-002	WT2224485-023			
Screen Depth (mbgs)		4.57 - 7.62	4.57 - 7.62			
Sample Date (d/m/y)		2022-12-06	2022-12-06			
Parameter	Units	MDL				
<b>Volatiles Organic Compounds (VOC)</b>						
trichloroethylene	ug/L	0.50	0.88	0.67	27.10	Y

Sample ID		MW22-39-06-07DEC22	DUP7-07DEC22	RPD	RPD Meets CCME (2016) Guideline	
Lab ID		WT2224609-007	WT2224609-024			
Screen Depth (mbgs)		24.38 - 25.91	24.38 - 25.91			
Sample Date (d/m/y)		2022-12-07	2022-12-07			
Parameter	Units	MDL				
<b>Volatiles Organic Compounds (VOC)</b>						
trichloroethylene	ug/L	0.50	0.81	0.64	26.56	Y

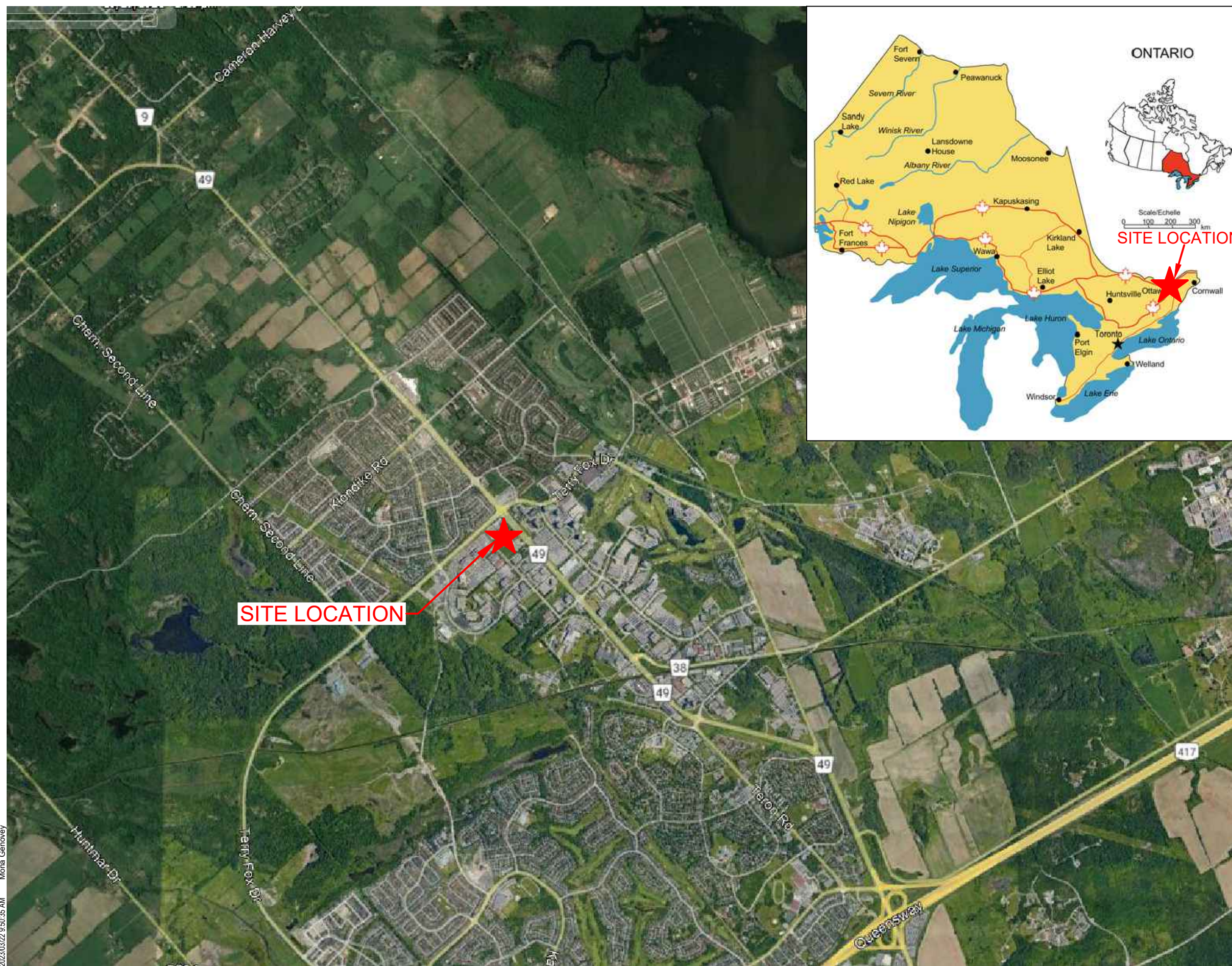
Sample ID		MW22-41-01-07DEC22	DUP8-07DEC22	RPD	RPD Meets CCME (2016) Guideline	
Lab ID		WT2224609-016	WT2224609-025			
Screen Depth (mbgs)		6.10 - 9.14	6.10 - 9.14			
Sample Date (d/m/y)		2022-12-07	2022-12-07			
Parameter	Units	MDL				
<b>Volatiles Organic Compounds (VOC)</b>						
tetrachloroethylene	ug/L	0.50	10.2	8.24	21.26	Y

**Notes:**

- RPD Relative percent difference
- MDL Method Detection Limit
- CCME (2016) Guideline 40% RPD for liquids used as QA/QC acceptance criteria. For concentrations less than 5 times the MDL it is recommended that the difference between duplicate sample concentrations should be less than 2 times the MDL

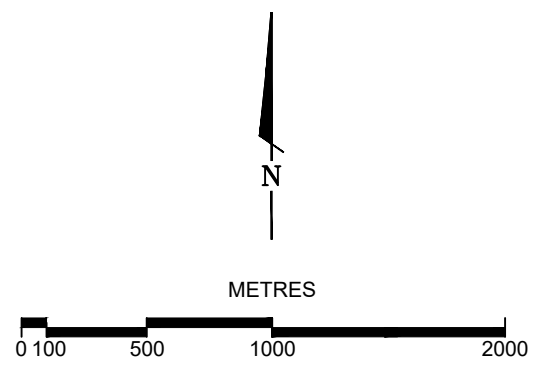
**BOLD** RPD does not meet CCME (2016) Guideline

C:\Users\Mona.Genovoy\Omni-McCann\Geospatial\Omni-McCann - Main & Main Developments\01 - March Road, Ottawa\03 - Phase Two ESA\Drawings\0006-0103-PHASE II ESA-FIG 1A.dwg  
2023/03/22 9:50:35 AM Mona.Genovoy



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**PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT**

APRIL, 2023



**Legend**

 SITE LOCATION

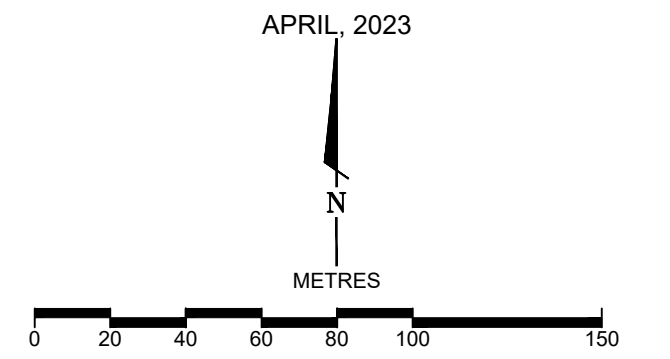
FIGURE 1A  
SITE LOCATION



C:\Users\MonaGenovey\Omni-McCann\Projects\0006 - Main & Main Developments\01 - March Road, Ottawa\03 - O.Reg 153 Phase Two ESA\Drawings\0006-0103-PHASE II ESA-FIG 1B.dwg  
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SITE ASSESSMENT**



**Legend**
















-  PHASE ONE SITE BOUNDARY
-  TOPOGRAPHIC CONTOURS
-  UNDERGROUND WATER LINE HYDRANT AND VALVE
-  UNDERGROUND SANITARY SEWER AND MH
-  UNDERGROUND STORM SEWER AND MH AND CB
-  APEC A-FORMER ELECTRONICS MANUFACTURING
-  APEC B-FORMER DRY CLEANER
-  APEC C-FORMER ELECTRONICS MANUFACTURING
-  APEC D-STORAGE HYDRAULIC OIL
-  APEC E-TRANSFORMER USE
-  APEC F-OFF-SITE PCAs
-  APEC G-FILL OF UNKNOWN QUALITY
-  APEC H-FORMER MARCH LANDFILL RISK MANAGEMENT AREA
-  INFERRED DIRECTION OF REGIONAL (DEEP) GROUNDWATER FLOW
-  INFERRED DIRECTION OF SURFACE RUNOFF

FIGURE 1B  
PHASE ONE ESA - CONCEPTUAL SITE MODEL

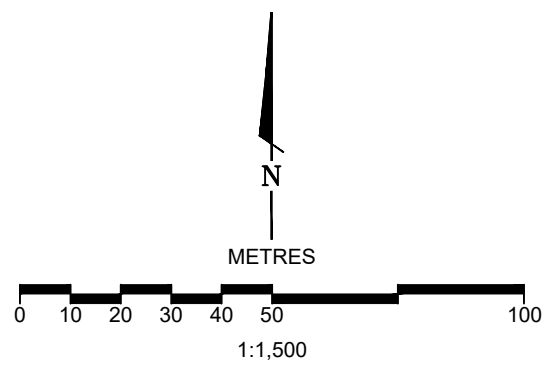


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**Legend**



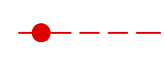

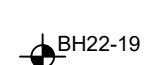
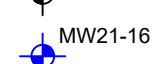

-  PHASE TWO SITE BOUNDARY
-  UNDERGROUND WATER LINE  
HYDRANT AND VALVE
-  UNDERGROUND SANITARY  
SEWER AND MH
-  UNDERGROUND STORM SEWER  
AND MH AND CB
-  BOREHOLE LOCATION
-  MONITORING WELL LOCATION
-  CROSS-SECTION DESIGNATION

FIGURE 1C  
SITE LAYOUT

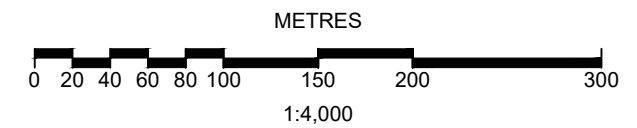


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**Legend**



-  PHASE TWO SITE BOUNDARY
-  STUDY AREA (250m)

FIGURE 2  
AREAS OF NATURAL SIGNIFICANCE  
AND WATER BODIES



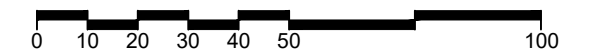


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METRES



1:1,500

Legend





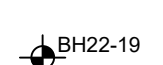
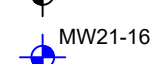
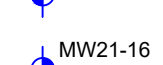

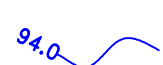
-  PHASE TWO SITE BOUNDARY
-  UNDERGROUND WATER LINE  
HYDRANT AND VALVE
-  UNDERGROUND SANITARY  
SEWER AND MH
-  UNDERGROUND STORM SEWER  
AND MH AND CB
-  BH22-19  
BOREHOLE LOCATION
-  MW21-16  
MONITORING WELL LOCATION
-  MW21-16  
MONITORING WELL LOCATION  
AND GROUNDWATER ELEVATION
-  94.0  
INFERRED GROUNDWATER  
ELEVATION CONTOUR
-  INFERRED GROUNDWATER  
FLOW DIRECTION

FIGURE 3A

GROUNDWATER ELEVATIONS AND INTERPRETED  
FLOW BETWEEN 4.0 AND 10.7 mbgs



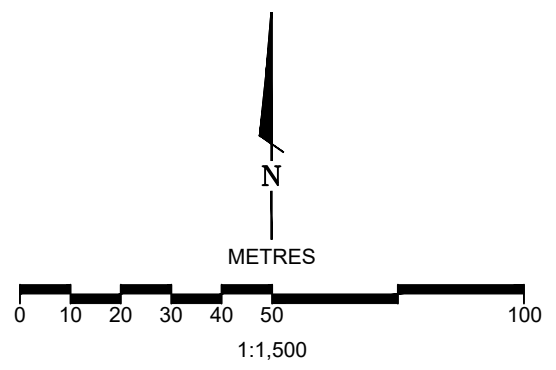
C:\Users\WomaGenovey\Omni-McCann\Projects\0006 - Main & Main Developments\01 - March Road, Ottawa\03 - O Reg 153 Phase Two ESA Drawings\0006-0103-PHASE II ESA-FIG 3A.dwg  
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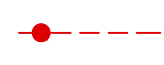






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**Legend**

-  PHASE TWO SITE BOUNDARY
-  UNDERGROUND WATER LINE HYDRANT AND VALVE
-  UNDERGROUND SANITARY SEWER AND MH
-  UNDERGROUND STORM SEWER AND MH AND CB
-  MONITORING WELL LOCATION AND GROUNDWATER ELEVATION
-  INFERRED GROUNDWATER ELEVATION CONTOUR
-  INFERRED GROUNDWATER FLOW DIRECTION

**FIGURE 3B**  
GROUNDWATER ELEVATIONS AND INTERPRETED  
FLOW BETWEEN 9.1 AND 13.7 mbgs



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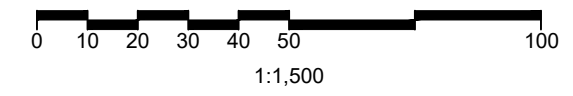


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**PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT**





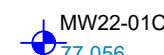


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METRES



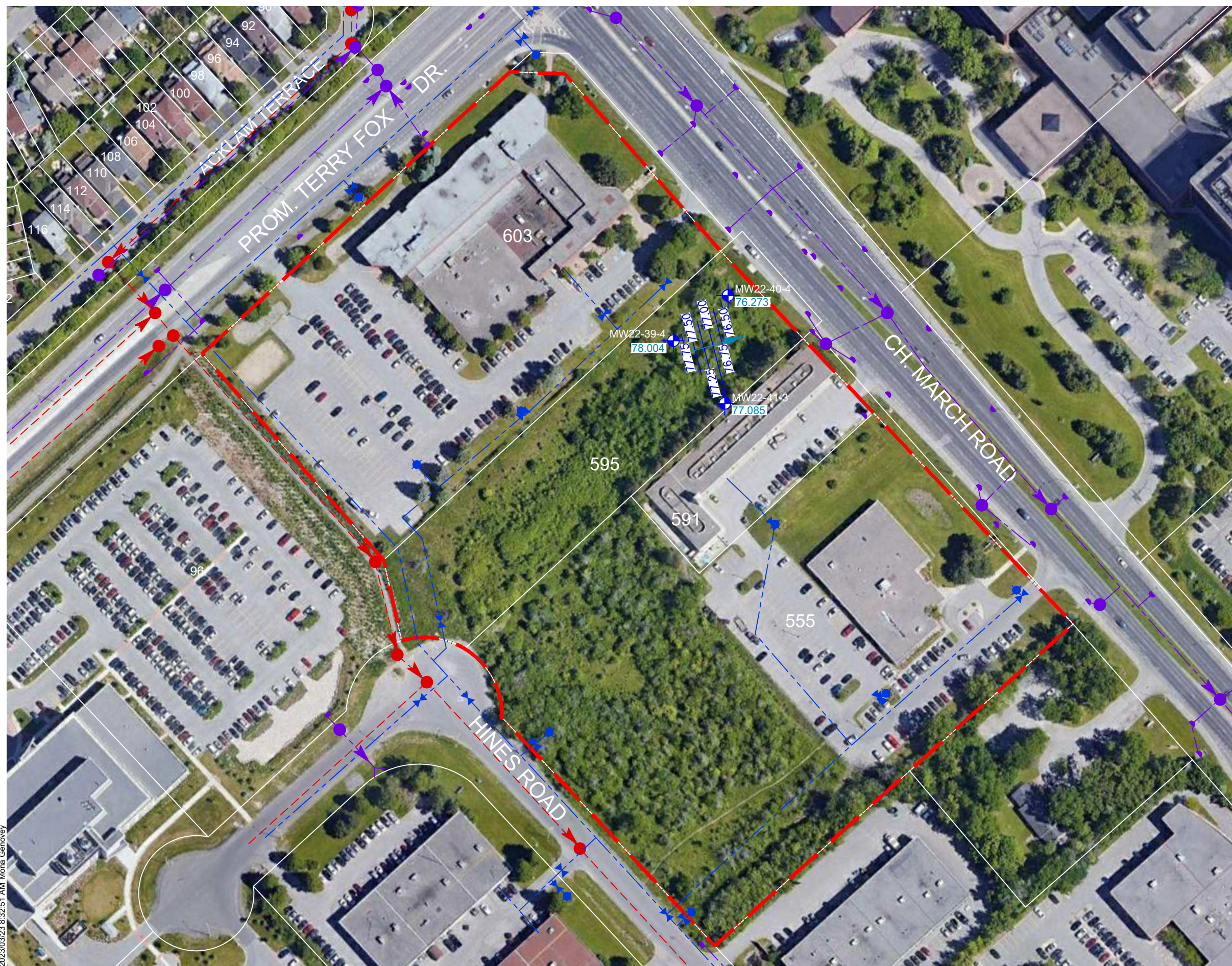
**Legend**

-  PHASE TWO SITE BOUNDARY
-  UNDERGROUND WATER LINE HYDRANT AND VALVE
-  UNDERGROUND SANITARY SEWER AND MH
-  UNDERGROUND STORM SEWER AND MH AND CB
-  MW22-01C MONITORING WELL LOCATION AND GROUNDWATER ELEVATION
-  INFERRED GROUNDWATER ELEVATION CONTOUR
-  INFERRED GROUNDWATER FLOW DIRECTION

**FIGURE 3C**  
GROUNDWATER ELEVATIONS AND INTERPRETED  
FLOW BETWEEN 13.7 AND 18.4 mbgs



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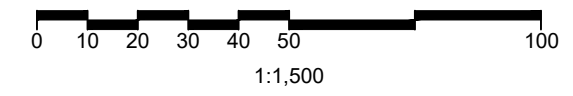


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**PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT**


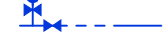
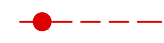
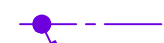
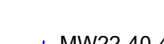


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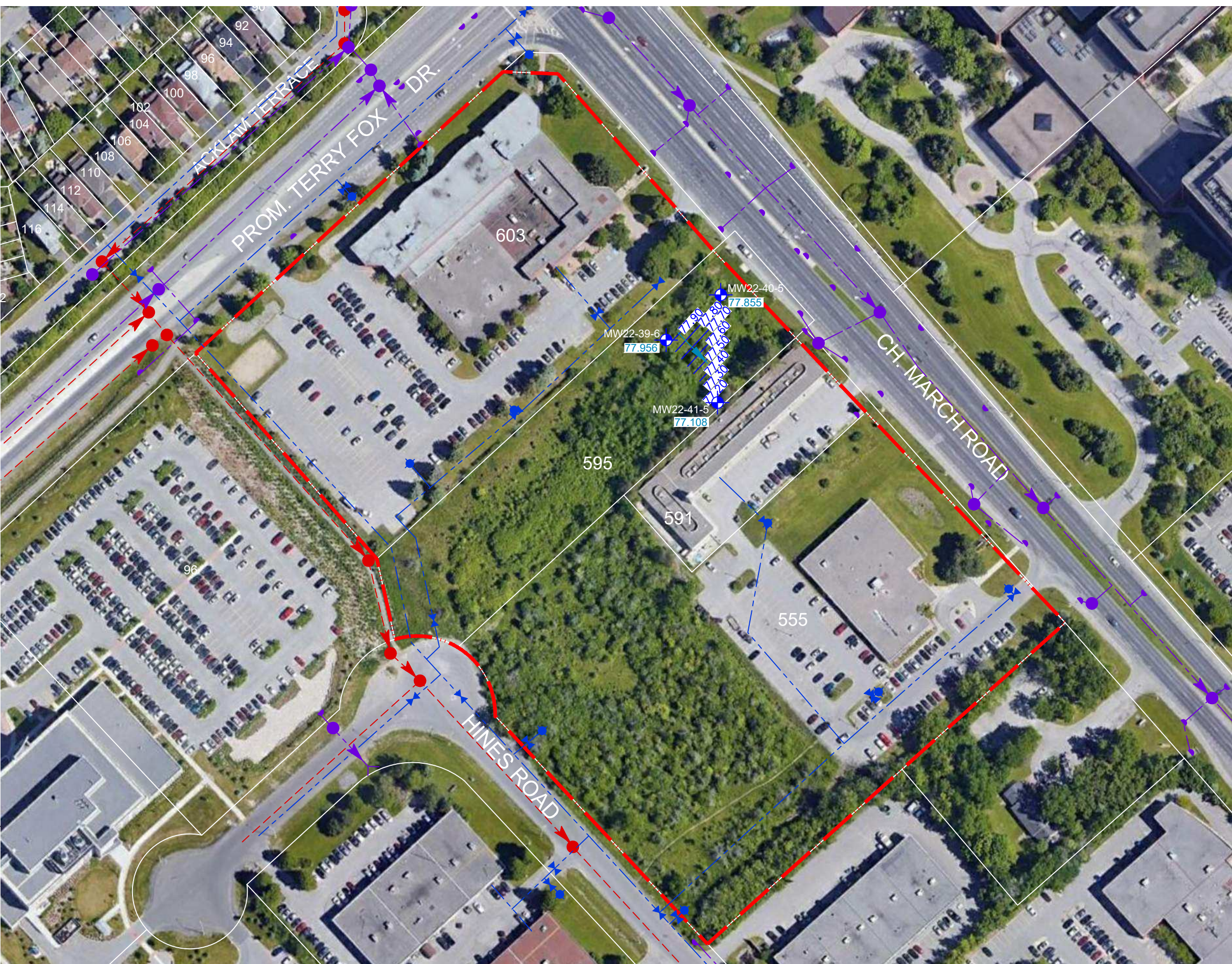
**Legend**

-  PHASE TWO SITE BOUNDARY
-  UNDERGROUND WATER LINE  
HYDRANT AND VALVE
-  UNDERGROUND SANITARY  
SEWER AND MH
-  UNDERGROUND STORM SEWER  
AND MH AND CB
-  MW22-40-4 MONITORING WELL LOCATION  
AND GROUNDWATER ELEVATION
-  INFERRED GROUNDWATER  
ELEVATION CONTOUR
-  INFERRED GROUNDWATER  
FLOW DIRECTION

**FIGURE 3D**  
GROUNDWATER ELEVATIONS AND INTERPRETED  
FLOW BETWEEN 18.3 AND 23.8 mbgs



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### PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

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METRES



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#### Legend





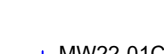


-  PHASE TWO SITE BOUNDARY
-  UNDERGROUND WATER LINE HYDRANT AND VALVE
-  UNDERGROUND SANITARY SEWER AND MH
-  UNDERGROUND STORM SEWER AND MH AND CB
-  MW22-01C MONITORING WELL LOCATION AND GROUNDWATER ELEVATION
-  INFERRED GROUNDWATER ELEVATION CONTOUR
-  INFERRED GROUNDWATER FLOW DIRECTION

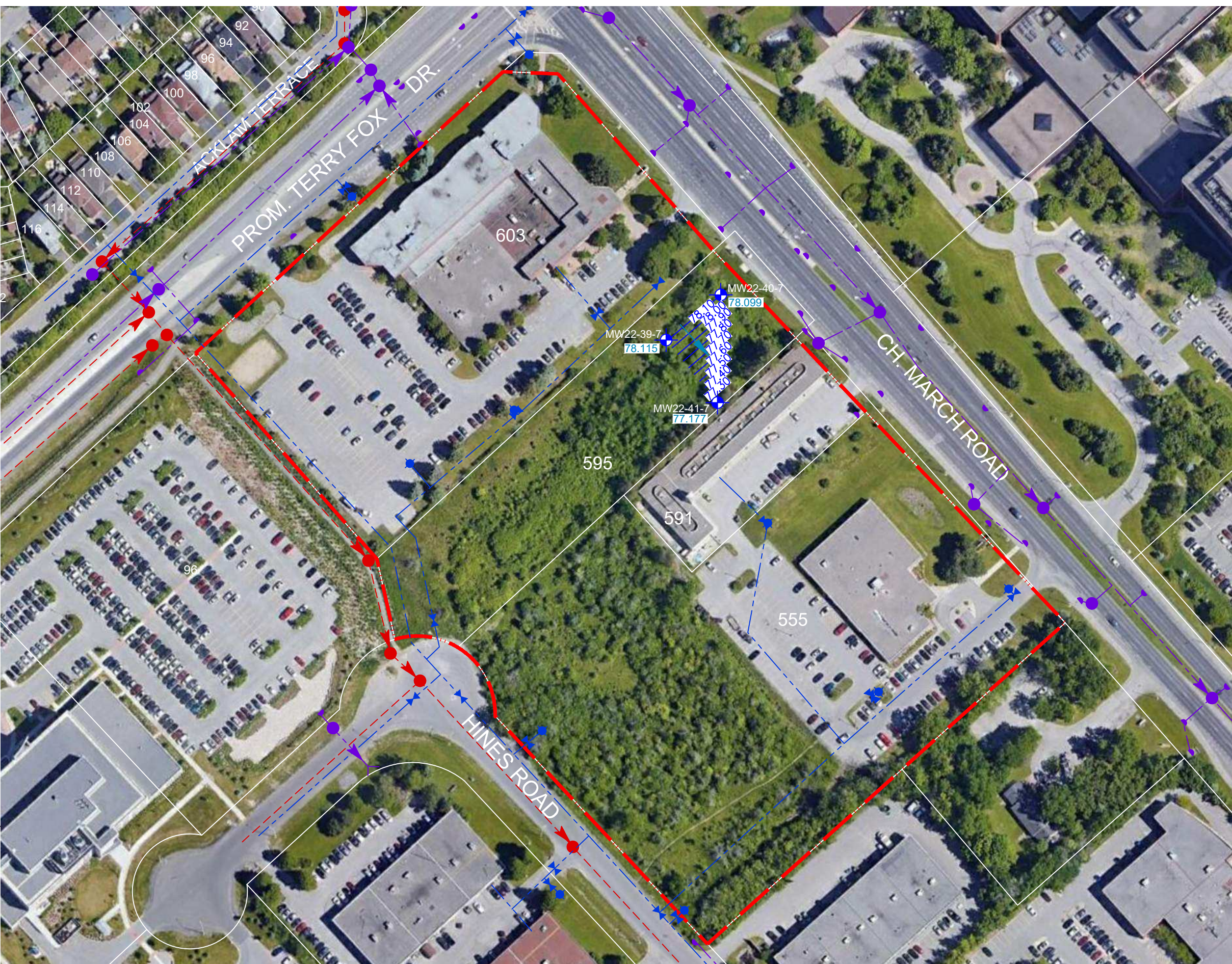
FIGURE 3E

GROUNDWATER ELEVATIONS AND INTERPRETED FLOW BETWEEN 24.1 AND 26.5 mbgs



IMAGERY SOURCE AND DATE: GOOGLE EARTH 6/9/2018

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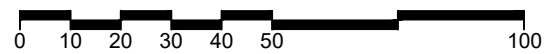
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### PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

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METRES



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#### Legend



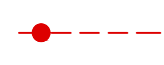




-  PHASE TWO SITE BOUNDARY
-  UNDERGROUND WATER LINE HYDRANT AND VALVE
-  UNDERGROUND SANITARY SEWER AND MH
-  UNDERGROUND STORM SEWER AND MH AND CB
-  MW22-01C MONITORING WELL LOCATION AND GROUNDWATER ELEVATION
-  77.0 INFERRED GROUNDWATER ELEVATION CONTOUR
-  INFERRED GROUNDWATER FLOW DIRECTION

FIGURE 3F

GROUNDWATER ELEVATIONS AND INTERPRETED FLOW BETWEEN 27.4 AND 30.5 mbgs

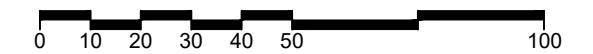


PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023



METRES



1:1,500

Legend




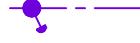
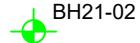
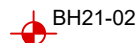
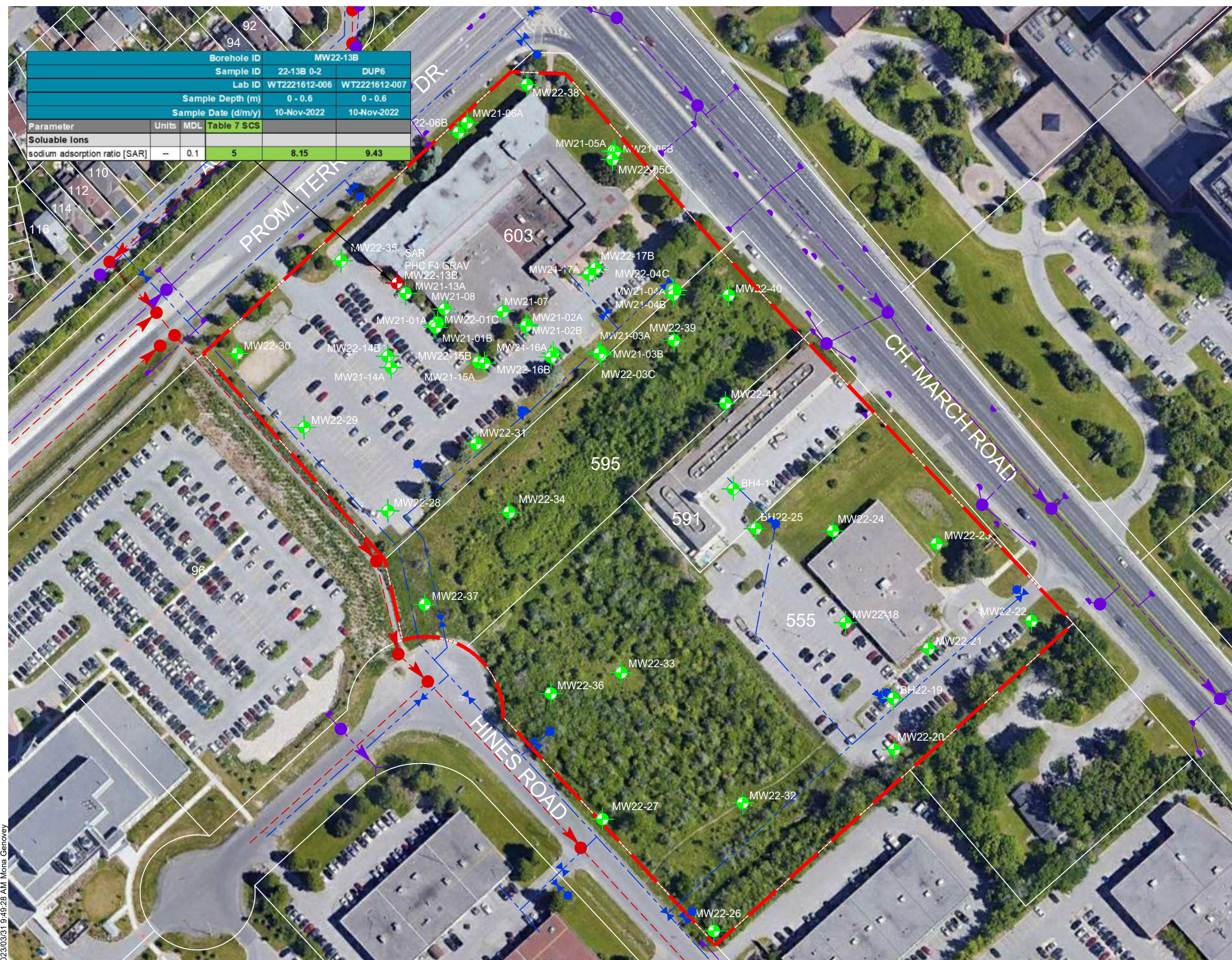
-  PHASE TWO SITE BOUNDARY
-  UNDERGROUND WATER LINE HYDRANT AND VALVE
-  UNDERGROUND SANITARY SEWER AND MH
-  UNDERGROUND STORM SEWER AND MH AND CB
-  BOREHOLE LOCATION MEETING APPLIED GUIDELINES
-  BOREHOLE LOCATION EXCEEDING APPLIED GUIDELINES

FIGURE 4A  
SOIL QUALITY RESULTS  
METALS



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# PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

APRIL, 2023



METRES



1:1,500

### Legend





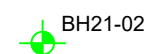
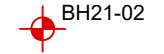
-  PHASE TWO SITE BOUNDARY
-  UNDERGROUND WATER LINE  
HYDRANT AND VALVE
-  UNDERGROUND SANITARY  
SEWER AND MH
-  UNDERGROUND STORM SEWER  
AND MH AND CB
-  BH21-02 BOREHOLE LOCATION MEETING  
APPLIED GUIDELINES
-  BH21-02 BOREHOLE LOCATION EXCEEDING  
APPLIED GUIDELINES

FIGURE 4B  
SOIL QUALITY RESULTS  
VOC



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IMAGERY SOURCE AND DATE: GOOGLE EARTH 6/9/2018

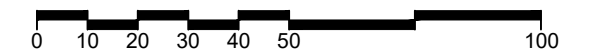


PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023



METRES



1:1,500

Legend





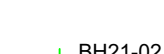

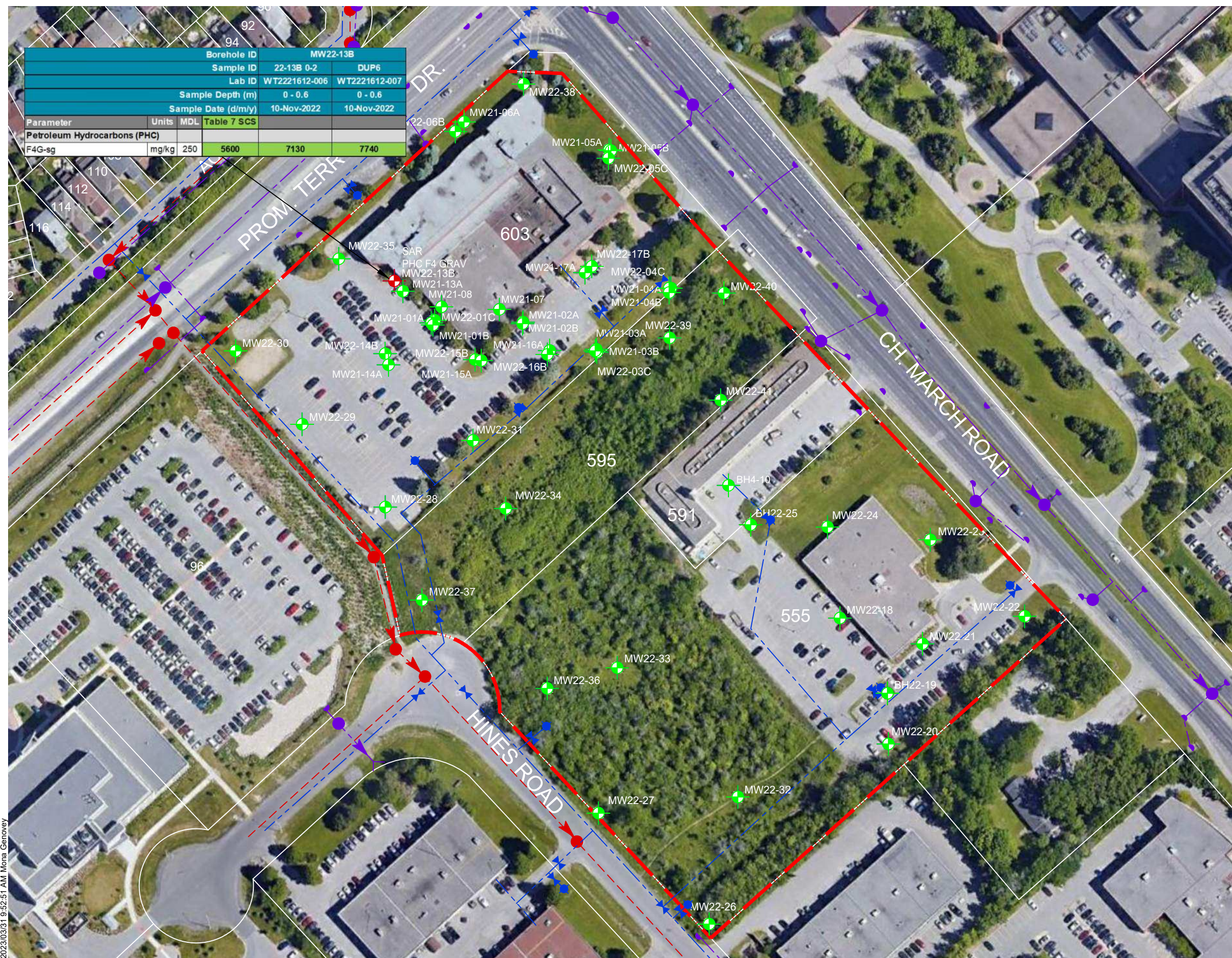
-  PHASE TWO SITE BOUNDARY
-  UNDERGROUND WATER LINE HYDRANT AND VALVE
-  UNDERGROUND SANITARY SEWER AND MH
-  UNDERGROUND STORM SEWER AND MH AND CB
-  BOREHOLE LOCATION MEETING APPLIED GUIDELINES
-  BOREHOLE LOCATION EXCEEDING APPLIED GUIDELINES

FIGURE 4C  
SOIL QUALITY RESULTS  
PHC



Borehole ID		MW22-13B	
Sample ID		22-13B 0-2 DUP6	
Lab ID		WT2221612-006 WT2221612-007	
Sample Depth (m)		0 - 0.6 0 - 0.6	
Sample Date (d/m/y)		10-Nov-2022 10-Nov-2022	
Parameter	Units	MDL	Table 7 SCS
<b>Petroleum Hydrocarbons (PHC)</b>			
F4G-sg	mg/kg	250	5600 7130 7740

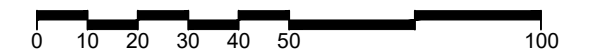
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# PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

APRIL, 2023



METRES



1:1,500

### Legend


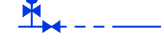

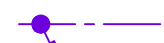


-  PHASE TWO SITE BOUNDARY
-  UNDERGROUND WATER LINE HYDRANT AND VALVE
-  UNDERGROUND SANITARY SEWER AND MH
-  UNDERGROUND STORM SEWER AND MH AND CB
-  BH21-02 BOREHOLE LOCATION MEETING APPLIED GUIDELINES
-  BH21-02 BOREHOLE LOCATION EXCEEDING APPLIED GUIDELINES

FIGURE 4D  
SOIL QUALITY RESULTS  
PAH



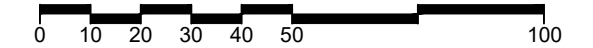
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### PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

APRIL, 2023



METRES



1:1,500

#### Legend



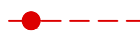

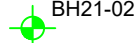
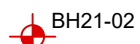
-  PHASE TWO SITE BOUNDARY
-  UNDERGROUND WATER LINE  
HYDRANT AND VALVE
-  UNDERGROUND SANITARY  
SEWER AND MH
-  UNDERGROUND STORM SEWER  
AND MH AND CB
-  BH21-02 BOREHOLE LOCATION MEETING  
APPLIED GUIDELINES
-  BH21-02 BOREHOLE LOCATION EXCEEDING  
APPLIED GUIDELINES

FIGURE 4E  
SOIL QUALITY RESULTS  
PCB



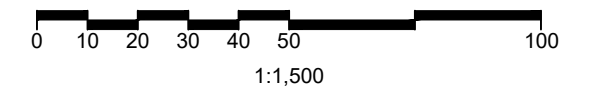
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2023/03/23 9:31:18 AM Mona Genovey

PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023



METRES



Legend

PHASE TWO SITE BOUNDARY

UNDERGROUND WATER LINE  
HYDRANT AND VALVE

UNDERGROUND SANITARY  
SEWER AND MH

UNDERGROUND STORM SEWER  
AND MH AND CB

MW21-16 MONITORING WELL LOCATION WITH  
GROUNDWATER PARAMETERS  
BELOW APPLIED GUIDELINE

MW21-16 MONITORING WELL LOCATION WITH  
GROUNDWATER PARAMETERS  
ABOVE APPLIED GUIDELINE

FIGURE 5A  
SHALLOW GROUNDWATER QUALITY  
METALS



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2023/03/24 1:20:26 PM Mona Genovey

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

APRIL, 2023



METRES



1:1,500

Legend

PHASE TWO SITE BOUNDARY

UNDERGROUND WATER LINE HYDRANT AND VALVE

UNDERGROUND SANITARY SEWER AND MH

UNDERGROUND STORM SEWER AND MH AND CB

MW21-16 MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS BELOW APPLIED GUIDELINE

MW21-16 MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS ABOVE APPLIED GUIDELINE

FIGURE 5B

SHALLOW GROUNDWATER QUALITY VOC



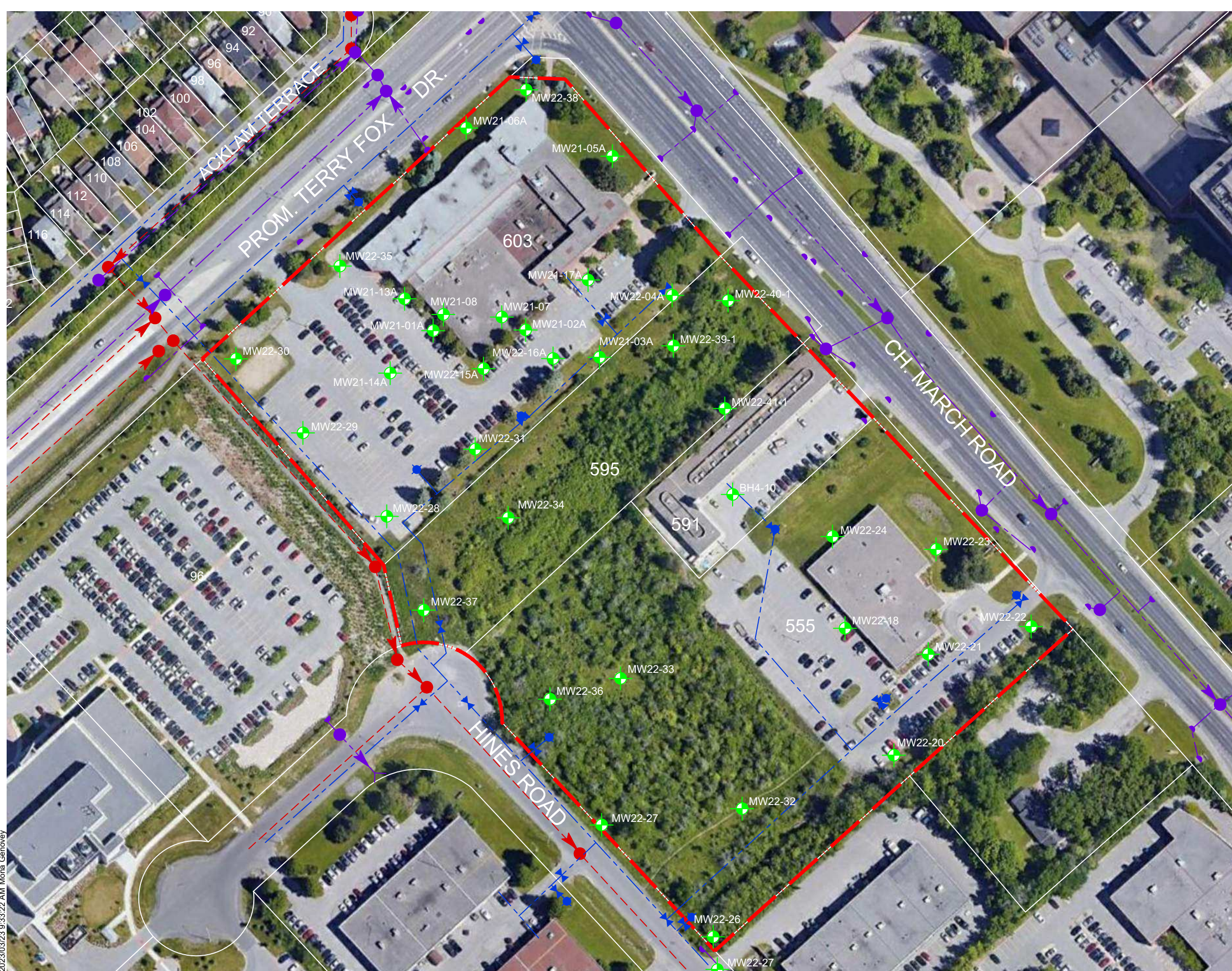
Omni-McCann

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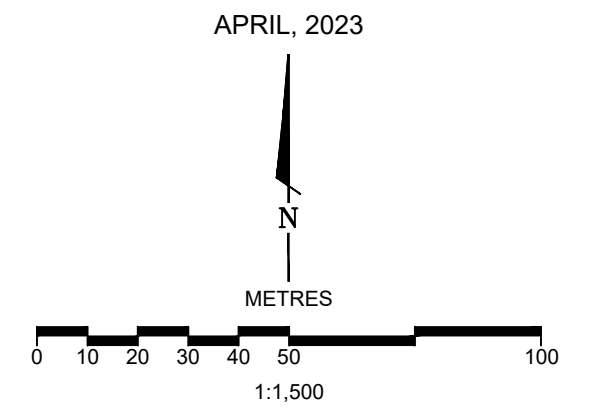


IMAGERY SOURCE AND DATE: GOOGLE EARTH 6/9/2018

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2023/03/23 9:33:22 AM Mona Genovey



**MARCH AND MAIN DEVELOPMENTS INC**  
PROJECT NO. 0006-0103  
555, 591, 595 AND 603 MARCH ROAD, KANATA, ONT.  
**PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT**



**Legend**

- PHASE TWO SITE BOUNDARY
- UNDERGROUND WATER LINE HYDRANT AND VALVE
- UNDERGROUND SANITARY SEWER AND MH
- UNDERGROUND STORM SEWER AND MH AND CB
- MW21-16 MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS BELOW APPLIED GUIDELINE
- MW21-16 MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS ABOVE APPLIED GUIDELINE

FIGURE 5C  
SHALLOW GROUNDWATER QUALITY  
PHC



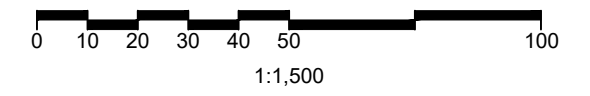
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PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023



METRES



Legend

PHASE TWO SITE BOUNDARY

UNDERGROUND WATER LINE  
HYDRANT AND VALVE

UNDERGROUND SANITARY  
SEWER AND MH

UNDERGROUND STORM SEWER  
AND MH AND CB

MW21-16 MONITORING WELL LOCATION WITH  
GROUNDWATER PARAMETERS  
BELOW APPLIED GUIDELINE

MW21-16 MONITORING WELL LOCATION WITH  
GROUNDWATER PARAMETERS  
ABOVE APPLIED GUIDELINE

FIGURE 5D  
SHALLOW GROUNDWATER QUALITY  
PAH



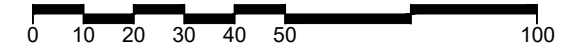
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2023/03/23 9:34:03 AM Mona Genovey

PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023



METRES



1:1,500

Legend

PHASE TWO SITE BOUNDARY

UNDERGROUND WATER LINE  
HYDRANT AND VALVE

UNDERGROUND SANITARY  
SEWER AND MH

UNDERGROUND STORM SEWER  
AND MH AND CB

MW21-16 MONITORING WELL LOCATION WITH  
GROUNDWATER PARAMETERS  
BELOW APPLIED GUIDELINE

MW21-16 MONITORING WELL LOCATION WITH  
GROUNDWATER PARAMETERS  
ABOVE APPLIED GUIDELINE



Borehole ID		MW21-01B	
Sample ID		MW21-01B-6DEC22	
Lab ID		WT2224485-003	
Screen Depth (mbgs)		9.14 - 12.19	
Sample Date (y/m/d)		2022-12-06	
Parameter	Units	MDL	Table 7 SCS
trichloroethylene	ug/L	0.5	0.5      0.82

Borehole ID		MW21-02B	
Sample ID		MW21-02B-6DEC22	
Lab ID		WT2224485-006	
Screen Depth (mbgs)		9.14 - 12.19	
Sample Date (y/m/d)		2022-12-06	
Parameter	Units	MDL	Table 7 SCS
trichloroethylene	ug/L	0.5	0.5      0.65

Borehole ID		MW21-03B	
Sample ID		MW21-03B-5DEC22	
Lab ID		WT2224326-010	
Screen Depth (mbgs)		9.14 - 12.19	
Sample Date (y/m/d)		2022-12-05	
Parameter	Units	MDL	Table 7 SCS
trichloroethylene	ug/L	0.5	0.5      0.53

FIGURE 5E  
GROUNDWATER QUALITY RESULTS  
BETWEEN 9.1 AND 13.7 mbgs: VOC



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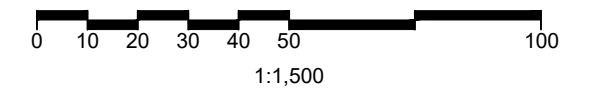


PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023



METRES



Legend





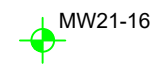
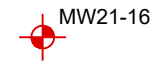
-  PHASE TWO SITE BOUNDARY
-  UNDERGROUND WATER LINE  
HYDRANT AND VALVE
-  UNDERGROUND SANITARY  
SEWER AND MH
-  UNDERGROUND STORM SEWER  
AND MH AND CB
-  MW21-16 MONITORING WELL LOCATION WITH  
GROUNDWATER PARAMETERS  
BELOW APPLIED GUIDELINE
-  MW21-16 MONITORING WELL LOCATION WITH  
GROUNDWATER PARAMETERS  
ABOVE APPLIED GUIDELINE

FIGURE 5F

GROUNDWATER QUALITY RESULTS  
BETWEEN 13.7 AND 18.4 mbgs: VOC



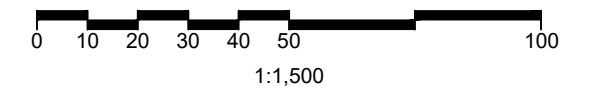
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2023/03/23 9:45:00 AM Mona Genovey

PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023



METRES



Legend

PHASE TWO SITE BOUNDARY

UNDERGROUND WATER LINE  
HYDRANT AND VALVE

UNDERGROUND SANITARY  
SEWER AND MH

UNDERGROUND STORM SEWER  
AND MH AND CB

MW21-16 MONITORING WELL LOCATION WITH  
GROUNDWATER PARAMETERS  
BELOW APPLIED GUIDELINE

MW21-16 MONITORING WELL LOCATION WITH  
GROUNDWATER PARAMETERS  
ABOVE APPLIED GUIDELINE

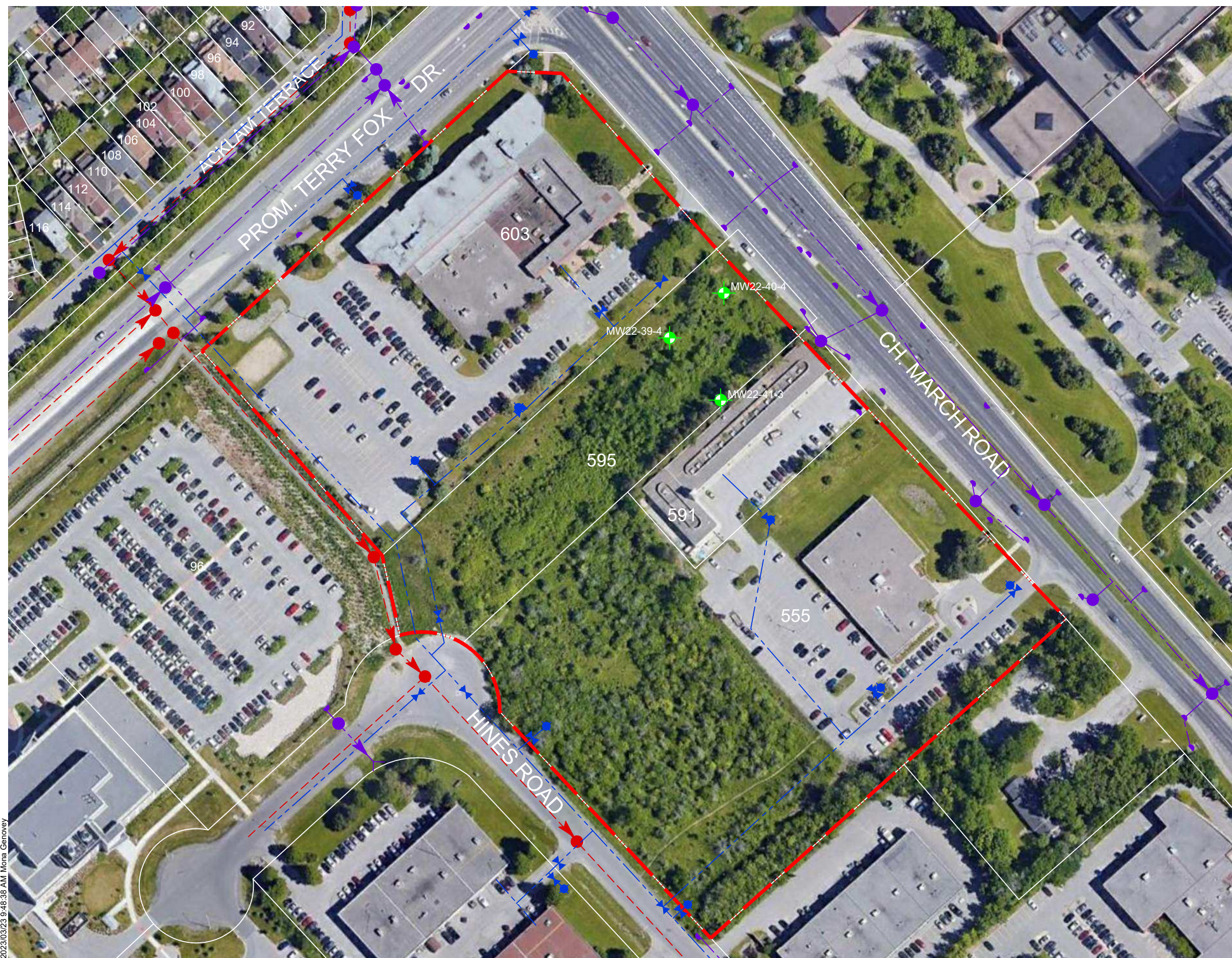


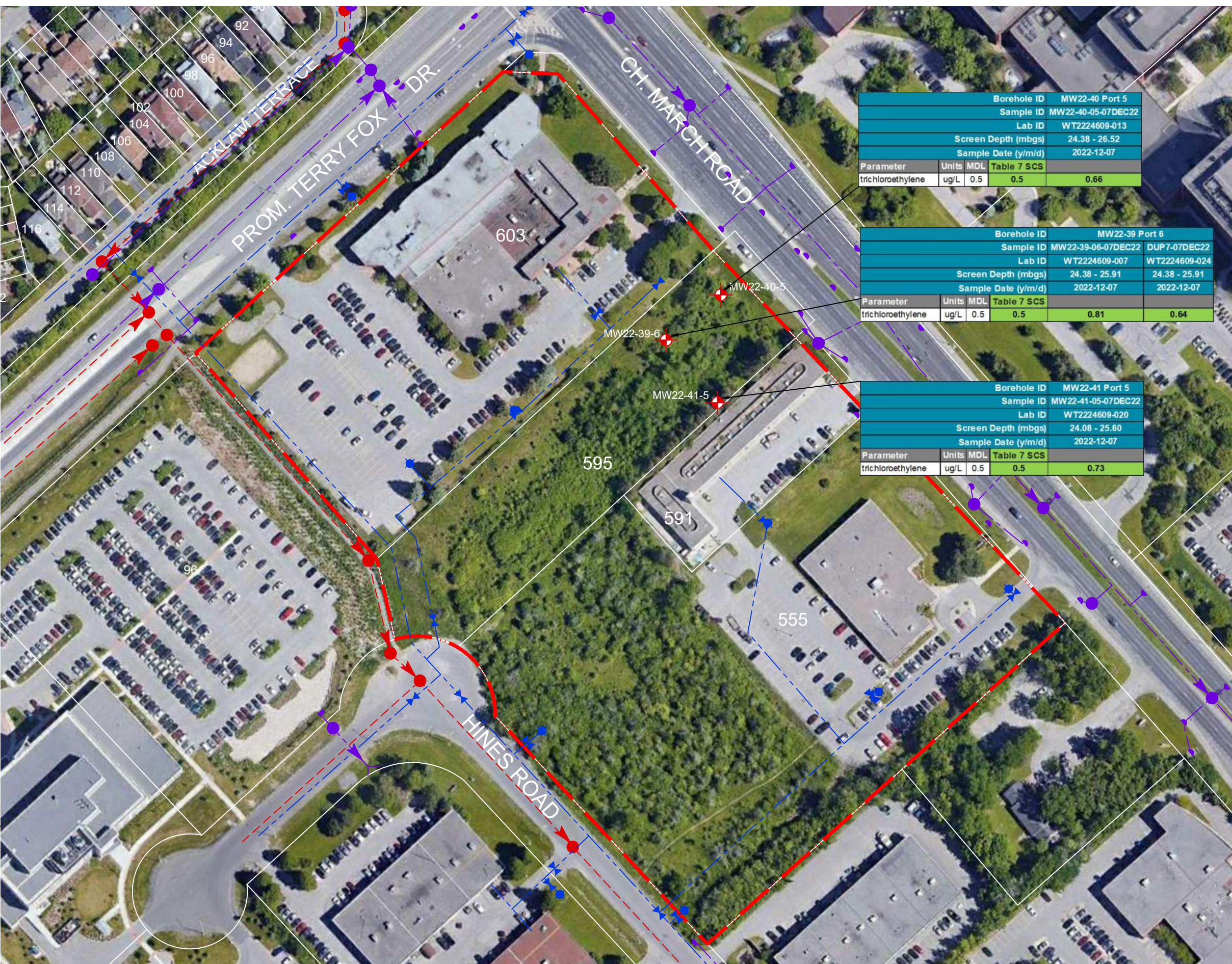
FIGURE 5G

GROUNDWATER QUALITY RESULTS  
BETWEEN 18.3 AND 23.8 mbgs: VOC



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2023/03/23 9:48:38 AM Mona Genovey

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 2023/04/06 11:12:41 AM Mona Genovey

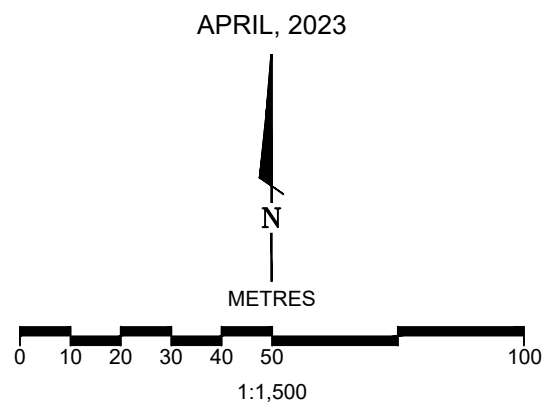


Borehole ID	MW22-40 Port 5			
Sample ID	MW22-40-05-07DEC22			
Lab ID	WT2224609-013			
Screen Depth (mbgs)	24.38 - 26.52			
Sample Date (y/m/d)	2022-12-07			
Parameter	Units	MDL	Table 7	SCS
trichloroethylene	ug/L	0.5	0.5	0.66

Borehole ID	MW22-39 Port 6			
Sample ID	MW22-39-06-07DEC22			
Lab ID	WT2224609-007			
Lab ID	WT2224609-024			
Screen Depth (mbgs)	24.38 - 25.91			
Screen Depth (mbgs)	24.38 - 25.91			
Sample Date (y/m/d)	2022-12-07			
Sample Date (y/m/d)	2022-12-07			
Parameter	Units	MDL	Table 7	SCS
trichloroethylene	ug/L	0.5	0.5	0.81
trichloroethylene	ug/L	0.5	0.5	0.64

Borehole ID	MW22-41 Port 5			
Sample ID	MW22-41-05-07DEC22			
Lab ID	WT2224609-020			
Screen Depth (mbgs)	24.08 - 25.60			
Sample Date (y/m/d)	2022-12-07			
Parameter	Units	MDL	Table 7	SCS
trichloroethylene	ug/L	0.5	0.5	0.73

MARCH AND MAIN DEVELOPMENTS INC  
 PROJECT NO. 0006-0103  
 555, 591, 595 AND 603 MARCH ROAD, KANATA, ONT.  
**PHASE TWO ENVIRONMENTAL  
 SITE ASSESSMENT**



- Legend**
- PHASE TWO SITE BOUNDARY
  - UNDERGROUND WATER LINE HYDRANT AND VALVE
  - UNDERGROUND SANITARY SEWER AND MH
  - UNDERGROUND STORM SEWER AND MH AND CB
  - MW21-16 MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS BELOW APPLIED GUIDELINE
  - MW21-16 MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS ABOVE APPLIED GUIDELINE

FIGURE 5H  
 GROUNDWATER QUALITY RESULTS  
 BETWEEN 24.1 AND 26.5 mbgs: VOC



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2023/03/23 10:00:09 AM Mona Genovey



MARCH AND MAIN DEVELOPMENTS INC

PROJECT NO. 0006-0103

555, 591, 595 AND 603 MARCH ROAD, KANATA, ONT.

### PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

APRIL, 2023



METRES



1:1,500

#### Legend





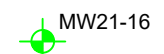
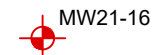
-  PHASE TWO SITE BOUNDARY
-  UNDERGROUND WATER LINE  
HYDRANT AND VALVE
-  UNDERGROUND SANITARY  
SEWER AND MH
-  UNDERGROUND STORM SEWER  
AND MH AND CB
-  MW21-16 MONITORING WELL LOCATION WITH  
GROUNDWATER PARAMETERS  
BELOW APPLIED GUIDELINE
-  MW21-16 MONITORING WELL LOCATION WITH  
GROUNDWATER PARAMETERS  
ABOVE APPLIED GUIDELINE

FIGURE 5 I

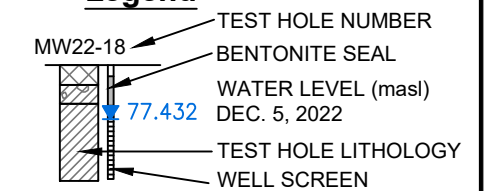
GROUNDWATER QUALITY RESULTS  
BETWEEN 27.4 AND 30.5 mgbs: VOC



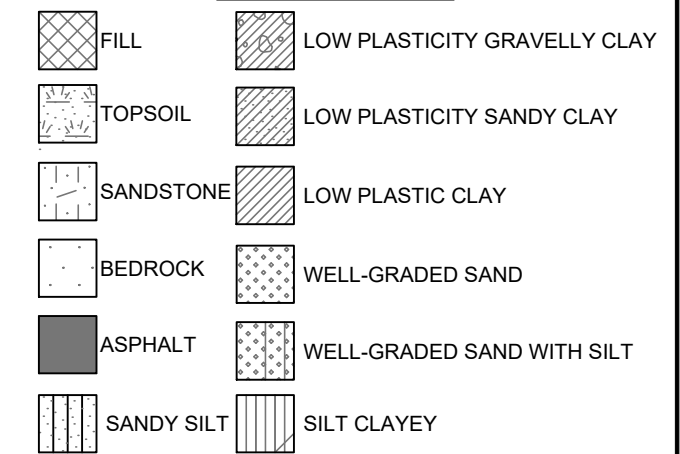
PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023

Legend



LITHOLOGY GRAPHICS



ANALYTICAL RESULTS

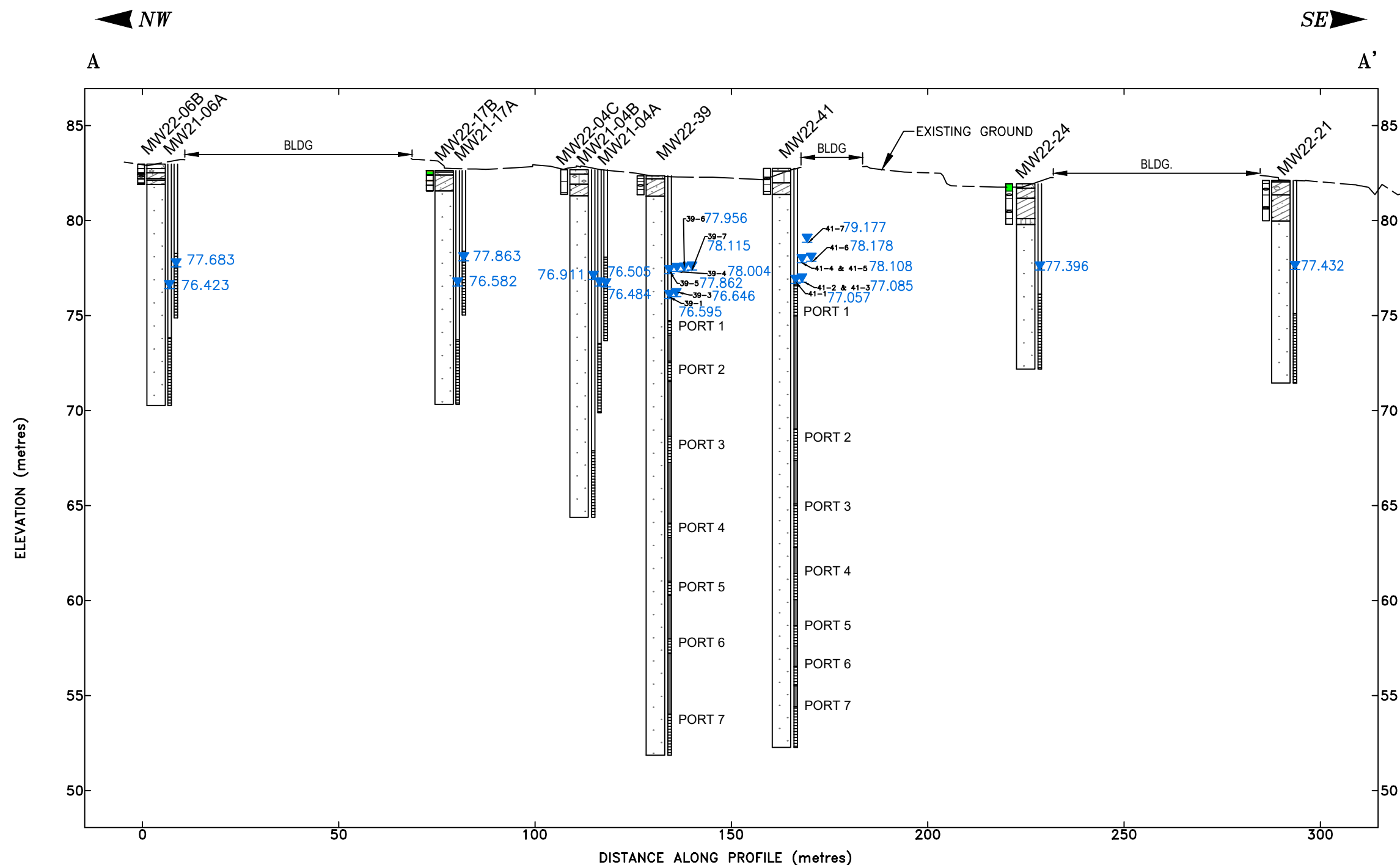
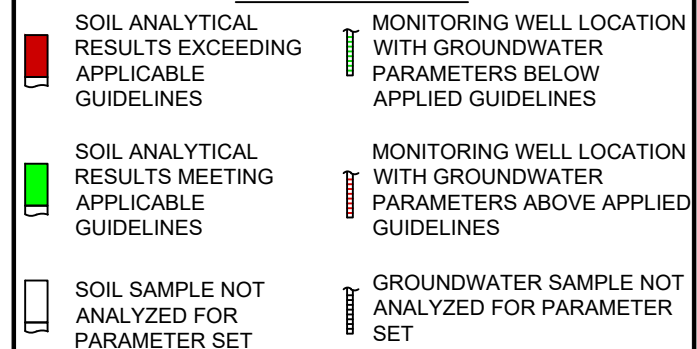


FIGURE 6A  
CROSS SECTION A-A'  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
METALS ANALYTICAL RESULTS

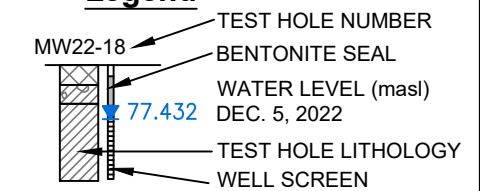


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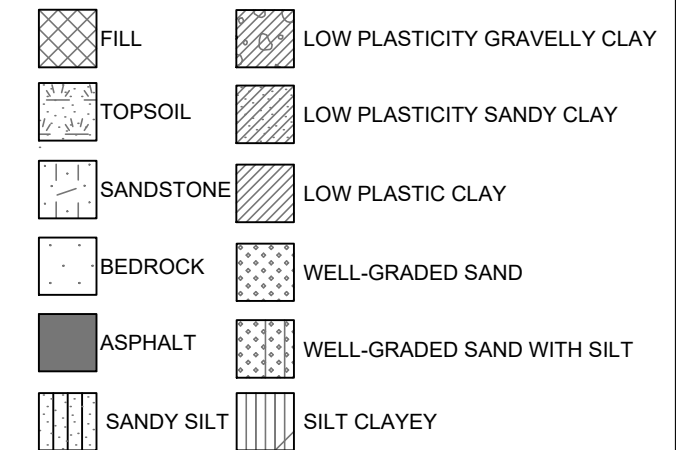
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

APRIL, 2023

Legend



LITHOLOGY GRAPHICS



ANALYTICAL RESULTS

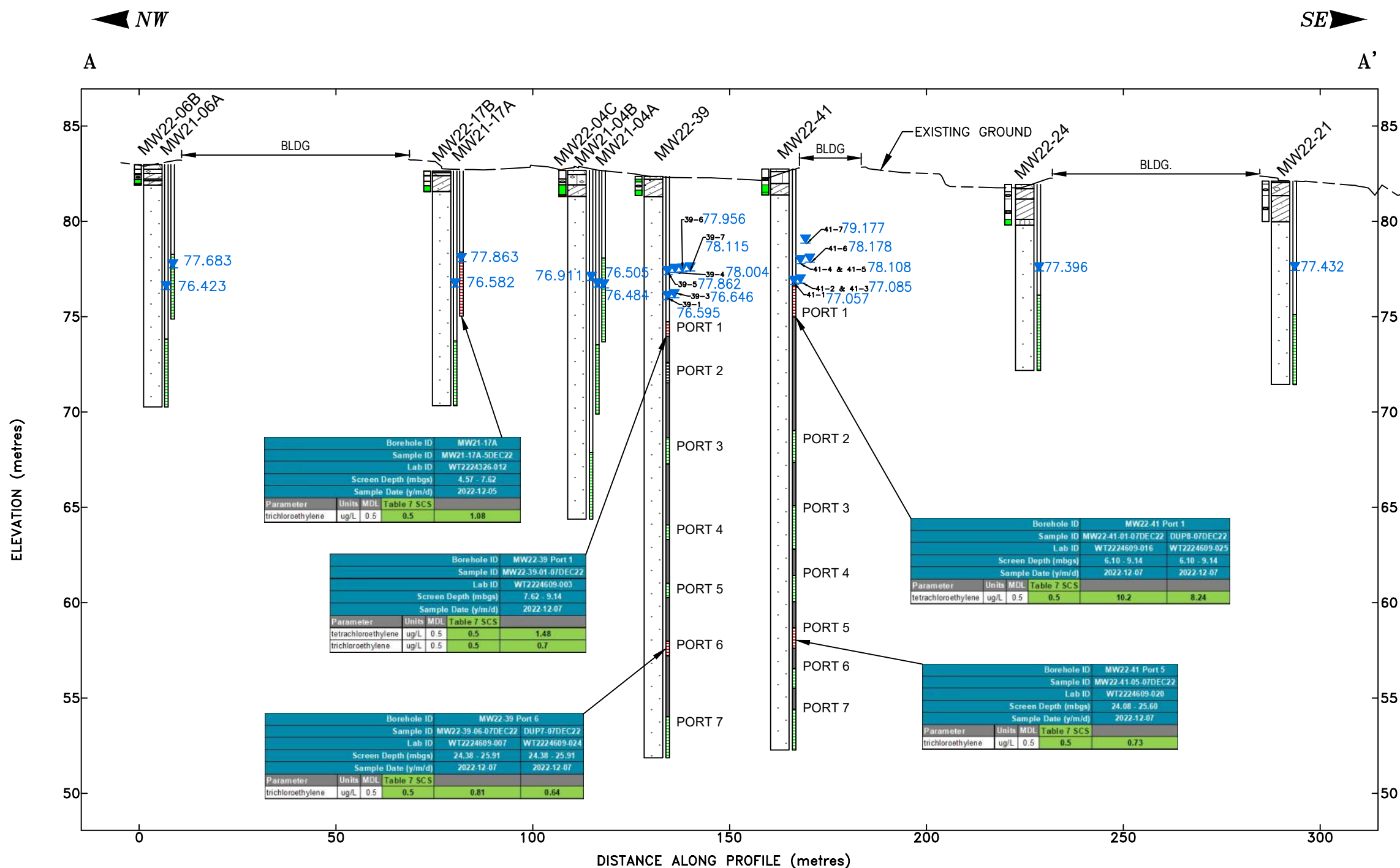
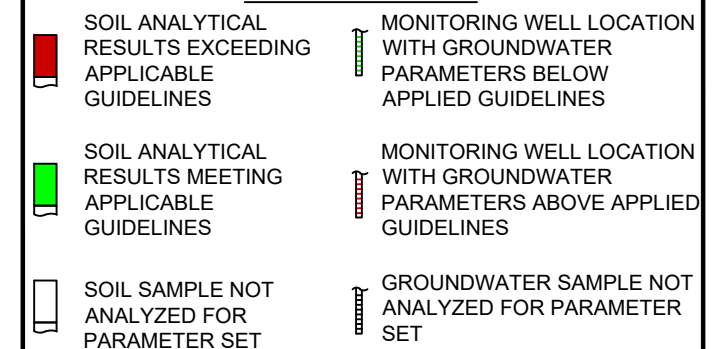


FIGURE 6B  
CROSS SECTION A-A'  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
VOC ANALYTICAL RESULTS

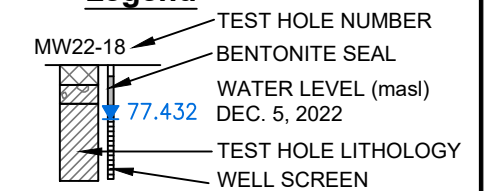


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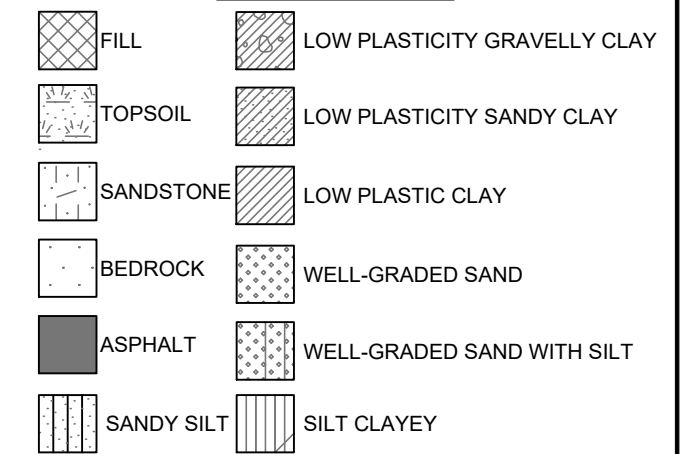
PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023

Legend



LITHOLOGY GRAPHICS



ANALYTICAL RESULTS

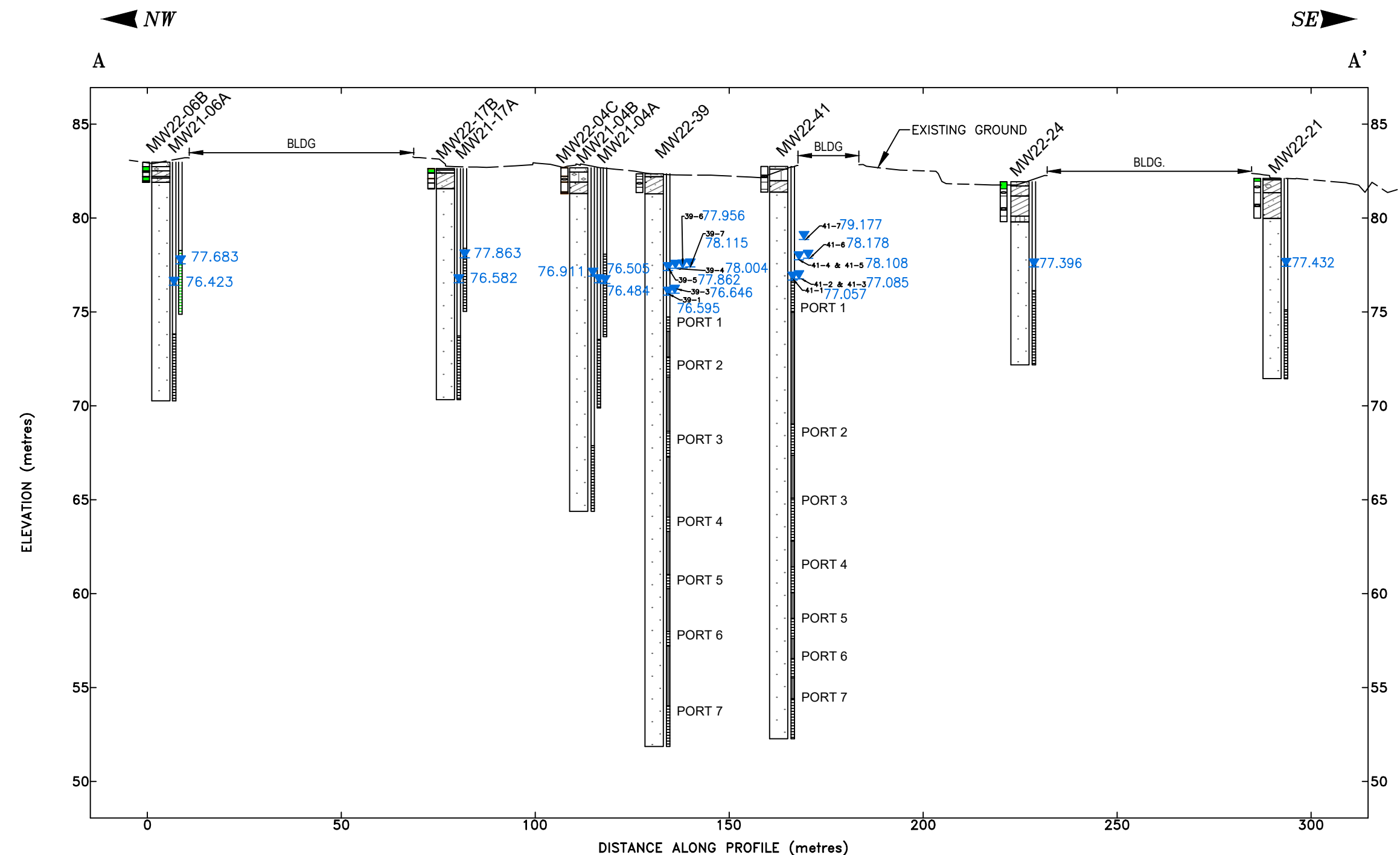
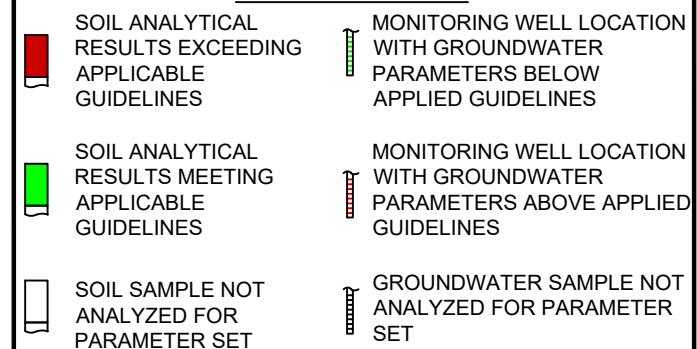


FIGURE 6C  
CROSS SECTION A-A'  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
PHC ANALYTICAL RESULTS

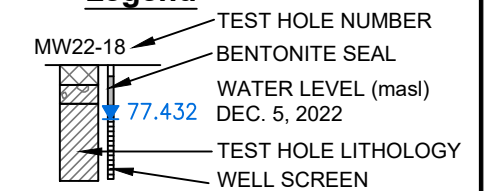


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2023/04/04 9:45:32 AM Mona Genovey

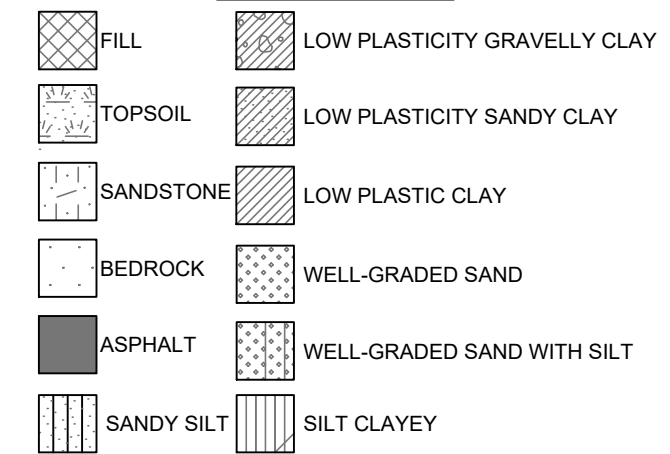
PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023

Legend



LITHOLOGY GRAPHICS



ANALYTICAL RESULTS

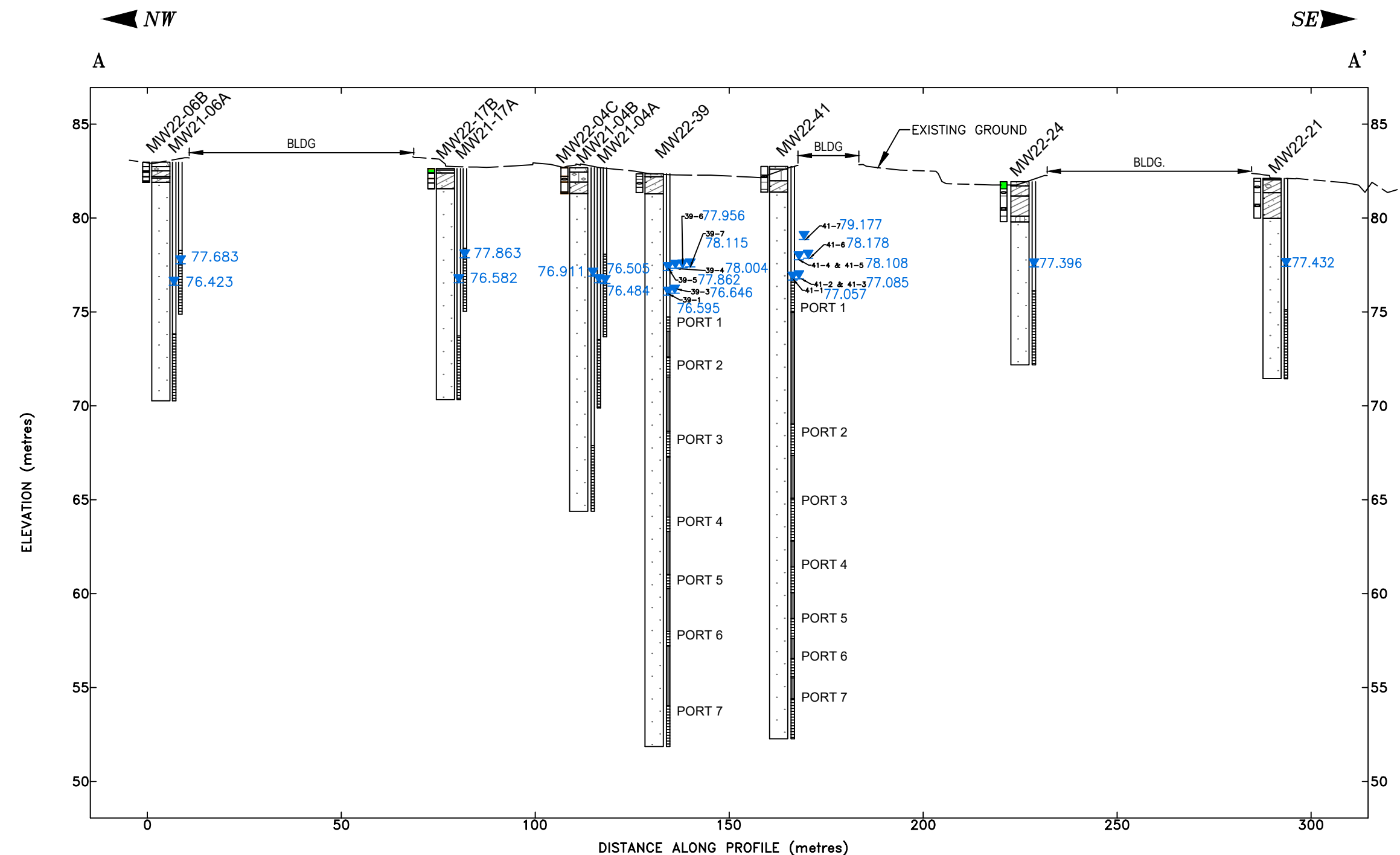
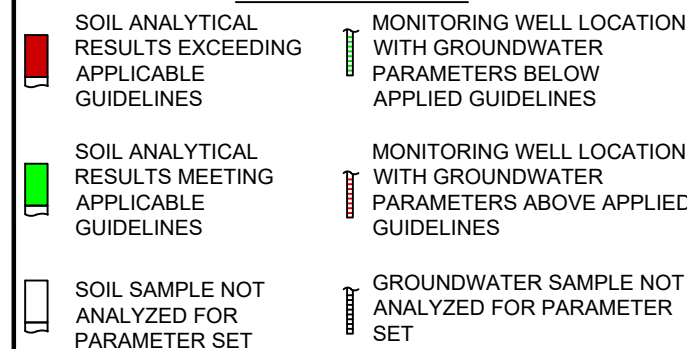


FIGURE 6D  
CROSS SECTION A-A'  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
PAH ANALYTICAL RESULTS



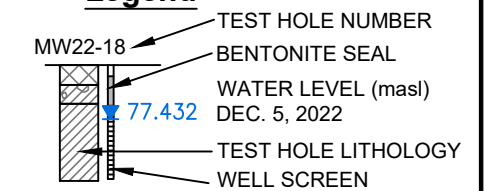
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2023/04/06 11:10:03 AM Mona Genovey



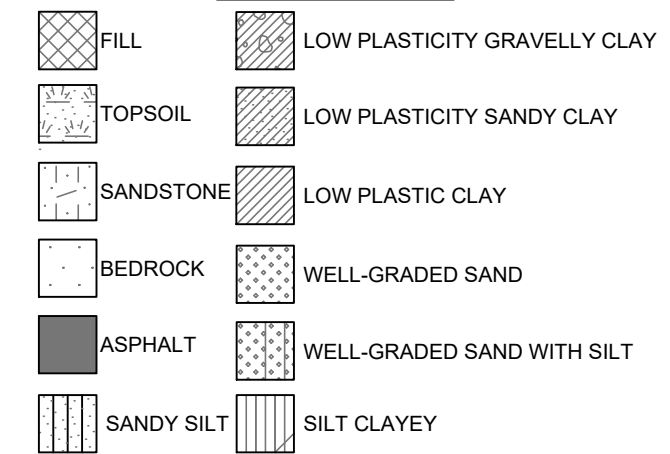
PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023

Legend



LITHOLOGY GRAPHICS



ANALYTICAL RESULTS

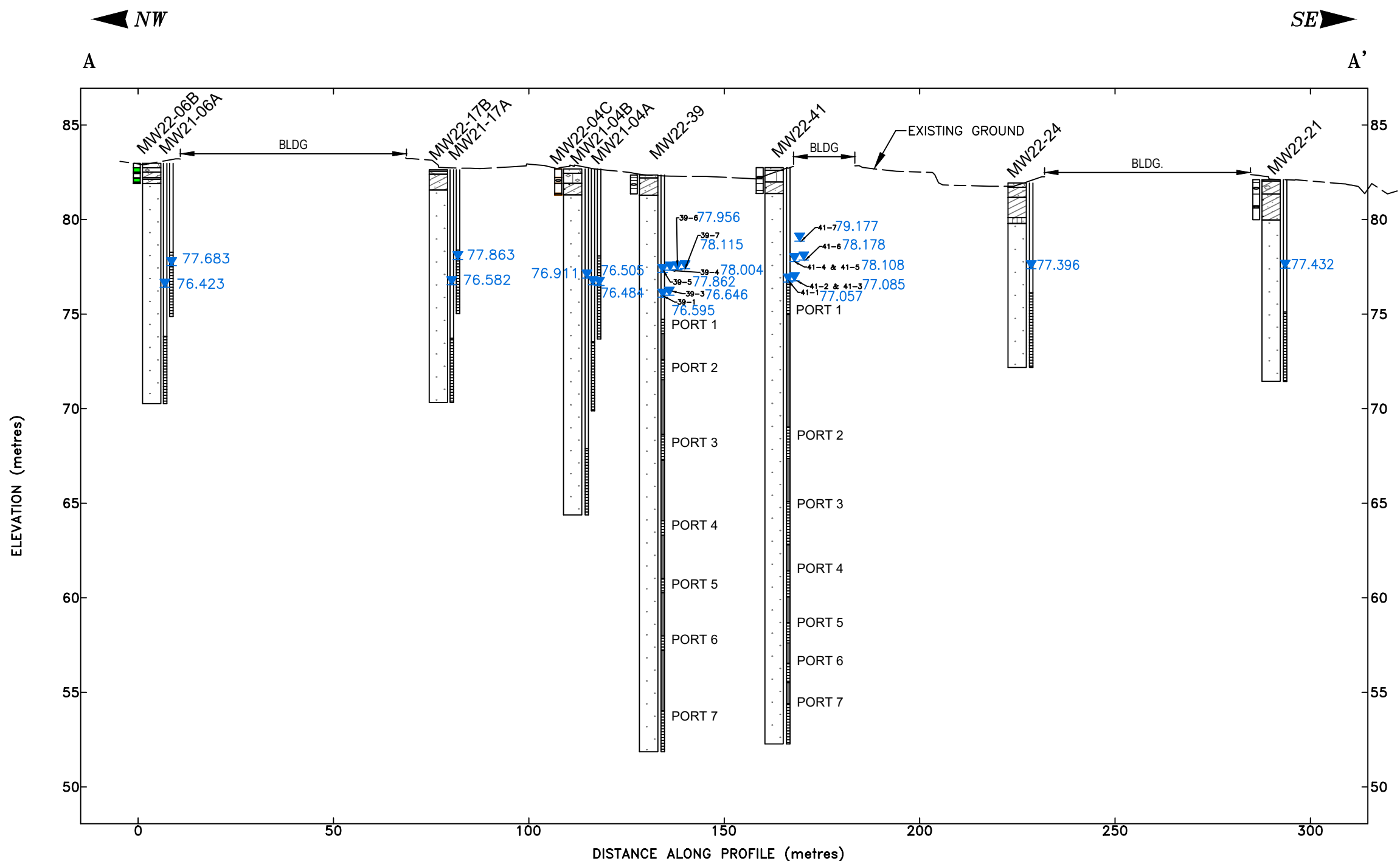
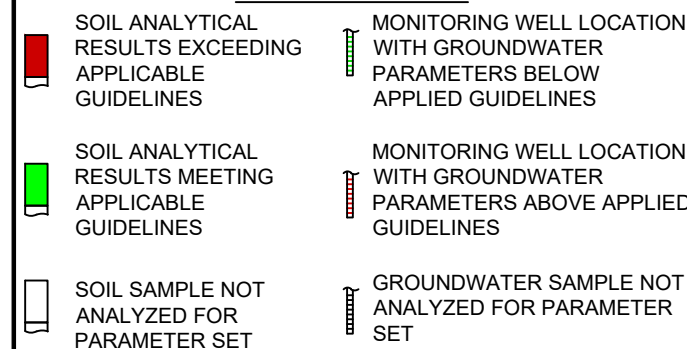


FIGURE 6E  
CROSS SECTION A-A'  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
PCB ANALYTICAL RESULTS

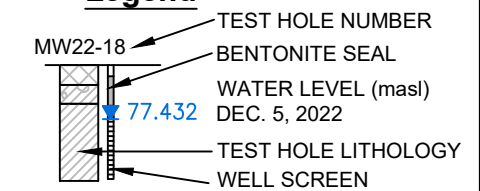


C:\Users\MonaGenovey\Omni-McCann\Projects\0006 - Main & Main Developments\01 - March Road, Ottawa\03 - O.Reg 153 Phase Two ESA\Drawings\0006-0103-PHASE II ESA-FIG 6E.dwg  
2023/04/04 8:41:04 AM Mona Genovey

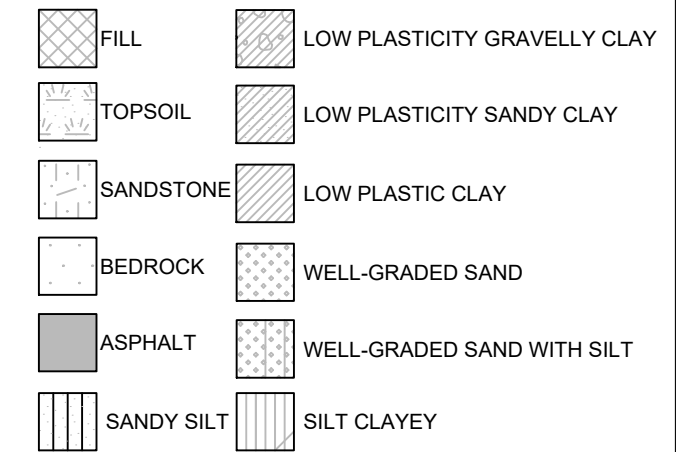
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

APRIL, 2023

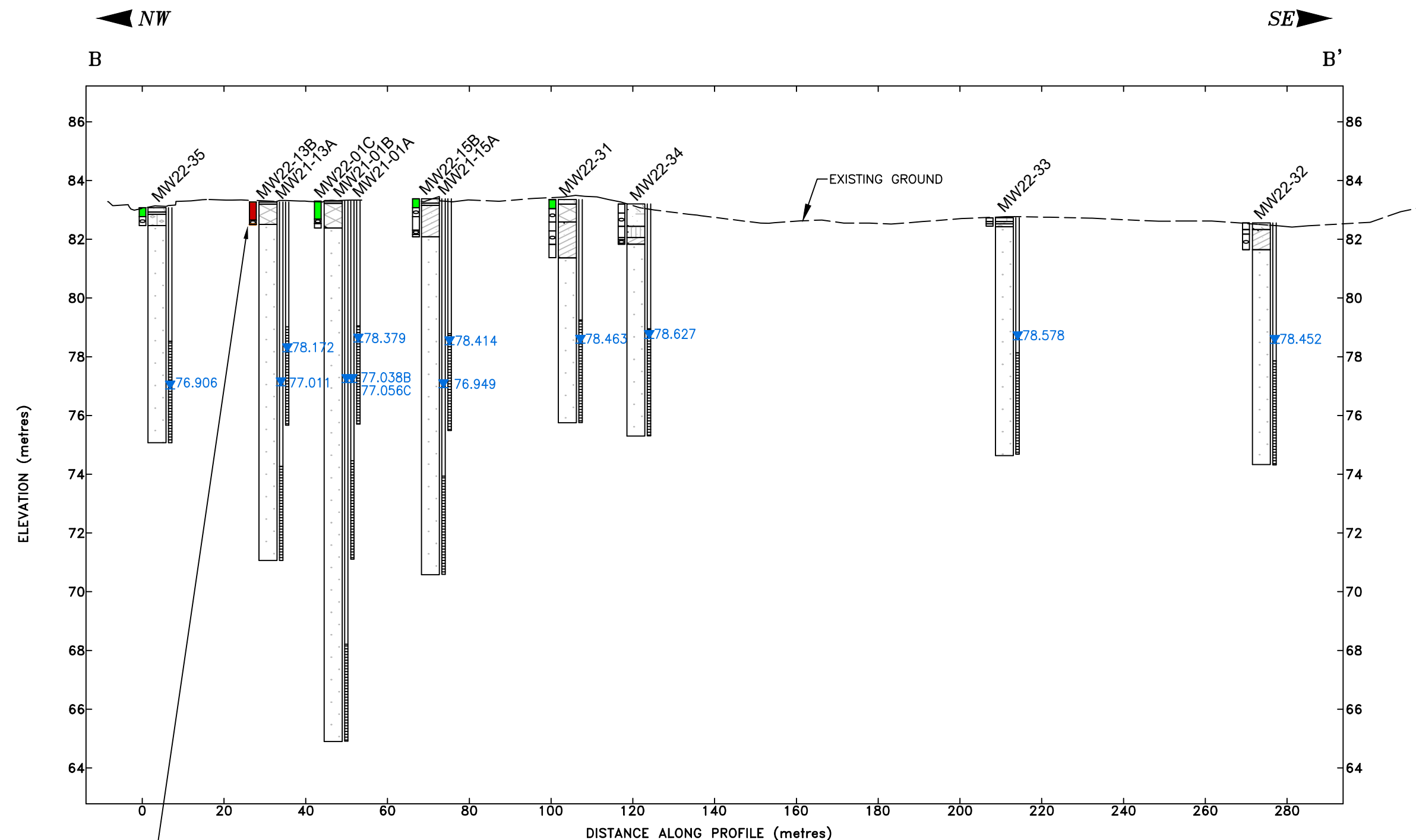
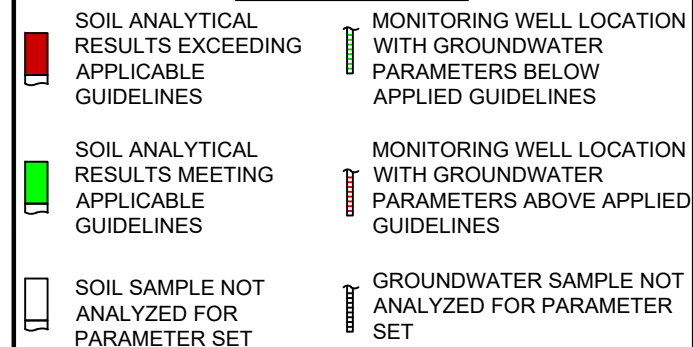
Legend



LITHOLOGY GRAPHICS



ANALYTICAL RESULTS



Borehole ID		MW22-13B	
Sample ID	22-13B-0-2	DUPE	
Lab ID	WT2221612-996	WT2221612-007	
Sample Depth (m)	0 - 0.6	0 - 0.6	
Sample Date (d/m/y)	10-Nov-2022	10-Nov-2022	
Parameter	Units	MDL	Table 7 SCS
<b>Soluble Ions</b>			
sodium adsorption ratio [SAR]	-	0.1	5
			8.15
			9.43

FIGURE 7A  
CROSS SECTION B-B  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
METALS ANALYTICAL RESULTS

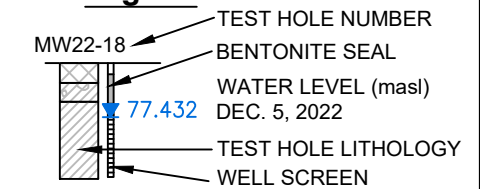


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2023/04/04 8:41:49 AM Mona Genovey

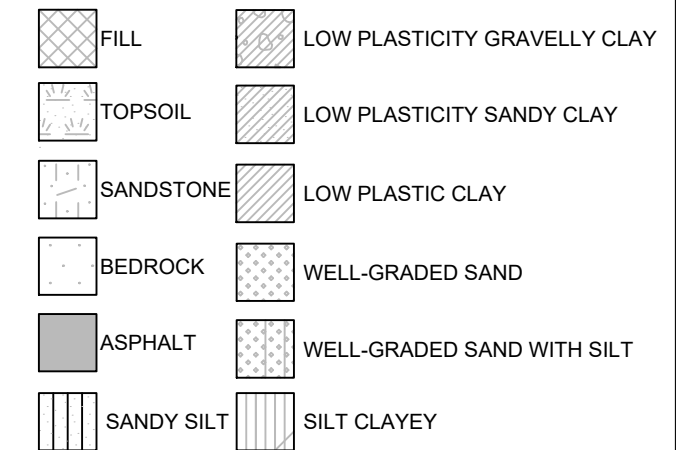
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

APRIL, 2023

Legend



LITHOLOGY GRAPHICS



ANALYTICAL RESULTS

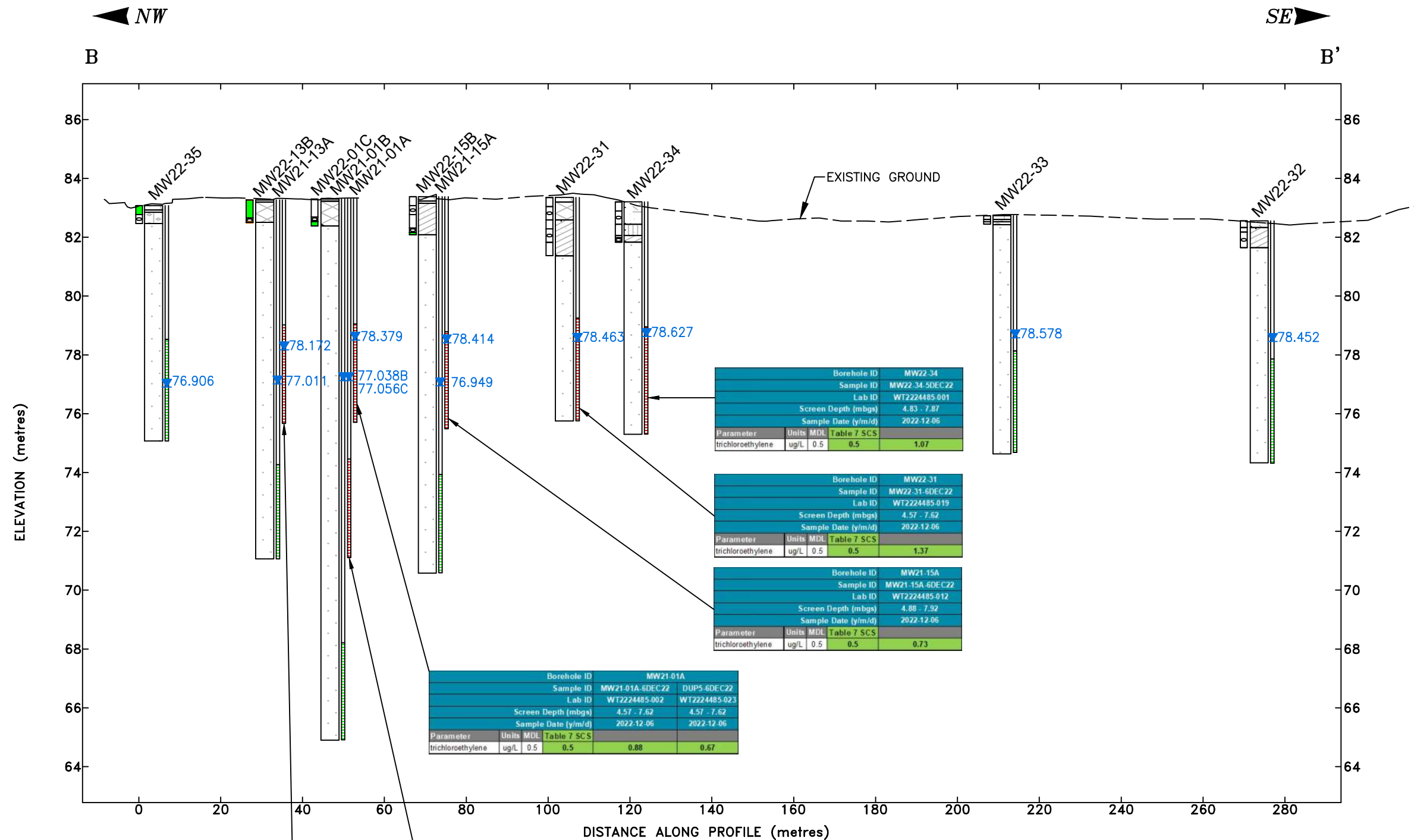
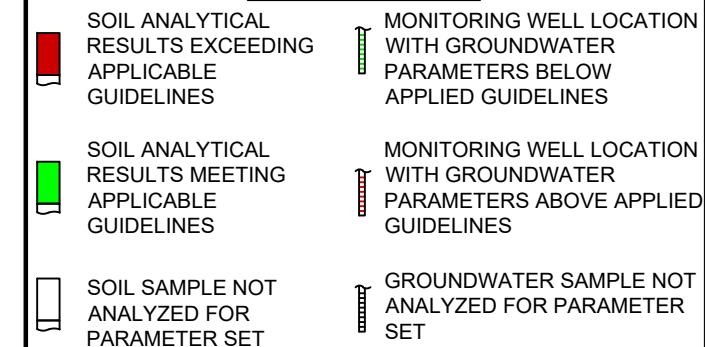


FIGURE 7B  
CROSS SECTION B-B  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
VOC ANALYTICAL RESULTS

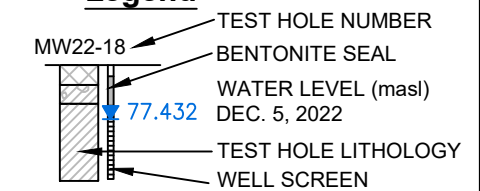


C:\Users\MonicaGenovey\Omni-McCann\Projects\0006 - Main & Main Developments\01 - March Road, Ottawa\03 - O.Reg 153 Phase Two ESA Drawings\0006-0103-PHASE II ESA-FIG 7B.dwg 2023/04/04 8:42:27 AM Monica Genovey

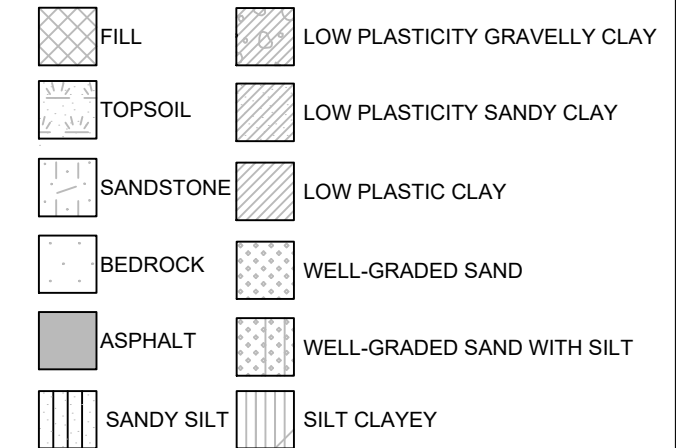
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

APRIL, 2023

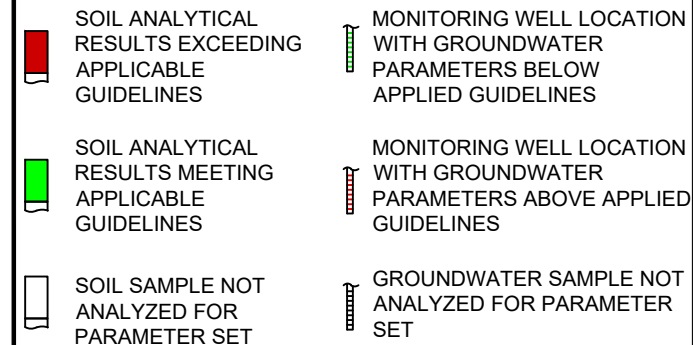
Legend



LITHOLOGY GRAPHICS



ANALYTICAL RESULTS



Borehole ID		MW22-13B	
Sample ID	22-13B 0-2	DUP6	
Lab ID	WT2221612-006	WT2221612-007	
Sample Depth (m)	0 - 0.6	0 - 0.6	
Sample Date (d/m/y)	10-Nov-2022	10-Nov-2022	
Parameter	Units	MDL	Table 7 SCS
<b>Petroleum Hydrocarbons (PHC)</b>			
F4G-9g	mg/kg	250	5600 7130 7740

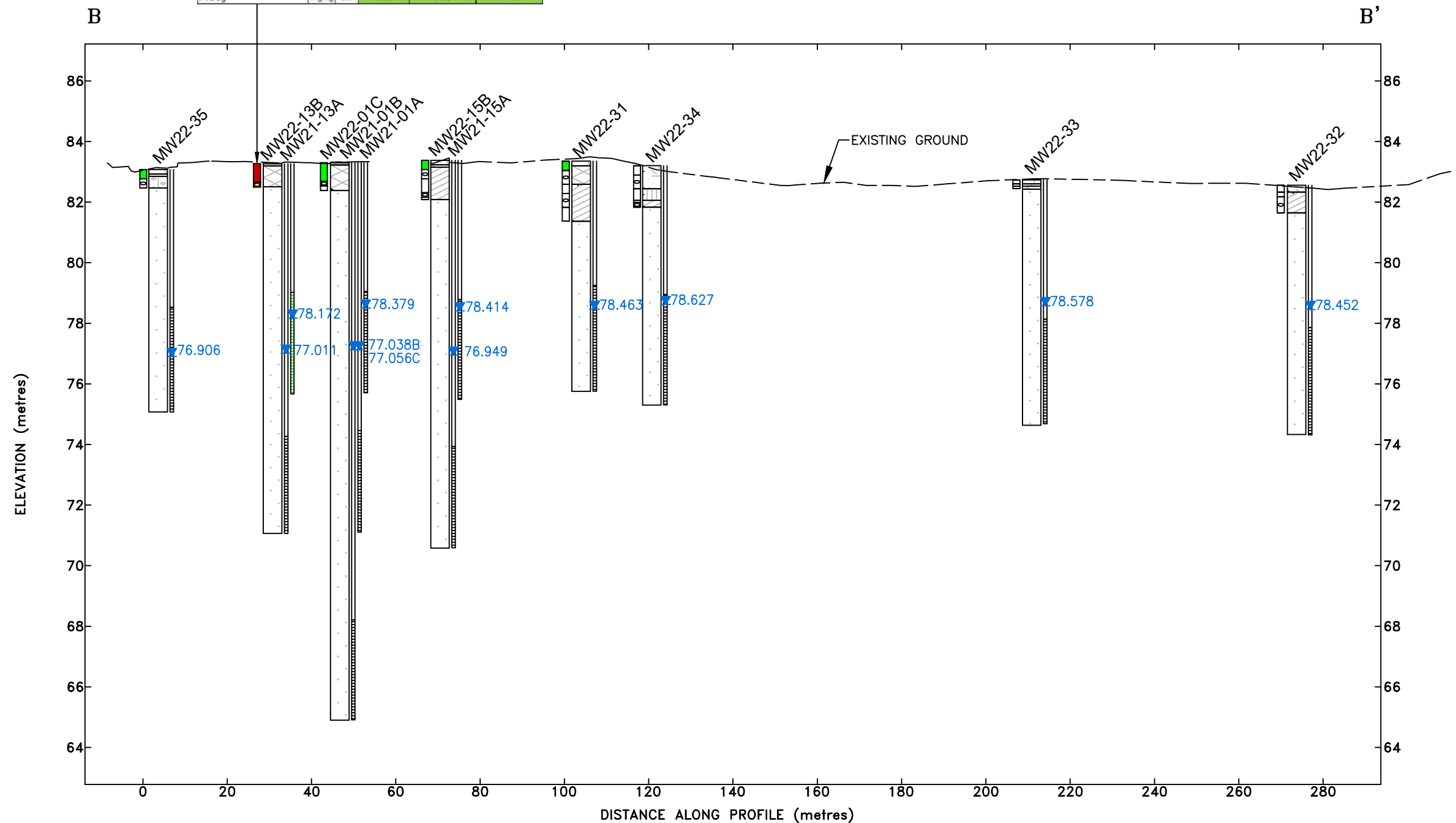


FIGURE 7C  
CROSS SECTION B-B  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
PHC ANALYTICAL RESULTS

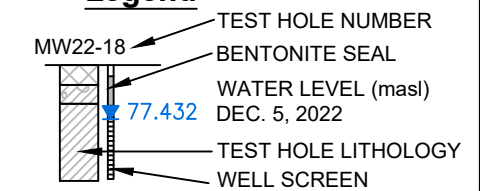


C:\Users\MonicaGenovey\Omni-McCann\Projects\0006 - Main & Main Developments\01 - March Road, Ottawa\03 - O.Reg 153 Phase Two ESA Drawings\0006-0103-PHASE II ESA-FIG 7C.dwg 2023/04/06 11:07:46 AM Monica Genovey

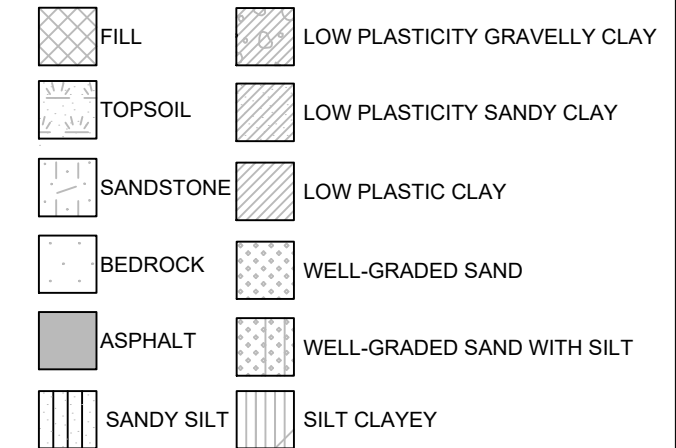
**PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT**

APRIL, 2023

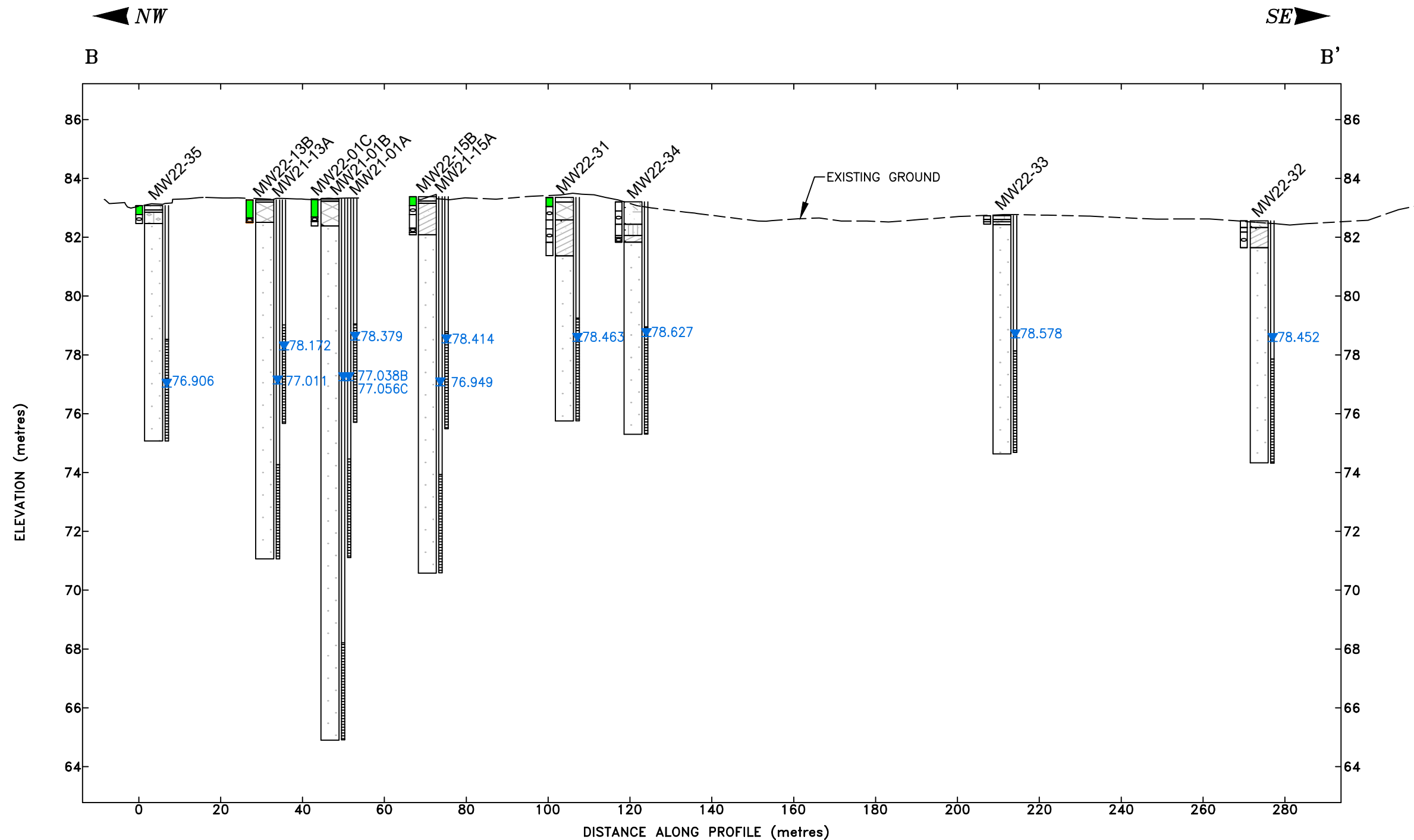
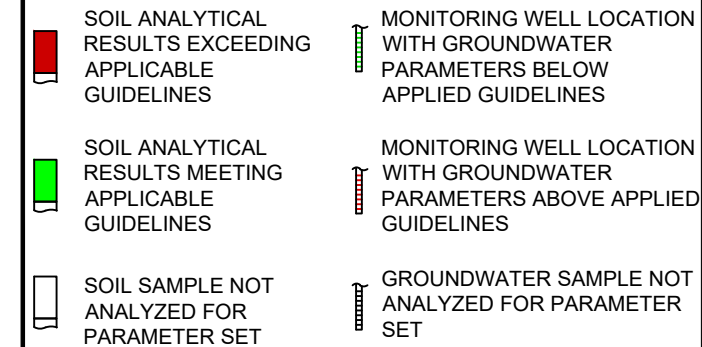
**Legend**



**LITHOLOGY GRAPHICS**



**ANALYTICAL RESULTS**



**FIGURE 7D  
CROSS SECTION B-B  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
PAH ANALYTICAL RESULTS**

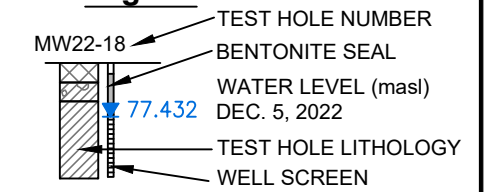


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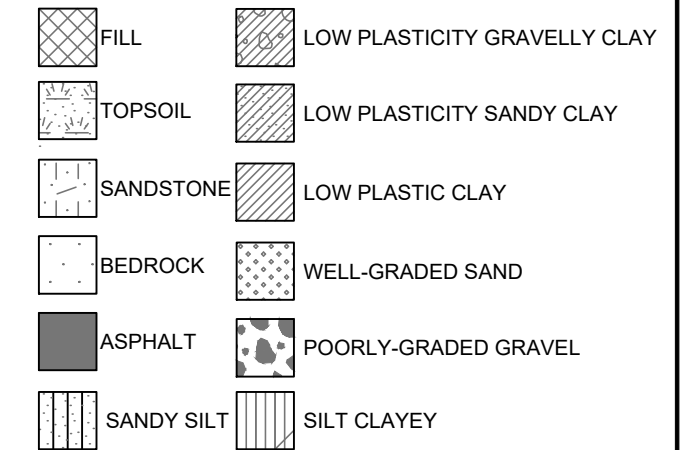
PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023

Legend



LITHOLOGY GRAPHICS



ANALYTICAL RESULTS

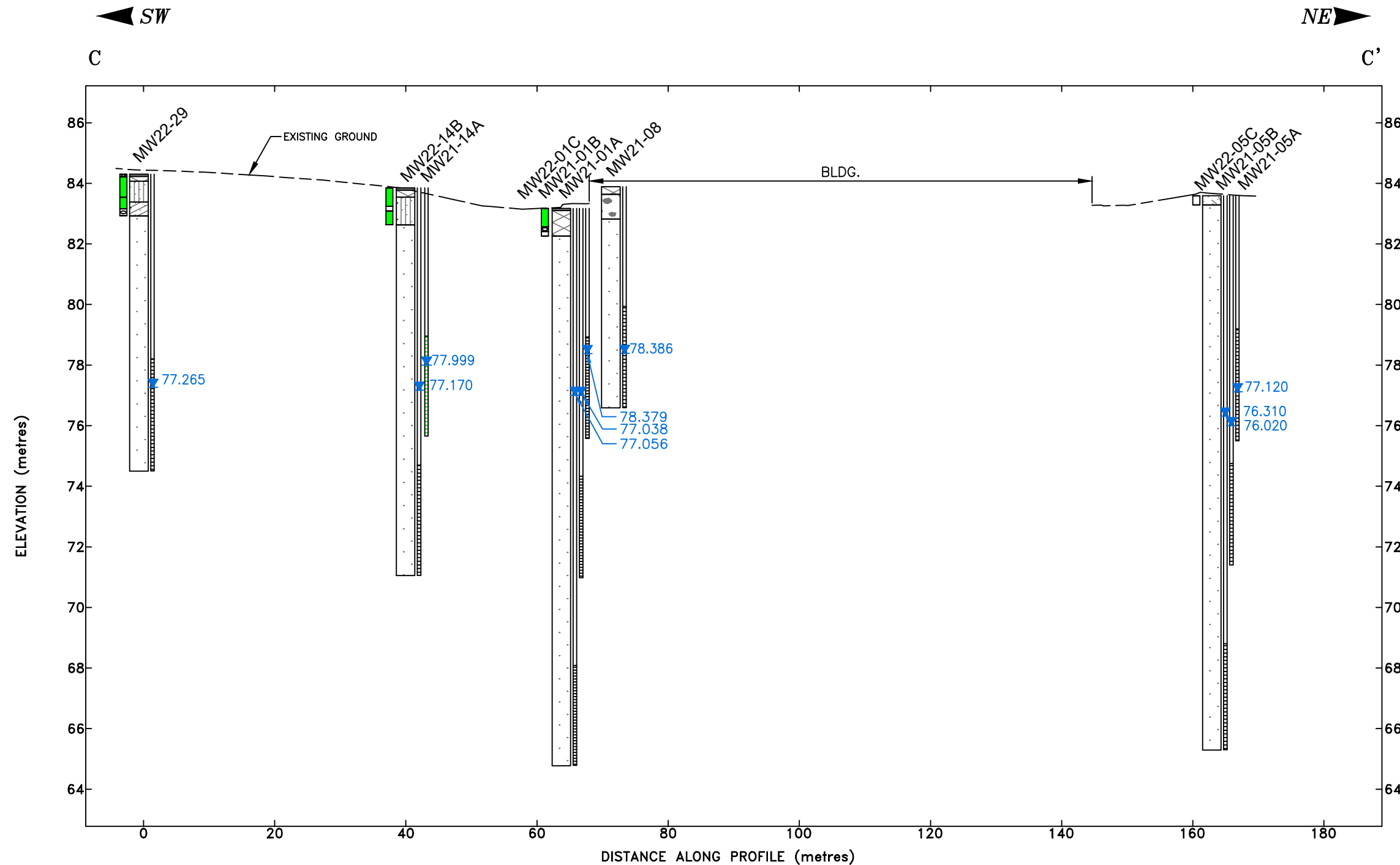
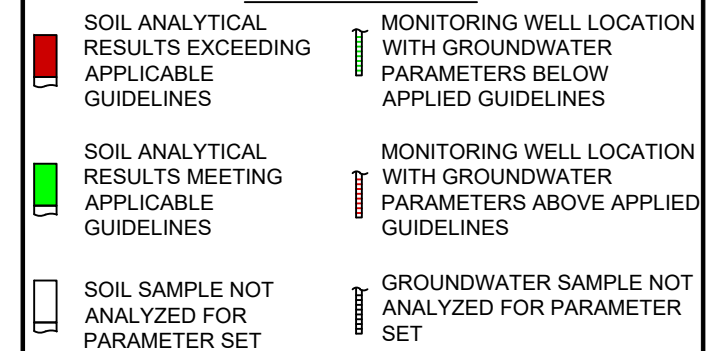


FIGURE 8A  
CROSS SECTION C-C  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
METALS ANALYTICAL RESULTS

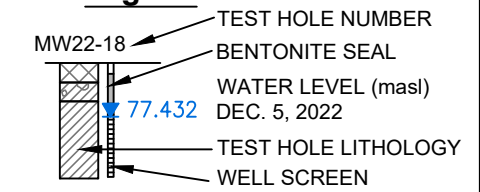


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2023/04/04 9:00:56 AM Mona Genovey

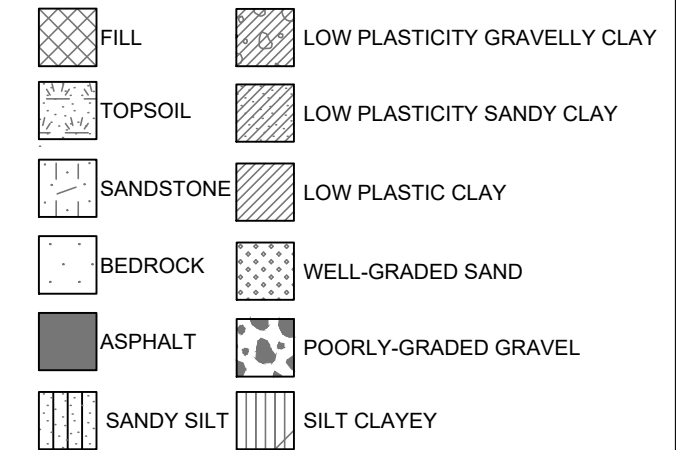
PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023

Legend



LITHOLOGY GRAPHICS



ANALYTICAL RESULTS

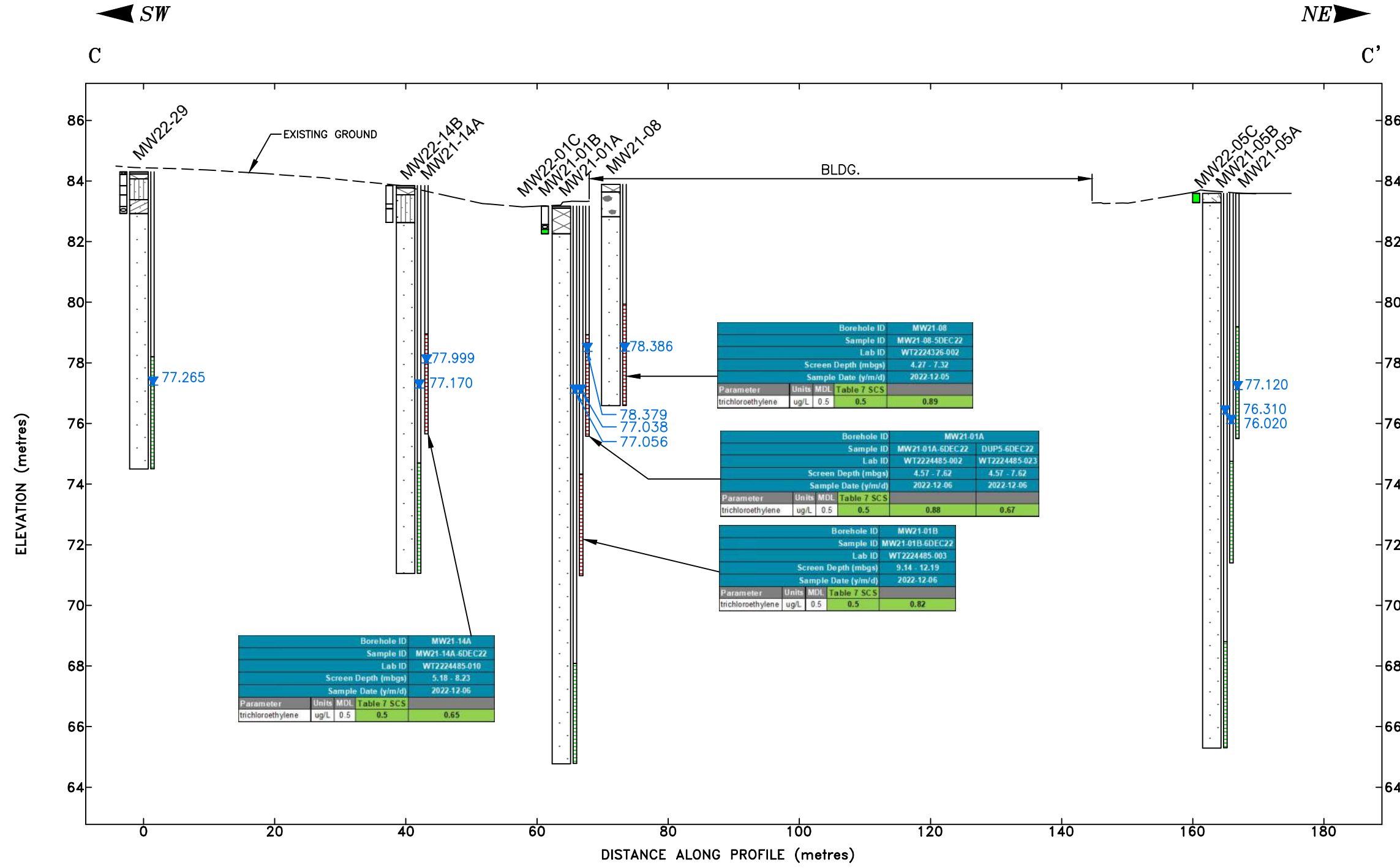
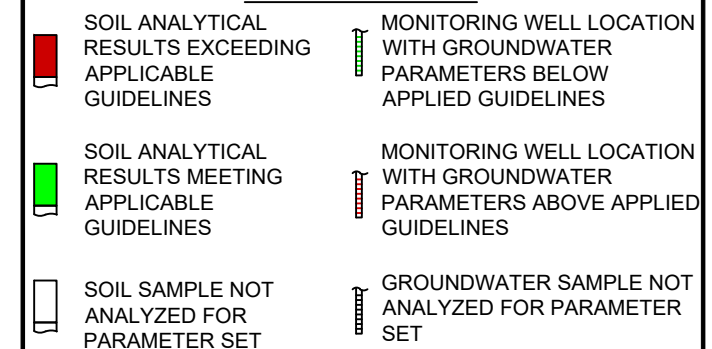


FIGURE 8B  
CROSS SECTION C-C  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
VOC ANALYTICAL RESULTS

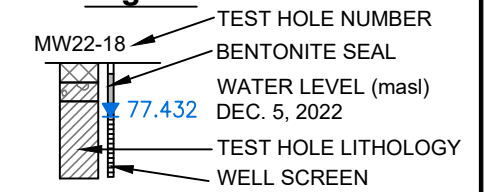


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2023/04/04 9:01:49 AM Mona Genovey

PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023

Legend



LITHOLOGY GRAPHICS

	FILL		LOW PLASTICITY GRAVELLY CLAY
	TOPSOIL		LOW PLASTICITY SANDY CLAY
	SANDSTONE		LOW PLASTIC CLAY
	BEDROCK		WELL-GRADED SAND
	ASPHALT		POORLY-GRADED GRAVEL
	SANDY SILT		SILT CLAYEY

ANALYTICAL RESULTS

	SOIL ANALYTICAL RESULTS EXCEEDING APPLICABLE GUIDELINES		MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS BELOW APPLIED GUIDELINES
	SOIL ANALYTICAL RESULTS MEETING APPLICABLE GUIDELINES		MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS ABOVE APPLIED GUIDELINES
	SOIL SAMPLE NOT ANALYZED FOR PARAMETER SET		GROUNDWATER SAMPLE NOT ANALYZED FOR PARAMETER SET

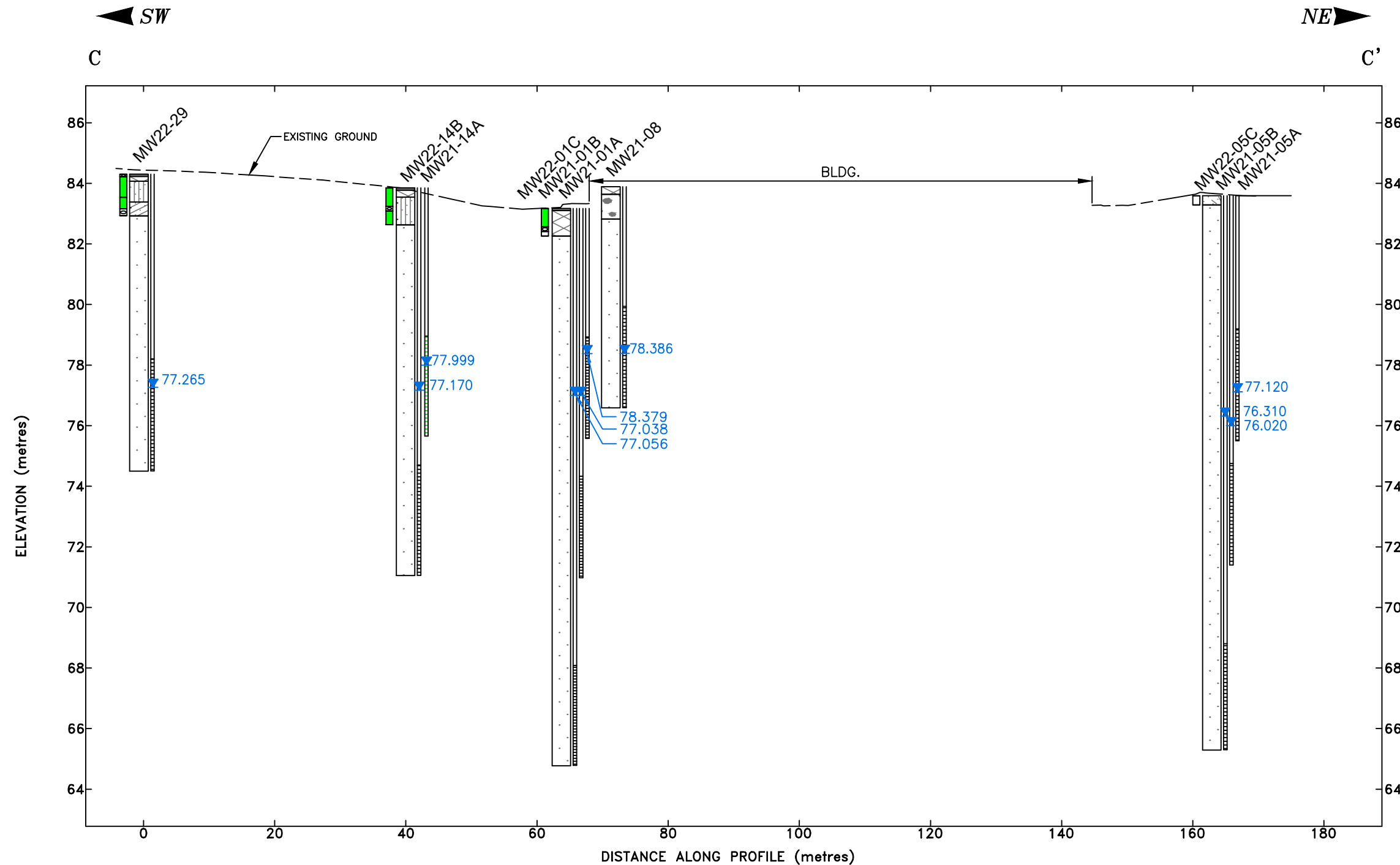


FIGURE 8C  
CROSS SECTION C-C  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
PHC ANALYTICAL RESULTS

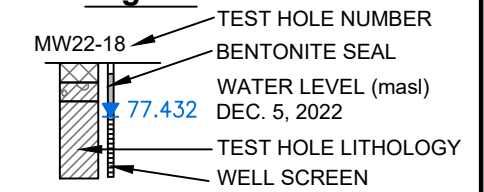




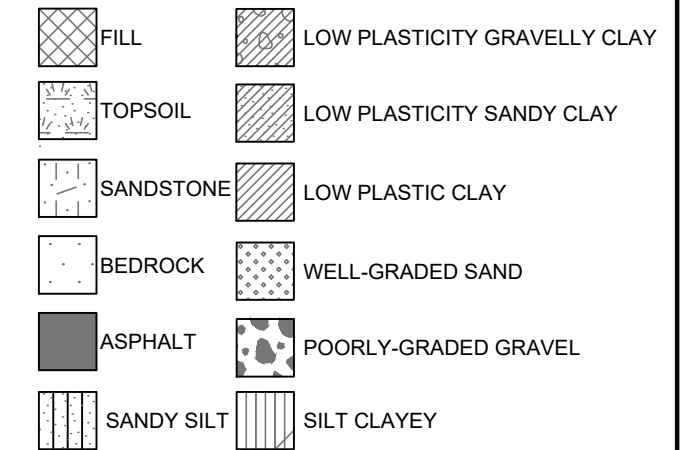
PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023

Legend



LITHOLOGY GRAPHICS



ANALYTICAL RESULTS

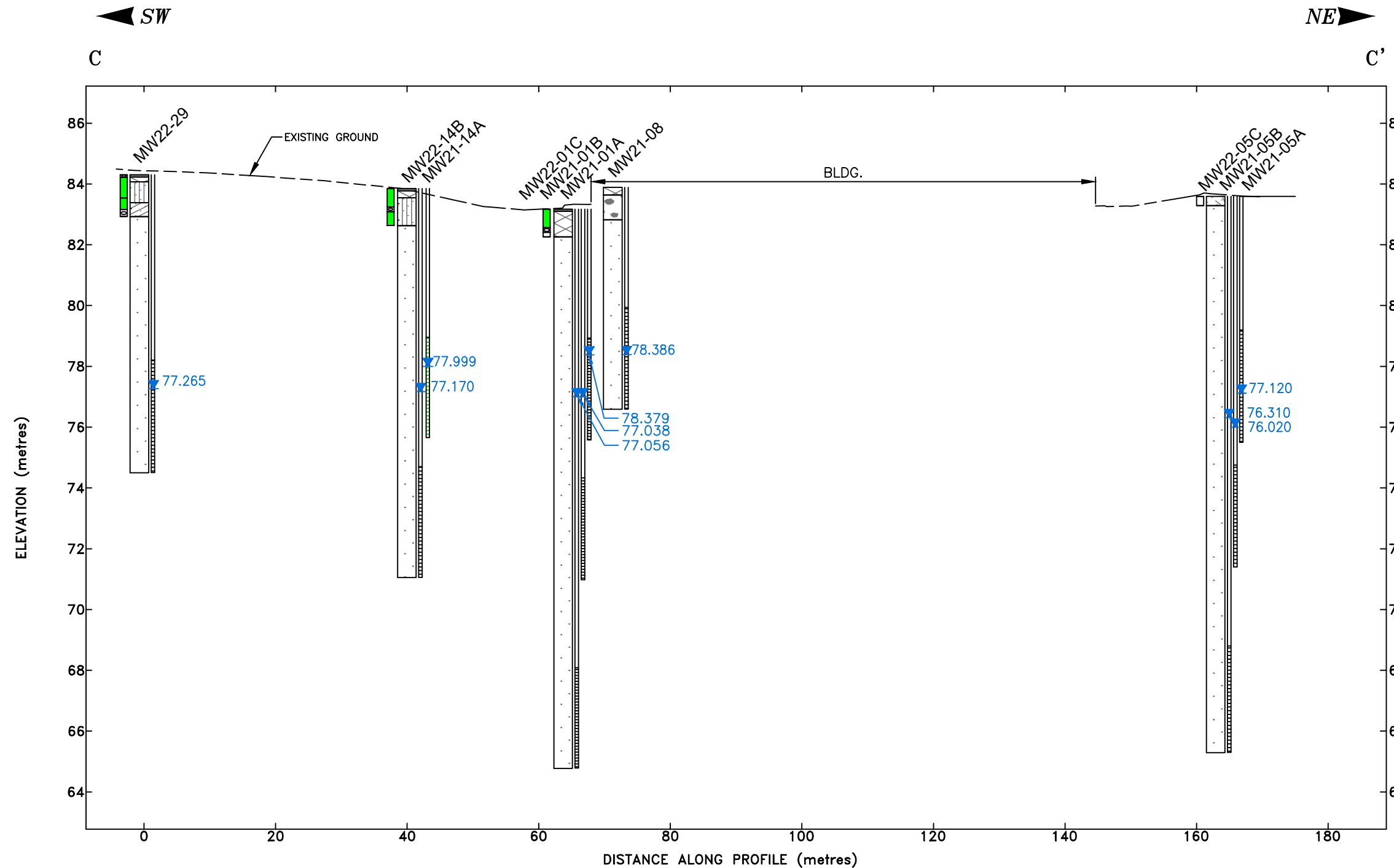
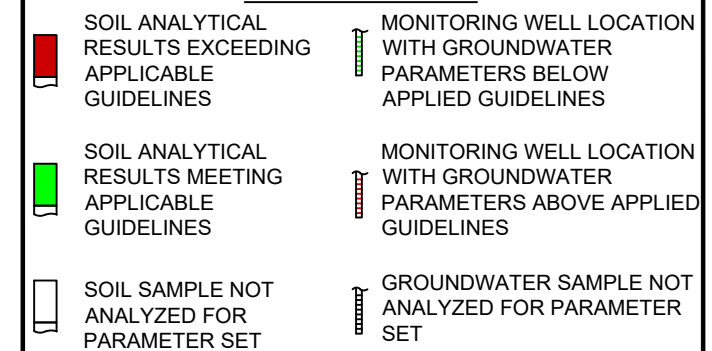


FIGURE 8D  
CROSS SECTION C-C  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
PAH ANALYTICAL RESULTS

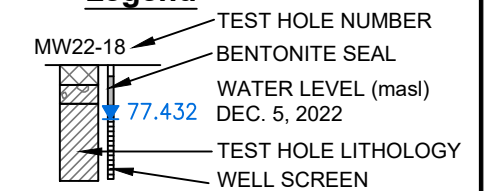


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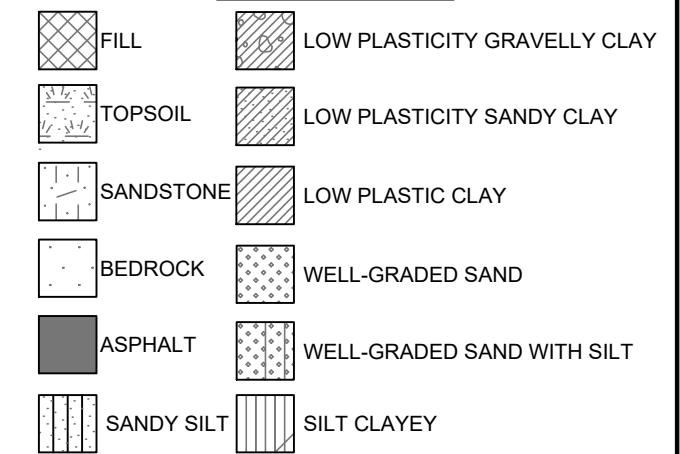
PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023

Legend



LITHOLOGY GRAPHICS



ANALYTICAL RESULTS

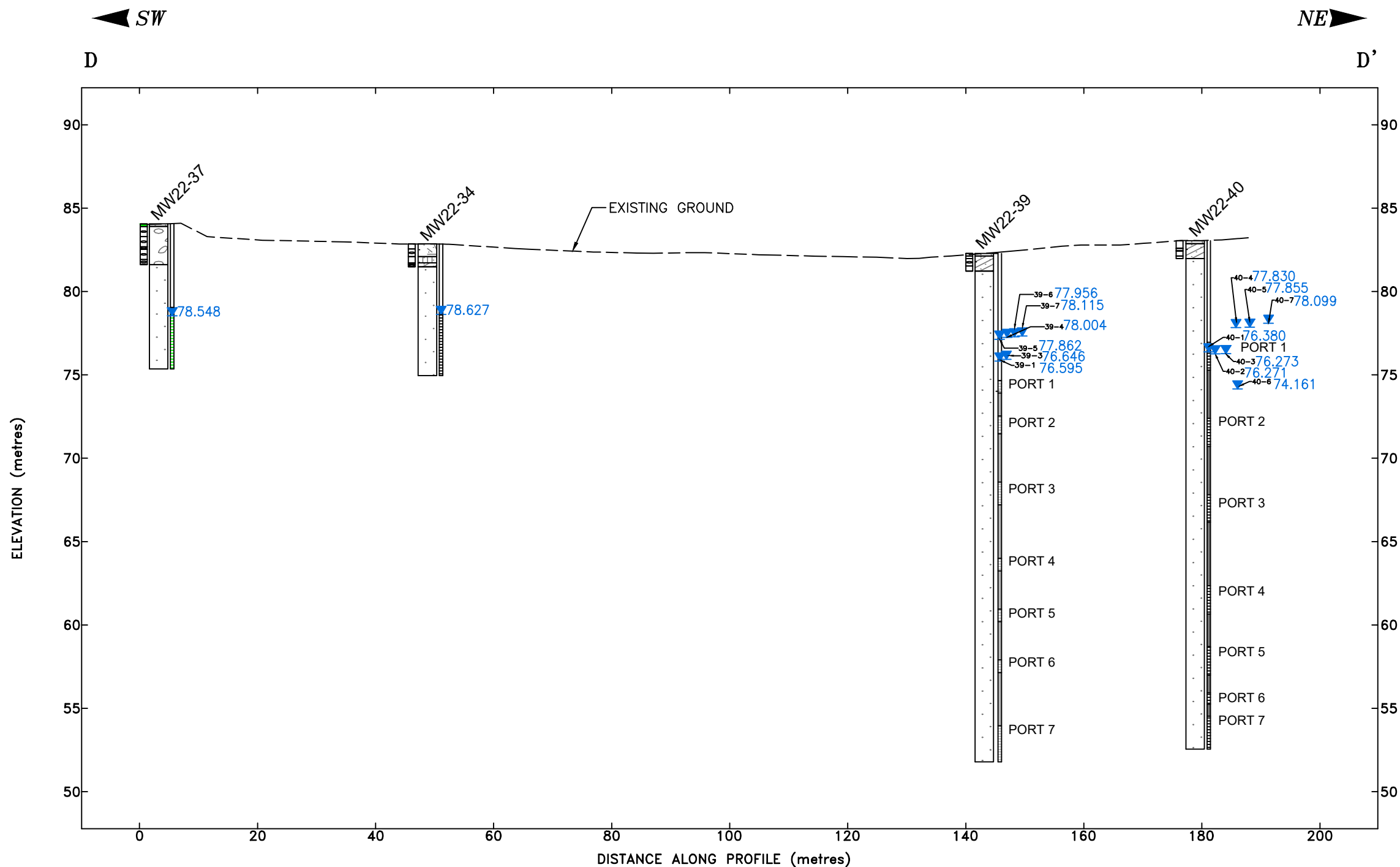
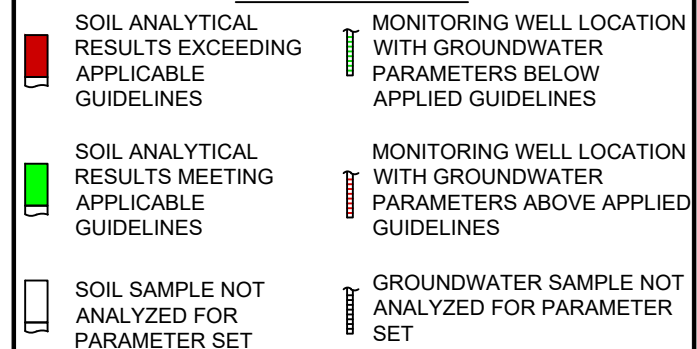


FIGURE 9A  
CROSS SECTION D-D  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
METALS ANALYTICAL RESULTS

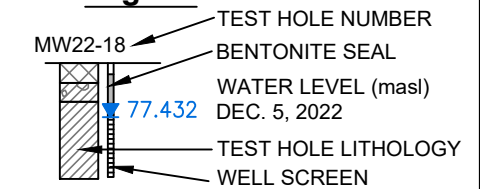


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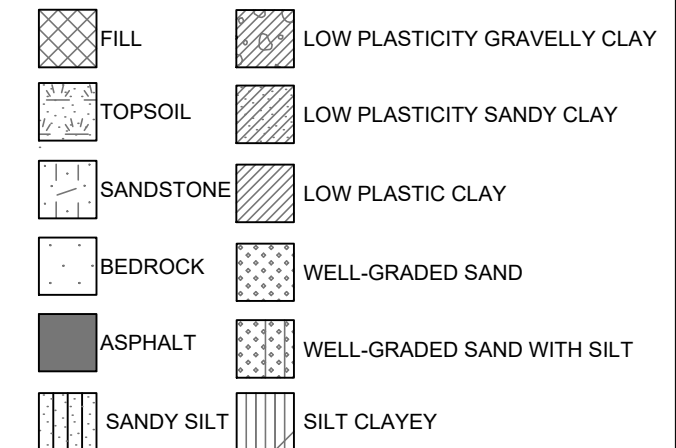
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

APRIL, 2023

Legend



LITHOLOGY GRAPHICS



ANALYTICAL RESULTS

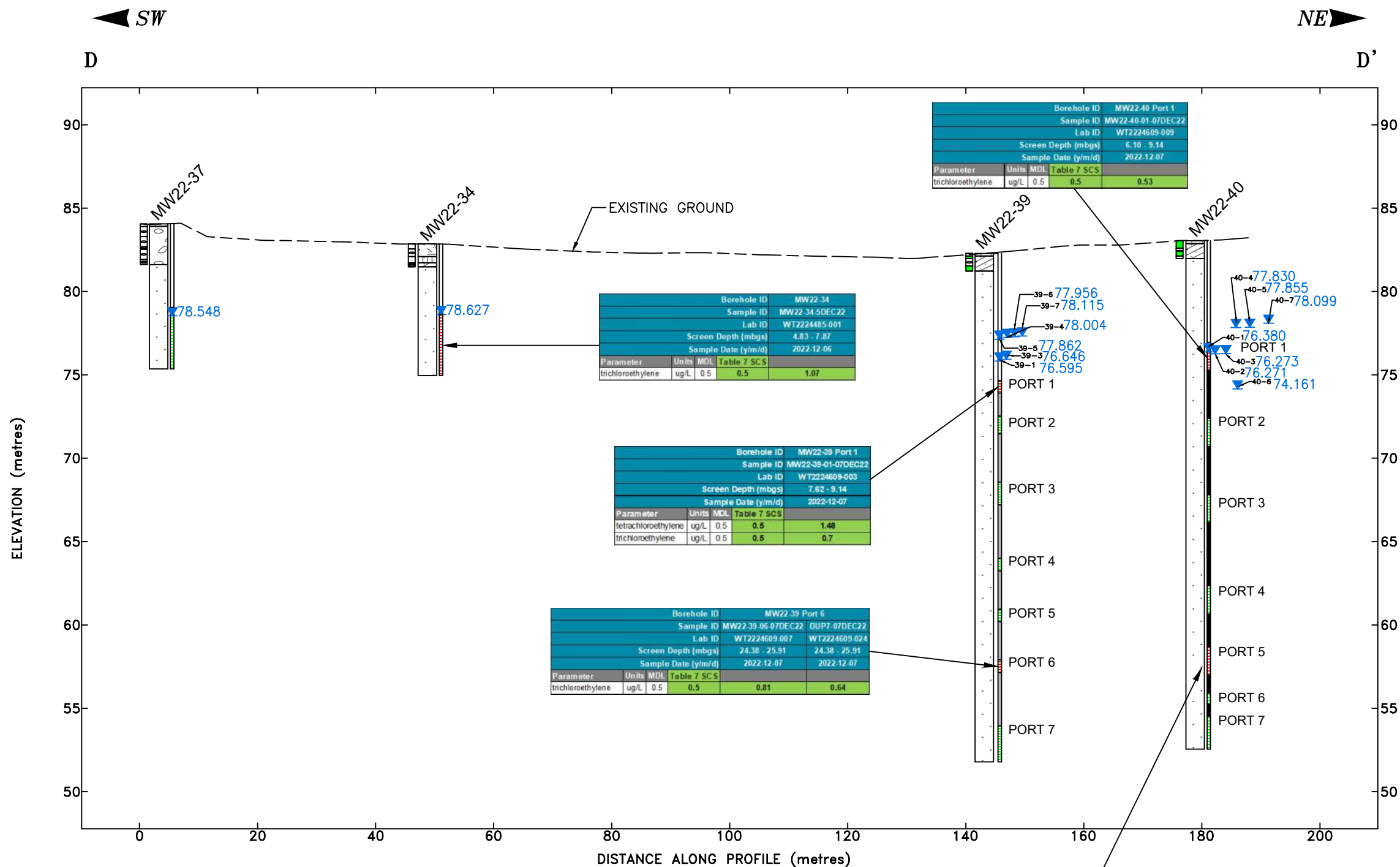
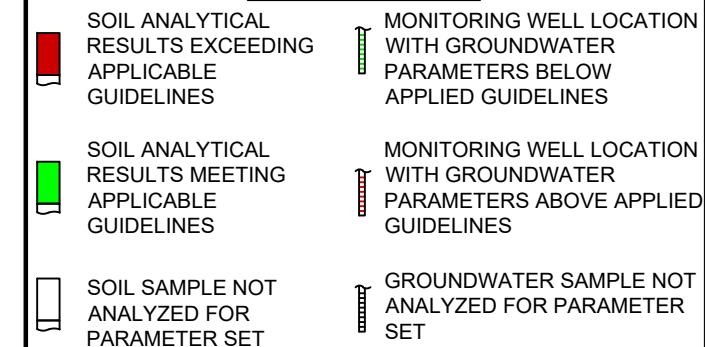


FIGURE 9B  
CROSS SECTION D-D  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
VOC ANALYTICAL RESULTS

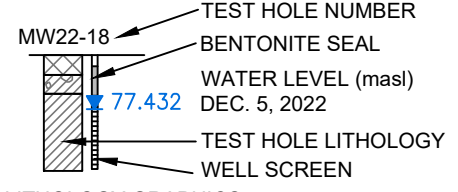


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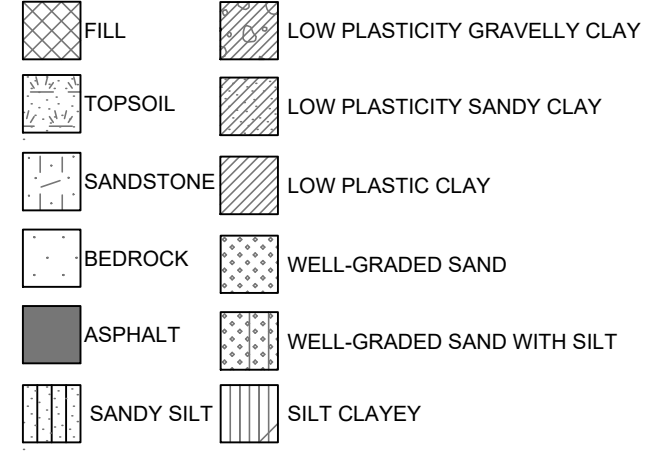
# PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

APRIL, 2023

### Legend



### LITHOLOGY GRAPHICS



### ANALYTICAL RESULTS

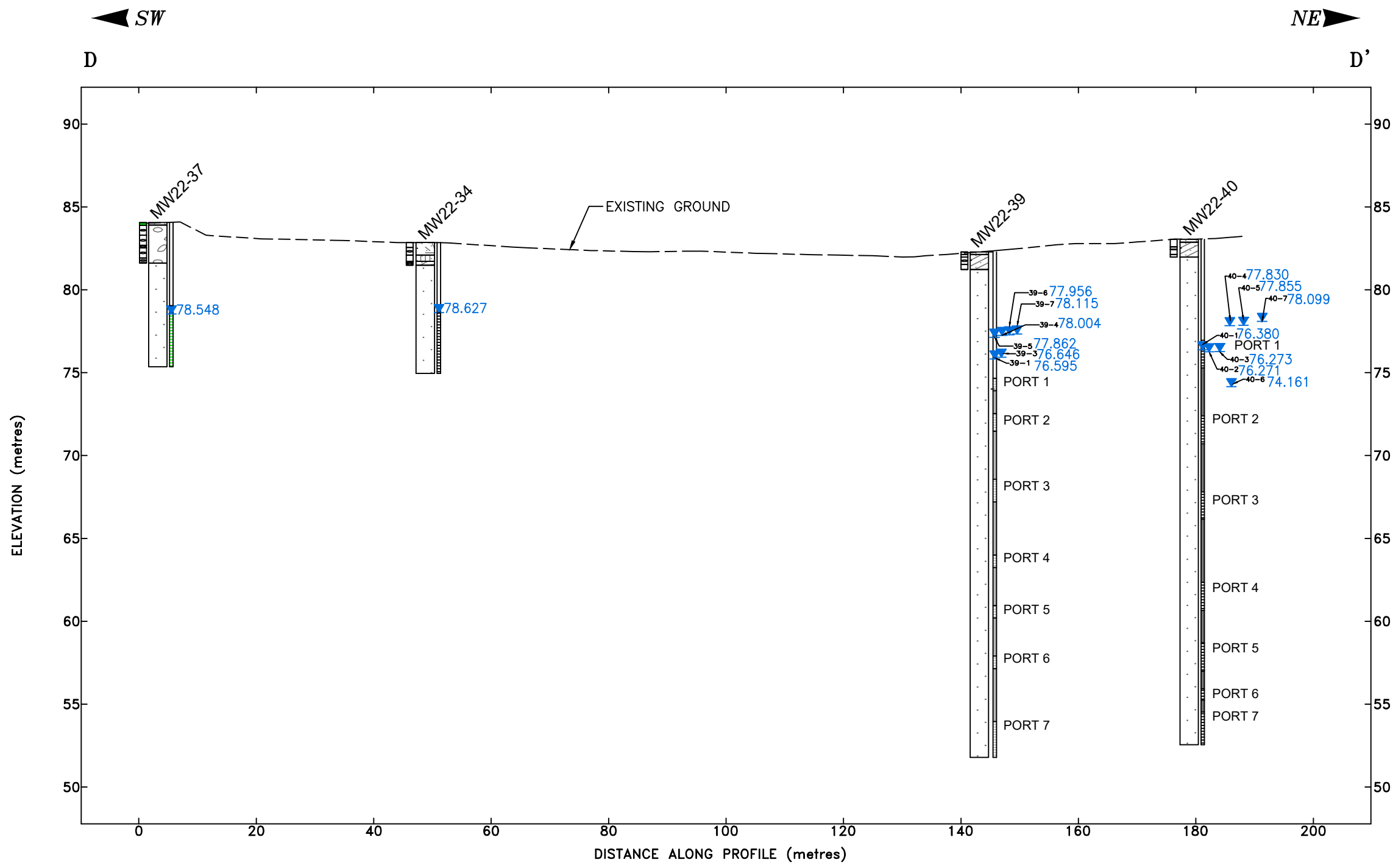
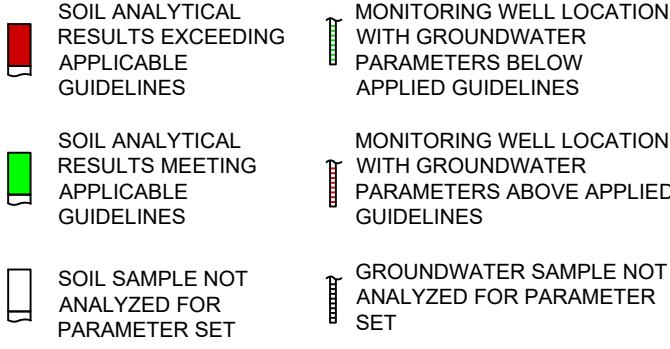


FIGURE 9C

CROSS SECTION D-D'  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
PHC ANALYTICAL RESULTS

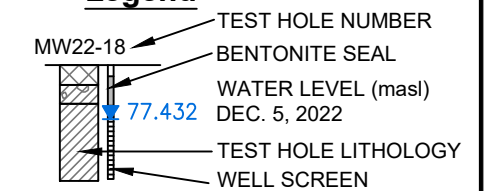


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2023/04/06 11:03:40 AM Mona Genovey

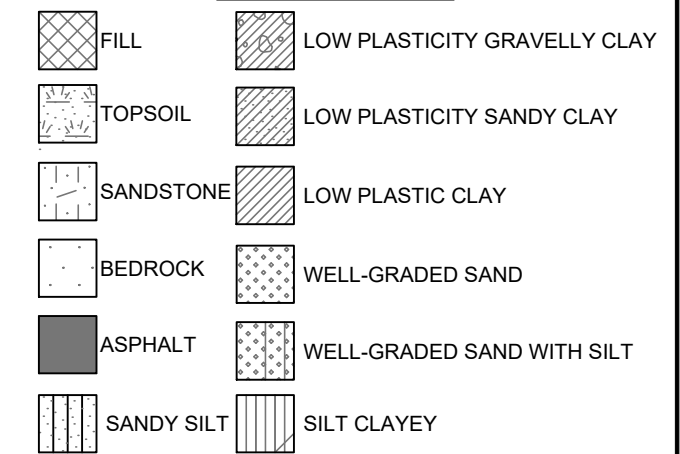
PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023

Legend



LITHOLOGY GRAPHICS



ANALYTICAL RESULTS

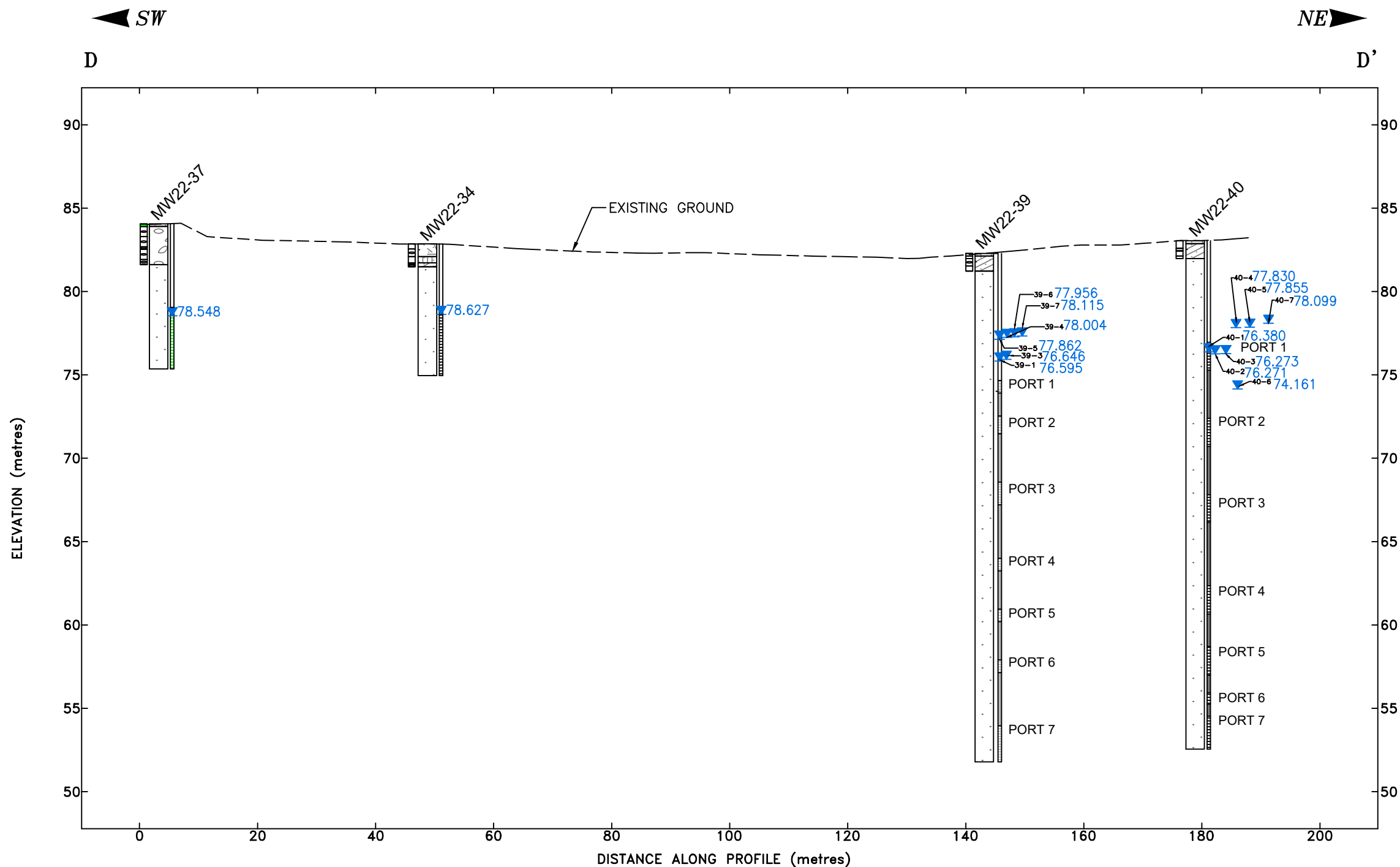
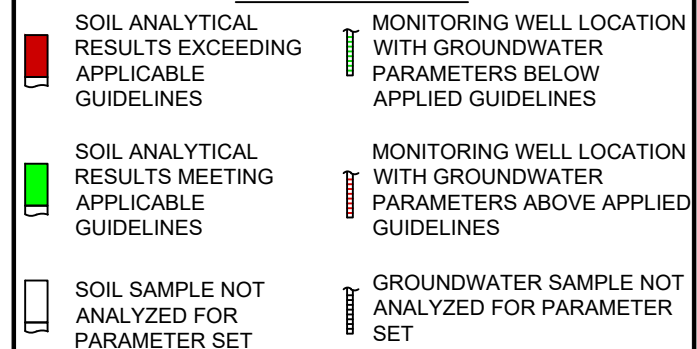


FIGURE 9D  
CROSS SECTION D-D  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
PAH ANALYTICAL RESULTS

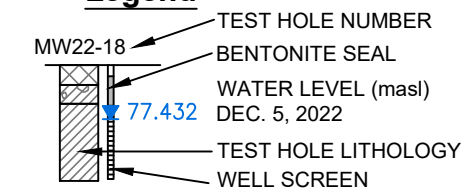


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**PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT**

APRIL, 2023

**Legend**

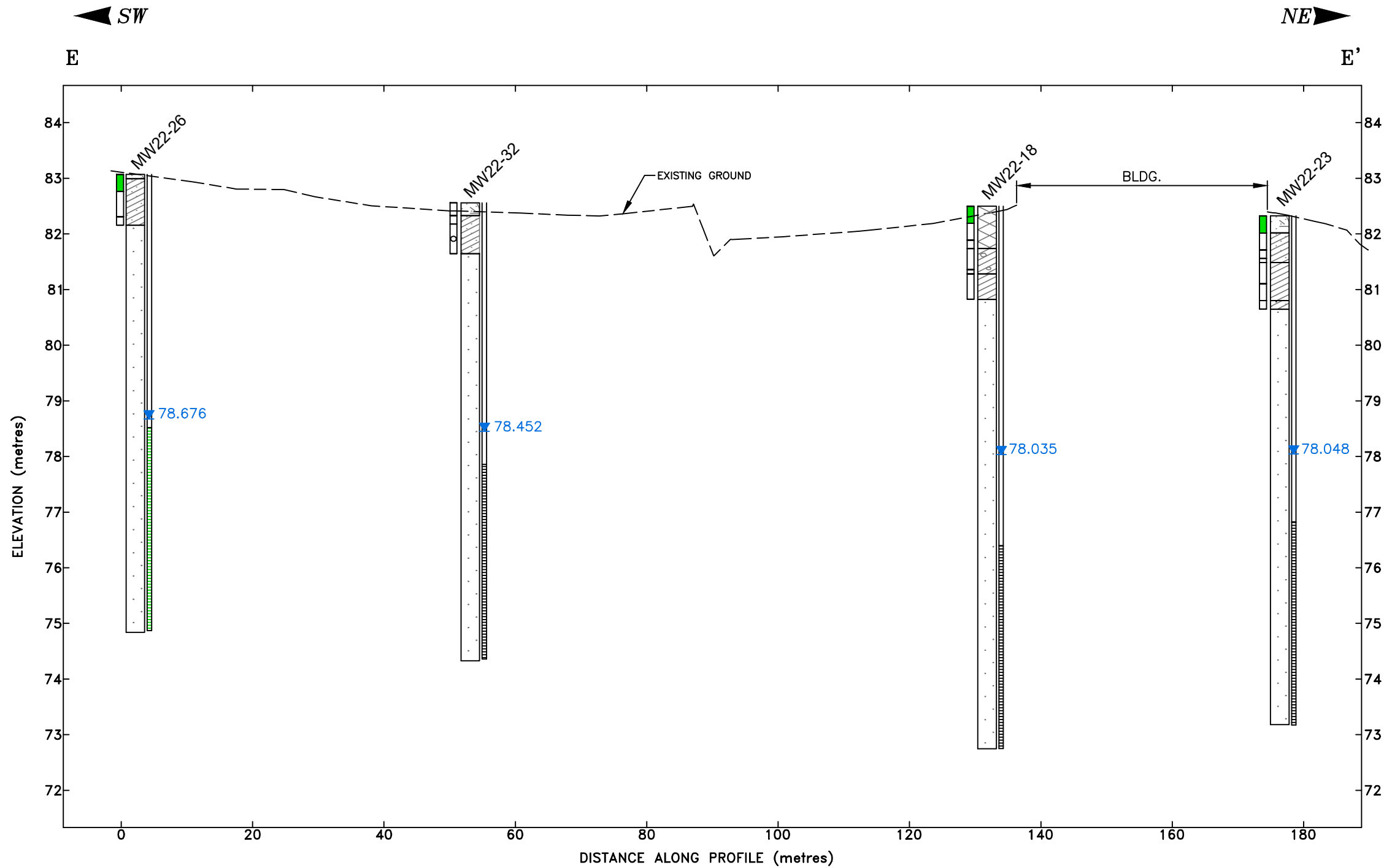


**LITHOLOGY GRAPHICS**

- |  |            |  |                              |
|--|------------|--|------------------------------|
|  | FILL       |  | LOW PLASTICITY GRAVELLY CLAY |
|  | TOPSOIL    |  | LOW PLASTICITY SANDY CLAY    |
|  | SANDSTONE  |  | LOW PLASTIC CLAY             |
|  | BEDROCK    |  | WELL-GRADED SAND             |
|  | ASPHALT    |  | WELL-GRADED SAND WITH SILT   |
|  | SANDY SILT |  | SILT CLAYEY                  |

**ANALYTICAL RESULTS**

- |  |   |  |   |
|--|---|--|---|
|  | SOIL ANALYTICAL RESULTS EXCEEDING APPLICABLE GUIDELINES |  | MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS BELOW APPLIED GUIDELINES |
|  | SOIL ANALYTICAL RESULTS MEETING APPLICABLE GUIDELINES   |  | MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS ABOVE APPLIED GUIDELINES |
|  | SOIL SAMPLE NOT ANALYZED FOR PARAMETER SET              |  | GROUNDWATER SAMPLE NOT ANALYZED FOR PARAMETER SET                             |



**FIGURE 10A**  
**CROSS SECTION E-E**  
**INTERPRETED GEOLOGICAL AND**  
**HYDROGEOLOGICAL CONDITIONS WITH**  
**METALS ANALYTICAL RESULTS**

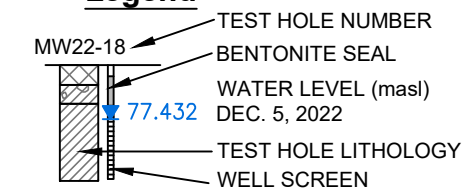


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PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023

Legend



LITHOLOGY GRAPHICS

- |  |            |  |                              |
|--|------------|--|------------------------------|
|  | FILL       |  | LOW PLASTICITY GRAVELLY CLAY |
|  | TOPSOIL    |  | LOW PLASTICITY SANDY CLAY    |
|  | SANDSTONE  |  | LOW PLASTIC CLAY             |
|  | BEDROCK    |  | WELL-GRADED SAND             |
|  | ASPHALT    |  | WELL-GRADED SAND WITH SILT   |
|  | SANDY SILT |  | SILT CLAYEY                  |

ANALYTICAL RESULTS

- |  |   |  |   |
|--|---|--|---|
|  | SOIL ANALYTICAL RESULTS EXCEEDING APPLICABLE GUIDELINES |  | MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS BELOW APPLIED GUIDELINES |
|  | SOIL ANALYTICAL RESULTS MEETING APPLICABLE GUIDELINES   |  | MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS ABOVE APPLIED GUIDELINES |
|  | SOIL SAMPLE NOT ANALYZED FOR PARAMETER SET              |  | GROUNDWATER SAMPLE NOT ANALYZED FOR PARAMETER SET                             |

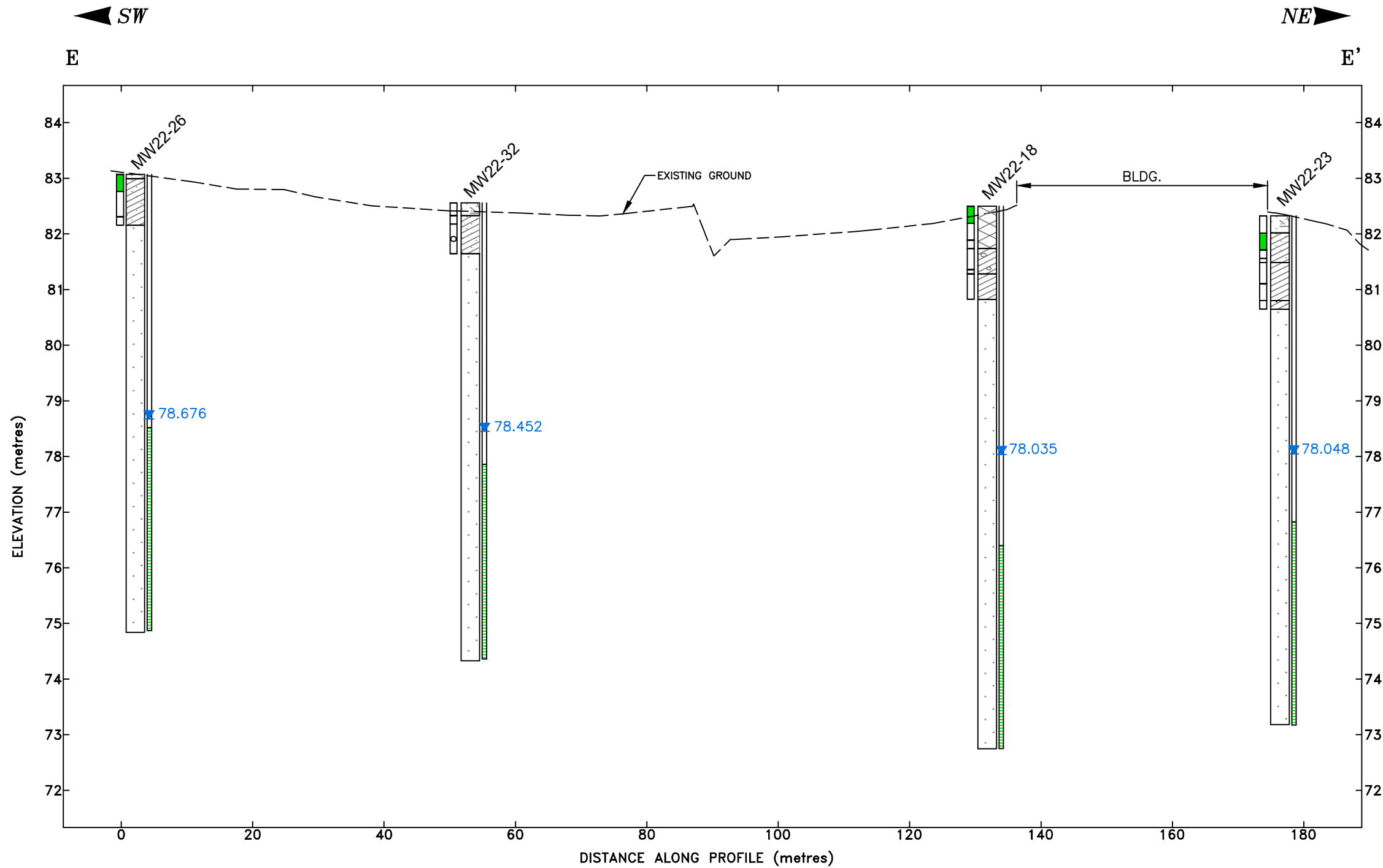


FIGURE 10B  
CROSS SECTION E-E  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
VOC ANALYTICAL RESULTS

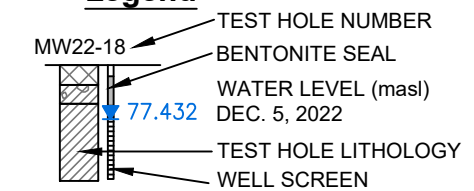


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PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT

APRIL, 2023

Legend



LITHOLOGY GRAPHICS

- |  |            |  |                              |
|--|------------|--|------------------------------|
|  | FILL       |  | LOW PLASTICITY GRAVELLY CLAY |
|  | TOPSOIL    |  | LOW PLASTICITY SANDY CLAY    |
|  | SANDSTONE  |  | LOW PLASTIC CLAY             |
|  | BEDROCK    |  | WELL-GRADED SAND             |
|  | ASPHALT    |  | WELL-GRADED SAND WITH SILT   |
|  | SANDY SILT |  | SILT CLAYEY                  |

ANALYTICAL RESULTS

- |  |   |  |   |
|--|---|--|---|
|  | SOIL ANALYTICAL RESULTS EXCEEDING APPLICABLE GUIDELINES |  | MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS BELOW APPLIED GUIDELINES |
|  | SOIL ANALYTICAL RESULTS MEETING APPLICABLE GUIDELINES   |  | MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS ABOVE APPLIED GUIDELINES |
|  | SOIL SAMPLE NOT ANALYZED FOR PARAMETER SET              |  | GROUNDWATER SAMPLE NOT ANALYZED FOR PARAMETER SET                             |

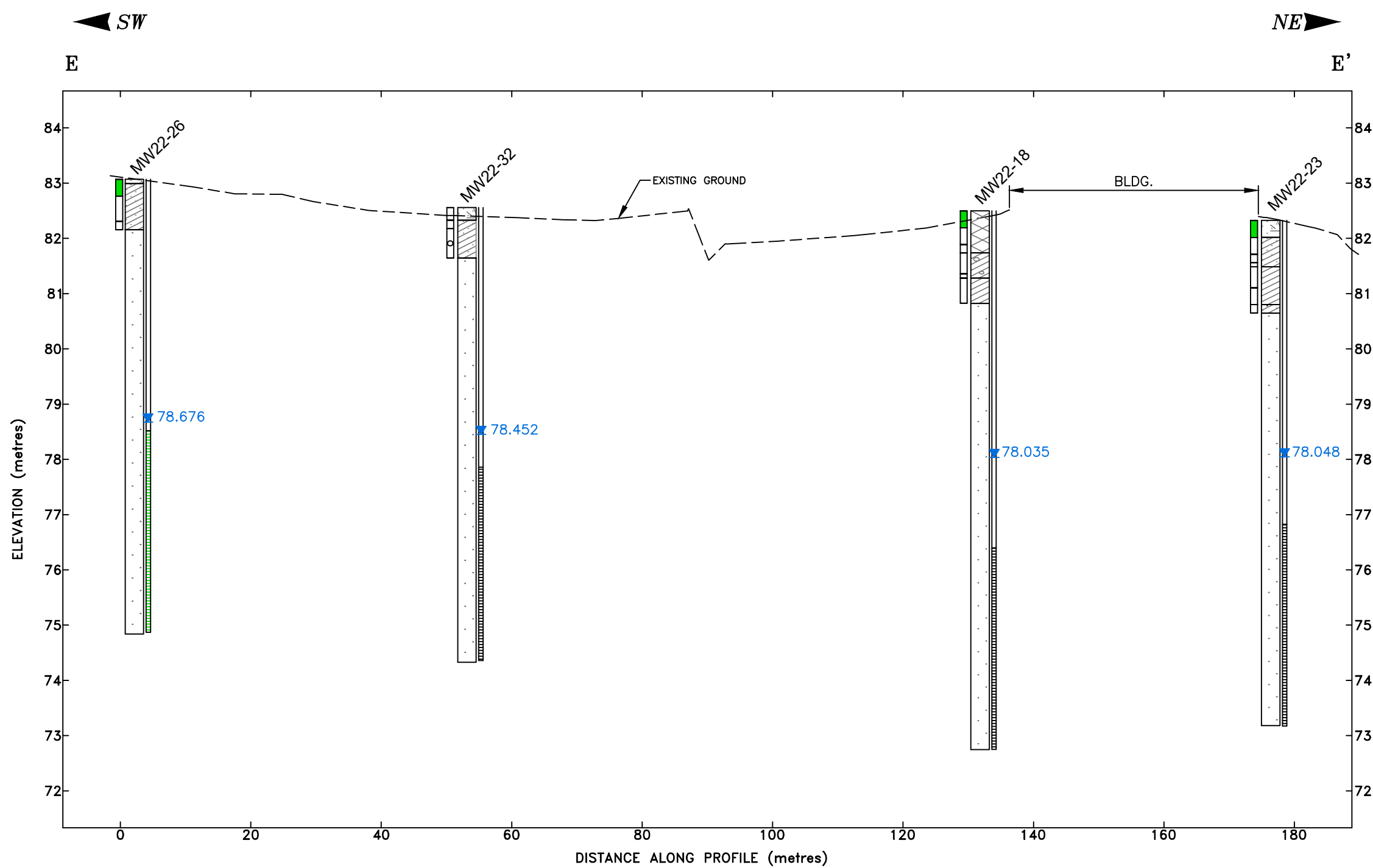


FIGURE 10C  
CROSS SECTION E-E  
INTERPRETED GEOLOGICAL AND  
HYDROGEOLOGICAL CONDITIONS WITH  
PHC ANALYTICAL RESULTS



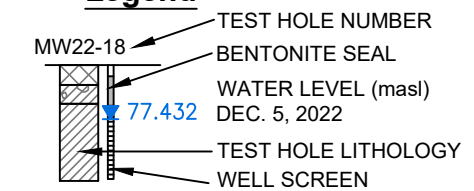
C:\Users\MonaGenovey\Omni-McCann\Projects\0006 - Main & Main Developments\01 - March Road, Ottawa\03 - O.Reg 153 Phase Two ESA Drawings\0006-0103-PHASE II ESA-FIG 10C.dwg 2023/04/04 9:31:59 AM Mona Genovey



**PHASE TWO ENVIRONMENTAL  
SITE ASSESSMENT**

APRIL, 2023

**Legend**

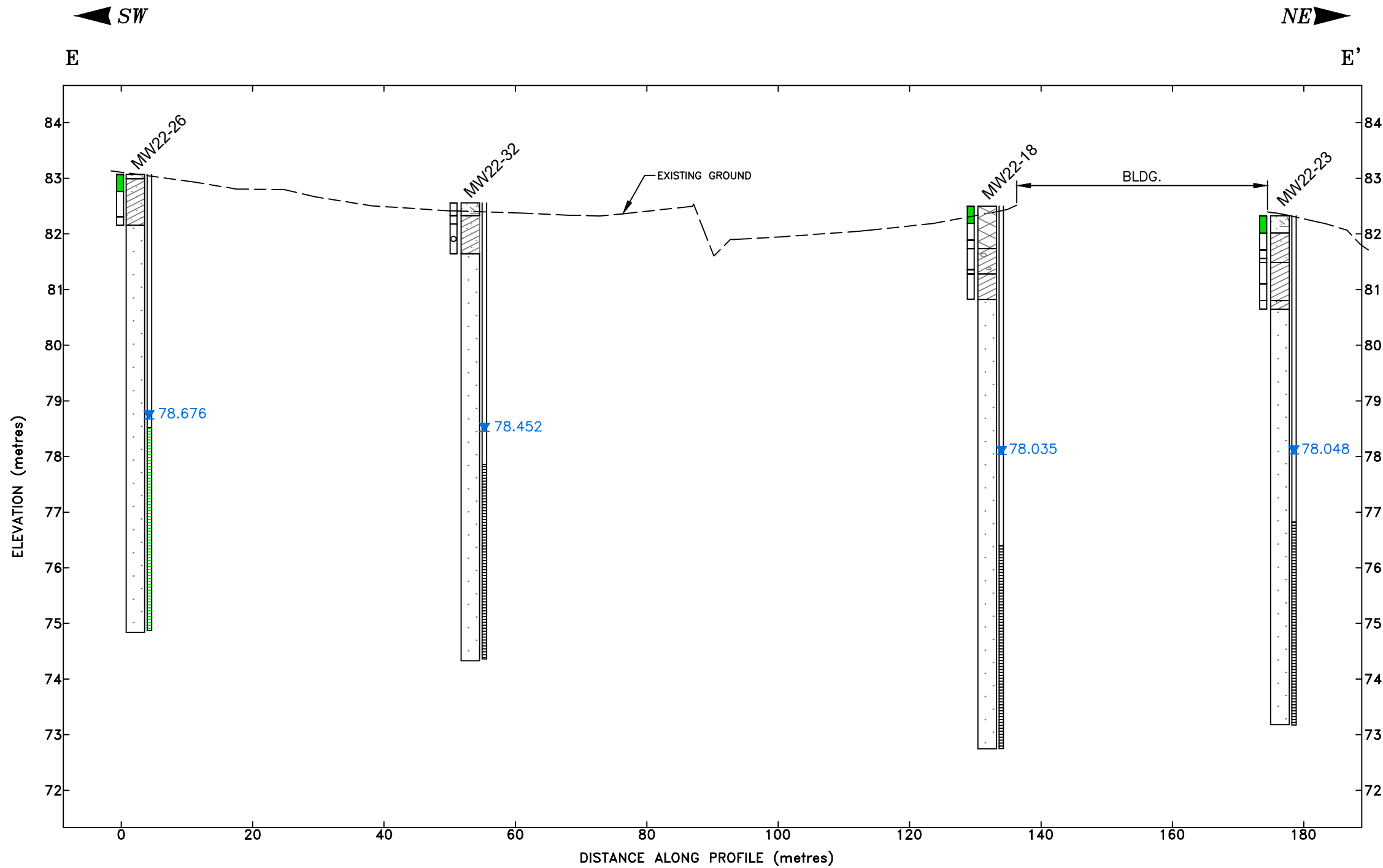


**LITHOLOGY GRAPHICS**

- |  |            |  |                              |
|--|------------|--|------------------------------|
|  | FILL       |  | LOW PLASTICITY GRAVELLY CLAY |
|  | TOPSOIL    |  | LOW PLASTICITY SANDY CLAY    |
|  | SANDSTONE  |  | LOW PLASTIC CLAY             |
|  | BEDROCK    |  | WELL-GRADED SAND             |
|  | ASPHALT    |  | WELL-GRADED SAND WITH SILT   |
|  | SANDY SILT |  | SILT CLAYEY                  |

**ANALYTICAL RESULTS**

- |  |   |  |   |
|--|---|--|---|
|  | SOIL ANALYTICAL RESULTS EXCEEDING APPLICABLE GUIDELINES |  | MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS BELOW APPLIED GUIDELINES |
|  | SOIL ANALYTICAL RESULTS MEETING APPLICABLE GUIDELINES   |  | MONITORING WELL LOCATION WITH GROUNDWATER PARAMETERS ABOVE APPLIED GUIDELINES |
|  | SOIL SAMPLE NOT ANALYZED FOR PARAMETER SET              |  | GROUNDWATER SAMPLE NOT ANALYZED FOR PARAMETER SET                             |

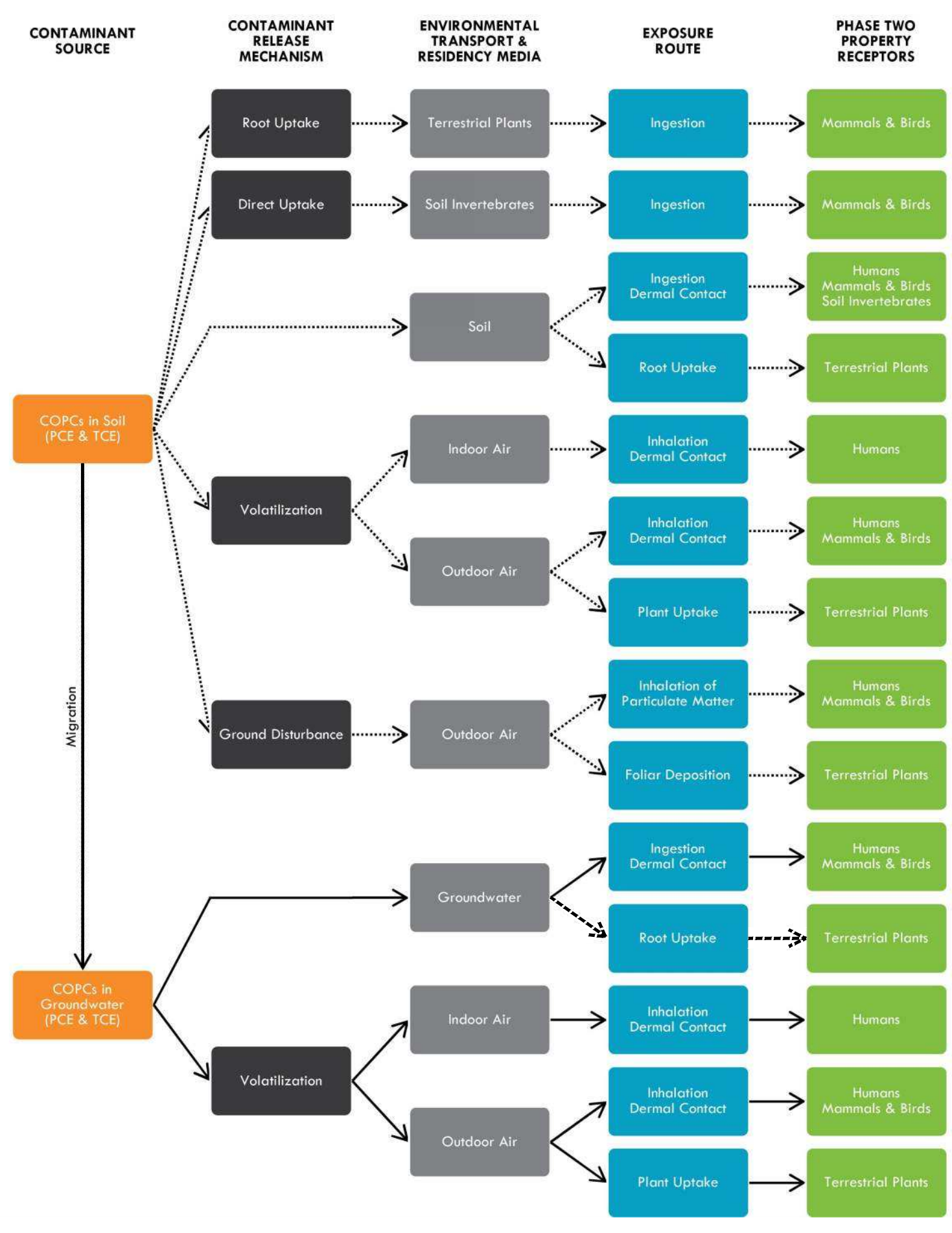


**FIGURE 10D**  
**CROSS SECTION E-E**  
**INTERPRETED GEOLOGICAL AND**  
**HYDROGEOLOGICAL CONDITIONS WITH**  
**PAH ANALYTICAL RESULTS**



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PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

APRIL, 2023



**Legend**

- COMPLETE PATHWAY
- ⋯→ INCOMPLETE PATHWAY

FIGURE 11  
EXPOSURE PATHWAYS FOR  
VOLATILE ORGANIC COMPOUNDS



# APPENDIX A

## Sample and Analysis Plan



October 7, 2022

Project No. 0006-0103

**RE: Phase Two Environmental Site Assessment Sampling and Analysis Plan  
555, 591, 595, and 603 March Road, Kanata, ON**

## OBJECTIVE

The objective of this Phase Two Environmental Site Assessment (ESA) is to investigate the presence or absence of environmental impacts to soil and groundwater associated with the historic uses of the above noted properties (herein referred to as the 'site') as they relate to the areas of potential environmental concern (APECs) identified in the Phase One ESA. The APECs and associated contaminants of potential concern (COPCs) identified as part of the Phase One ESA are as follows:

**APEC A:** Interior and immediately surrounding area of the 555 March Road building.

- Former (1985 – 2005) use of the building as an electronic component manufacturing facility.
- COPCs associated to APEC A are volatile organic compounds (VOCs).

**APEC B:** Interior and immediately surrounding area of the 591 March Road building; area of known contamination north of building.

- Former (1991 - 2000) dry cleaning operation where chemicals are used.
- COPCs associated to APEC B are VOCs.

**APEC C:** Interior and surrounding area of 603 March Road building; area of known groundwater contamination.

- Former (1997 – 2007) use of building as an electronic component manufacturing facility.
- COPCs associated to APEC C are VOCs.

**APEC D:** Interior and immediately surrounding area adjacent to elevator at 603 March Road.

- Storage of hydraulic oil in a fixed tank.



- COPCs associated with APEC D include petroleum hydrocarbons (PHC) and benzene, toluene, ethylbenzene, and xylenes (BTEX).

**APEC E:** Northern property boundary, 591 March Road parking area, and southern corner of 555 March Road building.

- Presence of two, oil filled, pad mounted, high voltage transformers along the northern boundary. One additional transformer adjacent to the 591 March Road parking area as well as one transformer adjacent to the southern most corner of 555 March Road.
- COPCs associated with APEC E include PHC, BTEX and polychlorinated biphenyls (PCBs).

**APEC F:** Southern and southwestern property boundary.

- Potential bulk chemical and ink storage. Electronic component manufacturing in surrounding buildings. Metal fabrication and manufacturing operations in nearby buildings.
- COPCs associated with APEC F include PHC, BTEX, VOC, and metals.

**APEC G:** Northern and southeastern paved areas; West central area of the phase one property.

- Imported fill of unknown or quality.
- COPCs associated with APEC G include PHC, BTEX, polycyclic aromatic hydrocarbons (PAHs), and metals.

**APEC H:** All exterior areas of the phase one property.

- Potential chlorinated solvent contamination in groundwater from the former March Landfill which operated from 1963 to 1974.
- COPCs associated with APEC H are VOCs.

Based on previous investigations completed on the site, vertical and horizontal delineation of known chlorinated solvent impacts in groundwater will be conducted in tandem with the investigation.

## CONCEPTUAL SITE MODEL

The subsurface conditions at the site are summarized as follows based on information gathered from previous investigations:

- Parking areas and drive lanes were asphalt covered, with asphalt thickness generally less than 0.1 m. Imported topsoil is present in landscaped areas around the Site buildings that ranges in thickness from approximately 0.1 to 0.3 m.
- Up to 0.9 m of sand and gravel fill (Granular A - <19 mm, ≤5% material finer than 75 µm) was present beneath paved portions of the Site and under imported topsoil immediately adjacent to the paved portions of the Site. Sand and gravel fill was not typically observed below the landscaped areas of the Site.



- Low plasticity clay with sand was observed between 0.6 m to 2 m thick, extending to bedrock. At some boreholes on the northern and southern portions of the Site, medium to high plasticity clay was observed extending to bedrock.
- On the undeveloped southwestern and central portions of the Site, a 0.7 m thick layer of humic topsoil was observed.
- A layer of clay with varying sand content between 0.1 m to 0.9 m thick was observed in the southwest, extending up to the center of the undeveloped portion of the Site. In the northwestern portion of the Site, a layer of sand with silt or clay was observed on top of bedrock.
- Native soils encountered on site are interpreted to be of glaciomarine origin.
- Bedrock under the site consists of interbedded dolostone and sandstone of the Beekmantown Group.
- No significant water table has been found in soils during previous investigations.
- The site is generally flat lying.
- Previous uses of the site include electronic component manufacturing, commercial retail plaza with various tenants, fitness club.
- A dry cleaning facility operating the 591 March Road plaza operated during the 1990's and released waste dry-cleaning fluids at the rear of the plaza onto the 595 March Road property. PCE, TCE, and DCE impacts in soil and groundwater under 591 and 595 March Road have been confirmed through previous investigations. 2016 groundwater monitoring showed low concentrations of PCE and TCE in groundwater under 591 and 595 March Road.
- Electronic component manufacturing occurred at the 603 March Road facility between 1997 and 2007 with records showing the use of TCE during that period. Previous investigations found evidence of TCE impacted groundwater around and under the 603 March Road building.
- Potassium permanganate was applied to 591 and 595 March Road via injection points in the early 2010's which reduced the concentrations of chlorinated solvents. Follow-up sampling showed concentration rebounding consistent with back diffusion from rock matrix. 2016 groundwater sampling showed a diminished plume with no impacts remaining on the 591 March Road property.
- Surface water runoff is directed to parking lot edge drainage swales or landscaped areas. Some runoff is directed to municipal storm sewers located on March Road.
- The nearest permanent surface water body is Shirleys Brook located approximately 513 m northeast of the site.

## APPLICABLE SITE CONDITION STANDARDS

The following conditions were used in the selection of appropriate assessment standard for the site:



- The site is currently operating as fitness club (555 March Road), multi-unit commercial businesses (591 March Road), vacant (595 March Road), and office/ research and development (603 March Road). The land use is therefore characterised as 'commercial' under O.Reg. 153/04. However, the proposed use of the phase two property includes residential units, therefore, the 'residential' land use criteria under O.Reg. 153/04 is required.
- Generally, bedrock has been identified at a depth of less than 2 m across the site during previous investigations.
- Groundwater beneath the site and within the immediately surrounding area is not used as a source of potable drinking water.
- The closest permanent surface water body (Shirleys Brook) is located more than 30 m from the site (i.e., approximately 513 m northeast at its closest point).
- Overburden beneath the site has been characterized previously as mixture of coarse fill materials and medium-fine grained native materials. As coarse textured soil criteria are generally more stringent, soil parameters will be compared to coarse grained criteria. Also, since no permanent or significant water has been found in soil, and a bedrock groundwater table was confirmed by previous investigations, coarse textured criteria were adopted for groundwater.

Based on the above, analytical results of soil and groundwater samples collected as part of the Phase Two ESA will be compared to:

- Table 7: Generic Site Condition Standards (Table 7 SCS) for Shallow Soils in a Non-Potable Groundwater Condition for coarse textured soils Residential/Parkland/Institutional Property Use of the Soil, Ground Water, and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act.

## STANDARD OPERATING PROCEDURES

The following standard operating procedures apply to this investigation:

- Borehole Drilling
- Soil Logging/Classification
- Soil Sampling
- Head Space OVC Screening
- Equipment Decontamination
- Monitoring Well Installation
- Monitoring Well Development
- Groundwater Monitoring



- Low-Flow Groundwater Sampling
- Monitoring Well Hydraulic Testing

## BOREHOLE DRILLING AND SOIL SAMPLING

Borehole drilling and soil sample collection will be conducted per Table 1 below. The rationale for the proposed borehole locations is also provided in Table 1.

**Table 1: Drilling and Sampling Plan**

APEC	BH/MW	Samples	COPC
<b>APEC A:</b> Former use of 555 March Rd. building as electronic component manufacturer.	BH/MW – 4	Soil – up to 8 GW – up to 4 Dup – at least 1 soil and 1 GW	VOC
<b>APEC B:</b> Known release of chlorinated solvents from former dry cleaning facility.	BH/MW - 6	Soil – up to 12 GW – up to 31* Dup – at least 1 soil and 3 GW	VOC
<b>APEC C:</b> Former use of 603 March Rd. building as electronic component manufacturer and known chlorinated solvent impacts.	BH/MW – 15 BH/MW – 1 covered by APEC B	Soil – up to 30 GW – up to 36* Dup – at least 3 soil and 3 GW	VOC
<b>APEC D:</b> Bulk storage and use of hydraulic oil for elevator operation in 603 March Rd. building.	BH/MW – 1 covered by APEC C	Soil – up to 2 covered by APEC C GW – 1 covered by APEC C Dup – at least 1 soil and 1 GW covered by APEC C	PHC BTEX
<b>APEC E:</b> Operation of pad mounted transformers for each of the buildings on site.	BH – 4 MW – 2 covered by APEC C	Soil – up to 8, 4 of which covered by APEC C GW – 2* covered by APEC C Dup – at least 1 soil and 1 GW covered by APEC C	PHC BTEX PCB
<b>APEC F:</b> Off-site property uses to the south and southwest of the site including printmaking/ink use, electronic component manufacturing, and metal fabrication.	BH/MW – 5	Soil – up to 10 GW – up to 5 Dup – at least 1 soil and 1 GW	PHC VOC Metals
<b>APEC G:</b> Importation of fill of unknown quality including blast/break out rock.	BH/MW – 1 BH/MW – 12 covered by APEC A and APEC C	Soil – up to 26, 24 of which covered by APEC A and APEC C GW – none Dup – at least 2 soil covered by APEC A and APEC C	PHC BTEX PAH Metals
<b>APEC H:</b> Risk management are for former March Landfill and known chlorinated solvent plume associated with the landfill.	BH/MW – 3 BH/MW – 30 covered by all other APECs	Soil – none GW – 73*, 70 of which covered by APEC A, APEC B, APEC C, APEC D, APEC E, APEC F Dup – at least 7 which are covered by APEC A, APEC B, APEC C, APEC D, APEC E, APEC F	VOC

Notes:





\* - indicates the usage of monitoring infrastructure installed during previous investigations for sample collection.

The drilling and sampling plan has been designed to supplement the monitoring infrastructure that was already in place from previous investigations on the site. Soil samples at nested locations are to be used to confirm the presence or absence of COPCs in the APEC's that the sample is collected. All soil samples are to be described and logged, per the *Soil Logging/Classification SOP*, and samples collected in 0.6m (2ft) intervals with shorter interval samples allowed when changes in stratigraphy, colour, or odours implicating contamination are observed. Samples will be collected using a 0.6m, 50mm diameter steel split spoon advanced ahead of hollow stem augers as described in the *Borehole Drilling SOP*. Soil samples addressing VOCs will be collected with Terra Core kits into preserved in vials that have been pre-charged with methanol supplied by the lab per the *Soil Sampling SOP*. Soil samples will be field screened using head space organic vapour content (OVC) measurements (*Head Space OVC Screening SOP*) to determine which samples will be submitted for laboratory analysis to a maximum of two (2) samples per borehole, one (1) worst case and one (1) from another layer. Duplicate soil samples will be collected at a frequency of one (1) duplicate for every ten (10) soil samples and at least one (1) from each APEC. Soil sampling will be continued to refusal on bedrock at which time rock drilling equipment will be deployed until evidence of interception of the groundwater table is observed or the target depth is achieved. Where rock coring is conducted, core and fracture logs will be completed. Table 2 shows the target depths of each new borehole, the drilling method to be used, and monitoring well installation by APEC.

## GROUNDWATER MONITORING WELL INSTALLATION

All bedrock boreholes will have monitoring well installations. Three (3) boreholes located in the source area of APEC B will have multilevel monitoring wells designed and installed based on data gathered during core and fracture logging. All remaining boreholes will have conventional monitoring wells installed in accordance with the details in Table 2 and details from the *Monitoring Well Installation SOP*.

After installation is complete, collect water levels, develop monitoring wells, and survey the vertical and horizontal positions of each well.

**Table 2: Drilling and Installation Plan**

APEC	Borehole Quantity and Naming	Target Depth (meters below ground surface)	Drilling Method	Installation Type
APEC A	4; MW22-## starting from 18 as a continuation from previous OMI investigations.	6 – 10	Soil – Split Spoon & Hollow Stem Auger  Rock – Air Hammer	Conventional Well
APEC B	3; MW22-03C, MW22-04C, MW22-05C corresponding to well clusters already in place.	18.2  30.5	Soil – Split Spoon & Hollow Stem Auger	Conventional Well  7 Channel CMT



	3; MW22-## depending on numbering to that point in the program.		Rock 18.2 m Target – Air Hammer  Rock 30.5 m Target – Diamond Core	
APEC C	1; MW22-01C corresponding to well cluster already in place.  6; MW22-06B, MW22-13B, MW22-14B, MW22-15B, MW22-16B, MW22-17B corresponding to wells already in place.  8; MW22-## depending on numbering to that point in the program.	18.2  12.2  6 – 10	Soil – Split Spoon & Hollow Stem Auger  Rock – Air Hammer	Conventional Well
APEC E	2; BH22-## depending on numbering to that point in the program.	Top of rock	Soil – Split Spoon & Hollow Stem Auger	None
APEC F	5; MW22-## depending on numbering to that point in the program.	6 – 10	Soil – Split Spoon & Hollow Stem Auger  Rock – Air Hammer	Conventional Well
APEC H	3; MW22-## depending on numbering to that point in the program.	6 – 10	Soil – Split Spoon & Hollow Stem Auger  Rock – Diamond Core	Conventional Well

## GROUNDWATER SAMPLING

Existing monitoring wells in unique locations or with visible labels for which OMI has construction details will be used to confirm groundwater VOC concentrations from previous investigations. In particular, all locations installed during OMI's investigation at 603 March Road and three (3) locations in the parking area of 591 March Road, BH4-10, BH5-10, and BH6-10, will be used to confirm groundwater VOC concentrations.

Groundwater sampling will be conducted in accordance with OMI SOP *Low-Flow Groundwater Sampling*. All samples for metals including Cr-VI and Hg will be filtered using a 0.45 µm filter. A summary of groundwater samples is provided in Table 2 above. Field duplicates will be collected



at a frequency of one (1) duplicate sample for every ten (10) groundwater samples and at least one (1) for each analytical group. Field blanks for VOC and PHC will be collected each day of groundwater sampling. A VOC and PHC trip blank will be assigned to each cooler that samples are stored in.

## QUALITY ASSURANCE AND QUALITY CONTROL MEASURES

Quality assurance and quality control (QA/QC) measures to be employed during this investigation will follow all requirements set out by O.Reg. 153/04 as well as best practices established within OMI. All field instruments will be pre-calibrated prior to use in the field. Calibration checks will be performed daily with re-calibration to be performed if measurements are outside of manufacturer's recommendations. Non dedicated equipment will be cleaned with an Alconox solution and distilled water consistent with OMI's *Equipment Decontamination SOP*.

The number and suggested locations of QA/QC samples is provided in Table 1 above.

## HYDRAULIC TESTING

A selection of monitoring well locations representing each monitoring interval will be chosen for rising head testing per the *Monitoring Well Hydraulic Testing SOP*. At least three (3) locations from each monitoring interval will be selected across the site. All non-dedicated equipment will be cleaned using the methods described above.

## OTHER NOTES

- Monitoring well location BH4-10, BH5-10, and BH6-10 will be assessed for sampling feasibility.
- Questions regarding sample selection, monitoring well design or other technical decisions will be directed to the project manager, Daniel Elliot (613-857-4936), or technical advisor, Kristina Small (343-548-5696).



# APPENDIX B

## Finalized Field Logs



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-01A**  
 Relative Location: **603 W bay door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
								1	10	100				
0.0 - 0.2			<b>Topsoil</b> Silt and sand, some clay, trace gravel, loose, dark brown, moist.	0-2		1								Flushmount, jplug, cement
0.2 - 0.4			<b>Sand and Gravel Fill</b> Sand and gravel, some silt and clay, loose, brown, dry.			2	50	VOCs	0.0					
0.4 - 0.6				2-3		9								Bentonite seal
0.6 - 0.8						29	80		0.7					
0.8 - 1.0	-82.29		<b>Bedrock</b> Interbedded dolostone and sandstone.											
1.0 - 2.0	-81.29													
2.0 - 3.0	-80.29													
3.0 - 3.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 17  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023251.39 N  
 349824.25 E  
 Groundsurface Elevation: 83.29 m  
 Top of Casing Elevation: 82.24 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-01A**  
 Relative Location: **603 W bay door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Patterned Soil Type]												
4.4														
4.6														
4.8														
5.0	78.29													
5.2														
5.4														
5.6														
5.8														
6.0	77.29													
6.2														
6.4														
6.6														
6.8														
7.0	76.29													
7.2														
7.4														
7.6			End of well at 7.60 m, due to achievement of target depth.											

▼ GW = 5.962 mbg  
 50 mm 010 slot PVC pipe

Well Completion Details:  
 Screened interval from 4.60 m to 7.60 m below surface  
 Elevation at top of pipe (TOP) = 82.240 m

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 17  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023251.39 N  
 349824.25 E  
 Groundsurface Elevation: 83.29 m  
 Top of Casing Elevation: 82.24 m

**Notes:**  
 ☒ SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-01A**  
 Relative Location: **603 W bay door**

Project #: 0006-0103

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
			Groundwater Information: Depth to groundwater from TOP = 4.912 m											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 17  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023251.39 N  
 349824.25 E  
 Groundsurface Elevation: 83.29 m  
 Top of Casing Elevation: 82.24 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-01B**  
 Relative Location: **603 W bay door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
0.2			<b>Topsoil</b> Silt and sand, some clay, trace gravel, loose, dark brown, moist.												Flushmount, jplug, cement
0.4			<b>Sand and Gravel Fill</b> Sand and gravel, some silt and clay, loose, brown, dry.												
1.0	-82.34		<b>Bedrock</b> Interbedded dolostone and sandstone												
2.0	-81.34														
3.0	-80.34														
3.8															

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023250.6 N  
 349824.77 E  
 Groundsurface Elevation: 83.34 m  
 Top of Casing Elevation: 83.28 m

**Notes:**





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-01B**  
 Relative Location: **603 W bay door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
4.2		[Patterned Soil Type]														
4.4																
4.6																
4.8																
5.0	78.34															
5.2																
5.4																
5.6																
5.8																
6.0	77.34															
6.2																
6.4																
6.6																
6.8																
7.0	76.34															
7.2																
7.4																
7.6																
7.8																

Bentonite seal

▼ GW = 6.361 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023250.6 N  
 349824.77 E  
 Groundsurface Elevation: 83.34 m  
 Top of Casing Elevation: 83.28 m

**Notes:**

Page 2 of 4



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-01B**  
 Relative Location: **603 W bay door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
8.2															
8.4															
8.6															
8.8															
9.0	74.34														
9.2															
9.4															
9.6															
9.8															
10.0	73.34														
10.2															
10.4															
10.6															
10.8															
11.0	72.34														
11.2															
11.4															
11.6															
11.8															

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023250.6 N  
 349824.77 E  
 Groundsurface Elevation: 83.34 m  
 Top of Casing Elevation: 83.28 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-01B**  
 Relative Location: **603 W bay door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
12.2			<p>End of well at 12.20 m, due to achievement of target depth.</p> <p>Well Completion Details:            Screened interval from 9.20 m to 12.20 m below surface            Elevation at top of pipe (TOP) = 83.280 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 6.301 m</p>											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023250.6 N  
 349824.77 E  
 Groundsurface Elevation: 83.34 m  
 Top of Casing Elevation: 83.28 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-01C**  
 Relative Location: **603 W bay door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL	
									1	10	100				
0.0		Asphalt													
0.2		Sand and Gravel Fill	Sand and gravel, some silt and clay, loose, brown, moist.	0.25-2		7 10 10 21	100	PHC BTEX PAH Metals		2.0					
0.4															
0.6															
0.8															
0.8				2.5-3		50+	100	VOCs		3.2					
1.0	82.26	Bedrock	Interbedded dolostone and sandstone												
1.2															
1.4															
1.6															
1.8															
2.0	81.26														
2.2															
2.4															
2.6															
2.8															
3.0	80.26														
3.2															
3.4															
3.6															
3.8															

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 9  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023250.7 N  
 349823.7 E  
 Groundsurface Elevation: 83.26 m  
 Top of Casing Elevation: 83.1 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-01C**  
 Relative Location: **603 W bay door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Patterned Soil Type]												
4.4														
4.6														
4.8														
5.0	78.26													
5.2														
5.4														
5.6														
5.8														
6.0	77.26													
6.2														
6.4														
6.6														
6.8														
7.0	76.26													
7.2														
7.4														
7.6														
7.8														

▼ GW = 6.361 mbg

Bentonite seal

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 9  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023250.7 N  
 349823.7 E  
 Groundsurface Elevation: 83.26 m  
 Top of Casing Elevation: 83.1 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-01C**  
 Relative Location: **603 W bay door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
8.2		[Patterned Soil Type]												
8.4														
8.6														
8.8														
9.0	74.26													
9.2														
9.4														
9.6														
9.8														
10.0	73.26													
10.2														
10.4														
10.6														
10.8														
11.0	72.26													
11.2														
11.4														
11.6														
11.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 9  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023250.7 N  
 349823.7 E  
 Groundsurface Elevation: 83.26 m  
 Top of Casing Elevation: 83.1 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-01C**  
 Relative Location: **603 W bay door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
12.2		[Dotted pattern]												
12.4														
12.6														
12.8														
13.0	70.26													
13.2														
13.4														
13.6														
13.8														
14.0	69.26													
14.2														
14.4														
14.6														
14.8														
15.0	68.26													
15.2														
15.4														
15.6														
15.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 9  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023250.7 N  
 349823.7 E  
 Groundsurface Elevation: 83.26 m  
 Top of Casing Elevation: 83.1 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-01C**  
 Relative Location: **603 W bay door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
16.2		[Pattern]														
16.4																
16.6																
16.8																
17.0	66.26															
17.2																
17.4																
17.6																
17.8																
18.0	65.26															
18.2																
18.4			End of well at 18.40 m, due to achievement of target depth.													
			Well Completion Details: Screened interval from 15.40 m to 18.40 m below surface Elevation at top of pipe (TOP) = 83.100 m													
			Groundwater Information: Depth to groundwater from TOP = 6.201 m													

Silica sand  
50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 9  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023250.7 N  
 349823.7 E  
 Groundsurface Elevation: 83.26 m  
 Top of Casing Elevation: 83.1 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW21-02A**  
 Relative Location: **603 S accessible door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
								1	10	100				
0.0 - 0.2			<b>Topsoil</b> Silt and sand, some clay, trace gravel, loose, dark brown, moist.	0-2		2	100							
0.2 - 0.6			<b>Silt</b> Silty silt, some clay, trace gravel, very dense, soft, low plastic, grey-green, moist.	2/3		3	100							
0.6 - 1.0	82.04		<b>Bedrock</b> Interbedded dolostone and sandstone			5	100							
1.0 - 2.0	81.04					50+	100							
2.0 - 3.0	80.04													
3.0 - 3.4														
3.4 - 3.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 17  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023251.01 N  
 349860.28 E  
 Groundsurface Elevation: 83.04 m  
 Top of Casing Elevation: 82.9 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-02A**  
 Relative Location: **603 S accessible door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
4.2		[Patterned Soil Type]														
4.4																
4.6																
4.8																
5.0	78.04															
5.2																
5.4																
5.6																
5.8																
6.0	77.04															
6.2																
6.4																
6.6																
6.8																
7.0	76.04															
7.2																
			End of well at 7.30 m, due to achievement of target depth.													
			Well Completion Details: Screened interval from 4.30 m to 7.30 m below surface Elevation at top of pipe (TOP) = 82.900 m													
			Groundwater Information: Depth to groundwater from TOP = 4.667 m													

GW = 4.807 mbg

Silica sand

50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 17  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023251.01 N  
 349860.28 E  
 Groundsurface Elevation: 83.04 m  
 Top of Casing Elevation: 82.9 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-02B**  
 Relative Location: **603 S accessible door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
0.2			<b>Topsoil</b> Silt and sand, some clay, trace gravel, loose, dark brown, moist.												Flushmount, jplug, cement
0.4															
0.6															
0.8			<b>Bedrock</b> Interbedded dolostone and sandstone												
1.0	82.02														
1.2															
1.4															
1.6															
1.8															
2.0	81.02														
2.2															
2.4															
2.6															
2.8															
3.0	80.02														
3.2															
3.4															
3.6															
3.8															

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 20  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023250.58 N  
 349860.11 E  
 Groundsurface Elevation: 83.02 m  
 Top of Casing Elevation: 82.83 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-02B**  
 Relative Location: **603 S accessible door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
4.2		[Patterned Soil Type]														
4.4																
4.6																
4.8																
5.0	78.02															
5.2																
5.4																
5.6																
5.8																
6.0	77.02															
6.2																
6.4																
6.6																
6.8																
7.0	76.02															
7.2																
7.4																
7.6																
7.8																

Bentonite seal

GW = 6.396 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 20  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023250.58 N  
 349860.11 E  
 Groundsurface Elevation: 83.02 m  
 Top of Casing Elevation: 82.83 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-02B**  
 Relative Location: **603 S accessible door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
8.2															
8.4															
8.6															
8.8															
9.0	74.02														
9.2															
9.4															
9.6															
9.8															
10.0	73.02														
10.2															
10.4															
10.6															
10.8															
11.0	72.02														
11.2															
11.4															
11.6															
11.8															

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 20  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023250.58 N  
 349860.11 E  
 Groundsurface Elevation: 83.02 m  
 Top of Casing Elevation: 82.83 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-02B**  
 Relative Location: **603 S accessible door**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
12.2			<p>End of well at 12.20 m, due to achievement of target depth.</p> <p>Well Completion Details:            Screened interval from 9.20 m to 12.20 m below surface            Elevation at top of pipe (TOP) = 82.830 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 6.206 m</p>											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 20  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023250.58 N  
 349860.11 E  
 Groundsurface Elevation: 83.02 m  
 Top of Casing Elevation: 82.83 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-03A**  
 Relative Location: **603 PL S of building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL	
									1	10	100				
0.0 - 0.2			<b>Topsoil</b> Silt and sand, some clay, trace gravel, loose, dark brown, moist.	0-2.5		1	30	VOCs	0.0						
0.2 - 0.4			<b>Gravel Fill</b> Sandy gravel, some clay, very dense, grey-brown, wet.												
0.4 - 0.8			<b>Bedrock</b> Interbedded dolostone and sandstone												
0.8 - 1.0	81.45														
1.0 - 2.0	80.45														
2.0 - 2.2															Bentonite seal
2.2 - 3.0															
3.0 - 3.2	79.45														
3.2 - 3.4															
3.4 - 3.6															
3.6 - 3.8															

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 18  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023240.08 N  
 349888.75 E  
 Groundsurface Elevation: 82.45 m  
 Top of Casing Elevation: 82.36 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

### BOREHOLE LOG

Borehole #: **MW21-03A**  
 Relative Location: **603 PL S of building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
4.2															
4.4															
4.6															
4.8															
5.0	77.45														
5.2															
5.4															
5.6															
5.8															
6.0	76.45														
6.2															
6.4															
6.6															
6.8															
7.0	75.45														
7.2															
7.4															
7.6															
			End of well at 7.60 m, due to achievement of target depth.												
			Well Completion Details: Screened interval from 4.30 m to 7.30 m below surface Elevation at top of pipe (TOP) = 82.360 m												

GW = 4.182 mbg

Silica sand  
50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 18  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023240.08 N  
 349888.75 E  
 Groundsurface Elevation: 82.45 m  
 Top of Casing Elevation: 82.36 m

**Notes:**  
 SPLIT SPOON





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-03A**  
 Relative Location: **603 PL S of building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
			Groundwater Information: Depth to groundwater from TOP = 4.092 m						1	10	100			

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 18  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023240.08 N  
 349888.75 E  
 Groundsurface Elevation: 82.45 m  
 Top of Casing Elevation: 82.36 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-03B**  
 Relative Location: **603 PL S of building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
0.2			<b>Topsoil</b> Silt and sand, some clay, trace gravel, loose, dark brown, moist.												Flushmount, jplug, cement
0.4			<b>Gravel Fill</b> Sandy gravel, some clay, very dense, grey-brown, wet.												
1.0	81.40		<b>Bedrock</b> Interbedded dolostone and sandstone												
2.0	80.40														
3.0	79.40														
3.8															

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023239.46 N  
 349888.36 E  
 Groundsurface Elevation: 82.40 m  
 Top of Casing Elevation: 82.34 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-03B**  
 Relative Location: **603 PL S of building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
4.2		[Patterned Soil Type]														
4.4																
4.6																
4.8																
5.0	77.40															
5.2																
5.4																
5.6																
5.8																
6.0	76.40															
6.2																
6.4																
6.6																
6.8																
7.0	75.40															
7.2																
7.4																
7.6																
7.8																

Bentonite seal

▼ GW = 5.704 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023239.46 N  
 349888.36 E  
 Groundsurface Elevation: 82.40 m  
 Top of Casing Elevation: 82.34 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-03B**  
 Relative Location: **603 PL S of building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
8.2		[Dotted pattern]														
8.4																
8.6																
8.8																
9.0	73.40															
9.2																
9.4																
9.6																
9.8																
10.0	72.40															
10.2																
10.4																
10.6																
10.8																
11.0	71.40															
11.2																
11.4																
11.6																
11.8																

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023239.46 N  
 349888.36 E  
 Groundsurface Elevation: 82.40 m  
 Top of Casing Elevation: 82.34 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-03B**  
 Relative Location: **603 PL S of building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
12.2			<p>End of well at 12.20 m, due to achievement of target depth.</p> <p>Well Completion Details:            Screened interval from 9.20 m to 12.20 m below surface            Elevation at top of pipe (TOP) = 82.340 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 5.644 m</p>											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023239.46 N  
 349888.36 E  
 Groundsurface Elevation: 82.40 m  
 Top of Casing Elevation: 82.34 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-03C**  
 Relative Location: **603 PL S of building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
								1	10	100				
0.0 - 0.2			<b>Topsoil</b> Sandy silt, soft, organics, brown, moist.	0-1		1	50	PHC PAH BTEX Metals	1.4					
0.2 - 0.4			<b>Sand and Gravel Fill</b> Sand and gravel, some clay, loose, black, moist.			3 3 7								
0.4 - 0.8			<b>Clay</b> Some sand, soft, high plasticity, brown, moist.	2.5-2.75		50+	100	VOCs	1.4					
0.8 - 1.0	81.44		<b>Bedrock</b> Interbedded dolostone and sandstone											
1.0 - 2.0	80.44		<b>Bedrock</b> Interbedded dolostone and sandstone											
2.0 - 3.0	79.44		<b>Bedrock</b> Interbedded dolostone and sandstone											
3.0 - 3.8			<b>Bedrock</b> Interbedded dolostone and sandstone											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 26  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023241.45 N  
 349889.98 E  
 Groundsurface Elevation: 82.44 m  
 Top of Casing Elevation: 82.37 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-03C**  
 Relative Location: **603 PL S of building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Dotted pattern]												
4.4														
4.6														
4.8														
5.0	77.44													
5.2														
5.4														
5.6														
5.8														
6.0	76.44													
6.2														
6.4														
6.6														
6.8														
7.0	75.44													
7.2														
7.4														
7.6														
7.8														

▼ GW = 5.522 mbg

Bentonite seal

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 26  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023241.45 N  
 349889.98 E  
 Groundsurface Elevation: 82.44 m  
 Top of Casing Elevation: 82.37 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

### BOREHOLE LOG

Borehole #: **MW22-03C**  
 Relative Location: **603 PL S of building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
8.2		[Patterned Soil Type]												
8.4														
8.6														
8.8														
9.0	73.44													
9.2														
9.4														
9.6														
9.8														
10.0	72.44													
10.2														
10.4														
10.6														
10.8														
11.0	71.44													
11.2														
11.4														
11.6														
11.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 26  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023241.45 N  
 349889.98 E  
 Groundsurface Elevation: 82.44 m  
 Top of Casing Elevation: 82.37 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-03C**  
 Relative Location: **603 PL S of building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
12.2		[Dotted pattern]												
12.4														
12.6														
12.8														
13.0	69.44													
13.2														
13.4														
13.6														
13.8														
14.0	68.44													
14.2														
14.4														
14.6														
14.8														
15.0	67.44													
15.2														
15.4														
15.6														
15.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 26  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023241.45 N  
 349889.98 E  
 Groundsurface Elevation: 82.44 m  
 Top of Casing Elevation: 82.37 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-03C**  
 Relative Location: **603 PL S of building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
16.2		[Dotted pattern]														
16.4																
16.6																
16.8																
17.0	65.44															
17.2																
17.4																
17.6																
17.8																
18.0	64.44															
18.2																
			End of well at 18.30 m, due to achievement of target depth.													
			Well Completion Details: Screened interval from 15.30 m to 18.30 m below surface Elevation at top of pipe (TOP) = 82.370 m													
			Groundwater Information: Depth to groundwater from TOP = 5.452 m													

Silica sand  
  
50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 26  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023241.45 N  
 349889.98 E  
 Groundsurface Elevation: 82.44 m  
 Top of Casing Elevation: 82.37 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-04A**  
 Relative Location: **SE corner of 603 property**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL	
									1	10	100				
0.2			<b>Topsoil</b> Silt and sand, some clay, trace gravel, loose, dark brown, moist.												Flushmount, jplug, cement
0.4			<b>Silt</b> Sandy silt, trace gravel, firm, light brown, moist.	0-2		1 1 3	90		0.0						
0.6			<b>Clay</b> Silty clay, some sand, trace gravel, medium plastic, firm to hard, grey-brown, moist.												
1.0	81.84			2-4		2 2 6 11	100	VOCs	0.0						
1.2			<b>Bedrock</b> Interbedded dolostone and sandstone				50+								
2.0	80.84														
3.0	79.84														Bentonite seal

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 18  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023263.55 N  
 349917.75 E  
 Groundsurface Elevation: 82.84 m  
 Top of Casing Elevation: 82.71 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-04A**  
 Relative Location: **SE corner of 603 property**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Dotted pattern]												
4.4														
4.6														
4.8														
5.0	77.84													
5.2														
5.4														
5.6														
5.8														
6.0	76.84													
6.2														
6.4														
6.6														
6.8														
7.0	75.84													
7.2														
7.4														
7.6														
7.8														

▼ GW = 6.481 mbg  
 Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 18  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023263.55 N  
 349917.75 E  
 Groundsurface Elevation: 82.84 m  
 Top of Casing Elevation: 82.71 m

**Notes:**  
 ☒ SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-04A**  
 Relative Location: **SE corner of 603 property**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
8.2		[Patterned Soil Type]													
8.4															
8.6															
8.8															
9.0	73.84														
			End of well at 9.00 m, due to achievement of target depth.												
			Well Completion Details: Screened interval from 6.00 m to 9.00 m below surface Elevation at top of pipe (TOP) = 82.710 m												
			Groundwater Information: Depth to groundwater from TOP = 6.351 m												

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 18  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023263.55 N  
 349917.75 E  
 Groundsurface Elevation: 82.84 m  
 Top of Casing Elevation: 82.71 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-04B**  
 Relative Location: **SE corner of 603 property**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
0.2			<b>Topsoil</b> Silt and sand, some clay, trace gravel, loose, dark brown, moist.											Flushmount, jplug, cement
0.4			<b>Silt</b> Sandy silt, trace gravel, firm, light brown, moist.											
0.6			<b>Clay</b> Silty clay, some sand, trace gravel, medium plastic, firm to hard, grey-brown, moist.											
1.0	81.82		<b>Bedrock</b> Interbedded dolostone and sandstone											
2.0	80.82													
3.0	79.82													

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023261.93 N  
 349917.5 E  
 Groundsurface Elevation: 82.82 m  
 Top of Casing Elevation: 82.66 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-04B**  
 Relative Location: **SE corner of 603 property**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
4.2																
4.4																
4.6																
4.8																
5.0	77.82															
5.2																
5.4																
5.6																
5.8																
6.0	76.82															
6.2																
6.4																
6.6																
6.8																
7.0	75.82															
7.2																
7.4																
7.6																
7.8																

Bentonite seal

▼ GW = 6.506 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023261.93 N  
 349917.5 E  
 Groundsurface Elevation: 82.82 m  
 Top of Casing Elevation: 82.66 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-04B**  
 Relative Location: **SE corner of 603 property**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
8.2															
8.4															
8.6															
8.8															
9.0	73.82														
9.2															
9.4															
9.6															
9.8															
10.0	72.82														
10.2															
10.4															
10.6															
10.8															
11.0	71.82														
11.2															
11.4															
11.6															
11.8															

Silica sand  
  
50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023261.93 N  
 349917.5 E  
 Groundsurface Elevation: 82.82 m  
 Top of Casing Elevation: 82.66 m

**Notes:**





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-04B**  
 Relative Location: **SE corner of 603 property**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
12.2		•••••												
12.4		•••••												
12.6		•••••												
12.8		•••••	End of well at 12.80 m, due to achievement of target depth.											
			Well Completion Details: Screened interval from 9.80 m to 12.80 m below surface Elevation at top of pipe (TOP) = 82.660 m											
			Groundwater Information: Depth to groundwater from TOP = 6.346 m											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023261.93 N  
 349917.5 E  
 Groundsurface Elevation: 82.82 m  
 Top of Casing Elevation: 82.66 m

**Notes:**

Page 4 of 4



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-04C**  
 Relative Location: **SE corner of 603 property**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
								1	10	100				
0.0			<b>Topsoil</b> Sandy silt, organics, firm, non-plastic, brown, moist.											
0.2			<b>Sand and Silt</b> Sand and silt, some gravel, compact, firm, brown, moist.	0-1.5		2 3 5 4	75	0.0						Flushmount, jplug, cement
0.4														
0.6														
0.8			<b>Clay</b> Sandy clay, some gravel, firm, low-plastic, brown and gray, dry.											
1.0	81.86			2.5-4.25		11 15 11 29	83	0.0						
1.2														
1.4			<b>Bedrock</b> Interbedded dolostone and sandstone				50+							
1.6														
1.8														
2.0	80.86													
2.2														
2.4														
2.6														
2.8														
3.0	79.86													
3.2														
3.4														
3.6														
3.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 28  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023261.98 N  
 349918.39 E  
 Groundsurface Elevation: 82.86 m  
 Top of Casing Elevation: 82.68 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-04C**  
 Relative Location: **SE corner of 603 property**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
4.2		[Dotted pattern]												
4.4														
4.6														
4.8														
5.0	77.86													
5.2														
5.4														
5.6														
5.8														
6.0	76.86													
6.2														
6.4														
6.6														
6.8														
7.0	75.86													
7.2														
7.4														
7.6														
7.8														

▼ GW = 6.127 mbg

Bentonite seal

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 28  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023261.98 N  
 349918.39 E  
 Groundsurface Elevation: 82.86 m  
 Top of Casing Elevation: 82.68 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-04C**  
 Relative Location: **SE corner of 603 property**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
8.2		[Patterned Soil Type]												
8.4														
8.6														
8.8														
9.0	73.86													
9.2														
9.4														
9.6														
9.8														
10.0	72.86													
10.2														
10.4														
10.6														
10.8														
11.0	71.86													
11.2														
11.4														
11.6														
11.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 28  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023261.98 N  
 349918.39 E  
 Groundsurface Elevation: 82.86 m  
 Top of Casing Elevation: 82.68 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-04C**  
 Relative Location: **SE corner of 603 property**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
12.2		[Dotted pattern]												
12.4														
12.6														
12.8														
13.0	69.86													
13.2														
13.4														
13.6														
13.8														
14.0	68.86													
14.2														
14.4														
14.6														
14.8														
15.0	67.86													
15.2														
15.4														
15.6														
15.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 28  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023261.98 N  
 349918.39 E  
 Groundsurface Elevation: 82.86 m  
 Top of Casing Elevation: 82.68 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-04C**  
 Relative Location: **SE corner of 603 property**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION			
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES	
									1	10	100				
16.2															
16.4															
16.6															
16.8															
17.0	65.86														
17.2															
17.4															
17.6															
17.8															
18.0	64.86														
18.2															
			End of well at 18.30 m, due to achievement of target depth.												
			Well Completion Details: Screened interval from 15.30 m to 18.30 m below surface Elevation at top of pipe (TOP) = 82.680 m												
			Groundwater Information: Depth to groundwater from TOP = 5.947 m												

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 28  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023261.98 N  
 349918.39 E  
 Groundsurface Elevation: 82.86 m  
 Top of Casing Elevation: 82.68 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-05A**  
 Relative Location: **603 Lawn near March**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
									1	10	100			
0.2			<b>Topsoil</b> Silt and sand, some clay, trace gravel, loose, dark brown, moist.	0-0.5		1	0							
0.4			<b>Bedrock</b> Interbedded dolostone and sandstone											
1.0	-82.72													
2.0	-81.72													
3.0	-80.72													
3.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 19  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023317.83 N  
 349895.67 E  
 Groundsurface Elevation: 83.72 m  
 Top of Casing Elevation: 83.62 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-05A**  
 Relative Location: **603 Lawn near March**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
4.2															
4.4															
4.6															
4.8															
5.0	78.72														
5.2															
5.4															
5.6															
5.8															
6.0	77.72														
6.2															
6.4															
6.6															
6.8															
7.0	76.72														
7.2															
7.4															
7.6															
7.8															

Silica sand  
 50 mm 010 slot PVC pipe  
 GW = 6.699 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 19  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023317.83 N  
 349895.67 E  
 Groundsurface Elevation: 83.72 m  
 Top of Casing Elevation: 83.62 m

**Notes:**  
 SPLIT SPOON





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-05A**  
 Relative Location: **603 Lawn near March**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
			<p>End of well at 8.10 m, due to achievement of target depth.</p> <p>Well Completion Details:            Screened interval from 5.10 m to 8.10 m below surface            Elevation at top of pipe (TOP) = 83.620 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 6.599 m</p>											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 19  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023317.83 N  
 349895.67 E  
 Groundsurface Elevation: 83.72 m  
 Top of Casing Elevation: 83.62 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-05B**  
 Relative Location: **603 Lawn near March**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
0.2			<b>Topsoil</b> Silt and sand, some clay, trace gravel, loose, dark brown, moist.												Flushmount, jplug, cement
0.4			<b>Bedrock</b> Interbedded dolostone and sandstone												
1.0	-82.72														
2.0	-81.72														
3.0	-80.72														
3.8															

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 21  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023318.34 N  
 349895 E  
 Groundsurface Elevation: 83.72 m  
 Top of Casing Elevation: 83.61 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-05B**  
 Relative Location: **603 Lawn near March**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Patterned Soil Type]												
4.4														
4.6														
4.8														
5.0	78.72													
5.2														
5.4														
5.6														
5.8														
6.0	77.72													
6.2														
6.4														
6.6														
6.8														
7.0	76.72													
7.2														
7.4														
7.6														
7.8														

Bentonite seal

▼ GW = 7.808 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 21  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023318.34 N  
 349895 E  
 Groundsurface Elevation: 83.72 m  
 Top of Casing Elevation: 83.61 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-05B**  
 Relative Location: **603 Lawn near March**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
8.2		[Dotted pattern]														
8.4																
8.6																
8.8																
9.0	74.72															
9.2																
9.4																
9.6																
9.8																
10.0	73.72															
10.2																
10.4																
10.6																
10.8																
11.0	72.72															
11.2																
11.4																
11.6																
11.8																

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 21  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023318.34 N  
 349895 E  
 Groundsurface Elevation: 83.72 m  
 Top of Casing Elevation: 83.61 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-05B**  
 Relative Location: **603 Lawn near March**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
12.2														
12.4			End of well at 12.50 m, due to achievement of target depth.											
			Well Completion Details: Screened interval from 9.20 m to 12.20 m below surface Elevation at top of pipe (TOP) = 83.610 m											
			Groundwater Information: Depth to groundwater from TOP = 7.698 m											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 21  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023318.34 N  
 349895 E  
 Groundsurface Elevation: 83.72 m  
 Top of Casing Elevation: 83.61 m

**Notes:**

Page 4 of 4



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-05C**  
 Relative Location: **603 Lawn near March**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL	
								1	10	100					
0.2			<b>Topsoil</b> Sandy silt, organics, loose, dark brown, moist.	0-1					0.2						Flushmount, jplug, cement
0.4			<b>Bedrock</b> Interbedded dolostone and sandstone												
1.0	-82.63														
2.0	-81.63														
3.0	-80.63														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 10  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023319.43 N  
 349895.21 E  
 Groundsurface Elevation: 83.63 m  
 Top of Casing Elevation: 83.52 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

### BOREHOLE LOG

Borehole #: **MW22-05C**  
 Relative Location: **603 Lawn near March**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
4.2		[Patterned Soil Type]													
4.4															
4.6															
4.8															
5.0	78.63														
5.2															
5.4															
5.6															
5.8															
6.0	77.63														
6.2															
6.4															
6.6															
6.8															
7.0	76.63														
7.2															
7.4															
7.6															
7.8															

GW = 7.434 mbg  
 Bentonite seal

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 10  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023319.43 N  
 349895.21 E  
 Groundsurface Elevation: 83.63 m  
 Top of Casing Elevation: 83.52 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-05C**  
 Relative Location: **603 Lawn near March**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
8.2		[Patterned Soil Type]												
8.4														
8.6														
8.8														
9.0	74.63													
9.2														
9.4														
9.6														
9.8														
10.0	73.63													
10.2														
10.4														
10.6														
10.8														
11.0	72.63													
11.2														
11.4														
11.6														
11.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 10  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023319.43 N  
 349895.21 E  
 Groundsurface Elevation: 83.63 m  
 Top of Casing Elevation: 83.52 m

**Notes:**  
 SPLIT SPOON





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-05C**  
 Relative Location: **603 Lawn near March**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
12.2		[Dotted pattern]												
12.4														
12.6														
12.8														
13.0	70.63													
13.2														
13.4														
13.6														
13.8														
14.0	69.63													
14.2														
14.4														
14.6														
14.8														
15.0	68.63													
15.2														
15.4														
15.6														
15.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 10  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023319.43 N  
 349895.21 E  
 Groundsurface Elevation: 83.63 m  
 Top of Casing Elevation: 83.52 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-05C**  
 Relative Location: **603 Lawn near March**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
16.2															
16.4															
16.6															
16.8															
17.0	66.63														
17.2															
17.4															
17.6															
17.8															
18.0	65.63														
18.2															
			End of well at 18.30 m, due to achievement of target depth.												
			Well Completion Details: Screened interval from 15.30 m to 18.30 m below surface Elevation at top of pipe (TOP) = 83.520 m												
			Groundwater Information: Depth to groundwater from TOP = 7.324 m												

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 10  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023319.43 N  
 349895.21 E  
 Groundsurface Elevation: 83.63 m  
 Top of Casing Elevation: 83.52 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW21-06A**  
 Relative Location: **603 Lawn near Terry Fox**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	
								1	10	100			
0.0 - 0.2			<b>Topsoil</b> Silt and sand, some clay, trace gravel, loose, dark brown, moist.	0-2	1 3 5 3	60	0.0						
			Construction debris										
0.2 - 0.4			<b>Sand</b> Sand, some silt and clay, trace gravel, loose, tan, moist.										
0.4 - 0.6			<b>Clay</b> Clay, some sand, firm to hard, high plastic, brown, moist.	2/3	3 3 50+	100	0.0						
0.6 - 1.0			<b>Bedrock</b> Interbedded dolostone and sandstone										
1.0 - 2.0	82.04												
2.0 - 3.0	81.04												
3.0 - 3.8	80.04												
													Bentonite seal

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 19  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023323.8 N  
 349835.36 E  
 Groundsurface Elevation: 83.04 m  
 Top of Casing Elevation: 82.9 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-06A**  
 Relative Location: **603 Lawn near Terry Fox**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Dotted pattern]												
4.4														
4.6														
4.8														
5.0	78.04													
5.2														
5.4														
5.6														
5.8														
6.0	77.04													
6.2														
6.4														
6.6														
6.8														
7.0	76.04													
7.2														
7.4														
7.6														
7.8														

▼ GW = 5.499 mbg

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 19  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023323.8 N  
 349835.36 E  
 Groundsurface Elevation: 83.04 m  
 Top of Casing Elevation: 82.9 m

**Notes:**  
 ☒ SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-06A**  
 Relative Location: **603 Lawn near Terry Fox**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
			<p>End of well at 8.10 m, due to achievement of target depth.</p> <p>Well Completion Details:            Screened interval from 5.10 m to 8.10 m below surface            Elevation at top of pipe (TOP) = 82.900 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 5.359 m</p>											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 November 19  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023323.8 N  
 349835.36 E  
 Groundsurface Elevation: 83.04 m  
 Top of Casing Elevation: 82.9 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-06B**  
 Relative Location: **603 Lawn near Terry Fox**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
								1	10	100				
0.0 - 0.2			<b>Topsoil</b> Silty sand, organics, loose, dark brown, moist.	0-0.75		1 15 4	83	0.1						Flushmount, jplug, cement
0.2 - 0.4			<b>Sand</b> Sand, some gravel, loose, tan/gray, moist.	0.75-1.5			83	0.1						
0.4 - 0.6			<b>Clay</b> Clay, some sand, soft, medium plasticity, dark brown, moist.	1.5-1.75			83	0.1	PHC BTEX PCB					
0.6 - 0.8			<b>Sand</b> Sand, some clay, loose, brown, moist.											
0.8 - 1.0	82.05		<b>Clay</b> Clay, trace sand, firm, low plasticity, brown, moist.	2.5-3.25		4 50+	100	0.2	PHC VOC PCB					
1.0 - 1.2			<b>Bedrock</b> Interbedded dolostone and sandstone											
1.2 - 2.0														
2.0 - 3.0	81.05													
3.0 - 3.8	80.05													

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 9  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023324.47 N  
 349836.13 E  
 Groundsurface Elevation: 83.05 m  
 Top of Casing Elevation: 82.97 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-06B**  
 Relative Location: **603 Lawn near Terry Fox**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Dotted pattern]												
4.4														
4.6														
4.8														
5.0	78.05													
5.2														
5.4														
5.6														
5.8														
6.0	77.05													
6.2														
6.4														
6.6														
6.8														
7.0	76.05													
7.2														
7.4														
7.6														
7.8														

Bentonite seal

▼ GW = 6.704 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 9  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023324.47 N  
 349836.13 E  
 Groundsurface Elevation: 83.05 m  
 Top of Casing Elevation: 82.97 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-06B**  
 Relative Location: **603 Lawn near Terry Fox**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
8.2															
8.4															
8.6															
8.8															
9.0	74.05														
9.2															
9.4															
9.6															
9.8															
10.0	73.05														
10.2															
10.4															
10.6															
10.8															
11.0	72.05														
11.2															
11.4															
11.6															
11.8															

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 9  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023324.47 N  
 349836.13 E  
 Groundsurface Elevation: 83.05 m  
 Top of Casing Elevation: 82.97 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-06B**  
 Relative Location: **603 Lawn near Terry Fox**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
12.2														
12.4														
12.6														
			End of well at 12.70 m, due to achievement of target depth.											
			Well Completion Details: Screened interval from 9.70 m to 12.70 m below surface Elevation at top of pipe (TOP) = 82.970 m											
			Groundwater Information: Depth to groundwater from TOP = 6.624 m											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 9  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023324.47 N  
 349836.13 E  
 Groundsurface Elevation: 83.05 m  
 Top of Casing Elevation: 82.97 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-07**  
 Relative Location: **603 interior former sump**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
0.2			<b>Concrete</b>												Flushmount, jplug, cement
0.4			<b>Clear Stone Fill</b> 3/4 in minus crushed and washed gravel.												Vapour Well
1.0	82.16														
1.6			<b>Bedrock</b> Interbedded dolostone and sandstone												
2.0	81.16														
2.2															Bentonite seal
3.0	80.16														GW = 3.015 mbg
3.8															

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Strata - Phil  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.076  
 WELL DIAMETER (m): 0.032  
 DRILL DATE: 2021 December 21  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023158.07 N  
 349827.95 E  
 Groundsurface Elevation: 83.16 m  
 Top of Casing Elevation: 84.11 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-07**  
 Relative Location: **603 interior former sump**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
4.2		[Patterned Soil Type]													
4.4															
4.6															
4.8															
5.0	78.16														
5.2															
5.4															
5.6															
5.8															
6.0	77.16														
6.2															
6.4															
6.6															
6.8															
7.0	76.16		End of well at 7.00 m, due to achievement of target depth.												
			Well Completion Details: Screened interval from 4.00 m to 7.00 m below surface Elevation at top of pipe (TOP) = 84.110 m												
			Groundwater Information: Depth to groundwater from TOP = 3.965 m												

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Strata - Phil  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.076  
 WELL DIAMETER (m): 0.032  
 DRILL DATE: 2021 December 21  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023158.07 N  
 349827.95 E  
 Groundsurface Elevation: 83.16 m  
 Top of Casing Elevation: 84.11 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-08**  
 Relative Location: **603 interior existing sump**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
0.2			<b>Concrete</b>											Flushmount, jplug, cement
0.4			<b>Clear Stone Fill</b> 3/4 in minus crushed and washed gravel											Vapour Well
1.0	81.94		<b>Bedrock</b> Interbedded dolostone and sandstone											
2.0	80.94													
2.2														Bentonite seal
3.0	79.94													GW = 3.052 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Strata - Phil  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.076  
 WELL DIAMETER (m): 0.032  
 DRILL DATE: 2021 December 20  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5923261.47 N  
 349941.22 E  
 Groundsurface Elevation: 82.94 m  
 Top of Casing Elevation: 83.89 m

**Notes:**

Page 1 of 2



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-08**  
 Relative Location: **603 interior existing sump**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Patterned Soil Type]												
4.4														
4.6														
4.8														
5.0	77.94													
5.2														
5.4														
5.6														
5.8														
6.0	76.94													
6.2														
6.4														
6.6														
6.8														
7.0	75.94													
7.2														
			End of well at 7.30 m, due to achievement of target depth.											
			Well Completion Details: Screened interval from 4.30 m to 7.30 m below surface Elevation at top of pipe (TOP) = 83.890 m											
			Groundwater Information: Depth to groundwater from TOP = 4.002 m											

Silica sand  
 32 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Strata - Phil  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.076  
 WELL DIAMETER (m): 0.032  
 DRILL DATE: 2021 December 20  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5923261.47 N  
 349941.22 E  
 Groundsurface Elevation: 82.94 m  
 Top of Casing Elevation: 83.89 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-13A**  
 Relative Location: **W 603 emergency exit**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
0.2			<b>Topsoil</b> Silt and sand, some clay, trace gravel, loose, dark brown, moist.												Flushmount, jplug, cement
0.4			<b>Sand and Gravel Fill</b> Sand and gravel, some silt and clay, loose, brown, dry.												
1.0	82.25		<b>Bedrock</b> Interbedded dolostone and sandstone												
2.0	81.25														Bentonite seal
2.2															
2.4															
2.6															
2.8															
3.0	80.25														
3.2															
3.4															
3.6															
3.8															

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 20  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023263.8 N  
 349813.24 E  
 Groundsurface Elevation: 83.25 m  
 Top of Casing Elevation: 83.12 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-13A**  
 Relative Location: **W 603 emergency exit**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Dotted pattern]												
4.4														
4.6														
4.8														
5.0	78.25													
5.2														
5.4														
5.6														
5.8														
6.0	77.25													
6.2														
6.4														
6.6														
6.8														
7.0	76.25													
7.2														
7.4														
7.6			End of well at 7.60 m, due to achievement of target depth.											

GW = 5.209 mbg

Silica sand  
 50 mm 010 slot PVC pipe

Well Completion Details:  
 Screened interval from 4.60 m to 7.60 m below surface  
 Elevation at top of pipe (TOP) = 83.120 m

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 20  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023263.8 N  
 349813.24 E  
 Groundsurface Elevation: 83.25 m  
 Top of Casing Elevation: 83.12 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-13A**  
 Relative Location: **W 603 emergency exit**

Project #: 0006-0103

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
			Groundwater Information: Depth to groundwater from TOP = 5.079 m						1	10	100			

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 20  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023263.8 N  
 349813.24 E  
 Groundsurface Elevation: 83.25 m  
 Top of Casing Elevation: 83.12 m

**Notes:**

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CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-13B**  
 Relative Location: **W 603 emergency exit**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
									1	10	100			
0.0 - 0.2		Asphalt												
0.2 - 0.8		Sand and Gravel Fill	Sand and gravel, some silt and clay, loose, brown, dry.	0-2		7 19 18 25	75	PHC VOC PAH Metals	0.8					Flushmount, jplug, cement
0.8 - 1.0		Bedrock	Interbedded dolostone and sandstone			50+								
1.0 - 2.0	-82.28													
2.0 - 3.0	-81.28													
3.0 - 3.8	-80.28													

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 10  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023262.76 N  
 349813.14 E  
 Groundsurface Elevation: 83.28 m  
 Top of Casing Elevation: 83.16 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-13B**  
 Relative Location: **W 603 emergency exit**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Dotted pattern]												
4.4														
4.6														
4.8														
5.0	78.28													
5.2														
5.4														
5.6														
5.8														
6.0	77.28													
6.2														
6.4														
6.6														
6.8														
7.0	76.28													
7.2														
7.4														
7.6														
7.8														

Bentonite seal

▼ GW = 6.385 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 10  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023262.76 N  
 349813.14 E  
 Groundsurface Elevation: 83.28 m  
 Top of Casing Elevation: 83.16 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-13B**  
 Relative Location: **W 603 emergency exit**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
8.2		[Dotted pattern]												
8.4														
8.6														
8.8														
9.0	74.28													
9.2														
9.4														
9.6														
9.8														
10.0	73.28													
10.2														
10.4														
10.6														
10.8														
11.0	72.28													
11.2														
11.4														
11.6														
11.8														

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 10  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023262.76 N  
 349813.14 E  
 Groundsurface Elevation: 83.28 m  
 Top of Casing Elevation: 83.16 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-13B**  
 Relative Location: **W 603 emergency exit**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
12.2			<p>End of well at 12.20 m, due to achievement of target depth.</p> <p>Well Completion Details:            Screened interval from 9.20 m to 12.20 m below surface            Elevation at top of pipe (TOP) = 83.160 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 6.265 m</p>											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 10  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023262.76 N  
 349813.14 E  
 Groundsurface Elevation: 83.28 m  
 Top of Casing Elevation: 83.16 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-14A**  
 Relative Location: **Center 603 parking**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
		Asphalt													
0.2		Sand and Gravel Fill	Sand and gravel, some silt and clay, loose, brown, dry.												Flushmount, jplug, cement
0.4															
0.6		Bedrock	Interbedded dolostone and sandstone												
0.8															
1.0	-82.77														
1.2															
1.4															
1.6															
1.8															
2.0	-81.77														
2.2															
2.4															
2.6															Bentonite seal
2.8															
3.0	-80.77														
3.2															
3.4															
3.6															
3.8															

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 23  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023235.16 N  
 349807.37 E  
 Groundsurface Elevation: 83.77 m  
 Top of Casing Elevation: 83.64 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-14A**  
 Relative Location: **Center 603 parking**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
4.2		[Dotted pattern]														
4.4																
4.6																
4.8																
5.0	78.77															
5.2																
5.4																
5.6																
5.8																
6.0	77.77															
6.2																
6.4																
6.6																
6.8																
7.0	76.77															
7.2																
7.4																
7.6																
7.8																

▼ GW = 5.901 mbg

Silica sand

50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 23  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023235.16 N  
 349807.37 E  
 Groundsurface Elevation: 83.77 m  
 Top of Casing Elevation: 83.64 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-14A**  
 Relative Location: **Center 603 parking**

Project #: 0006-0103

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
8.2			<p>End of well at 8.20 m, due to achievement of target depth.</p> <p>Well Completion Details:            Screened interval from 5.20 m to 8.20 m below surface            Elevation at top of pipe (TOP) = 83.640 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 5.771 m</p>											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 23  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023235.16 N  
 349807.37 E  
 Groundsurface Elevation: 83.77 m  
 Top of Casing Elevation: 83.64 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-14B**  
 Relative Location: **Center 603 parking**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
									1	10	100			
0.0 - 0.2		Asphalt												
0.2 - 0.4		Sand and Gravel Fill Sand and gravel, some silt and clay, loose, brown, dry.												
0.4 - 1.2		Silt Sandy silt, firm, dark brown, moist.												
1.2 - 2.0	82.84	Bedrock Interbedded dolostone and sandstone												
2.0 - 3.0	81.84													
3.0 - 3.8	80.84													

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 24  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023234.36 N  
 349806.46 E  
 Groundsurface Elevation: 83.84 m  
 Top of Casing Elevation: 83.85 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-14B**  
 Relative Location: **Center 603 parking**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
4.2		[Dotted pattern]														
4.4																
4.6																
4.8																
5.0	78.84															
5.2																
5.4																
5.6																
5.8																
6.0	77.84															
6.2																
6.4																
6.6																
6.8																
7.0	76.84															
7.2																
7.4																
7.6																
7.8																

Bentonite seal

▼ GW = 6.659 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 24  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023234.36 N  
 349806.46 E  
 Groundsurface Elevation: 83.84 m  
 Top of Casing Elevation: 83.85 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-14B**  
 Relative Location: **Center 603 parking**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
8.2															
8.4															
8.6															
8.8															
9.0	74.84														
9.2															
9.4															
9.6															
9.8															
10.0	73.84														
10.2															
10.4															
10.6															
10.8															
11.0	72.84														
11.2															
11.4															
11.6															
11.8															

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 24  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023234.36 N  
 349806.46 E  
 Groundsurface Elevation: 83.84 m  
 Top of Casing Elevation: 83.85 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-14B**  
 Relative Location: **Center 603 parking**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
12.2														
12.4														
12.6														
12.8			<p>End of well at 12.80 m, due to achievement of target depth.</p> <p>Well Completion Details:            Screened interval from 9.80 m to 12.80 m below surface            Elevation at top of pipe (TOP) = 83.850 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 6.669 m</p>											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 24  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023234.36 N  
 349806.46 E  
 Groundsurface Elevation: 83.84 m  
 Top of Casing Elevation: 83.85 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-15A**  
 Relative Location: **SW 603 building corner**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
0.2			<b>Topsoil</b> Silt and sand, some clay, trace gravel, loose, dark brown, moist.												Flushmount, jplug, cement
0.4			<b>Sand and Gravel Fill</b> Sand and gravel, some silt and clay, loose, brown, dry.												
1.0	-82.43														
1.2			<b>Bedrock</b> Interbedded dolostone and sandstone												
2.0	-81.43														
3.0	-80.43														
3.8															Bentonite seal

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023236.22 N  
 349843.75 E  
 Groundsurface Elevation: 83.43 m  
 Top of Casing Elevation: 83.28 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-15A**  
 Relative Location: **SW 603 building corner**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Dotted pattern]												
4.4														
4.6														
4.8														
5.0	78.43													
5.2														
5.4														
5.6														
5.8														
6.0	77.43													
6.2														
6.4														
6.6														
6.8														
7.0	76.43													
7.2														
7.4														
7.6														
7.8														
			End of well at 7.90 m, due to achievement of target depth.											

GW = 5.161 mbg

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023236.22 N  
 349843.75 E  
 Groundsurface Elevation: 83.43 m  
 Top of Casing Elevation: 83.28 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-15A**  
 Relative Location: **SW 603 building corner**

Project #: 0006-0103

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
			<p>Well Completion Details:            Screened interval from 4.90 m to 7.90 m below surface            Elevation at top of pipe (TOP) = 83.280 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 5.011 m</p>											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023236.22 N  
 349843.75 E  
 Groundsurface Elevation: 83.43 m  
 Top of Casing Elevation: 83.28 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-15B**  
 Relative Location: **SW 603 building corner**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
								1	10	100				
0.2			<b>Topsoil</b> Silt and sand, some clay, trace gravel, loose,	0-1		1								Flushmount, jplug, cement
			<b>Sand and Gravel Fill</b> Sand and gravel, some silt and clay, loose, brown, moist.			2								
			<b>Clay</b> Clay, some sand, firm, low-plastic, tan, moist.			3								
			<b>Clay</b> Clay, some sand, firm, low-plastic, tan, moist.			4								
0.4			No gravel.											
0.6			No gravel.											
0.8			No gravel.											
1.0	82.44		No gravel.											
1.2			No gravel.											
1.4			<b>Bedrock</b> Interbedded dolostone and sandstone	44.25		50+	100	VOCs						
1.6			Interbedded dolostone and sandstone											
1.8			Interbedded dolostone and sandstone											
2.0	81.44		Interbedded dolostone and sandstone											
2.2			Interbedded dolostone and sandstone											
2.4			Interbedded dolostone and sandstone											
2.6			Interbedded dolostone and sandstone											
2.8			Interbedded dolostone and sandstone											
3.0	80.44		Interbedded dolostone and sandstone											
3.2			Interbedded dolostone and sandstone											
3.4			Interbedded dolostone and sandstone											
3.6			Interbedded dolostone and sandstone											
3.8			Interbedded dolostone and sandstone											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 25  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023235.32 N  
 349842.76 E  
 Groundsurface Elevation: 83.44 m  
 Top of Casing Elevation: 83.38 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-15B**  
 Relative Location: **SW 603 building corner**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
4.2		[Patterned Soil Type]														
4.4																
4.6																
4.8																
5.0	78.44															
5.2																
5.4																
5.6																
5.8																
6.0	77.44															
6.2																
6.4																
6.6																
6.8																
7.0	76.44															
7.2																
7.4																
7.6																
7.8																

Bentonite seal

GW = 6.551 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 25  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023235.32 N  
 349842.76 E  
 Groundsurface Elevation: 83.44 m  
 Top of Casing Elevation: 83.38 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-15B**  
 Relative Location: **SW 603 building corner**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
8.2															
8.4															
8.6															
8.8															
9.0	74.44														
9.2															
9.4															
9.6															
9.8															
10.0	73.44														
10.2															
10.4															
10.6															
10.8															
11.0	72.44														
11.2															
11.4															
11.6															
11.8															

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 25  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023235.32 N  
 349842.76 E  
 Groundsurface Elevation: 83.44 m  
 Top of Casing Elevation: 83.38 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-15B**  
 Relative Location: **SW 603 building corner**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
										1	10	100			
12.2															
12.4															
12.6															
12.8			End of well at 12.80 m, due to achievement of target depth.												
			Well Completion Details: Screened interval from 9.80 m to 12.80 m below surface Elevation at top of pipe (TOP) = 83.380 m												
			Groundwater Information: Depth to groundwater from TOP = 6.491 m												

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 25  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023235.32 N  
 349842.76 E  
 Groundsurface Elevation: 83.44 m  
 Top of Casing Elevation: 83.38 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-16A**  
 Relative Location: **S of MW21-02 30m**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
0.0 - 0.2		Asphalt													
0.2 - 0.8		Sand and Gravel Fill	Sand and gravel, some silt and clay, loose, brown, dry.												Flushmount, jplug, cement
0.8 - 1.0	81.72	Bedrock	Interbedded dolostone and sandstone												
1.0 - 2.0	80.72														
2.0 - 2.2															Bentonite seal
2.2 - 3.0	79.72														
3.0 - 3.8															

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 23  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023239.77 N  
 349870.52 E  
 Groundsurface Elevation: 82.72 m  
 Top of Casing Elevation: 82.61 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-16A**  
 Relative Location: **S of MW21-02 30m**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
4.2		[Patterned Soil Type]														
4.4																
4.6																
4.8																
5.0	77.72															
5.2																
5.4																
5.6																
5.8																
6.0	76.72															
6.2																
6.4																
6.6																
6.8																
7.0	75.72															
7.2																
7.4																
7.6			End of well at 7.60 m, due to achievement of target depth.													
			Well Completion Details: Screened interval from 4.60 m to 7.60 m below surface Elevation at top of pipe (TOP) = 82.610 m													

GW = 4.433 mbg

Silica sand  
50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 23  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023239.77 N  
 349870.52 E  
 Groundsurface Elevation: 82.72 m  
 Top of Casing Elevation: 82.61 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-16A**  
 Relative Location: **S of MW21-02 30m**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
			Groundwater Information: Depth to groundwater from TOP = 4.323 m						1	10	100			

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 23  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023239.77 N  
 349870.52 E  
 Groundsurface Elevation: 82.72 m  
 Top of Casing Elevation: 82.61 m

**Notes:**

Page 3 of 3



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-16B**  
 Relative Location: **S of MW21-02 30m**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL	
									1	10	100				
0.0		Asphalt													
0.2		Sand and Gravel Fill	Sand and gravel, some silt and clay, loose, gray, moist.	0-1		6 3 1 2	88	PHC BTEX PAH Metals	0.0						Flushmount, jplug, cement
0.4		Clay	Clay, some sand, high plastic, soft, grayish brown, moist.	1-1.75					0.0						
0.8		Silty sand	Silty sand, some clay, some gravel, loose, tan/beige/black, dry.	2.5-3		50+	100	VOCs	0.0						
1.0	81.74	Bedrock	Interbedded dolostone and sandstone												
2.0	80.74														
3.0	79.74														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 25  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023239.21 N  
 349870.11 E  
 Groundsurface Elevation: 82.74 m  
 Top of Casing Elevation: 82.64 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

### BOREHOLE LOG

Borehole #: **MW22-16B**  
 Relative Location: **S of MW21-02 30m**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
4.2																
4.4																Bentonite seal
4.6																
4.8																
5.0	77.74															
5.2																
5.4																
5.6																
5.8																
6.0	76.74															
6.2																
6.4																
6.6																
6.8																
7.0	75.74															
7.2																
7.4																
7.6																
7.8																

▼ GW = 6.094 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 25  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023239.21 N  
 349870.11 E  
 Groundsurface Elevation: 82.74 m  
 Top of Casing Elevation: 82.64 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-16B**  
 Relative Location: **S of MW21-02 30m**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
8.2		[Patterned Soil Type]														
8.4																
8.6																
8.8																
9.0	73.74															
9.2																
9.4																
9.6																
9.8																
10.0	72.74															
10.2																
10.4																
10.6																
10.8																
11.0	71.74															
11.2																
11.4																
11.6																
11.8																

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 25  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023239.21 N  
 349870.11 E  
 Groundsurface Elevation: 82.74 m  
 Top of Casing Elevation: 82.64 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-16B**  
 Relative Location: **S of MW21-02 30m**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
12.2			<p>End of well at 12.20 m, due to achievement of target depth.</p> <p>Well Completion Details:            Screened interval from 9.20 m to 12.20 m below surface            Elevation at top of pipe (TOP) = 82.640 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 5.994 m</p>											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 25  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023239.21 N  
 349870.11 E  
 Groundsurface Elevation: 82.74 m  
 Top of Casing Elevation: 82.64 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-17A**  
 Relative Location: **603 parking, S of cafeteria**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
0.0 - 0.2		Asphalt													
0.2 - 1.0		Sand and Gravel Fill	Sand and gravel, some silt and clay, loose, brown, dry.												Flushmount, jplug, cement
1.0 - 2.0	81.74	Bedrock	Interbedded dolostone and sandstone												
2.0 - 2.2	80.74														
2.2 - 2.4															Bentonite seal
2.4 - 3.0															
3.0 - 3.2	79.74														
3.2 - 3.4															
3.4 - 3.6															
3.6 - 3.8															

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 21  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023270.22 N  
 349884.86 E  
 Groundsurface Elevation: 82.74 m  
 Top of Casing Elevation: 82.64 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-17A**  
 Relative Location: **603 parking, S of cafeteria**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
4.2		[Dotted pattern]														
4.4																
4.6																
4.8																
5.0	77.74															
5.2																
5.4																
5.6																
5.8																
6.0	76.74															
6.2																
6.4																
6.6																
6.8																
7.0	75.74															
7.2																
7.4																
7.6			End of well at 7.60 m, due to achievement of target depth.													
			Well Completion Details: Screened interval from 4.60 m to 7.60 m below surface Elevation at top of pipe (TOP) = 82.640 m													

GW = 4.972 mbg

Silica sand  
50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 21  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023270.22 N  
 349884.86 E  
 Groundsurface Elevation: 82.74 m  
 Top of Casing Elevation: 82.64 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW21-17A**  
 Relative Location: **603 parking, S of cafeteria**

Project #: 0006-0103

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
			Groundwater Information: Depth to groundwater from TOP = 4.872 m						1	10	100			

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Ryan  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2021 December 21  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023270.22 N  
 349884.86 E  
 Groundsurface Elevation: 82.74 m  
 Top of Casing Elevation: 82.64 m

**Notes:**



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-17B**  
 Relative Location: **603 parking, S of cafeteria**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
									1	10	100			
0.0		Asphalt		0-0.75	3 3 1 1	88	PHC PAH BTEX Metals	1.0						
0.2		Sand and Gravel Fill Sand and gravel, some silt and clay, loose, gray, moist.												
0.4		Sandy clay Sandy clay, some gravel, soft, high plastic. dark brown to beige, moist.		0.75-1.75				0.0						
0.6														
0.8														
1.0	81.73		Becomes firm.	2.5-3.5	2 4 50+	100	VOCs	0.0						
1.2			Becomes hard.											
1.4		Bedrock Interbedded dolostone and sandstone												
1.6														
1.8														
2.0	80.73													
2.2														
2.4														
2.6														
2.8														
3.0	79.73													
3.2														
3.4														
3.6														
3.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 26  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023270.76 N  
 349885.37 E  
 Groundsurface Elevation: 82.73 m  
 Top of Casing Elevation: 82.63 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-17B**  
 Relative Location: **603 parking, S of cafeteria**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION			
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES	
									1	10	100				
4.2															
4.4															
4.6															
4.8															
5.0	77.73														
5.2															
5.4															
5.6															
5.8															
6.0	76.73														
6.2															
6.4															
6.6															
6.8															
7.0	75.73														
7.2															
7.4															
7.6															
7.8															

Bentonite seal

▼ GW = 6.246 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 26  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023270.76 N  
 349885.37 E  
 Groundsurface Elevation: 82.73 m  
 Top of Casing Elevation: 82.63 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-17B**  
 Relative Location: **603 parking, S of cafeteria**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL			
									1	10	100					
8.2		[Dotted pattern]														
8.4																
8.6																
8.8																
9.0	73.73															
9.2																
9.4																
9.6																
9.8																
10.0	72.73															
10.2																
10.4																
10.6																
10.8																
11.0	71.73															
11.2																
11.4																
11.6																
11.8																

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 26  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023270.76 N  
 349885.37 E  
 Groundsurface Elevation: 82.73 m  
 Top of Casing Elevation: 82.63 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-17B**  
 Relative Location: **603 parking, S of cafeteria**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
12.2			End of well at 12.30 m, due to achievement of target depth.  Well Completion Details: Screened interval from 9.30 m to 12.30 m below surface Elevation at top of pipe (TOP) = 82.630 m  Groundwater Information: Depth to groundwater from TOP = 6.146 m											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 26  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023270.76 N  
 349885.37 E  
 Groundsurface Elevation: 82.73 m  
 Top of Casing Elevation: 82.63 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



Project #: 0006-0103

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL	
									1	10	100				
0.0 - 0.2		Asphalt		0-1	Split Spoon	12	50	PHC BTEX PAH Metals	0.6						Flushmount, jplug, cement
0.2 - 0.4		Sand and Gravel Fill Sand and gravel, some silt and clay, loose, grey, moist.		2-2.5	Split Spoon	12 12 10 6									
0.4 - 0.8		Gravelly clay Gravelly clay, hard, grey, moist.		2.5-3.75	Split Spoon	4 4 4 6	75		0.4						
0.8 - 1.0	81.50	No gravel.		3.75-4.5	Split Spoon	2 3 50+	100	VOCs	0.3						
1.0 - 1.2															
1.2 - 1.4															
1.4 - 1.6															
1.6 - 1.8		Bedrock	Interbedded dolostone and sandstone												
1.8 - 2.0	80.50														
2.0 - 2.2															
2.2 - 2.4															
2.4 - 2.6															
2.6 - 2.8															
2.8 - 3.0	79.50														
3.0 - 3.2															
3.2 - 3.4															
3.4 - 3.6															
3.6 - 3.8															
3.8 - 4.0															

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 17  
 LOGGED BY: DE/AC

**UTM COORDINATES**  
 ZONE: 18  
 5023134.33 N  
 349982.51 E  
 Groundsurface Elevation: 82.50 m  
 Top of Casing Elevation: 82.37 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY

Bentonite seal



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-18**  
 Relative Location: **SW side of 555 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Dotted pattern]												
4.4														
4.6														
4.8														
5.0	77.50													
5.2														
5.4														
5.6														
5.8														
6.0	76.50													
6.2														
6.4														
6.6														
6.8														
7.0	75.50													
7.2														
7.4														
7.6														
7.8														

▼ GW = 4.595 mbg

Silica sand

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 17  
 LOGGED BY: DE/AC

**UTM COORDINATES**  
 ZONE: 18  
 5023134.33 N  
 349982.51 E  
 Groundsurface Elevation: 82.50 m  
 Top of Casing Elevation: 82.37 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-18**  
 Relative Location: **SW side of 555 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
8.2		[Patterned Soil Type]													50 mm 010 slot PVC pipe
8.4															
8.6															
8.8															
9.0	73.50														
9.2															
9.4															
9.6															
9.8			End of well at 9.80 m, due to achievement of target depth.												
			Well Completion Details: Screened interval from 6.80 m to 9.80 m below surface Elevation at top of pipe (TOP) = 82.370 m												
			Groundwater Information: Depth to groundwater from TOP = 4.465 m												

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 17  
 LOGGED BY: DE/AC

**UTM COORDINATES**  
 ZONE: 18  
 5023134.33 N  
 349982.51 E  
 Groundsurface Elevation: 82.50 m  
 Top of Casing Elevation: 82.37 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **BH22-19**  
 Relative Location: **555 transformer**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE			FIELD TEST DATA			WELL COMPLETION			
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL
								1	10	100			
0.2			<b>Topsoil</b> Sandy silt, organics, soft, dark brown, moist. <b>Sand and Gravel Fill</b> Sand and gravel, some silt and clay, loose, grey, moist.	0-0.5		2 10 6	25		0.0				
0.8			<b>Clay</b> Clay, some gravel, firm, high plasticity, grey, moist. 1" sand pocket, becomes soft.	2-3.5		3 6 4	75		0.0				
1.0	81.23												
1.2			End of borehole at 1.20 m, due to refusal on assumed bedrock.										

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: SPLIT SPOON  
 BOREHOLE DIAMETER (m): 0.152  
 WELL DIAMETER (m):  
 DRILL DATE: 2022 October 17  
 LOGGED BY: DE/AC

**UTM COORDINATES**  
 ZONE: 18  
 5023101.94 N  
 350001.46 E  
 Groundsurface Elevation: 82.23 m  
 Top of Casing Elevation: m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-20**  
 Relative Location: **S central site boundary**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	
								1	10	100			
0.0		Asphalt		0.0-0.5	6	50		0.7					
0.2		Sand and Gravel Fill	Sand and gravel, some silt and clay, loose, grey, moist.	0.5-1	2			0.5					
0.4		Clay	Clay, some sand, firm, medium plastic, greyish brown, moist.										
0.6			Becomes soft.										
1.0	80.98			2.4	1	100		0.4					
1.2		Bedrock	Interbedded dolostone and sandstone										
2.0	79.98												
3.0	78.98												
3.4													GW = 3.405 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 17  
 LOGGED BY: DE/AC

**UTM COORDINATES**  
 ZONE: 18  
 5023087.26 N  
 350004.33 E  
 Groundsurface Elevation: 81.98 m  
 Top of Casing Elevation: 81.91 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-20**  
 Relative Location: **S central site boundary**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
4.2		[Dotted pattern]													
4.4															
4.6															
4.8															
5.0	76.98														
5.2															
5.4															
5.6															
5.8															
6.0	75.98														
6.2															
6.4															
6.6															
6.8															
7.0	74.98														
7.2															
7.4															
7.6															
7.8															

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 17  
 LOGGED BY: DE/AC

**UTM COORDINATES**  
 ZONE: 18  
 5023087.26 N  
 350004.33 E  
 Groundsurface Elevation: 81.98 m  
 Top of Casing Elevation: 81.91 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-20**  
 Relative Location: **S central site boundary**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
8.2														
8.4														
8.6														
8.8														Slough
9.0	72.98		End of well at 9.10 m, due to achievement of target depth.											
			Well Completion Details: Screened interval from 5.20 m to 8.20 m below surface Elevation at top of pipe (TOP) = 81.910 m											
			Groundwater Information: Depth to groundwater from TOP = 3.335 m											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 17  
 LOGGED BY: DE/AC

**UTM COORDINATES**  
 ZONE: 18  
 5023087.26 N  
 350004.33 E  
 Groundsurface Elevation: 81.98 m  
 Top of Casing Elevation: 81.91 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-21**  
 Relative Location: **SE of 555 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
								1	10	100				
0.2			<b>Sand and Gravel Fill</b> Sand and gravel, some silt and clay, loose, grey, moist.	0-0.5		12 5 5 17	25	PHC BTEx	0.0					Flushmount, jplug, cement
0.4			<b>Gravelly clay</b> Gravelly clay, soft, medium plastic, brownish grey, moist.											
0.8			<b>Clay</b> Clay, some sand, firm, low plasticity, grey, moist.											
1.0	-81.12		Becomes non-plastic.	2.5-2.5		1 3 3 3	100	VOCs	0.0					
1.8			Becomes non-plastic.											
2.0	-80.12		1" sand pocket, becomes sandy clay.	5-7		3 3 4 5	100		0.0					
2.2			<b>Bedrock</b> Interbedded dolostone and sandstone											
3.0	-79.12													
3.8														Bentonite seal

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 18  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023117.81 N  
 350011.87 E  
 Groundsurface Elevation: 82.12 m  
 Top of Casing Elevation: 82.02 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-21**  
 Relative Location: **SE of 555 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Patterned Soil Type]												
4.4														
4.6														
4.8														
5.0	77.12													
5.2														
5.4														
5.6														
5.8														
6.0	76.12													
6.2														
6.4														
6.6														
6.8														
7.0	75.12													
7.2														
7.4														
7.6														
7.8														

GW = 4.783 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 18  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023117.81 N  
 350011.87 E  
 Groundsurface Elevation: 82.12 m  
 Top of Casing Elevation: 82.02 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-21**  
 Relative Location: **SE of 555 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
8.2															
8.4															
8.6															
8.8															
9.0	73.12														
9.2															
9.4															
9.6															
9.8															
10.0	72.12														
10.2															
10.4															
10.6															
			End of well at 10.70 m, due to achievement of target depth.												
			Well Completion Details: Screened interval from 7.70 m to 10.70 m below surface Elevation at top of pipe (TOP) = 82.020 m												
			Groundwater Information: Depth to groundwater from TOP = 4.683 m												

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 18  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023117.81 N  
 350011.87 E  
 Groundsurface Elevation: 82.12 m  
 Top of Casing Elevation: 82.02 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY

# BOREHOLE LOG

Borehole #: **MW22-22**  
 Relative Location: **East site corner**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
								1	10	100				
0.0			<b>Topsoil</b> Sandy silt, organics, loose, dark brown, moist.	0-1.25		3 15 13 8	63	PHC BTEX PAH Metals	0.8					
0.2			<b>Gravelly sand</b> Gravelly sand, loose, brown/grey, moist.  Becomes saturated.											
0.4														
0.6														
0.8			<b>Sand and clay</b> Sand and clay, firm, low plasticity, brown/grey, moist.	2.5-3		2 4 8 50+	25	VOCs	0.3					
1.0	80.94													
1.2														
1.4														
1.6			<b>Bedrock</b> Interbedded dolostone and sandstone											
1.8														
2.0	79.94													
2.2														
2.4														
2.6														
2.8														
3.0	78.94													
3.2														
3.4														
3.6														
3.8														

Bentonite seal

GW = 3.263 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 18  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023130.61 N  
 350051.01 E  
 Groundsurface Elevation: 81.94 m  
 Top of Casing Elevation: 81.85 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-22**  
 Relative Location: **East site corner**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Dotted pattern]												
4.4														
4.6														
4.8														
5.0	76.94													
5.2														
5.4														
5.6														
5.8														
6.0	75.94													
6.2														
6.4														
6.6														
6.8														
7.0	74.94													
7.2														
7.4														
7.6														
7.8														

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 18  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023130.61 N  
 350051.01 E  
 Groundsurface Elevation: 81.94 m  
 Top of Casing Elevation: 81.85 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-22**  
 Relative Location: **East site corner**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
8.2															
8.4															
8.6															
8.8															
9.0															
9.0-72.94			End of well at 9.10 m, due to achievement of target depth.												
			Well Completion Details: Screened interval from 5.80 m to 8.80 m below surface Elevation at top of pipe (TOP) = 81.850 m												
			Groundwater Information: Depth to groundwater from TOP = 3.173 m												

Slough

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 18  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023130.61 N  
 350051.01 E  
 Groundsurface Elevation: 81.94 m  
 Top of Casing Elevation: 81.85 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY

# BOREHOLE LOG

Borehole #: **MW22-23**  
 Relative Location: **Front of 555 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
								1	10	100				
0.2			<b>Topsoil</b> Clayey silt, some sand, firm, non-plastic, brown, moist.	0-1		1 3 5	100	PHC BTEX PAH Metals	4.0					Flushmount, jplug, cement
0.4			<b>Sandy clay</b> Sandy clay, firm, low plasticity, grey, moist.	1-2				VOCs	0.0					
0.8			Some gravel, loose, grey/brown/tan, Becomes hard.	2.5-2.75		3 4 7 7	75		0.0					
1.0	81.32		No sand.	2.75-4					0.0					
1.6			<b>Sandy clay</b> Sandy clay, soft, medium plasticity, greyish brown, moist.	5-5.5		2 50+	100		0.0					
1.8			<b>Bedrock</b> Interbedded dolostone and sandstone											
2.0	80.32													
2.2														
2.4														
2.6														
2.8														
3.0	79.32													Bentonite seal
3.2														
3.4														
3.6														
3.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 19  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023163.36 N  
 350016.09 E  
 Groundsurface Elevation: 82.32 m  
 Top of Casing Elevation: 82.22 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-23**  
 Relative Location: **Front of 555 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2														
4.4														
4.6														
4.8														
5.0	77.32													
5.2														
5.4														
5.6														
5.8														
6.0	76.32													
6.2														
6.4														
6.6														
6.8														
7.0	75.32													
7.2														
7.4														
7.6														
7.8														

GW = 5.376 mbg

Silica sand

50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 19  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023163.36 N  
 350016.09 E  
 Groundsurface Elevation: 82.32 m  
 Top of Casing Elevation: 82.22 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-23**  
 Relative Location: **Front of 555 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
8.2															
8.4															
8.6															
8.8															
9.0	73.32														
			<p>End of well at 9.10 m, due to achievement of target depth.</p> <p>Well Completion Details:            Screened interval from 6.10 m to 9.10 m below surface            Elevation at top of pipe (TOP) = 82.220 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 5.276 m</p>												

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 19  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023163.36 N  
 350016.09 E  
 Groundsurface Elevation: 82.32 m  
 Top of Casing Elevation: 82.22 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-24**  
 Relative Location: **NE side of 555 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
								1	10	100				
0.2			<b>Topsoil</b> Sandy silt, some clay, organics, loose, firm, non-plastic, brown, moist.	0-1,25		1								
0.4			<b>Sandy clay</b> Sandy clay, firm, low plasticity, grey, moist.			3								
0.6						4								
0.8			Becomes some sand.											
1.0	80.93					2								
1.2				2.5-4.5		5								
1.4						5								
1.6			Becomes trace sand.			6								
1.8						5								
2.0	79.93		<b>Sandy silt</b> Sandy silt, some clay, some gravel, loose, pinkish/grey/brown/tan, wet.			2								
2.2						2								
2.4						2								
2.6						2								
2.8						2								
3.0	78.93		<b>Bedrock</b> Interbedded dolostone and sandstone			14								
3.2														
3.4														
3.6														
3.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 19  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023175.24 N  
 349981.42 E  
 Groundsurface Elevation: 81.93 m  
 Top of Casing Elevation: 81.84 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-24**  
 Relative Location: **NE side of 555 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Dotted pattern]												
4.4														
4.6														
4.8														
5.0	76.93													
5.2														
5.4														
5.6														
5.8														
6.0	75.93													
6.2														
6.4														
6.6														
6.8														
7.0	74.93													
7.2														
7.4														
7.6														
7.8														

GW = 4.627 mbg

Silica sand

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 19  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023175.24 N  
 349981.42 E  
 Groundsurface Elevation: 81.93 m  
 Top of Casing Elevation: 81.84 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-24**  
 Relative Location: **NE side of 555 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
8.2															
8.4															
8.6															
8.8															
9.0	72.93														
9.2															
9.4															
9.6															
9.8			End of well at 9.80 m, due to achievement of target depth.												
			Well Completion Details: Screened interval from 6.80 m to 9.80 m below surface Elevation at top of pipe (TOP) = 81.840 m												
			Groundwater Information: Depth to groundwater from TOP = 4.537 m												

50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 19  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023175.24 N  
 349981.42 E  
 Groundsurface Elevation: 81.93 m  
 Top of Casing Elevation: 81.84 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY

Project #: 0006-0103

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	
								1	10	100			
0.0 - 0.2			<b>Topsoil</b> Sandy silt, some clay, loose, soft, dark brown, moist.	0-0.5		2 3 4	25		0.0				
0.2 - 0.8			<b>Clay</b> Some sand, firm, non-plastic, grey, moist.										
0.8 - 1.0			<b>Sandy silt</b> Some clay, firm, non-plastic, dark brown, moist.	2.5-3		2 5 6 7	100		0.0				
1.0 - 1.2	81.61		<b>Clay</b> Some sand, firm, non-plastic, grey, moist.	3-4.5					0.0				
1.2 - 1.8													
1.8 - 2.0				5-7		3 4 3 4	100		0.0				
2.0 - 2.2	80.61												
2.2 - 2.4			<b>Sand and Gravel</b> Black.,	7-8.5		6 6 6 6	100		0.3				
2.4 - 2.6			<b>Clay</b> Some sand, firm, non-plastic, grey, moist.										
2.6 - 2.7			<b>Sandy clay</b> Soft, medium plasticity, greyish brown, wet.	8.5-9					0.3				
2.7 - 2.7			End of borehole at 2.70 m, due to refusal on assumed bedrock.										

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: SPLIT SPOON  
 BOREHOLE DIAMETER (m): 0.152  
 WELL DIAMETER (m):  
 DRILL DATE: 2022 October 19  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023169.44 N  
 349945.83 E  
 Groundsurface Elevation: 82.61 m  
 Top of Casing Elevation: m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-26**  
 Relative Location: **South corner of site**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
									1	10	100			
0.0 - 0.2			<b>Topsoil</b> Sandy silt, trace organics, trace gravel, soft, non-plastic, dark brown, moist.	0-1		1								
0.2 - 0.8			<b>Sandy clay</b> Sandy clay, soft, low plasticity, brown/grey, moist.			2 3	50	PHC VOC Metals	0.0					Steel casing, stickup, jplug
0.8 - 1.0			<b>Bedrock</b> Interbedded doloston and sandstone			1 50+								
1.0 - 2.0	-82.07													
2.0 - 3.0	-81.07													
3.0 - 3.4	-80.07													
3.4 - 3.6														Bentonite seal
3.6 - 3.8														
														GW = 3.484 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 20  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023019.32 N  
 349926.26 E  
 Groundsurface Elevation: 83.07 m  
 Top of Casing Elevation: 83.98 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-26**  
 Relative Location: **South corner of site**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
4.2															
4.4															
4.6															
4.8															
5.0	78.07														
5.2															
5.4															
5.6															
5.8															
6.0	77.07														
6.2															
6.4															
6.6															
6.8															
7.0	76.07														
7.2															
7.4															
7.6															
7.8															

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 20  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023019.32 N  
 349926.26 E  
 Groundsurface Elevation: 83.07 m  
 Top of Casing Elevation: 83.98 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-26**  
 Relative Location: **South corner of site**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
8.2			<p>End of well at 8.20 m, due to achievement of target depth.</p> <p>Well Completion Details:            Screened interval from 5.20 m to 8.20 m below surface            Elevation at top of pipe (TOP) = 83.980 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 4.394 m</p>											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 20  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023019.32 N  
 349926.26 E  
 Groundsurface Elevation: 83.07 m  
 Top of Casing Elevation: 83.98 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY

Project #: 0006-0103

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
								1	10	100				
0.0 - 0.2			<b>Topsoil</b> Sandy silt, organics, loose, dark brown, moist.	0-1		1 1 3 2	75	PHC VOC Metals	0.0					Steel casing, stickup, jplug
0.2 - 0.4			<b>Silty sand</b> Silty sand, loose, greyish brown, moist.						0.0					
0.4 - 0.8			<b>Sandy clay</b> Sandy clay, firm, low plasticity, greyish brown, moist.	1-1.5					0.0					
0.8 - 1.0			Becomes some gravel with high plasticity, tan/brown/grey,	2, 5-3		1	50+		0.0					
1.0 - 82.11			<b>Bedrock</b> Interbedded dolostone and sandstone											
2.0 - 81.11														
3.0 - 80.11														
3.4 - 3.6														Bentonite seal
3.6 - 3.8														GW = 3.460 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 20  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023062.31 N  
 349888.57 E  
 Groundsurface Elevation: 83.11 m  
 Top of Casing Elevation: 84.16 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-27**  
 Relative Location: **SW area of site**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Dotted pattern]												
4.4														
4.6														
4.8														
5.0	78.11													
5.2														
5.4														
5.6														
5.8														
6.0	77.11													
6.2														
6.4														
6.6														
6.8														
7.0	76.11													
7.2														
7.4														
7.6														
7.8														

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 20  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023062.31 N  
 349888.57 E  
 Groundsurface Elevation: 83.11 m  
 Top of Casing Elevation: 84.16 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-27**  
 Relative Location: **SW area of site**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
8.2			<p>End of well at 8.20 m, due to achievement of target depth.</p> <p>Well Completion Details:            Screened interval from 5.20 m to 8.20 m below surface            Elevation at top of pipe (TOP) = 84.160 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 4.510 m</p>											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 20  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023062.31 N  
 349888.57 E  
 Groundsurface Elevation: 83.11 m  
 Top of Casing Elevation: 84.16 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY

# BOREHOLE LOG

Borehole #: **MW22-28**  
 Relative Location: **South corner of 603**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL	
									1	10	100				
0.0 - 0.2		Asphalt		0.25-1.5	○	4									Flushmount, jplug, cement
0.2 - 0.4		Sand and Gravel Fill Sand and gravel, some silt and clay, loose, grey, moist. Sand Sand, some clay, trace gravel, compact, tan, moist.			△	3 5 6	63	PHC BTEX PAH Metals	0.1						
0.4 - 1.4		Sandy clay	Sandy clay, some gravel, medium plasticity, brownish grey, wet.	4.5-5	△	1	100		0.0						Bentonite seal
1.4 - 1.6		Bedrock	Interbedded dolostone and sandstone												
1.6 - 2.0	81.97														
2.0 - 3.0	80.97														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 21  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023174.62 N  
 349805.36 E  
 Groundsurface Elevation: 83.97 m  
 Top of Casing Elevation: 83.91 m

**Notes:**  
 NO RECOVERY       SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-28**  
 Relative Location: **South corner of 603**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
4.2															
4.4															
4.6															
4.8															
5.0	78.97														
5.2															
5.4															
5.6															
5.8															
6.0	77.97														
6.2															
6.4															
6.6															
6.8															
7.0	76.97														
7.2															
7.4															
7.6															
7.8															

GW = 5.504 mbg

Silica sand

50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 21  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023174.62 N  
 349805.36 E  
 Groundsurface Elevation: 83.97 m  
 Top of Casing Elevation: 83.91 m

**Notes:**  
 NO RECOVERY       SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-28**  
 Relative Location: **South corner of 603**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
8.2			<p>End of well at 8.20 m, due to achievement of target depth.</p> <p>Well Completion Details:            Screened interval from 5.20 m to 8.20 m below surface            Elevation at top of pipe (TOP) = 83.910 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 5.444 m</p>											Slough

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 21  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023174.62 N  
 349805.36 E  
 Groundsurface Elevation: 83.97 m  
 Top of Casing Elevation: 83.91 m

**Notes:**  
 NO RECOVERY       SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-29**  
 Relative Location: **NW central site boundary**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL	
									1	10	100				
0.2		Asphalt													
		Sand and Gravel Fill	Sand and gravel, some silt and clay, compact, light grey, dry.												
0.4		Sandy silt	Sandy silt, loose, firm, non-plastic, brown, moist.	0.25-2.5	○	8 17 9 5	75	PHC BTEX PAH Metals	1.1						Flushmount, jplug, cement
0.8		Some gravel.													
1.0	83.39	Sandy clay	Sandy clay, some silt, soft, medium plasticity, caramel brown, moist.	2.5-3.75	○	3 3 3 4	63	PHC BTEX PAH Metals	0.0						
1.4		Bedrock	Interbedded dolostone and sandstone												
2.0	82.39														
3.0	81.39														
3.2															Bentonite seal

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 21  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023206.81 N  
 349776.54 E  
 Groundsurface Elevation: 84.39 m  
 Top of Casing Elevation: 84.3 m

**Notes:**  
 NO RECOVERY       SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-29**  
 Relative Location: **NW central site boundary**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Dotted pattern]												
4.4														
4.6														
4.8														
5.0	79.39													
5.2														
5.4														
5.6														
5.8														
6.0	78.39													
6.2														
6.4														
6.6														
6.8														
7.0	77.39													
7.2														
7.4														
7.6														
7.8														

GW = 7.210 mbg

Silica sand

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 21  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023206.81 N  
 349776.54 E  
 Groundsurface Elevation: 84.39 m  
 Top of Casing Elevation: 84.3 m

**Notes:**  
 NO RECOVERY       SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-29**  
 Relative Location: **NW central site boundary**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
8.2		[Patterned Soil Type]										[Construction Pattern]		50 mm 010 slot PVC pipe
8.4														
8.6														
8.8														
9.0														
9.2														
9.4														
9.6														
9.8	75.39		End of well at 9.80 m, due to achievement of target depth.											
			Well Completion Details: Screened interval from 6.80 m to 9.80 m below surface Elevation at top of pipe (TOP) = 84.300 m											
			Groundwater Information: Depth to groundwater from TOP = 7.120 m											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 21  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023206.81 N  
 349776.54 E  
 Groundsurface Elevation: 84.39 m  
 Top of Casing Elevation: 84.3 m

**Notes:**  
 NO RECOVERY       SPLIT SPOON





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-30**  
 Relative Location: **NW corner of site**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL	
									1	10	100				
0.2			<b>Topsoil</b> Sandy silt, some gravel, organics, brown/grey, moist.	0-175		1	88	PHC BTEX PAH Metals	0.0					Flushmount, jplug, cement	
0.4		Becomes black. 1" Sand pocket.	2			3									6
0.6			<b>Bedrock</b> Interbedded dolostone and sandstone												
1.0	83.12														
2.0	82.12														
3.0	81.12														Bentonite seal
3.8															

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 21  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023239.39 N  
 349747.3 E  
 Groundsurface Elevation: 84.12 m  
 Top of Casing Elevation: 84.07 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-30**  
 Relative Location: **NW corner of site**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2														
4.4														
4.6														
4.8														
5.0	79.12													
5.2														
5.4														
5.6														
5.8														
6.0	78.12													
6.2														
6.4														
6.6														
6.8														
7.0	77.12													
7.2														
7.4														
7.6														
7.8														

GW = 5.672 mbg

Silica sand

50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 21  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023239.39 N  
 349747.3 E  
 Groundsurface Elevation: 84.12 m  
 Top of Casing Elevation: 84.07 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-30**  
 Relative Location: **NW corner of site**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION			
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES	
									1	10	100				
8.2		[Patterned Soil Type]													
8.4															
8.6															
8.8															
9.0	75.12														
			End of well at 9.10 m, due to achievement of target depth.												
			Well Completion Details: Screened interval from 6.10 m to 9.10 m below surface Elevation at top of pipe (TOP) = 84.070 m												
			Groundwater Information: Depth to groundwater from TOP = 5.622 m												

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 21  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023239.39 N  
 349747.3 E  
 Groundsurface Elevation: 84.12 m  
 Top of Casing Elevation: 84.07 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-31**  
 Relative Location: **S central grass 603**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
									1	10	100			
0.0 - 0.2			<b>Topsoil</b> Sandy silt, organics, loose, dark brown, dry.	0-1		1	50	PHC BTEX PAH Metals	0.4					
			<b>Sand and Gravel Fill</b> Sand and gravel, some silt and clay, loose, grey, dry.			6 12								
0.2 - 0.8			<b>Sandy clay</b> Sandy clay, soft to firm, low plasticity, grey-brown, moist.	2.5-3.5		5	50	VOCs	0.7					
						7 9 10								
0.8 - 1.0	-82.44			5-6.5		4	100		0.6					
						13 9 50+								
1.0 - 2.0	-81.44		<b>Bedrock</b> Interbedded dolostone and sandstone											
2.0 - 2.2														Bentonite seal
2.2 - 3.0	-80.44													
3.0 - 3.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 24  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023201.88 N  
 349840.71 E  
 Groundsurface Elevation: 83.44 m  
 Top of Casing Elevation: 83.35 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-31**  
 Relative Location: **S central grass 603**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2		[Dotted pattern]												
4.4														
4.6														
4.8														
5.0	78.44													
5.2														
5.4														
5.6														
5.8														
6.0	77.44													
6.2														
6.4														
6.6														
6.8														
7.0	76.44													
7.2														
7.4														
7.6			End of well at 7.6 m, due to achievement of target depth.											

GW = 5.069 mbg

Silica sand

50 mm 010 slot PVC pipe

Well Completion Details:  
 Screened interval from 4.60 m to 7.60 m below surface  
 Elevation at top of pipe (TOP) = 83.350 m

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 24  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023201.88 N  
 349840.71 E  
 Groundsurface Elevation: 83.44 m  
 Top of Casing Elevation: 83.35 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-31**  
 Relative Location: **S central grass 603**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
			Groundwater Information: Depth to groundwater from TOP = 4.979 m						1	10	100			







CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 24  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023201.88 N  
 349840.71 E  
 Groundsurface Elevation: 83.44 m  
 Top of Casing Elevation: 83.35 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL
								1	10	100				
0.2			<b>Topsoil</b> Silt, some sand, high organics content, soft, non-plastic, dark brown, moist.	0-0.75		1 3 4 7	63							Steel casing, stickup, jplug
0.4			<b>Sandy clay</b> Sandy clay, firm, low plasticity, grey/brown, moist.	0.75-1.25										
1.0	81.56		<b>Bedrock</b> Interbedded dolostone and sandstone 10.1cm, medium texture (M), bedded fabric (BD), weathering AW1.5.											
1.2			3cm, M, BD, R5, AW1.5, joint condition - 20, rough roughness (r), extremely close spacing (xc)											
1.4			8cm, R5, AW1.5, 20, r, xc											
1.6			3cm, R5, AW1.5, 20, r, xc											
1.8			22cm, R5, AW1.5, 20, r, xc											
2.0	80.56		22cm, R5, AW1.5, 20, r, xc											
2.2			16cm, R5, AW1.5, 20, xc, QZ joint fill, V/J fill type											
2.4			17cm, R5, AW1.5, 20, r, xc											
2.6			9cm, R5, AW1.5, 20, r, xc, VL. END OF RUN. RECOVERY = 89.3%, RQD = 68%											Bentonite seal
2.8			8cm, F/M, BD/R5/ AW1.5, 20, r, xc											
3.0	79.56		65cm, M/F, R5, AW1, 20, r, xc											
3.2			8cm, M/F, BD, R5, AW1, 20, r, xc											
3.4			25.5cm, M, BD, R5, AW1, 20, r, xc											
3.6			17cm, M, BD, R5, AW1, 20, r, xc											
3.8			2cm, M, BD, R5, AW1, 20 r xc											
			18.5cm, R5, AW1, 20, r, xc. ENF OF RUN. RECOVERY = 94.7%, RQD = 87.5%											
			10cm, M, BD, R5, AW1, 20											

GW = 3.157 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

 DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 31  
 LOGGED BY: AC/DE

**UTM COORDINATES**  
 ZONE: 18  
 5023068.65 N  
 349939.2 E  
 Groundsurface Elevation: 82.56 m  
 Top of Casing Elevation: 83.51 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-32**  
 Relative Location: **S central site**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2			22.5cm, M, R3, AW1, 20, r, xc 5.5cm, M, R5, AW1, 20, r, xc											
4.4			19.5cm, M, R3, AW1, 20, r, xc 2.5cm, M, R5, AW1, 20, r, xc 4cm, R5, 20, BX 2.5cm											
4.6			8cm, M, BD, R5, BX 2.5cm, M, BD, R5											
4.8			24.5cm, M, BD, R3, r, xc											
5.0	77.56													
5.2			51cm, M, BD, R3, AW1, r, xc. END OF RUN. RECOVERY = 100%, RQD = 83.6%											
5.4			20.5cm, M, BD, R3, AW1, 20, r, xc											
5.6														
5.8														
6.0	76.56		61cm, M, BD, R3, AW1, 20, r, xc											
6.2			17cm, M, BD, R5, AW1, 20, r, xc											
6.4			16cm, M, BD, R5, AW1, 20, r, xc BX											
6.6			12cm, M, BD, R5, AW1, 20, r, xc											
6.8			31cm, M, BD, R4, AW1, 20, r, L. END OF RUN. RECOVERY = 100%, RQD = 98.4%											
7.0	75.56		15.5cm, M, BD, R3, AW1, 20, r, xc											
7.2			20.5cm, M, BD, R5, AW1, 20, r, xc 4cm, M, BD, R5, AW1, 25, r, xc 11cm, M, BD, R5, AW1, 20, r, xc											
7.4														
7.6			32cm, M, BD, R3, AW1, 20/25, r, xc											
7.8			15.5cm, M, BD, R5, AW1, 20, r, xc 2cm, M, BD, R5, AW1, 20, r, xc 2.5cm, M, BD, R5, AW1, 20, r, xc 1.5cm, M, BD, R2, AW1, 20, r, xc											

Silica sand  
50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 31  
 LOGGED BY: AC/DE

**UTM COORDINATES**  
 ZONE: 18  
 5023068.65 N  
 349939.2 E  
 Groundsurface Elevation: 82.56 m  
 Top of Casing Elevation: 83.51 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-32**  
 Relative Location: **S central site**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
8.2			28cm, M, BD, R4, AW1, 20, r, xc											
			13.5cm, M, BD, R3, AW1, 20, r, xc											
			7cm, M, BD, R5, AW1, 20, r. END OF RUN. RECOVERY = 100%, RQD = 88.9% End of well at 8.20 m, due to achievement of target depth.											
			Well Completion Details: Screened interval from 5.20 m to 8.20 m below surface Elevation at top of pipe (TOP) = 83.510 m											
			Groundwater Information: Depth to groundwater from TOP = 4.107 m											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 31  
 LOGGED BY: AC/DE

**UTM COORDINATES**  
 ZONE: 18  
 5023068.65 N  
 349939.2 E  
 Groundsurface Elevation: 82.56 m  
 Top of Casing Elevation: 83.51 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-33**  
 Relative Location: **S central site**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL
								1	10	100			
0.0		Clayey silt	Clayey silt, soft, non-plastic, dark brown, moist.	0-5"	▲	1	100						
0.2		Sandy clay	Sandy clay, soft, medium plasticity, brown/grey, moist.	5-10"	▲	2							Steel casing, stickup, jplug
0.4		Sand	Loose, well graded, reddish brown, moist.	10-15"	▲	50+							
0.4		Bedrock	Interbedded dolostone and sandstone										
0.6			7cm, scratch (Y/N) Y, medium texture (M), bedded fabric (BD), R5 field strength, AW1 weathering, condition -20, rough roughness (r), extremely close spacing (xc)										
0.8			16cm, Y, M, BD, R5, AW1, 20, r, xc										
0.8			9.5cm, Y, M, BD, R5, AW1, 20, r, xc										
0.8			2cm, N, M, BD, R5, AW1.5, 20, r, vc										
0.8			9cm, N, M, BD, R5, AW1.5, 20, r, vc										
1.0	81.73		7.5cm, N, M, BD, R5, AW1.5, 20, r, vc										
1.0	81.73		8.5cm, N, M, BD, R5, AW1.5, 20, r, xc										
1.4			37.5cm, Y, M, BD, R3, AW1, 20, r, xc										
1.8			37cm, Y, M, BD, R3, AW1, 20, r, xc										
1.8			1.5cm, Y, M, BD, R3, AW2, 20, r, vc										
2.0	80.73		14.5cm, scratches, M, BD, R4, AW1.5. END OF RUN. RECOVERY = 98.6%, RQD = 70%										
2.2			11.5cm, N, M, BD, R5, AW1, 20, r, xc										
2.2			7cm, N, M, BD, R5, AW1, 20, r, xc										
2.4			20cm, N, M, BD, R3, AW1, 20, r, xc										Bentonite seal
2.6			Vertical fracture										
2.8			35.5cm, N, M, BD, R3, AW1, 20, r, xc										
3.0	79.73		18cm, Y, M, BD, R3, AW1.5, 20, r, xc										
3.4			52.5cm, Y, M, BD, R3, AW1, 20, r, xc										
3.6			4cm, Y, M, BD, R5, AW1, 20, r. END OF RUN. RECOVERY = 97.7%, RQD = 92.6%										
3.6			4cm, Y, M, BD, R5, AW1, 20, r, xc										
3.8			4.5cm, Y, M, BD, R3, AW1, 20, r, xc										

GW = 3.183 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 31  
 LOGGED BY: AC/DE

**UTM COORDINATES**  
 ZONE: 18  
 5023113.66 N  
 349895.39 E  
 Groundsurface Elevation: 82.73 m  
 Top of Casing Elevation: 83.7 m

**Notes:**  
 ▲ SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-33**  
 Relative Location: **S central site**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2			42.5cm, Y, M, BD, R4, AW1, 20, r, xc 8cm, Y, M, BD, R5, AW1, 20, r, xc											
4.4			23cm, Y, M BD, R3, AW1, 20, r, xc											
4.6			36.5cm, Y, M, BD, R3, AW1, 12, sm, xc											
4.8			mottled - 11.5cm, N, M, BD, R5, AW1, 20, r, xc											
5.0-77.73			20cm, N, M, R3, AW1. END OF RUN. RECOVERY = 98.7%, RQD = 89%											
5.2														
5.4			mottling - 43cm, Y, M, BD, R5, AW1, 20, r, xc, BX, J											
5.6														
5.8														
6.0-76.73			48.5cm, Y, M, BD, R5, AW1, 20, sm, xc											
6.2			18cm, N, M, BD, R4, AW1, 20, r, xc 2cm, N, M, BD, R5, AW1, 20, r, xc 4cm, N, M, BD, R5, AW1, 20, r, xc											
6.4														
6.6			28cm, Y, M, BD, R3, AW1. END OF RUN. RECOVERY = 94.4%, RQD = 95.8%											
6.8														
7.0-75.73			43cm, N, R4, AW1, 20, r, xc 7.5cm, Y, M, BD, R5, AW1, 20, r, xc											
7.2			12.5cm, Y, M, BD, R5, AW1, 20, r, xc 8cm, N, M, BD, R5, AW1, 20, r, xc											
7.4			13.5cm, N, M, BD, R5, AW1, 20, r, xc											
7.6			16cm, N, M, BD, R4, AW1m 20, r, xc 6cm, Y, M, BD, R5, AW1, 12, sm, vc, VL, BX, J											
7.8														
			26.5cm, Y, M, BD, R3, AW1, 20, r, xc											

Silica sand  
50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 31  
 LOGGED BY: AC/DE

**UTM COORDINATES**  
 ZONE: 18  
 5023113.66 N  
 349895.39 E  
 Groundsurface Elevation: 82.73 m  
 Top of Casing Elevation: 83.7 m

**Notes:**  
 SPLIT SPOON



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-33**  
 Relative Location: **S central site**

Project #: 0006-0103

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
			<p>15.5cm, N. M. BD, R5, AW1. END OF RUN. RECOVERY = 97.7%, RQD = 85.5%</p> <p>End of well at 8.10 m, due to achievement of target depth.</p> <p>Well Completion Details:            Screened interval from 5.10 m to 8.10 m below surface            Elevation at top of pipe (TOP) = 83.700 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 4.153 m</p>											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 October 31  
 LOGGED BY: AC/DE

**UTM COORDINATES**  
 ZONE: 18  
 5023113.66 N  
 349895.39 E  
 Groundsurface Elevation: 82.73 m  
 Top of Casing Elevation: 83.7 m

**Notes:**  
 SPLIT SPOON

Project #: 0006-0103

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION			
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
								1	10	100				
0.2			<b>Topsoil</b> Sandy silt, organics, loose, soft, well-graded, dark brown, moist.	0-1		1 1 2 2	50	0.0						Steel casing, stickup, jplug
0.4			<b>Sandy silt</b> Sandy silt, some clay, soft, tan, moist.											
0.6														
0.8														
1.0	83.06			2.5-3/75		2 1 0 1	75	0.0						
1.2			<b>Clay</b> Clay, some sand, firm, grey/brown, moist.	3/75-4				0.0						
1.4			<b>Bedrock</b> Interbedded dolostone and sandstone											
1.6			3cm, scratches(Y/N) - N, medium texture (M), bedded fabric (BD), field strength - R5, weathering - AW1.5, condition - 20, rough roughness (r), extremely close spacing (xc)											
1.8			6.5cm, Y, M, BD, R5, AW1, 20, r, xc											
2.0	82.06		13cm, Y, M, BD, R4, AW1, 20, r, xc											
2.2			9.5cm, N, M, BD, R5< AW1.5, 20, r, vc, Medium persistence (M), Broken rock fill (BX), J											
2.4			6cm, Y, C, BD, R5< AW2, 20, sm, xc											
2.6			4cm, Y, C, BD, R3, AW3, 12, sm, xc											
2.8			2.5cm, Y, M, BD, R5, AW2, 20, sm. END OF RUN. RECOVERY = 29.2%, RQD = 29%											
3.0	81.06		45.5cm, Y, M, BD, R4, AW1, 20, R, xc											
3.2			37cm, Y, M, BD, R4, AW1, 20, r, xc											
3.4			5.5cm, Y, M, BD, R5, AW1.5, 20, sm, xc											
3.6			20cm, N, M, BD, R4, AW1, 20, sm, xc											
3.8			32.5cm, N, M, BD, R3, AW1. END OF RUN. RECOVERY = 92.4%, RQD = 96%											
			2cm, N, M, BD, R5, AW1, 20, r, xc											
														GW = 3.636 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 1  
 LOGGED BY: AC/DE

**UTM COORDINATES**  
 ZONE: 18  
 5023185.09 N  
 349840.42 E  
 Groundsurface Elevation: 84.06 m  
 Top of Casing Elevation: 85 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-34**  
 Relative Location: **Center of site**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2			74cm, Y, M, BD, R5, AW1.5, 20, r, xc, L, BX, J											
4.4														
4.6			40.5cm, Y, M, BD, R4, AW1.5, 20, r, xc, L, BX, J											
4.8			10cm, Y, M, BD, R5, AW1.5, 20, r, xc											
5.0	79.06		28cm, Y, M, BD, R3, AW1.5, 20, r. END OF RUN. RECOVERY = 101.6%, RQD = 98.7%											
5.2			7.5cm, Y, M, BD, R3, AW1.5, 20, sm, xc											
5.4			18cm, Y, M, BD, R3, AW1.5, 20, r, vc, M, BX, J											
5.6			7.5cm, Y, M, BD, R5, AW1, 20, r, xc											
5.8			31.5cm, Y, M, BD, R3, AW1.5, 20, r, vc, L, BX, J											
6.0	78.06													
6.2														
6.4			56cm, Y, M, BD, R4, AW1.5, 20, sm, xc											
6.6			20cm, Y, M, BD, R5, AW1.5, 20, r. END OF RUN. RECOVERY = 92.4%, RQD = 89%											
6.8			4cm, N, M, BD, R5, AW1.5, 20, r, xc											
7.0	77.06		35cm, Y, M, BD, R4, AW1.5, 20, r, xc											
7.2			23.5cm, N, M, BD, R4, AW1.5, 20, sm, xc											
7.4			9cm, Y, M, BD, R5, AW1, 20, 20, r, xc											
7.6			9.5cm, Y, M, BD, R5, AW1, 20, r, xc											
7.8			3.5cm, N, M, BD, R5, AW1, 20, r, xc											
			3.5cm, N, M, BD, R5, AW1.5, 20, r, xc											
			7.5cm, Y, M, BD, R5, AW1.5, 20, r, xc											
			1.5cm, Y, M, BD, R5, AW1, 20, r, xc											
			6.5cm, N, M, BD, R5, AW1, 20, r. END OF RUN. RECOVERY = 68%, RQD = 56.6%											
			25cm, N, M, BD, R5, AW1, 20, sm. END OF RUN. RECOVERY = 100%, RQD = 100%											

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 1  
 LOGGED BY: AC/DE

**UTM COORDINATES**  
 ZONE: 18  
 5023185.09 N  
 349840.42 E  
 Groundsurface Elevation: 84.06 m  
 Top of Casing Elevation: 85 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-34**  
 Relative Location: **Center of site**

Project #: 0006-0103

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
			End of well at 7.90 m, due to achievement of target depth.  Well Completion Details: Screened interval from 4.90 m to 7.90 m below surface Elevation at top of pipe (TOP) = 85.000 m  Groundwater Information: Depth to groundwater from TOP = 4.576 m						1	10	100			

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 1  
 LOGGED BY: AC/DE

**UTM COORDINATES**  
 ZONE: 18  
 5023185.09 N  
 349840.42 E  
 Groundsurface Elevation: 84.06 m  
 Top of Casing Elevation: 85 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-35**  
 Relative Location: **Near NW 603 entrance**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL	
									1	10	100				
0.0			<b>Topsoil</b> Sandy silt, organics, loose, dark brown, moist.	0-1		5	50	PHC VOC Metals PAH	0.7						
0.2			<b>Silty Sand and Gravel</b> Silty sand and gravel, loose, poorly graded, grey/white, dry.			15									50+
0.4			<b>Sand</b> Sand, some silt, compact, well-graded, brown, moist.			16									
0.6			<b>Bedrock</b> Interbedded dolostone and sandstone												
1.0	82.01														
1.6			3cm, scratches - Y/N (N), medium texture (M), bedded fabric (BD), field strength (R5), weathering- AW1, condition - 12, smooth roughness (sm), extremely close spacing (xc)												
1.7			7.5cm, N, M, BD, R5, AW1.5, 20, sm, xc												
1.8			9.5cm, N, M, BD, R5, AW1.5, 12, sm, vc												
1.8			12.5cm, N, M/F, BD, R5, AW1.5, 20, r, c												
2.0	81.01														
2.2			6.5cm, N, M/F, BD, R5, AW2. END OF RUN. RECOVERY = 91%, RQD = 32%												
2.2			6cm, N, M, BD, R5, AW1.5, 20, sm, xc												
2.4			24cm, Y, M, BD, R4, AW1.5, 20, sm, xc												
2.4			8.5cm, Y, M, BD, R5, AW2, 12, sm, xc											Bentonite seal	
2.6															
2.8															
3.0	80.01														
3.0			43cm, Y, M, BD, R3, AW1.5, 20, sm, xc												
3.0			8.5cm, Y, M, BD, R5, AW1, 20, r, xc												
3.0			8cm, Y, M, BD, R5, AW1, 20, r, xc												
3.2			8.5cm, Y, M, BD, R3, AW1.5, 20, sm, xc, M, BX												
3.2			27.5cm, Y, M, BD, R3, AW1.5, 20, sm, xc												
3.4															
3.6			9.5cm, N, M, BD, R5, AW1.5. END OF RUN. RECOVERY = 94.4%, RQD = 65.9%												
3.6			13cm, N, M, BD, R5, AW1, 20, r, xc												
3.6			1cm, N, M, BD, R5, AW1, 20, sm, xc												
3.6			9cm, N, M, BD, R3, AW1.5, 20, sm, xc												
3.8			12cm, Y, M, BD, R4, AW1, 20, sm, xc												
3.8			1cm, Y, M, BD, R4, AW1.5, 20, sm, vc, M, BX												
3.8			9.5cm, Y, M, BD, R3, AW1, 12, sm, xc												
3.8			1.5cm, Y, M, BD, R4, AW1, 12, sm, xc												

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 2  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023276.91 N  
 349789.98 E  
 Groundsurface Elevation: 83.01 m  
 Top of Casing Elevation: 82.88 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-35**  
 Relative Location: **Near NW 603 entrance**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2			16.5cm, Y, M, BD, R3, AW1, 20, sm, xc 10cm, N, M, BD, R5, AW1, 20, r, xc 15cm, Y, M, BD, R5, AW1.5, 2, sm, xc											
4.4			26cm, N, M, BD, R4, AW1, 20, r, xc											
4.6														
4.8														
5.0	78.01		50.5, Y, M, BD, R4, AW1, 20. END OF RUN. RECOVERY = 93%, RQD = 82% 2.5cm, Y, M, BD, R5, AW1, 12, sm, xc 13cm, Y, M, BD, R3, AW1, 20, r, xc											
5.2			15.5cm, Y, M, BD, R5, AW1, 20, r, xc 7cm, Y, M, BD, R5, AW1, 12, sm, xc											
5.4			17cm, Y, M, BD, R5, AW1, 12, sm, xc 4cm, N, M, BD, R5, AW1, 12, sm, xc											
5.6														
5.8			29.5cm, N, M, BD, R4, AW1, 20, r, xc											
6.0	77.01		13cm, Y, M, BD, R5, AW1, 20, r, xc											
6.2			19.5cm, N, M, BD, R5, AW1, 12, sm, xc											
6.4			13.5cm, N, M, BD, R5, AW1, 12, sm, xc 4.5cm, N, M, BD, R5, AW1, 12, sm, xc 2cm, N, M, BD, R1, AW1, 20, r, xc											
6.6			15.5cm, N, M, BD, R4, AW1. END OF RUN. RECOVERY = 100%, RQD = 89.6% 16cm, N, M, BD, R5, AW1, 20, r, xc 3cm, N, M, BD, R5, AW1, 20, r, xc											
6.8			16.5cm, Y, M, BD, R3, AW1, 12, sm, xc											
7.0	76.01		11.5cm, Y, M, BD, R4, AW1, 20, r, xc											
7.2			16cm, Y, M, BD, R4, AW1, 20, r, xc											
7.4			11cm, Y, M, BD, R4, AW1, 20, R, xc, H, BX 3.5cm, N, M, BD, R5, AW1, 12, sm, xc 5cm, Y, M, BD, R5, AW1, 12, sm, vc, H, BX											
7.6														
7.8														

GW = 6.233 mbg  
 Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 2  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023276.91 N  
 349789.98 E  
 Groundsurface Elevation: 83.01 m  
 Top of Casing Elevation: 82.88 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-35**  
 Relative Location: **Near NW 603 entrance**

Project #: 0006-0103

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
			Fractured rock. 57.5cm, M, BD, R3, AW4. END OF RUN. RECOVERY = 100%, RQD = 46.5% End of well at 8.00 m, due to achievement of target depth.  Well Completion Details: Screened interval from 5.00 m to 8.00 m below surface Elevation at top of pipe (TOP) = 82.880 m  Groundwater Information: Depth to groundwater from TOP = 6.103 m						1	10	100			

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 2  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023276.91 N  
 349789.98 E  
 Groundsurface Elevation: 83.01 m  
 Top of Casing Elevation: 82.88 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY

Project #: 0006-0103

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE			FIELD TEST DATA			WELL COMPLETION			
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL
								1	10	100			
0.2			<b>Topsoil</b> Sandy silt, organics, soft, dark brown, moist.	0-0.75		1 50+	75	PHC VOC Metals	0.6				Steel casing, stickup, jplug
			<b>Sand</b> Sand, some silt, loose, well graded, tan/beige, moist.										
0.4			<b>Bedrock</b> Interbedded dolostone and sandstone										
0.6			25.5cm, N, M, BD, R4, AW1, 20, r, xc										
			7.5cm, N, M, BD, R5, AW1, 20, r, xc										
0.8			13.5cm, Y, M, BD, R5, AW1, 20, sm, xc										
			7cm, Y, M, BD, R5, AW1, 20, r, xc, M, BX, J										
1.0	82.19												
1.2													
1.4			42cm, Y, M, BD, R4, AW1, 20, r, xc										
1.6			27.5cm, Y, M, BD, R3, AW1, 20, r, xc										
			9cm, Y, M, BD, R5, AW1.5, 20, sm, xc										
1.8			9.5cm, N, M, BD, R4, AW1, 20, sm, xc										
2.0	81.19		10cm, N, M, BD, R5, AW1, 20, r. END OF RUN. RECOVERY = 99%, RQD = 77.8%										
			7.5cm, N, M, BD, R5, AW1, 20, r, vc										
2.2													
2.4			43.5cm, N, M, BD, R3, AW1, 20, r, xc										Bentonite seal
2.6			15cm, Y, M, BD, R5, AW1, 20, sm, xc										
2.8													
3.0	80.19		37cm, N, M, BD, R3, AW1, 20, r, xc										
3.2			26cm, Y, M, BD, R4, AW1, 20, r, xc										
3.4			13.5cm, Y, M, BD, R5, AW1, 20, r, xc										
3.6			16.5cm, Y, M, BD, R3, AW1, 20, r. END OF RUN. RECOVERY = 104%, RQD = 99.4%										
3.8													
			37cm, N, M, BD, R3, AW1, 20, r, xc										GW = 3.896 mbg

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 7  
 LOGGED BY: AC/DE

**UTM COORDINATES**  
 ZONE: 18  
 5023108.25 N  
 349869.5 E  
 Groundsurface Elevation: 83.19 m  
 Top of Casing Elevation: 83.98 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-36**  
 Relative Location: **SW central site boundary**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)		CONSTRUCTION	WATER LEVEL		
									1	10	100			
4.2			10.5cm, N, M, BD, R5, AW1, 20, r, xc 3cm, N, M, BD, R5, AW1, 12, sm, xc 4cm, N, M, BD, R5, AW1, 12, sm, xc 7cm, N, M, BD, R4, AW1, 12, sm, xc, M, BX, J 2cm, N, M, BD, R5, AW1, 12, sm, xc 6.5cm, Y, M, BD, R4, AW1, 12, sm, xc											
4.4			27.5cm, Y, M, BD, R4, AW1, 20, sm, vc											
4.6														
4.8														
5.0	78.19		51cm, N, M, BD, R4, AW1. END OF RUN. RECOVERY = 100%, RQD = 82.7%											
5.2														
5.4			35cm, Y, M, BD, R4, AW1, 12, sm, xc											
5.6														
5.8			39cm, Y, M, BD, R3, AW1, 12, sm, xc											
6.0	77.19		14.5cm, N, M, BD, R5, AW1, 12, sm, xc 9.5cm, N, M, BD, R5, AW1, 12, sm, xc											
6.2			25cm, Y, M, BD, R4, AW1, 25, r, xc											
6.4			15.5cm, N, M, BD, R5, AW1, 25, r. END OF RUN. RECOVERY = 91%, RQD = 93.1%											
6.6			15.5cm, N, M, BD, R5, AW1, 20, sm, xc, VL											
6.8			24cm, N, M, BD, R4, AW1, 20, sm, xc 3.5cm, N, M, BD, R5, AW1, 12, sm, xc											
7.0	76.19		13.5cm, N, M, BD, R5, AW1, 20, r, xc											
7.2			18.5cm, N, M, BD, R5, AW1, 20, r, xc											
7.4			27cm, N, M, BD, R4, AW1, 20, r, xc 6.5cm, N, M, BD, R5, AW1, 20, r, xc 5.5cm, N, M, BD, R5, AW1, 20, r, vc 4cm, M, BD, AW, 12, sm, xc, BX											
7.6														
7.8			20.5cm, N, M, BD, R5, AW1, 20, sm, xc, END OF RUN. RECOVERY = 97%, RQD = 80.7%											

Silica sand  
50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 7  
 LOGGED BY: AC/DE

**UTM COORDINATES**  
 ZONE: 18  
 5023108.25 N  
 349869.5 E  
 Groundsurface Elevation: 83.19 m  
 Top of Casing Elevation: 83.98 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

### BOREHOLE LOG

Borehole #: **MW22-36**  
 Relative Location: **SW central site boundary**

Project #: 0006-0103

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
			End of well at 7.90 m, due to achievement of target depth.  Well Completion Details: Screened interval from 4.90 m to 7.90 m below surface Elevation at top of pipe (TOP) = 83.980 m  Groundwater Information: Depth to groundwater from TOP = 4.686 m						1	10	100			

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 7  
 LOGGED BY: AC/DE

**UTM COORDINATES**  
 ZONE: 18  
 5023108.25 N  
 349869.5 E  
 Groundsurface Elevation: 83.19 m  
 Top of Casing Elevation: 83.98 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-37**  
 Relative Location: **Hines turn around**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE			FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)				CONSTRUCTION	WATER LEVEL
								1	10	100				
0.0			<b>Topsoil</b> Sandy silt, loose, non-plastic, broken rocks, dark brown, moist.	0-0.5		1 4 9 10	25	PHC BTEX PAH Metals	0.3					
0.2			<b>Broken stones</b> Broken rock fill deposited on site from adjacent properties.											Steel casing, stickup, jplug
0.4														
0.6														
0.8														
1.0	83.06					42 26 8 8								
1.2														
1.4														
1.6														
1.8														
2.0	82.06													
2.2														
2.4														
2.6			<b>Bedrock</b> Interbedded dolostone and sandstone											
2.8														
3.0	81.06													
3.2														
3.4														
3.6														
3.8														

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 8  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023143.22 N  
 349822.73 E  
 Groundsurface Elevation: 84.06 m  
 Top of Casing Elevation: 85 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-37**  
 Relative Location: **Hines turn around**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
4.2															
4.4															
4.6															
4.8															
5.0	79.06														
5.2															
5.4															
5.6															
5.8															
6.0	78.06														
6.2															
6.4															
6.6															
6.8															
7.0	77.06														
7.2															
7.4															
7.6															
7.8															

▼ GW = 4.572 mbg

Silica sand

50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 8  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023143.22 N  
 349822.73 E  
 Groundsurface Elevation: 84.06 m  
 Top of Casing Elevation: 85 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-37**  
 Relative Location: **Hines turn around**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
8.2														
8.4														
8.6														
			End of well at 8.70 m, due to achievement of target depth.											
			Well Completion Details: Screened interval from 5.70 m to 8.70 m below surface Elevation at top of pipe (TOP) = 85.000 m											
			Groundwater Information: Depth to groundwater from TOP = 5.512 m											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 8  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023143.22 N  
 349822.73 E  
 Groundsurface Elevation: 84.06 m  
 Top of Casing Elevation: 85 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-38**  
 Relative Location: **Terry Fox & March**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA			WELL COMPLETION		NOTES		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION		WATER LEVEL	
									1	10	100				
0.2			<b>Topsoil</b> Silty sand, trace gravel, loose, dark brown, dry.	0-0.75		2 6 7 8	100	PHC BTX PCB	0.2						Flushmount, jplug, cement
0.4			<b>Sand</b> Sand, some gravel, loose, beige, dry.												
0.6			<b>Sand and clay</b> Sand and clay, firm, low plasticity, dark brown, moist.	0.75-2			100	PHC BTX PCB	0.8						
0.8			<b>Bedrock</b> Interbedded dolostone and sandstone			50+	50								
1.0	82.03														
2.0	81.03														
3.0	80.03														
3.8															Bentonite seal

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 8  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023343.34 N  
 349857.11 E  
 Groundsurface Elevation: 83.03 m  
 Top of Casing Elevation: 82.99 m

**Notes:**  
 SPLIT SPOON      NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-38**  
 Relative Location: **Terry Fox & March**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
4.2														
4.4														
4.6														
4.8														
5.0	78.03													
5.2														
5.4														
5.6														
5.8														
6.0	77.03													
6.2														
6.4														
6.6														
6.8														
7.0	76.03													
7.2														
7.4														
7.6														
7.8														

GW = 5.793 mbg

Silica sand  
 50 mm 010 slot PVC pipe

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 8  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023343.34 N  
 349857.11 E  
 Groundsurface Elevation: 83.03 m  
 Top of Casing Elevation: 82.99 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-38**  
 Relative Location: **Terry Fox & March**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
8.2														
8.4			<p>End of well at 8.50 m, due to achievement of target depth.</p> <p>Well Completion Details:            Screened interval from 5.50 m to 8.50 m below surface            Elevation at top of pipe (TOP) = 82.990 m</p> <p>Groundwater Information:            Depth to groundwater from TOP = 5.753 m</p>											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: AIR HAMMER  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 8  
 LOGGED BY: AC

**UTM COORDINATES**  
 ZONE: 18  
 5023343.34 N  
 349857.11 E  
 Groundsurface Elevation: 83.03 m  
 Top of Casing Elevation: 82.99 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-39**  
 Relative Location: **Near 603 drainage on 595**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
								1	10	100				
-0.6														
-0.4														
-0.2														
0.0	82.27		Ground Surface											
0.0			<b>Topsoil</b> Silt, some clay, some sand, organics, soft, non-plastic, dark brown, moist.	22-39 0.0-0.5	1 2 4 3	50		1.5						
0.2			<b>Sandy Clay</b> Sandy clay, soft, medium plasticity, light brown, moist.			50	VOCs	3.8						
0.4														
0.6														
0.8			Becomes grey with less sand.											
1.0	81.27			22-39 2.5-3.5	3 50+	100	VOCs	0.7						
1.2			<b>Bedrock</b> Interbedded dolostone and sandstone											
1.4			Length - 20cm, Scratch (Y/N) - Y, Texture - M (medium grain), Fabric - BD (Bedded), Field Strength - R4, Weathering - AW1, End joint condition - 12, Roughness - SM (Smooth), Spacing - XC (Extra Close)											
1.6														
1.8			38.5, Y, M, BD, R4, AW1, 12, SM, XC											
2.0	80.27		17.5, Y, M, BD, R4, AW1, 12, SM; END RUN 1, RECOVERY - 100%, RQD - 100%											
2.0			6.5, Y, M, BD, R5, AW1.5, 12, R (rough), VC (Very Close)											
2.2			4, N, M, BD, R5, AW1, 12, R, XC											
2.2			6.5, N, M, BD, R5, AW1, 12, SM, XC											
2.2			3, N, M, BD, R5, AW1, 12, SM, XC											
2.4														
2.6														
2.8														
3.0	79.27		98.5, N, M, BD, R4, AW1, 12, SM, XC											

Monument Stick-up with 7 Channel CMT

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 16  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023242.54 N  
 349915.25 E  
 Groundsurface Elevation: 82.27 m  
 Top of Casing Elevation: 83.01 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-39**  
 Relative Location: **Near 603 drainage on 595**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
									1	10	100			
3.4			31.5, N, M, BD, R4, AW1, 12, SM; END RUN 2, RECOVERY - 99%, RQD - 86.7%											
			6, Y, M, BD, R4, AW1, 20, R, XC											
3.6			15.5, Y, M, BD, R5, AW1, 20, R, VC, VL, Joint Fill - BX (Broken Rock)											
			2.5, Y, M, BD, R5, AW1, 20, R, XC											
3.8			3, Y, M, BD, R5, AW1, 20, SM, XC											
			10, Y, M, BD, R5, AW1, 12, SM, XC											
			1.5, Y, M, BD, R5, AW1, 12, SM, XC											
4.0	78.27													
			Mechanical Fracture - 34.5, Y, M, BD, R3, AW1, 20, R, XC											
4.2			9.5, Y, M, BD, R5, AW1, 20, R, XC											
			3.5, Y, M, BD, R4, AW1, 20, R, VC, VL, BX											
4.4			18.5, N, M, BD, R4, AW1, 20, SM, XC											
4.6			12.5, Y, M, BD, R4, AW1, 20, R, XC											
4.8			26, N, M, BD, R4, AW1, 20, SM, XC											
5.0	77.27		10, N, M, BD, R5, AW1, 20, R; END RUN 3, RECOVERY - 100%, RQD - 83%											
			Fracture, Mottling Around Fracture, PID Reading - 0 ppm											
5.2														
5.4														
5.6			Fracture, Discolouration, 0.2											
5.8														
6.0	76.27		Fracture, 0											
6.2														
6.4			Fracture, 0											
			End Run 4											
6.6			Fracture, 0											
			Fracture, 0.2											
6.8														
7.0	75.27		Fracture, 0											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 16  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023242.54 N  
 349915.25 E  
 Groundsurface Elevation: 82.27 m  
 Top of Casing Elevation: 83.01 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-39**  
 Relative Location: **Near 603 drainage on 595**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
7.4		Fracture, 0												
7.6		Fracture, 0												
7.8		Fracture, 0.3												
8.0	74.27	End Run 5												
8.2		Fracture, 0.2												Port 1
8.4		Fracture, 0.3												
8.6		Fracture, 0												
8.8		Fracture, Discolouration, Lost Circulation, 0												
9.0	73.27	Fracture, 0												
9.2		Fracture, 0												
9.4		Fracture, 0												
9.6		End Run 6, Oxidation, 0.1												
9.8		Fracture, 0.3												
10.0	72.27	Fracture, 0.2												
10.2		Fracture, 0.1												
10.4		Fracture, 0.1												
10.6		Fracture, 0.1												
10.8		Fracture, 0.1												
11.0	71.27	End Run 7												

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 16  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023242.54 N  
 349915.25 E  
 Groundsurface Elevation: 82.27 m  
 Top of Casing Elevation: 83.01 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-39**  
 Relative Location: **Near 603 drainage on 595**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
11.4														
11.6			Fracture, 0.1 Fracture, Oxidation, 0.2											
11.8			Fracture, 0.2											
12.0	70.27		Fracture, 0.2											
12.2			Fracture, 0.2											
12.4														
12.6			End Run 8 Fracture, 0											
12.8			Fracture, 0 Vertical Fracture Fracture, 0											
13.0	69.27		Fracture, 0 Fracture, 0											
13.2			Fracture, 0 Fracture, 0											
13.4			Fracture, 0											
13.6			Fracture, 0 Fracture, Oxidation, 0 Fracture, 0											
13.8			Fracture, 0											
14.0	68.27		End Run 9											
14.2			Fracture, 0.2											
14.4														
14.6														
14.8														
15.0	67.27		Fracture, 0.3 Fracture, 0.7											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 16  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023242.54 N  
 349915.25 E  
 Groundsurface Elevation: 82.27 m  
 Top of Casing Elevation: 83.01 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY

Port 3



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-39**  
 Relative Location: **Near 603 drainage on 595**

Project #: **0006-0103**

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
15.4			Fracture, 0.4											
			Fracture, 0.4											
			Fracture, 0.2											
			Fracture, 0.2											
15.6			End Run 10											
			Fracture, 0											
15.8														
16.0	66.27													
16.2														
16.4														
16.6			Fracture, 0											
16.8														
17.0	65.27		Fracture, 0											
			End Run 11											
			Fracture, 0.1											
			Fracture, 0											
			Fracture, 0											
			Fracture, 0											
			Fracture, 0											
17.6			Fracture, 0											
			Fracture, 0											
17.8			Clay Seam within Fracture Set											
18.0	64.27		Fracture, 0											
18.2														
18.4			Fracture, 0											
			Fracture, 0											
18.6														
			End Run 12											
18.8			Fracture, 0											
			Fracture, 0											
19.0	63.27		Fracture, White Colouration, 0											

Port 4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 16  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023242.54 N  
 349915.25 E  
 Groundsurface Elevation: 82.27 m  
 Top of Casing Elevation: 83.01 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-39**  
 Relative Location: **Near 603 drainage on 595**

Project #: **0006-0103**

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
19.4														
19.6			Fracture, 0											
			Fracture, 0											
19.8			Fracture, 0											
20.0	62.27		Fracture, 0											
20.2			End Run 13											
20.4														
20.6														
20.8			Fracture, 0											
21.0	61.27		Fracture, 0											
21.2			Fracture, 0											
			Fracture, 0											
21.4			Fracture, 0											
			Fracture, 0											
21.6														
			Fracture, 0											
21.8			End Run 14											
22.0	60.27		Fracture, 0											
			Fracture, 0											
22.2			Fracture, 0											
			Fracture, 0											
22.4			Fracture, 0											
22.6			Fracture, 0											
			Fracture, 0											
			Fracture, 0											
22.8			Fracture, 0											
			Fracture, 0											
23.0	59.27		Fracture, 0											
			Fracture, 0											
			Fracture, 0											

Port 5

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 16  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023242.54 N  
 349915.25 E  
 Groundsurface Elevation: 82.27 m  
 Top of Casing Elevation: 83.01 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-39**  
 Relative Location: **Near 603 drainage on 595**

Project #: **0006-0103**

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
23.4		Fracture	End Run 15 Fracture, PID Readings Unreliable Fracture											
23.6		Fracture	Fracture											
23.8		Fracture	Fracture											
24.0	58.27	Fracture	Fracture											
24.2		Fracture	Fracture											
24.4		Fracture	Fracture											
24.6		Fracture	Fracture											
24.8		End Run 16	End Run 16											
25.0	57.27	Fracture Zone, Oxidation, 37.5	Fracture Zone, Oxidation, 37.5											
25.2		Fracture Zone End	Fracture Zone End											
25.4		Fracture, 38.3	Fracture, 38.3											
25.6		Fracture, 27.3	Fracture, 27.3											
25.8		Fracture, 24.2	Fracture, 24.2											
26.0	56.27	Fracture, 24.1	Fracture, 24.1											
26.2		Fracture, 24.5	Fracture, 24.5											
26.4		End Run 17	End Run 17											
26.6		Fracture, 8.6	Fracture, 8.6											
26.8		Fracture, Oxidation, 10.9	Fracture, Oxidation, 10.9											
27.0	55.27													

Port 6

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 16  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023242.54 N  
 349915.25 E  
 Groundsurface Elevation: 82.27 m  
 Top of Casing Elevation: 83.01 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-39**  
 Relative Location: **Near 603 drainage on 595**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
27.4															
27.6			Fracture, 18.7												
27.8			End Run 18												
28.0	54.27														
28.2															
28.4															
28.6															
28.8			Fracture, 18.2												
29.0	53.27		Fracture, 19.2												
29.2			Fracture, 19.5												
29.4			End Run 19												
29.6															
29.8			Fracture, 3.1												
30.0	52.27		Fracture, 4												
30.2															
30.4															
			End of well at 30.50 m, due to achievement of target depth.												

Port 7

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 16  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023242.54 N  
 349915.25 E  
 Groundsurface Elevation: 82.27 m  
 Top of Casing Elevation: 83.01 m

**Notes:**  
 SPLIT SPOON       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-40**  
 Relative Location: **Adjacent March on 595**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE				FIELD TEST DATA					WELL COMPLETION			
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)					CONSTRUCTION	WATER LEVEL	NOTES
								1	10	100	1000	10000				
-0.8			Ground Surface													
0.0	83.00		<b>Topsoil</b> Topsoil, Silt, some clay, organics, soft, non-plastic, dark brown, moist.													
0.2			<b>Sandy Clay</b> Sandy clay, soft, high plasticity, moist, brown.	22-40 01-15	1	75	VOCs	1.3								
0.4			Becomes grey-brown.	22-40 2-3	8	75	VOCs				2000.0					
1.0	82.00		<b>Bedrock</b> Interbedded dolostone and sandstone													
1.4			Length - 32.5cm, Scratch (Y/N) - Y, Texture - M (medium grain), Fabric - BD (Bedded), Field Strength - R3, Weathering - AW1, End joint condition - 20, Roughness - R (Rough), Spacing - XC (Extra Close)													
1.8			18.5, Y, M, BD, R3, AW1; End Run 1, RECOVERY - 100%, RQD - 100%													
2.0	81.00		31, Y, M, BD, R3, AW1, 20, R, XC													
2.2			51, Y, M, BD, R4, AW1, 20, R, XC													
2.4			9, Y, M, BD, R5, AW1, 12, SM (Smooth), VC, BX (Broken Rock Filled Joint)													
2.6																
2.8																
3.0	80.00															

Monument Stick-up with 7 Channel CMT

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023265.36 N  
 349942.76 E  
 Groundsurface Elevation: 83.00 m  
 Top of Casing Elevation: 83.91 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-40**  
 Relative Location: **Adjacent March on 595**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA					WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)					CONSTRUCTION	WATER LEVEL		
										1	10	100	1000	10000			
3.2			36, N, M, BD, R4, AW1, 12, R, XC														
			7, N, M, BD, R4, AW1, 12, SM, XC														
			6.5, N, M, BD, R5, AW1, 12, SM, XC														
3.4			9.5, N, M, BD, R5, AW1, 20, R														
			End Run 2, RECOVERY - 98%, RQD - 78.7%														
3.6			16, N, M, BD, R4, AW1, 12, R, XC														
3.8																	
4.0	79.00		31, N, M, BD, R4, AW1, 20, R, XC														
			Mechanical Fracture, 39, Y, M, BD, R3, AW1, 20, R, XC														
4.2																	
4.4																	
4.6			22.5, Y, M, BD, R3, AW1, 12, SM, XC														
4.8			Mechanical Fracture, 14, Y, M, BD, R4, AW1, 25, R, XC														
5.0	78.00		34, Y, M, BD, R4, AW1, 25, R; End Run 3, RECOVERY - 103%, RQD - 100%														
			8, N, M, BD, R4, AW1, 12, SM, XC														
5.2			7, N, M, BD, R5, AW1, 12, SM, XC														
			10.5, N, M, BD, R4, AW1, 20, R, XC														
5.4			9, N, M, BD, R4, AW1, 12, SM, XC														
			6, N, M, BD, R4, AW1, 12, SM, XC														
5.6																	
5.8			34.5, N, M, BD, R3, AW1, 12, SM, XC														
6.0	77.00		13.5, N, M, BD, R3, AW1, 12, SM, XC														
6.2																	
6.4			55.5, N, M, BD, R4, AW1, 20, SM, VC														
6.6			2, N, M, BD, R4, AW1, 20, SM; End Run 4, RECOVERY 100%, RQD - 78%														
			Fracture, Oxidation, PID Reading - 0 ppm														
6.8																	
7.0	76.00																

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023265.36 N  
 349942.76 E  
 Groundsurface Elevation: 83.00 m  
 Top of Casing Elevation: 83.91 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-40**  
 Relative Location: **Adjacent March on 595**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA					WELL COMPLETION	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)					CONSTRUCTION	WATER LEVEL
								1	10	100	1000	10000			
7.2			Fracture, 0.1												
			Fracture, 0.1												
7.4			Fracture, 0.2												
7.6			Fracture, 0.3												
7.8															
8.0	75.00														
			End Run 5												
8.2			Fracture												
			Fracture												
8.4															
8.6			Fracture												
8.8															
			Fracture												
9.0	74.00		Fracture, Broken Rock, Oxidation												
			Fracture, Broken Rock, Oxidation												
9.2															
			Fracture												
9.4															
			Fracture												
9.6															
			Fracture												
			Oxidation, End Run 6												
9.8															
10.0	73.00														
			Fracture												
10.2															
			Fracture												
10.4															
			Fracture												
10.6															
			Fracture												
10.8															
			Fracture												
11.0	72.00														
			Fracture												

Port 1

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023265.36 N  
 349942.76 E  
 Groundsurface Elevation: 83.00 m  
 Top of Casing Elevation: 83.91 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-40**  
 Relative Location: **Adjacent March on 595**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA					WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)					CONSTRUCTION	WATER LEVEL	
									1	10	100	1000	10000			
11.2			End Run 7													
11.4			Fracture													
11.6			Fracture													
11.8			Fracture													
12.0	71.00		Fracture													
12.2			Fracture, Oxidation													
12.4			Fracture, Oxidation													
12.6			End Run 8													
12.8			Fracture													
13.0	70.00		Fracture													
13.2			Fracture													
13.4			Fracture													
13.6			Fracture													
13.8			Fracture													
14.0	69.00		Fracture													
14.2			End Run 9													
14.4			Fracture, 0													
14.6			Fracture, 0													
14.8			Fracture, 0													
15.0	68.00		Fracture, 0													

Port 2

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023265.36 N  
 349942.76 E  
 Groundsurface Elevation: 83.00 m  
 Top of Casing Elevation: 83.91 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-40**  
 Relative Location: **Adjacent March on 595**

Project #: **0006-0103**

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ - CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA					WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)					CONSTRUCTION	WATER LEVEL	
									1	10	100	1000	10000			
15.2		Fracture, 0	Fracture, 0													
15.4		Fracture, 0	Fracture, 0													
15.6		Fracture, 0.4	Fracture, 0.4													
15.8		End Run 10	End Run 10													
16.0	67.00															
16.2		Fracture, 0	Fracture, 0													
16.4																
16.6		Fracture, 0	Fracture, 0													
16.8		Fracture, 0	Fracture, 0													
17.0	66.00	Fracture, 0	Fracture, 0													
17.2		Fracture, 0	Fracture, 0													
17.4		End Run 11	End Run 11													
17.6		Fracture, 0	Fracture, 0													
17.8		Fracture, 0	Fracture, 0													
18.0	65.00	Fracture, 0	Fracture, 0													
18.2		Fracture, 0	Fracture, 0													
18.4		Fracture, 0	Fracture, 0													
18.6		Fracture, 0	Fracture, 0													
18.8		Fracture, 0	Fracture, 0													
19.0	64.00	End Run 12	End Run 12													
		Clay layer with broken rock, 0	Clay layer with broken rock, 0													
		Fracture, 0	Fracture, 0													

Port 3

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023265.36 N  
 349942.76 E  
 Groundsurface Elevation: 83.00 m  
 Top of Casing Elevation: 83.91 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-40**  
 Relative Location: **Adjacent March on 595**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA					WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)					CONSTRUCTION	WATER LEVEL	
									1	10	100	1000	10000			
19.2																
19.4																
19.6																
19.8			Fracture, 0													
			Fracture, 0													
			Fracture, 0													
20.0	63.00															
20.2			Fracture, 0													
			End Run 13													
20.4																
20.6			Fracture, 0													
20.8																
21.0	62.00		Fracture, 0													
21.2																
21.4			Fracture, 0													
21.6			Fracture, 0													
			Fracture, 0													
21.8			End Run 14													
22.0	61.00		Fracture, 0													
22.2			Fracture, 0													
			Fracture, 0													
			Fracture, 0													
22.4			Fracture, 0													
			Fracture, 0													
22.6																
22.8			Fracture, 0													
23.0	60.00		Fracture, 2.6													

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ - CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023265.36 N  
 349942.76 E  
 Groundsurface Elevation: 83.00 m  
 Top of Casing Elevation: 83.91 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY

Port 4



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-40**  
 Relative Location: **Adjacent March on 595**

Project #: **0006-0103**

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA					WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)					CONSTRUCTION	WATER LEVEL	
									1	10	100	1000	10000			
23.2			Fracture, 1.1													
			Fracture, 1.1													
23.4			End Run 15													
23.6																
23.8			Fracture, 0													
			Fracture, 0													
			Fracture, 0													
24.0	59.00		Fracture, 0													
24.2			Fracture, 0													
			Fracture, 0													
24.4			Fracture, 0													
24.6			Fracture, 0													
			Fracture, 0													
			Fracture, 0													
24.8			End Run 16													
25.0	58.00		Fracture, 0													
25.2																
25.4			Fracture, 0													
25.6			Clay layer with broken rock, Oxidation, 0													
			End clay layer													
			Fracture, Oxidation, 0													
			Fracture, Oxidation, 0													
25.8			Fracture, Oxidation, 0													
			Fracture, Oxidation, 0													
26.0	57.00		Vertical Fracture, Oxidation, 0													
			Fracture, Oxidation, 0													
26.2																
26.4			Fracture, 0													
			End Run 17													
			Fracture, 0													
			Fracture, 0													
26.6			Fracture, 0													
26.8																
27.0	56.00															

Port 5

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023265.36 N  
 349942.76 E  
 Groundsurface Elevation: 83.00 m  
 Top of Casing Elevation: 83.91 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-40**  
 Relative Location: **Adjacent March on 595**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA					WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)					CONSTRUCTION	WATER LEVEL	
									1	10	100	1000	10000			
27.2																
27.4																
27.6			Fracture, Purple colouration in bedding of matrix, 0 Fracture, Green residue on fracture surfaces, 0 Purple colouration in bedding of matrix Fracture, 0													
27.8			Purple colouration in bedding of matrix Fracture, 0													Port 6
28.0	55.00		End purple colouration in matrix, End Run 18													
28.2			Fracture, 0													
28.4			Fracture, 0													
28.6																
28.8			End Run 19													Port 7
29.0	54.00															
29.2																
29.4																
29.6			Fracture, 0													
29.8			Fracture, 0													
30.0	53.00		Fracture, 0													
30.2			Fracture, 0													
30.4			Fracture, 0													
			End of well at 30.50 m, due to achievement of target depth.													

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Jon  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 22  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023265.36 N  
 349942.76 E  
 Groundsurface Elevation: 83.00 m  
 Top of Casing Elevation: 83.91 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

# BOREHOLE LOG

Borehole #: **MW22-41**  
 Relative Location: **Rear center of 591 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	NOTES
								1	10	100				
-1.0	83.06													
-0.8														
-0.6														
-0.4														
-0.2														
0.0	82.06		Ground Surface											
0.1		Topsoil	Topsoil, Silt, trace sand, organics, soft, loose, dark brown, moist.											
0.2		Silty Clay	Silty clay, soft, medium plasticity, light brown, moist.	22-41 0.1-5	N	10	75		2.1					
0.4														
0.6														
0.8		Sandy Clay	Sandy clay, trace gravel, firm, high plasticity, grey-brown, moist.	22-41 2.2/5	N	25	100		2.7					
1.0	81.06													
1.2														
1.4		Bedrock	Interbedded dolostone and sandstone	22-41 2.75-4	N	50	100	VOCs	3.4					
1.6			Fracture, PID Reading - 0 ppm											
1.8			Fracture, 0											
2.0	80.06		End Run 1											
2.2			Fracture, 8.1											
2.4			Fracture											
2.6			Fracture											
2.8			Fracture, Oxidation											
				22-41 4.4-5	N	50+	100	VOCs	3.7					

Monument Stick-up with 7 Channel CMT

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Devin  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 24  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023218.99 N  
 349937.08 E  
 Groundsurface Elevation: 82.06 m  
 Top of Casing Elevation: 83.07 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-41**  
 Relative Location: **Rear center of 591 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
3.0	79.06													
3.2			Fracture, Oxidation											
3.4			Fracture, Oxidation											
3.4			End Run 2											
3.6														
3.8			Purplein bedding of matrix											
4.0	78.06		Oxidation in Vertical Fracture											
4.2			Fracture											
4.4			Vertical Fracture											
4.6			Fracture											
4.8			Fracture											
5.0	77.06		Fracture											
5.2			Fracture, 0											
5.4			Fracture, 0											
5.6														
5.8			Fracture, 0											
6.0	76.06													
6.2														
6.4			Fracture, 0											
6.6			End Run 4											
6.8			Fracture, 0											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Devin  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 24  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023218.99 N  
 349937.08 E  
 Groundsurface Elevation: 82.06 m  
 Top of Casing Elevation: 83.07 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-41**  
 Relative Location: **Rear center of 591 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
7.0	75.06		Fracture, 0											
7.2														
7.4			Fracture, 0											
7.6			Fracture, 0											
7.8			Fracture, 0											
8.0	74.06		End Run 5											
8.2			Fracture, 0											
8.4			Fracture, 0											
8.6			Fracture, 0											
8.8			Fracture, Oxidation, Lost Circulation, 0											
9.0	73.06		Fracture, 0											
9.2			Mechanical Fracture, 0											
9.4			Fracture, 0											
9.6			End Run 6											
9.8			Fracture, Oxidation, 0											
10.0	72.06		Fracture, 0											
10.2			Fracture, 0											
10.4			Fracture, 0											
10.6														
10.8			Fracture, 0											

Port 1

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Devin  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 24  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023218.99 N  
 349937.08 E  
 Groundsurface Elevation: 82.06 m  
 Top of Casing Elevation: 83.07 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-41**  
 Relative Location: **Rear center of 591 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
11.0	71.06		Fracture, 0											
11.2			End Run 7											
11.4														
11.6			Fracture, 0											
11.8			Fracture, 0											
12.0	70.06													
12.2														
12.4														
12.6			End Run 8											
12.8			Sub-vertical Fracture, 0 Fracture, 0											
13.0	69.06		Vertical Fracture											
13.2			Fracture, 0 Fracture, 0											
13.4														
13.6			Fracture, 0 Fracture, 0											
13.8			Fracture, 0											
14.0	68.06		Fracture, 0											
14.2			End Run 9 Mechanical Fracture, 0											
14.4			Fracture, 113											
14.6														
14.8			Fracture, 19.6											

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ - CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Devin  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 24  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023218.99 N  
 349937.08 E  
 Groundsurface Elevation: 82.06 m  
 Top of Casing Elevation: 83.07 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-41**  
 Relative Location: **Rear center of 591 building**

Project #: **0006-0103**

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES	
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL		
									1	10	100				
15.0	67.06														
15.2			Fracture, 6.6												Port 2
			Fracture, 2.1												
			Fracture, 1.4												
15.4			Fracture, 1.8												
			Fracture, 1.8												
15.6															
15.8			End Run 10												
16.0	66.06														
16.2			Fracture, 5												
			Fracture, 3.5												
16.4			Fracture, 4												
16.6			Fracture, 0												
16.8			Fracture, 0												
17.0	65.06		Fracture, 0												
17.2			End Run 11												
17.4															
17.6															
17.8			Fracture, 0												
18.0	64.06		Fracture, 0												
			Fracture, 0												
			Fracture, 0												
18.2			Clay layer with broken rock												
			Fracture, 0												
18.4			Fracture, 0												
18.6															
18.8			End Run 12												

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DRILLER: Aardvark - Devin  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 24  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023218.99 N  
 349937.08 E  
 Groundsurface Elevation: 82.06 m  
 Top of Casing Elevation: 83.07 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY





CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-41**  
 Relative Location: **Rear center of 591 building**

Project #: **0006-0103**

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
19.0	63.06		Fracture, 0											
19.2			Fracture, 0											
19.4			Fracture, 0											
19.6			Fracture, 0											
19.8			Fracture, 0											Port 3
20.0	62.06		Fracture, 0											
20.2			End Run 13											
20.4														
20.6			Fracture, 0											
20.8														
21.0	61.06													
21.2			Fracture, 0											
21.4			Fracture, 0											
21.6			Fracture, 0											
21.8			End Run 14											
22.0	60.06		Fracture, 0											
22.2			Fracture, 0											
22.4			Fracture, 0.6											
22.6			Fracture, 0											Port 4
22.8			Fracture, 0											

DRILLER: Aardvark - Devin  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 24  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023218.99 N  
 349937.08 E  
 Groundsurface Elevation: 82.06 m  
 Top of Casing Elevation: 83.07 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-41**  
 Relative Location: **Rear center of 591 building**

Project #: **0006-0103**

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ - CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
23.0	59.06		Fracture, 0											
23.2			Fracture, 0											
23.4			End Run 15											
23.6			Fracture, 0											
23.8			Fracture, 0											
24.0	58.06		Fracture, 0											
24.2			Fracture, 0											
24.4														
24.6			Fracture, 0.3											
24.8			End Run 16											
25.0	57.06		Fracture, 0											
25.2			Fracture, 0.4											
25.3			Fracture, 0.2											
25.4			Fracture, 3.2											
25.6			Fracture, 0.1											
25.8			Fracture, 0.1											
26.0	56.06		Fracture, 0.2											
26.1			Fracture, 0.1											
26.4			End Run 17											
26.6														
26.8														

Port 5

DRILLER: Aardvark - Devin  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 24  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023218.99 N  
 349937.08 E  
 Groundsurface Elevation: 82.06 m  
 Top of Casing Elevation: 83.07 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY



CLIENT: **March and Main Developments Inc.**  
 PROJECT: **March Road Properties Phase Two ESA**  
 ADDRESS: **555, 591, 595 and 603 March Rd.**

**BOREHOLE LOG**

Borehole #: **MW22-41**  
 Relative Location: **Rear center of 591 building**

Project #: **0006-0103**

CONCENTRIC V1.0 0006-0103 - BOREHOLE LOGS.GPJ - CONCENTRIC TEMPLATE V1.0.GDT 23-4-4

DEPTH (m)	ELEVATION (m)	SOIL TYPE	SOIL DESCRIPTION	SAMPLE					FIELD TEST DATA			WELL COMPLETION		NOTES
				SAMPLE ID	TYPE	SPT COUNT	RECOVERY (%)	LAB ANALYSIS	Organic Vapour Concentration (ppmv)			CONSTRUCTION	WATER LEVEL	
									1	10	100			
27.0	55.06	[Fracture pattern]	Fracture, 0.1											Port 6
			Fracture, 0.9											
27.2			Fracture, 0.4											
27.4			Fracture, 0.4											
27.6			Fracture, 0.4											
27.8			Fracture, 0.4											
28.0	54.06	[Fracture pattern]	End Run 18											Port 7
			Fracture, 0.1											
			Fracture, 0.2											
28.2			Fracture, 0.3											
28.4			Fracture, 0.3											
28.6			Fracture, 0.6											
28.8			Fracture, 0.7											
29.0	53.06	[Fracture pattern]	Fracture, 1.4											Port 7
			Fracture, 0.5											
29.2			Fracture, 0.3											
29.4			Fracture, 0.3											
			End Run 19											
29.6			Fracture, 1.3											
29.8														
30.0	52.06	[Fracture pattern]	Fracture, 3											Port 7
			Fracture											
30.2														
30.4														
			End of well at 30.50 m, due to achievement of target depth.											

DRILLER: Aardvark - Devin  
 DRILLING METHOD: CORE  
 BOREHOLE DIAMETER (m): 0.102  
 WELL DIAMETER (m): 0.051  
 DRILL DATE: 2022 November 24  
 LOGGED BY: DE

**UTM COORDINATES**  
 ZONE: 18  
 5023218.99 N  
 349937.08 E  
 Groundsurface Elevation: 82.06 m  
 Top of Casing Elevation: 83.07 m

**Notes:**  
 CORE SAMPLE       NO RECOVERY



# Omni-McCann

## Slug Test Analysis Report

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road

Slug Test: MW22-21 R1

Test Well: MW21-01A

Test Conducted by: DE

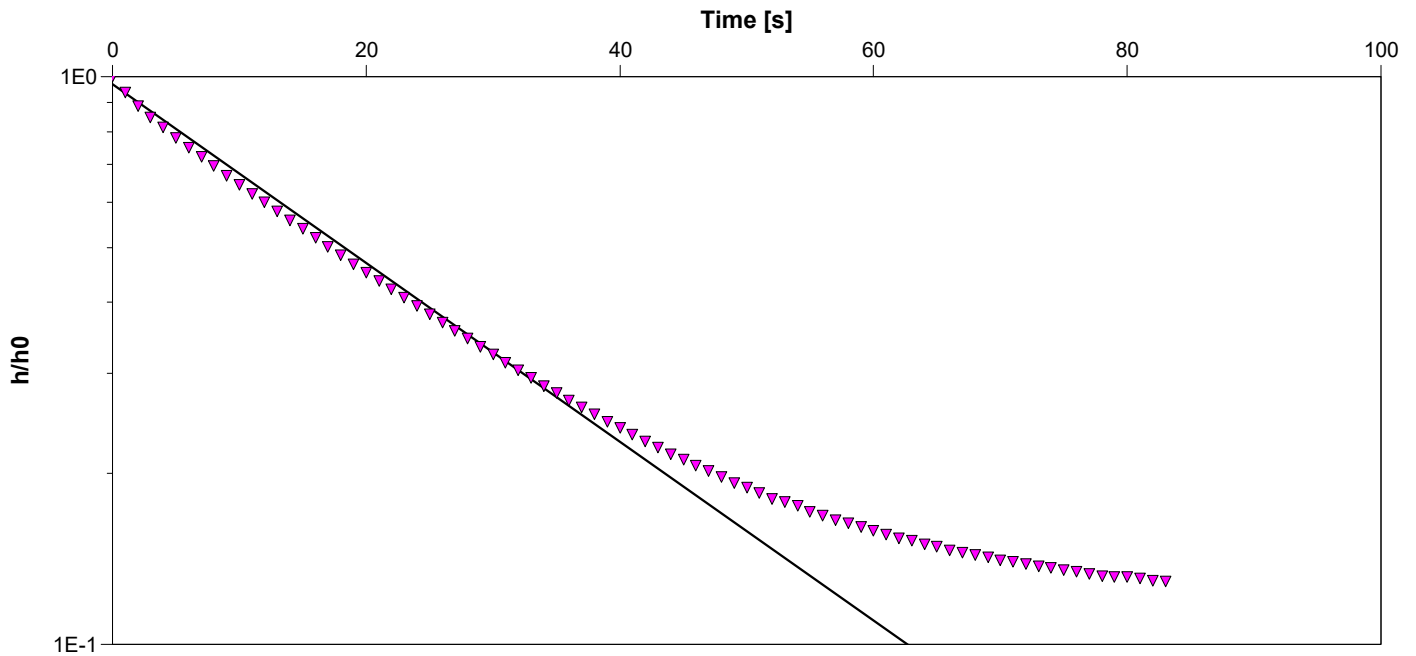
Test Date: 2022-12-19

Analysis Performed by: K

MW22-21 R1

Analysis Date: 2023-01-24

Aquifer Thickness: 40.00 m



### Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]
MW21-01A	$1.29 \times 10^{-5}$



# Omni-McCann

## Slug Test Analysis Report

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road

Slug Test: MW22-21 R2

Test Well: MW22-21

Test Conducted by: DE

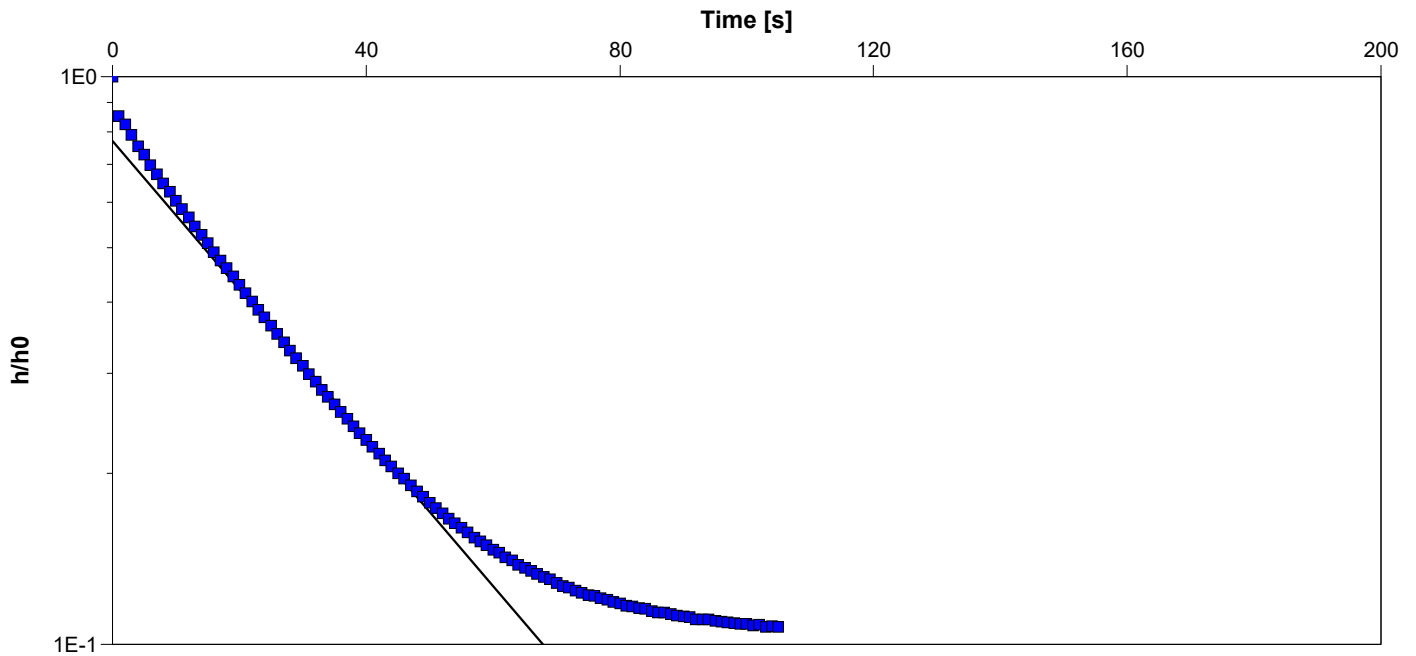
Test Date: 2022-12-19

Analysis Performed by:

MW22-21 R2

Analysis Date: 2023-01-24

Aquifer Thickness: 40.00 m



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]
MW22-21	$1.20 \times 10^{-5}$



**Omni-McCann**

**Slug Test Analysis Report**

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road

Slug Test: MW22-32 R1

Test Well: MW22-32

Test Conducted by: DE

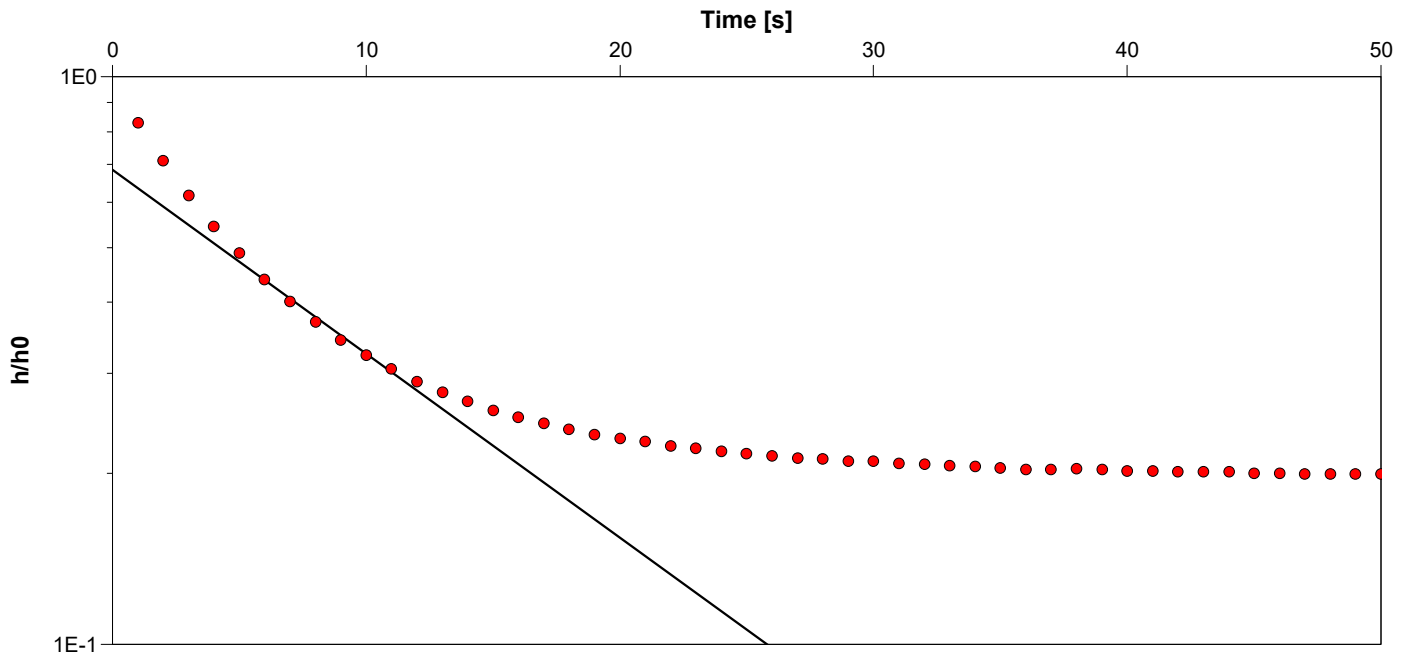
Test Date: 2022-12-19

Analysis Performed by: KS

MW22-32 R1

Analysis Date: 2023-01-24

Aquifer Thickness: 40.00 m



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]
MW22-32	$2.68 \times 10^{-5}$



# Omni-McCann

## Slug Test Analysis Report

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road

Slug Test: MW22-32 R2

Test Well: MW22-32

Test Conducted by: DE

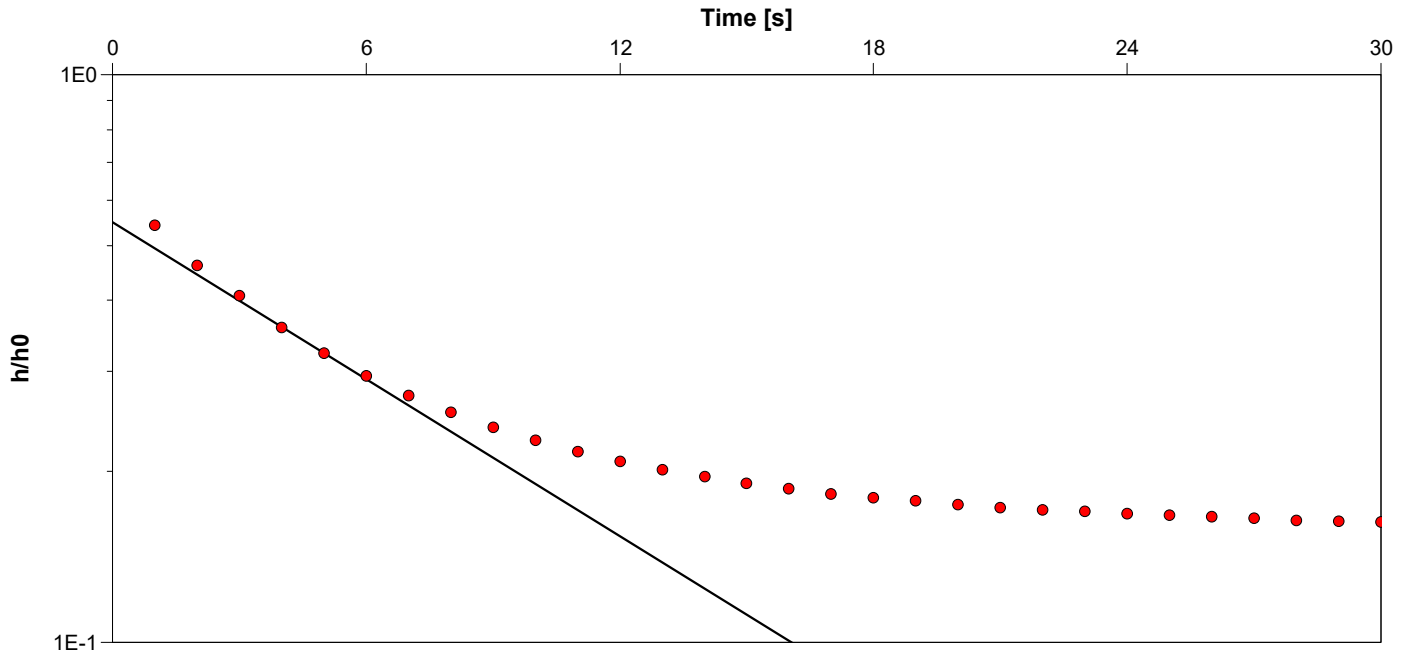
Test Date: 2023-01-19

Analysis Performed by: KS

MW22-32 R2

Analysis Date: 2023-01-24

Aquifer Thickness: 40.00 m



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]
MW22-32	$3.81 \times 10^{-5}$



# Omni-McCann

## Slug Test Analysis Report

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road

Slug Test: MW22-36 R1

Test Well: MW22-36

Test Conducted by: DE

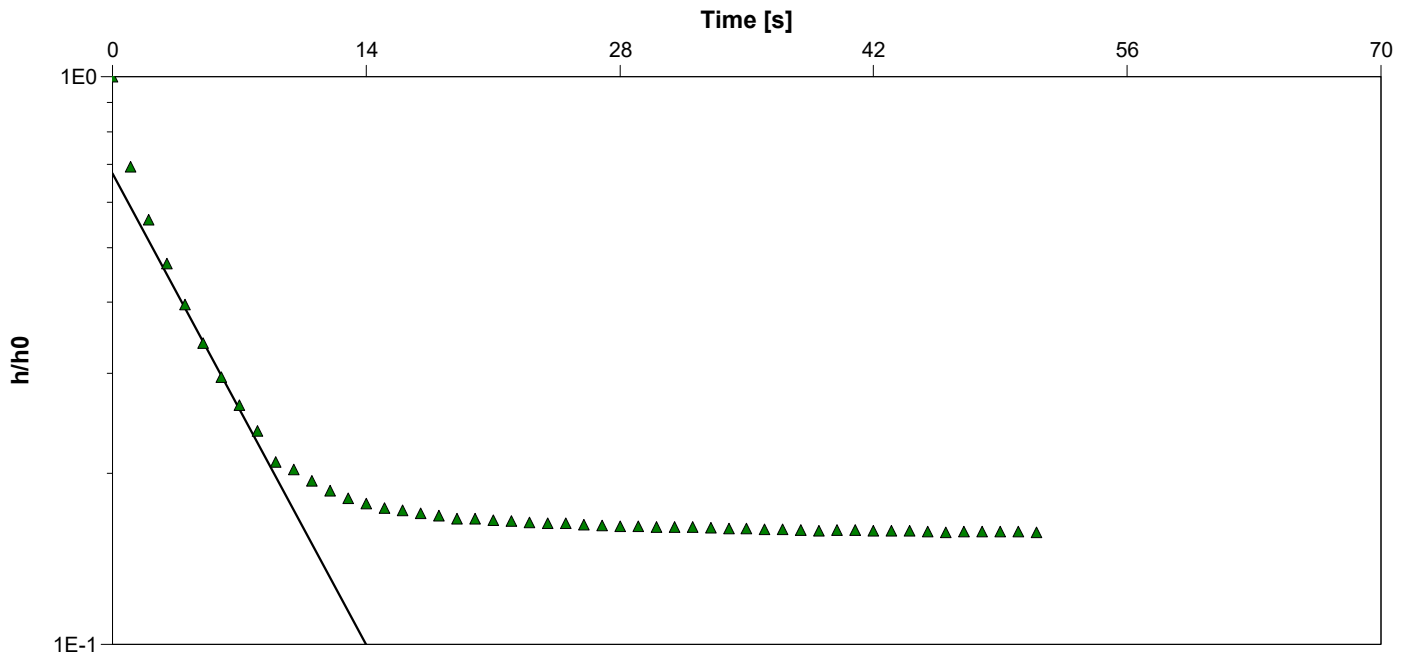
Test Date: 2023-01-19

Analysis Performed by: KS

MW22-36

Analysis Date: 2023-01-24

Aquifer Thickness: 40.00 m



### Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]
MW22-36	$4.88 \times 10^{-5}$





# Omni-McCann

## Slug Test Analysis Report

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road

Slug Test: MW22-36 R2

Test Well: MW22-36

Test Conducted by: DE

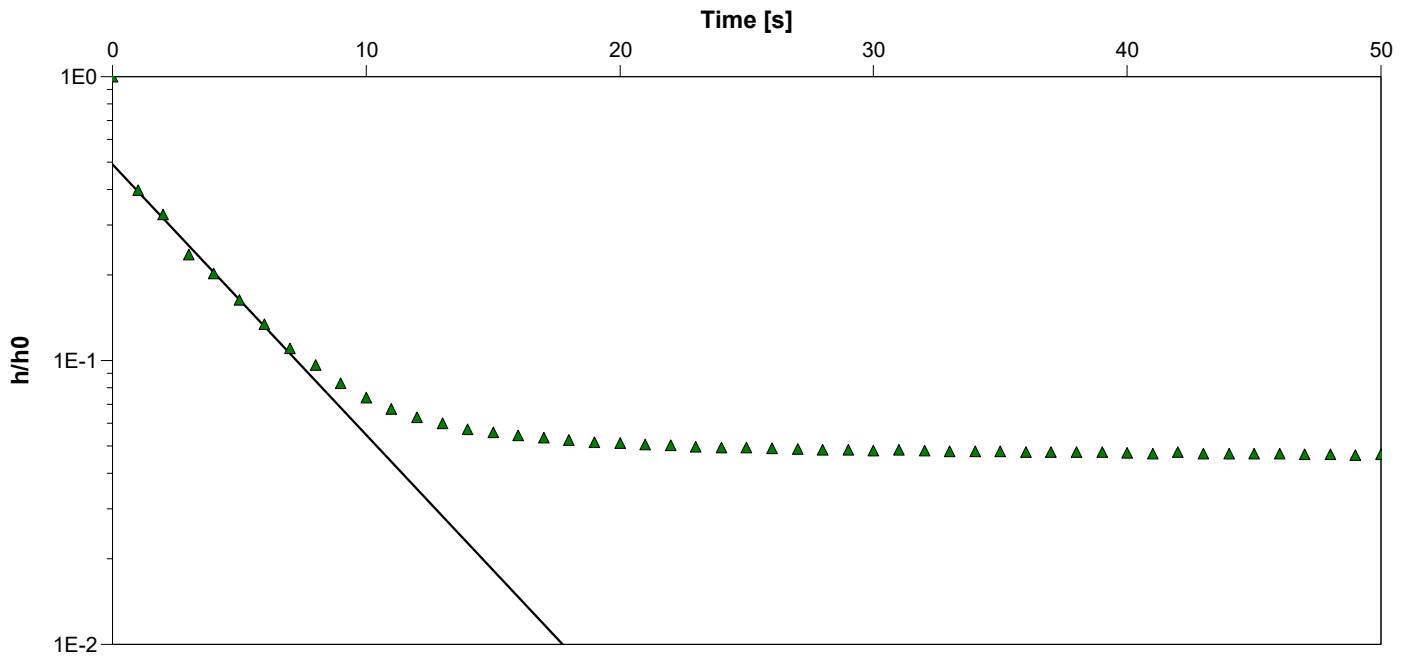
Test Date: 2022-12-19

Analysis Performed by: KS

MW22-36 R2

Analysis Date: 2023-01-24

Aquifer Thickness: 40.00 m



### Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]
MW22-36	$7.85 \times 10^{-5}$



**Omni-McCann**

**Slug Test Analysis Report**

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road

Slug Test: MW21-01A R1

Test Well: MW21-01A

Test Conducted by:

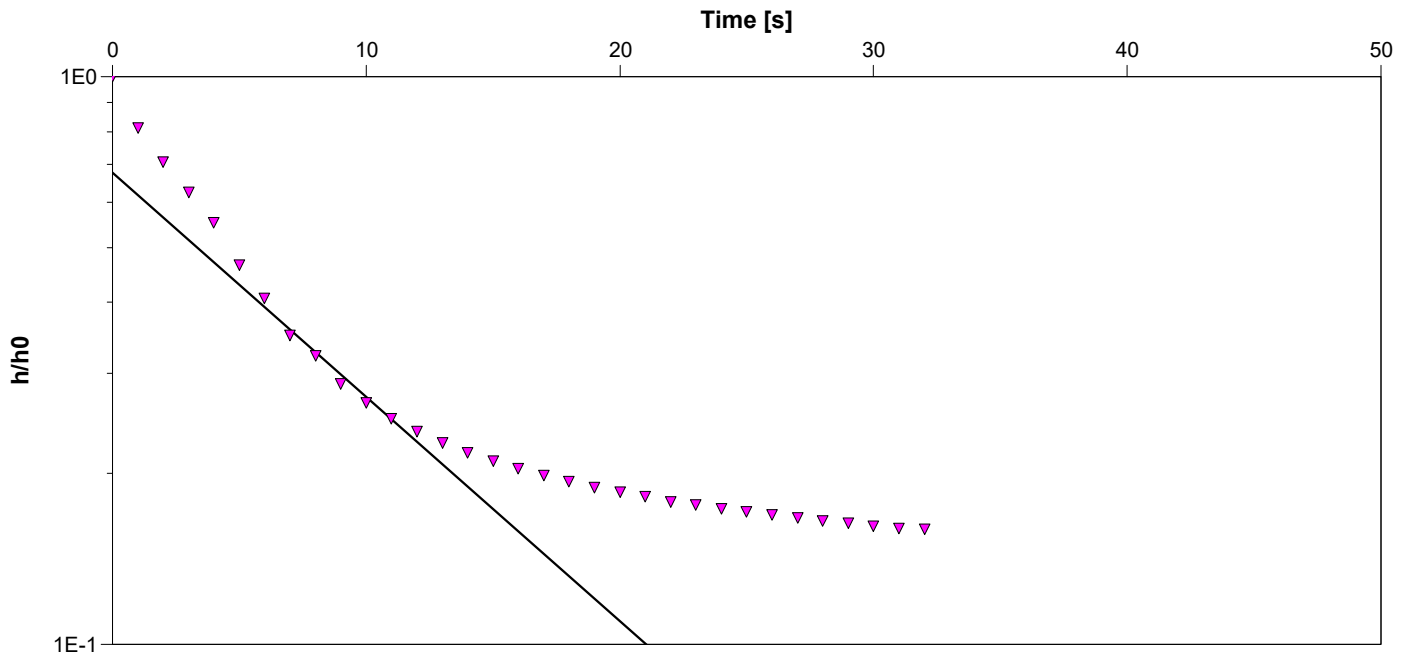
Test Date: 2022-12-19

Analysis Performed by: DE

MW21-01A R1

Analysis Date: 2023-03-30

Aquifer Thickness: 40.00 m



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]
MW21-01A	$3.23 \times 10^{-5}$



# Omni-McCann

## Slug Test Analysis Report

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road

Slug Test: MW21-01A R2

Test Well: MW21-01A

Test Conducted by:

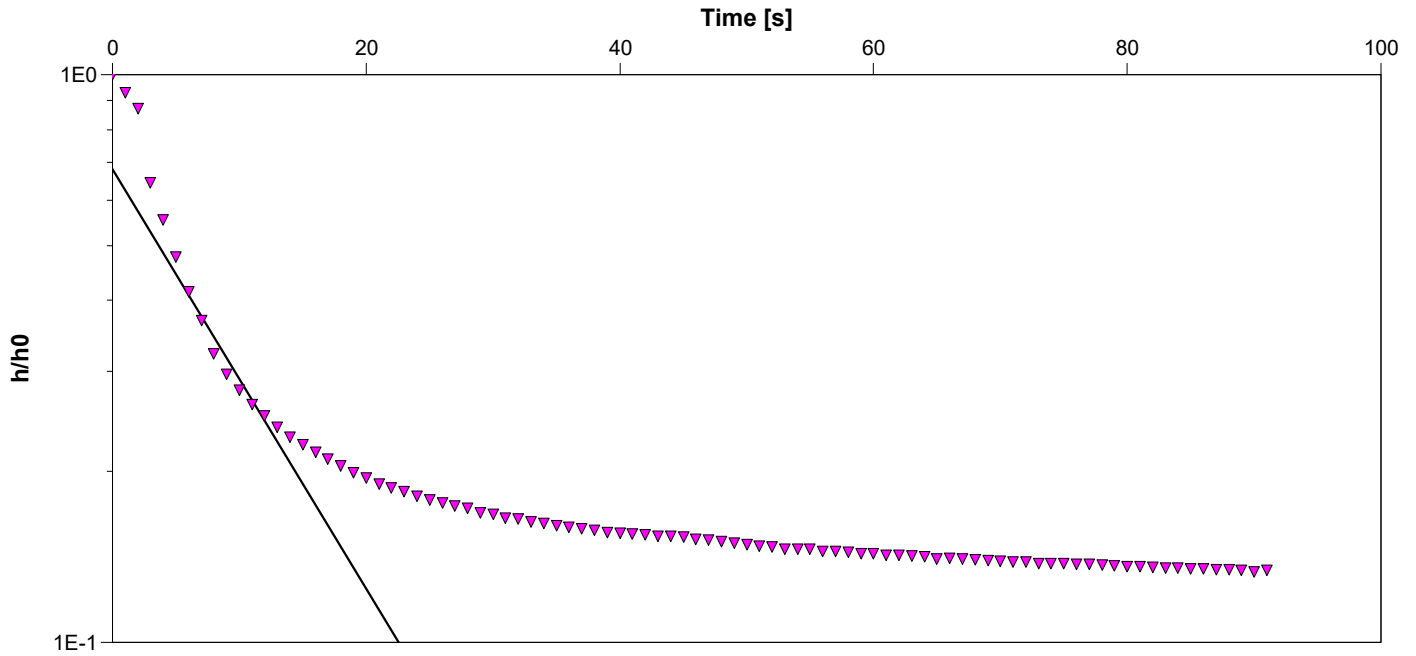
Test Date: 2022-12-19

Analysis Performed by: KS

MW21-01A R2

Analysis Date: 2023-03-30

Aquifer Thickness: 40.00 m



### Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]
MW21-01A	$3.03 \times 10^{-5}$



# Omni-McCann

## Slug Test Analysis Report

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road

Slug Test: MW21-01A R3

Test Well: MW21-01A

Test Conducted by:

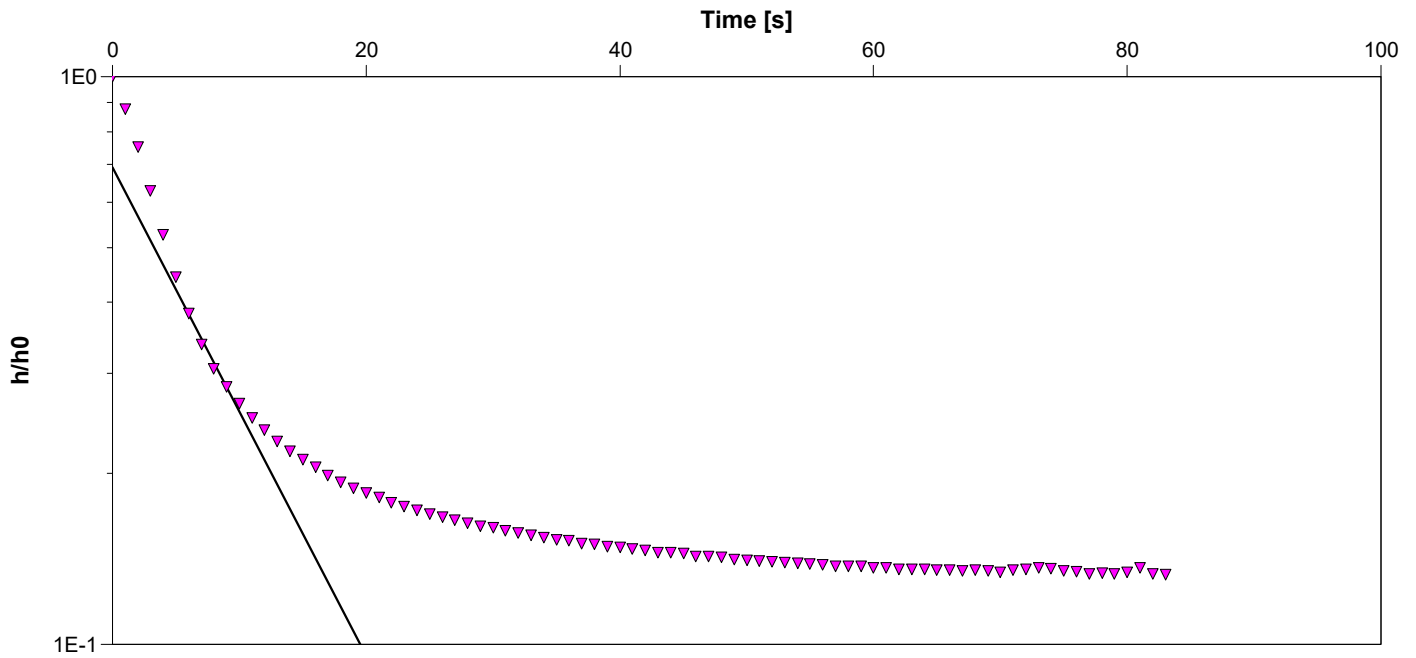
Test Date: 2022-12-19

Analysis Performed by: KS

MW21-01A R3

Analysis Date: 2023-03-30

Aquifer Thickness: 40.00 m



### Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]
MW21-01A	$3.52 \times 10^{-5}$



# Omni-McCann

## Slug Test Analysis Report

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road

Slug Test: MW21-01B R2

Test Well: MW21-01B

Test Conducted by: DE

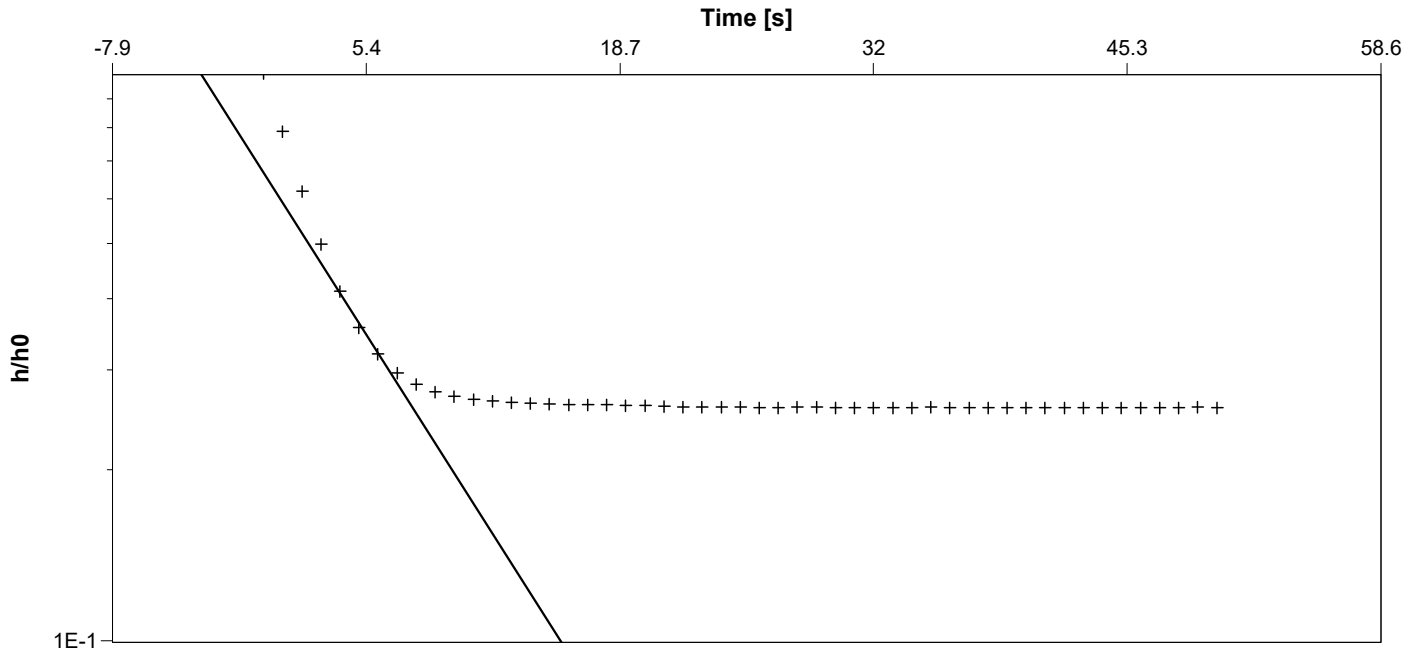
Test Date: 2022-12-19

Analysis Performed by: KS

MW21-01B R1

Analysis Date: 2023-03-30

Aquifer Thickness: 40.00 m



### Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]
MW21-01B	$4.92 \times 10^{-5}$



**Omni-McCann**

**Slug Test Analysis Report**

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road

Slug Test: MW22-01C R1

Test Well: MW21-01C

Test Conducted by:

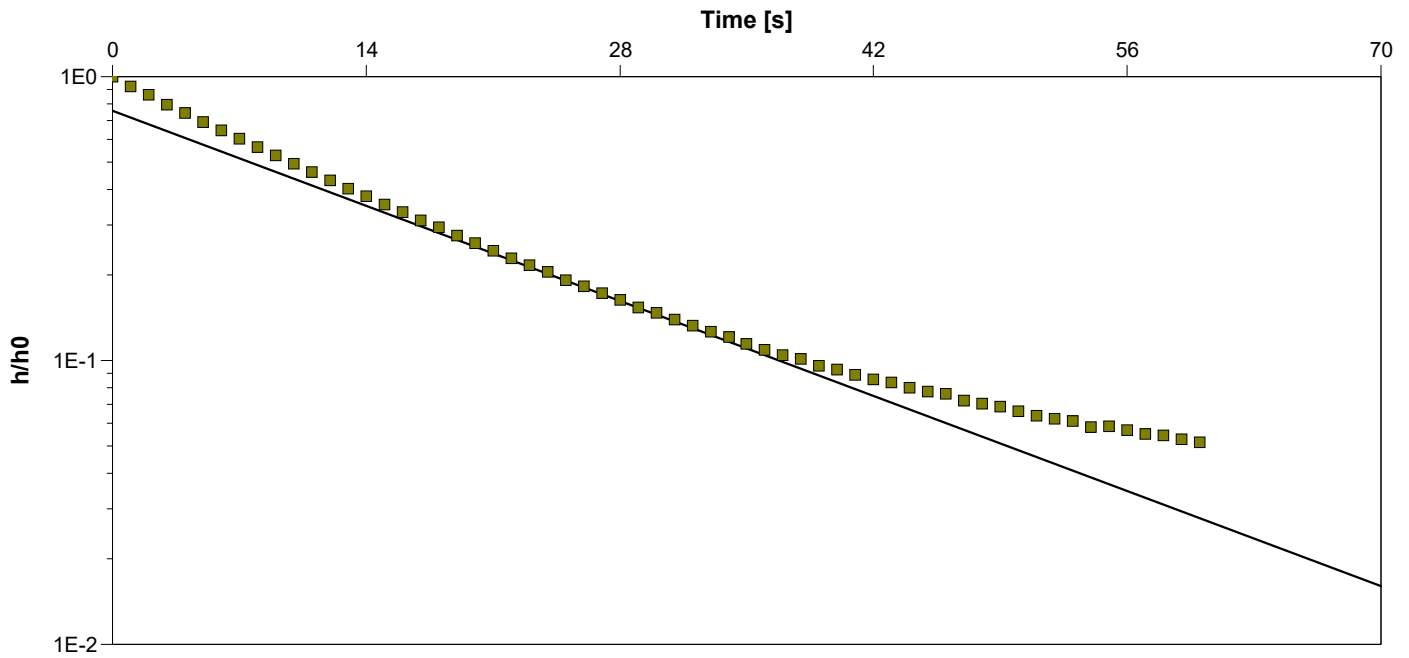
Test Date: 2023-03-31

Analysis Performed by: DE

MW22-01C R1

Analysis Date: 2023-03-31

Aquifer Thickness: 40.00 m



Calculation using Bouwer & Rice

Observation Well

Hydraulic Conductivity  
[m/s]

MW21-01C

$2.32 \times 10^{-5}$



# Omni-McCann

## Slug Test Analysis Report

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road

Slug Test: MW21-03A R2

Test Well: MW21-03A

Test Conducted by:

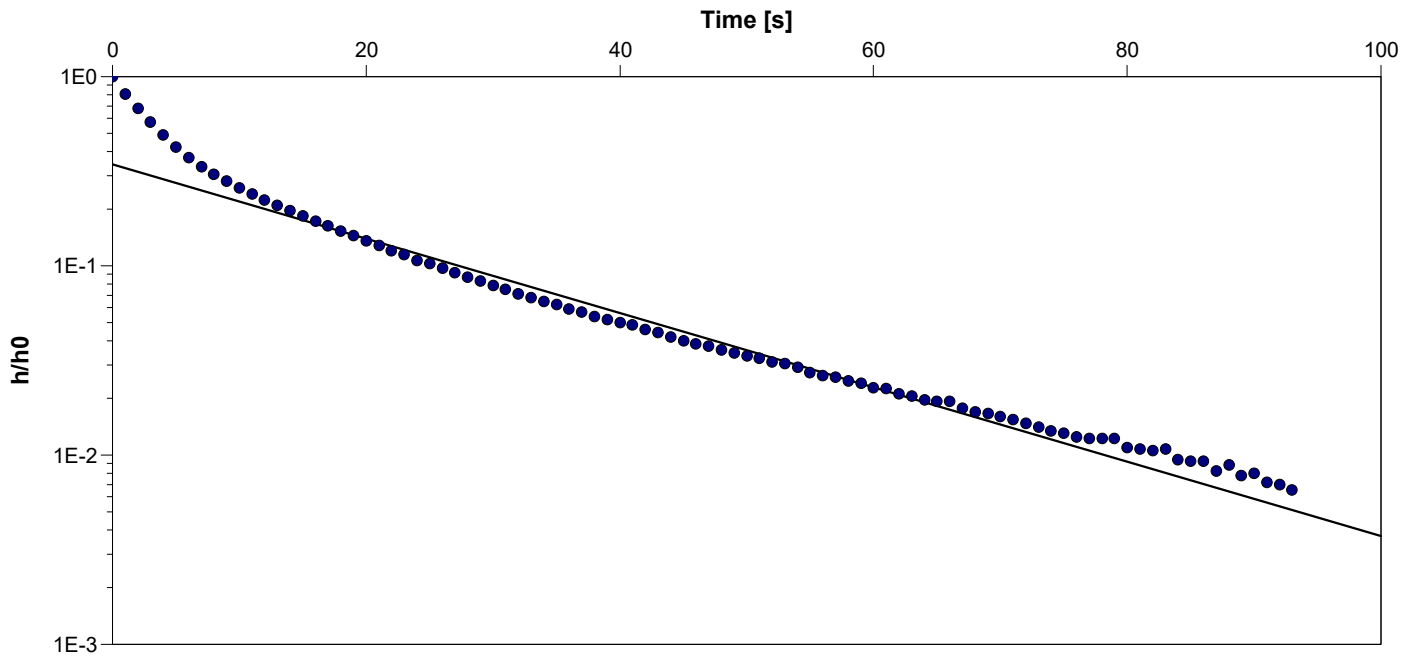
Test Date: 2022-12-19

Analysis Performed by: KS

MW21-03A R2

Analysis Date: 2023-03-31

Aquifer Thickness: 40.00 m



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]
MW21-03A	$1.60 \times 10^{-5}$



**Omni-McCann**

**Slug Test Analysis Report**

Project: Phase Two ESA

Number: 006-01-03

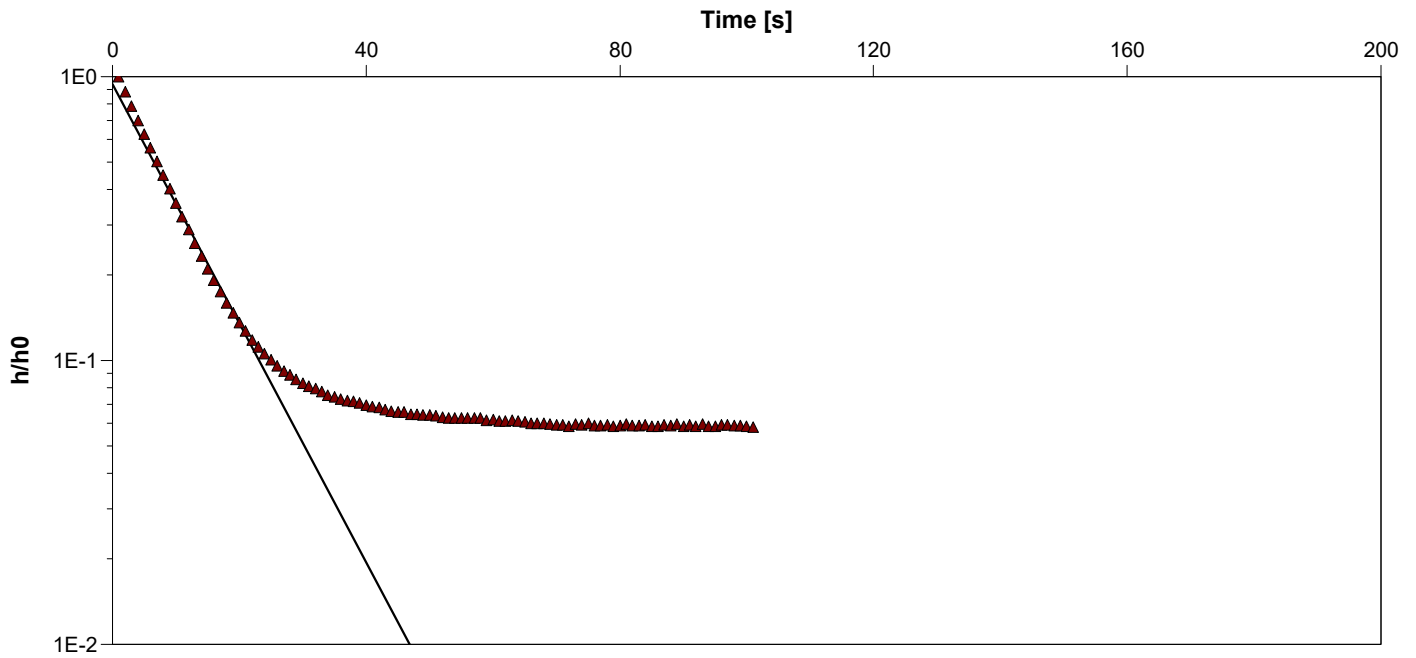
Client: March and Main

Location: 555 March Road      Slug Test: MW21-3B R2      Test Well: MW21-03B

Test Conducted by:      Test Date: 2022-12-19

Analysis Performed by: KS      MW21-03B R2      Analysis Date: 2023-03-31

Aquifer Thickness: 40.00 m



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]
MW21-03B	$3.91 \times 10^{-5}$





# Omni-McCann

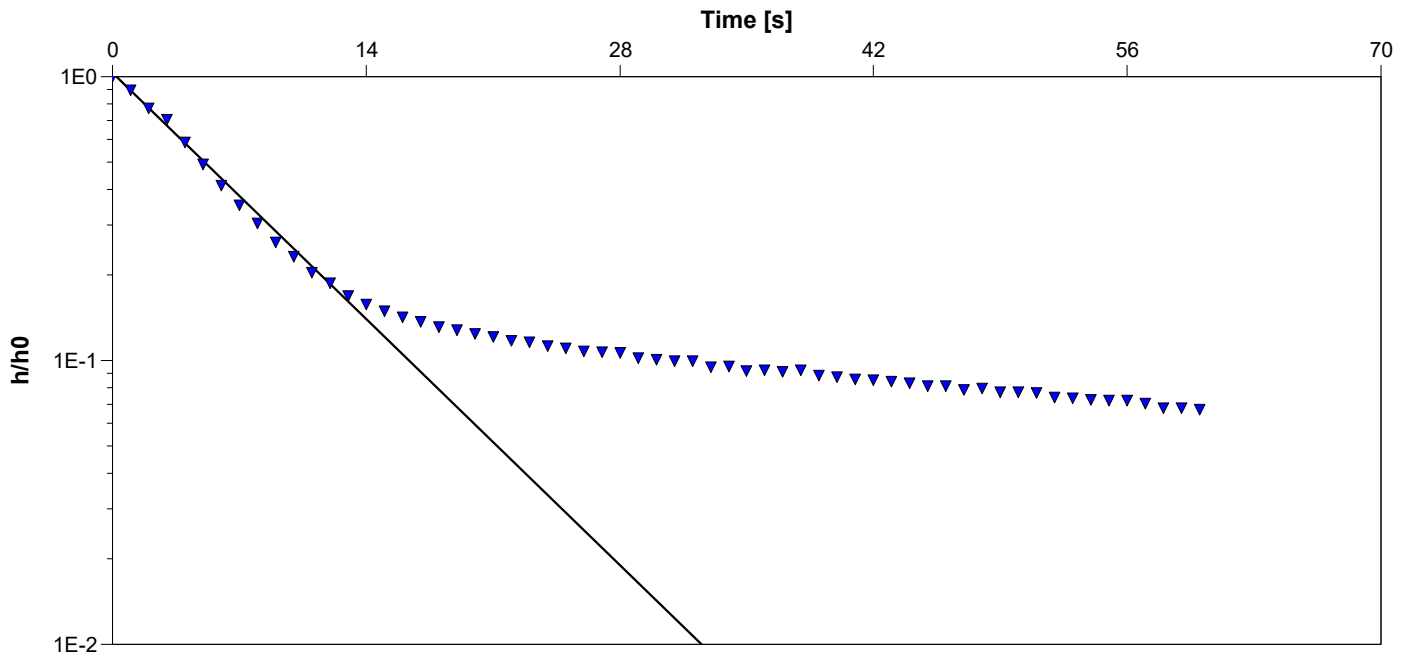
## Slug Test Analysis Report

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road	Slug Test: MW22-03C R1	Test Well: MW21-03C
Test Conducted by:		Test Date: 2022-12-19
Analysis Performed by: DE	MW22-03C R1	Analysis Date: 2023-03-31
Aquifer Thickness: 40.00 m		



Calculation using Bouwer & Rice	
Observation Well	Hydraulic Conductivity [m/s]
MW21-03C	$6.01 \times 10^{-5}$



**Omni-McCann**

**Slug Test Analysis Report**

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road

Slug Test: MW21-04A R2

Test Well: MW21-04A

Test Conducted by:

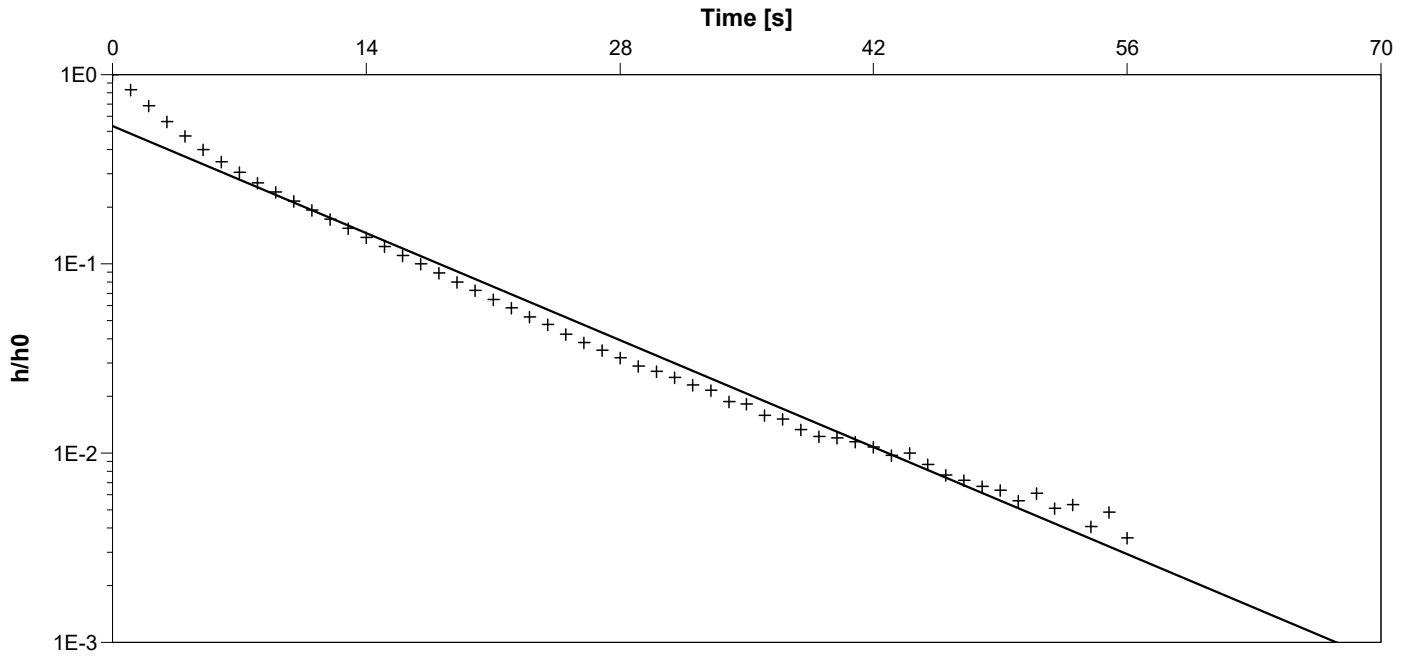
Test Date: 2022-12-19

Analysis Performed by:

MW21-04A R2

Analysis Date: 2023-03-31

Aquifer Thickness: 40.00 m



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]
MW21-04A	$3.38 \times 10^{-5}$



# Omni-McCann

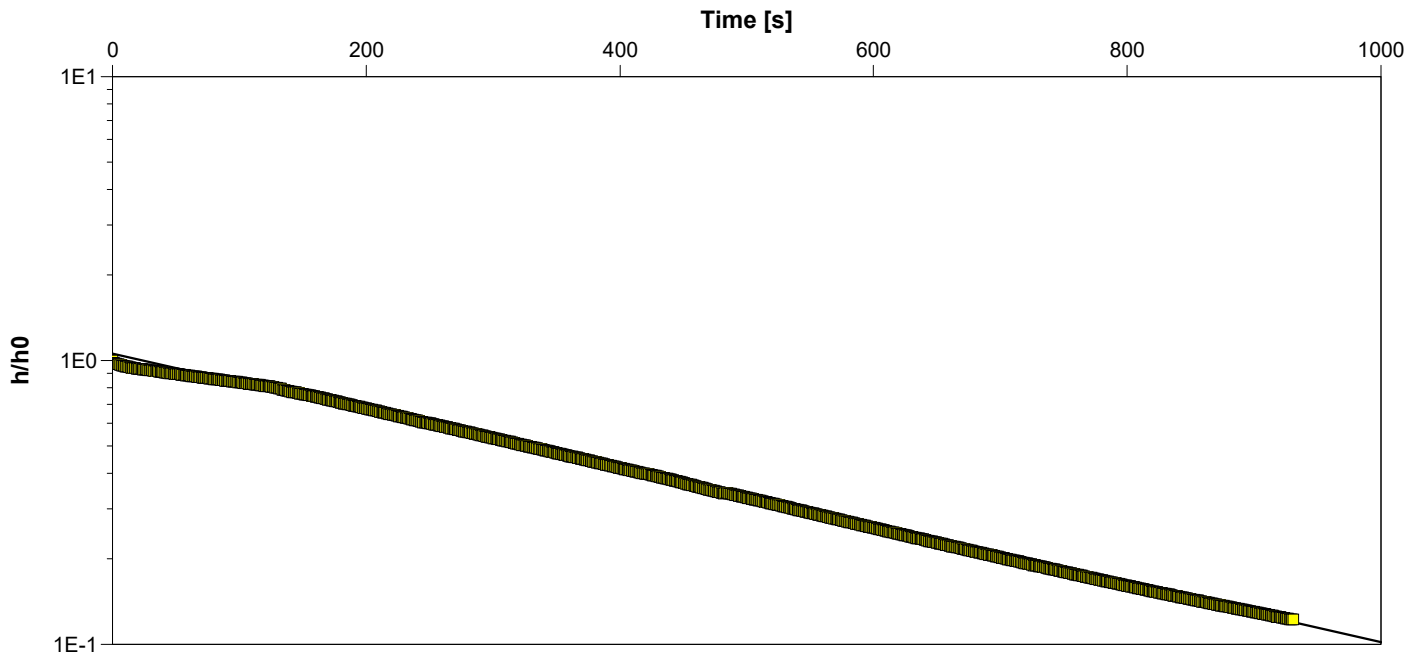
## Slug Test Analysis Report

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road	Slug Test: MW21-04B R1	Test Well: MW21-04B
Test Conducted by:		Test Date: 2023-01-19
Analysis Performed by:	MW21-04B R1	Analysis Date: 2023-03-31
Aquifer Thickness: 40.00 m		



### Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]
MW21-04B	$8.85 \times 10^{-7}$



# Omni-McCann

## Slug Test Analysis Report

Project: Phase Two ESA

Number: 006-01-03

Client: March and Main

Location: 555 March Road

Slug Test: MW22-04C

Test Well: MW21-04C

Test Conducted by:

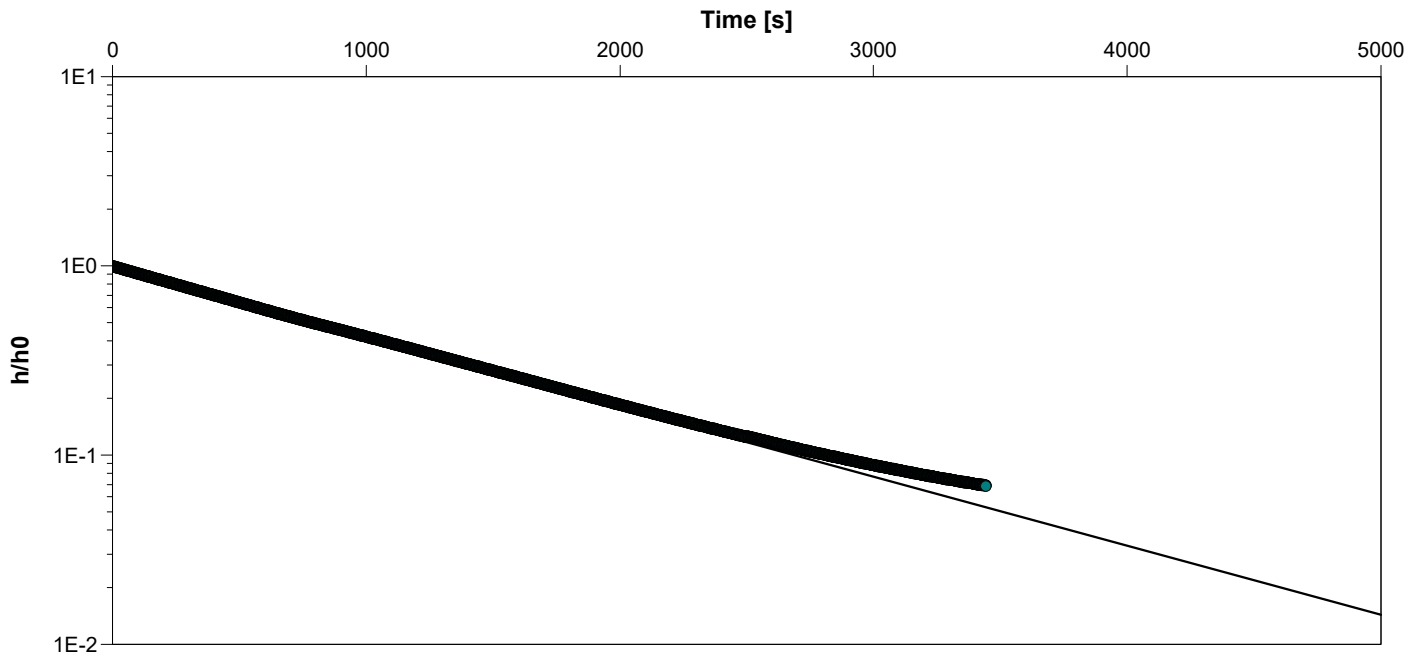
Test Date: 2022-12-19

Analysis Performed by: DE

MW22-04C R1

Analysis Date: 2023-03-31

Aquifer Thickness: 40.00 m



### Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]
MW21-04C	$3.54 \times 10^{-7}$



# CERTIFICATE OF CALIBRATION

The Instrument listed below has been inspected and calibrated following the Manufacturer's specifications and methods.

Instrument Model: **MiniRae 3000 11.7eV**

Serial Number: **592-906454**

Calibration Date: **November 2, 2022**

<u>SENSOR</u>	<u>CALIBRATION GAS STANDARD</u>	<u>CALIBRATION GAS CONCENTRATION</u>	<u>READING PRIOR TO ADJUSTMENT</u>	<u>INSTRUMENT SPAN SETTINGS</u>	<u>ALARM LEVEL SETTING</u>
TVOC	Isobutylene Lot: 1509978 Exp: July 2026	100 PPM	100 PPM	100 PPM	50 & 100 PPM
	Zero Air Lot: 302-402450316-53 Exp: July 2017				

The calibration gas standard used is considered to be a certified standard and is traceable to the National Institute of Standards and Technology (NIST). Certificate of Analysis is available upon request.

The instrument indicated above is now certified to be operating within the Manufacturer's specifications. This does not eliminate the requirement for regular maintenance and pre-use sensor response checks in order to ensure continued complete and accurate operating condition.

Certified By: Jeff Loney

## Maxim Environmental and Safety Inc.

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9 - 148 Colonnade Rd., Ottawa, ON K2E 7R4  
(613)224-4747 | Toll Free (888)285-2324



# CERTIFICATE OF CALIBRATION

The YSI Instrument listed below has been inspected and calibrated following the Manufacturer's specifications and methods.

Instrument Model: **YSI PRO**      Serial Number: **22G102484**      Calibration Date: **November 28, 2022**

<u>3-POINT pH</u>	<u>CONDUCTIVITY</u>	<u>OXIDIZATION - REDUCTION POTENTIAL</u>	<u>DISSOLVED OXYGEN</u>
4.00 pH, 7.00 pH, 10.00 pH	1413uS/cm	240mV	8.92 @ 21 DegC SODIUM SULFITE ZERO
4.00 pH LOT # 1GE539	LOT # 1GE261	LOT # 6658	LOT # 727039
Expiry Date: June 1, 2023	Expiry Date: June 1, 2023	Expiry Date: July 1, 2026	Expiry Date: June 1, 2023
7.00 pH LOT # 2GK014	@25 DegC LOT # 1GE261		
Expiry Date: November 1, 2024	Expiry Date: June 1, 2023		
10.00 pH LOT # 1GI516			
Expiry Date: September 1, 2023			

The calibration standard used is considered to be a certified standard and is traceable to the National Institute of Standards and Technology (NIST). Certificate of Analysis is available upon request.

The instrument indicated above is now certified to be operating within the Manufacturer's specifications. This does not eliminate the requirement for regular maintenance and pre-use sensor response checks in order to ensure continued complete and accurate operating condition.

Certified By: Jeff Loney

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(613)224-4747 | Toll Free (888)285-2324



# CERTIFICATE OF CALIBRATION

The YSI Instrument listed below has been inspected and calibrated following the Manufacturer's specifications and methods.

Instrument Model: **YSI PRO**      Serial Number: **22G102484**      Calibration Date: **December 2, 2022**

<u>3-POINT pH</u>	<u>CONDUCTIVITY</u>	<u>OXIDIZATION - REDUCTION POTENTIAL</u>	<u>DISSOLVED OXYGEN</u>
4.00 pH, 7.00 pH, 10.00 pH	1413uS/cm	240mV	8.92 @ 21 DegC SODIUM SULFITE ZERO
4.00 pH LOT # 1GE539	LOT # 1GE261	LOT # 6658	LOT # 727039
Expiry Date: June 1, 2023	Expiry Date: June 1, 2023	Expiry Date: July 1, 2026	Expiry Date: June 1, 2023
7.00 pH LOT # 2GK014	@25 DegC LOT # 1GE261		
Expiry Date: November 1, 2024	Expiry Date: June 1, 2023		
10.00 pH LOT # 1GI516			
Expiry Date: September 1, 2023			

The calibration standard used is considered to be a certified standard and is traceable to the National Institute of Standards and Technology (NIST). Certificate of Analysis is available upon request.

The instrument indicated above is now certified to be operating within the Manufacturer's specifications. This does not eliminate the requirement for regular maintenance and pre-use sensor response checks in order to ensure continued complete and accurate operating condition.

Certified By: Jeff Loney

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# CERTIFICATE OF CALIBRATION

The YSI Instrument listed below has been inspected and calibrated following the Manufacturer's specifications and methods.

Instrument Model: **YSI PRO**      Serial Number: **18K100425**      Calibration Date: **December 2, 2022**

<u>3-POINT pH</u>	<u>CONDUCTIVITY</u>	<u>OXIDIZATION - REDUCTION POTENTIAL</u>	<u>DISSOLVED OXYGEN</u>
4.00 pH, 7.00 pH, 10.00 pH	1413uS/cm	240mV	8.92 @ 21 DegC SODIUM SULFITE ZERO
4.00 pH LOT # 1GE539	LOT # 1GE261	LOT# 6658	LOT # 727039
Expiry Date: June 1, 2023	Expiry Date: June 1, 2023	Expiry Date: July 1, 2026	Expiry Date: June 1, 2023
7.00 pH LOT # 2GK014	@25 DegC LOT # 1GE261		
Expiry Date: November 1, 2024	Expiry Date: June 1, 2023		
10.00 pH LOT # 1G1516			
Expiry Date: September 1, 2023			

The calibration standard used is considered to be a certified standard and is traceable to the National Institute of Standards and Technology (NIST). Certificate of Analysis is available upon request.

The instrument indicated above is now certified to be operating within the Manufacturer's specifications. This does not eliminate the requirement for regular maintenance and pre-use sensor response checks in order to ensure continued complete and accurate operating condition.

**Certified By:** Jeff Loney

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# APPENDIX C

## Certificates of Analysis



## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

<p><b>Work Order</b> : <b>WT2219243</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 20-1009747; 20-1009748</p> <p><b>Sampler</b> : Antonia Cass</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 17</p> <p><b>No. of samples analysed</b> : 11</p>	<p><b>Page</b> : 1 of 34</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 21-Oct-2022 09:00</p> <p><b>Date Analysis Commenced</b> : 26-Oct-2022</p> <p><b>Issue Date</b> : 08-Nov-2022 18:28</p>
--	--

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Amanda Ganouri-Lumsden	Department Manager - Microbiology and Prep	Centralized Prep, Waterloo, Ontario
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Organics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Inorganics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Metals, Waterloo, Ontario
Hedy Lai	Team Leader - Inorganics	Sask Soils, Saskatoon, Saskatchewan
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Organics, Waterloo, Ontario

## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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. Guidelines 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.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	No Unit
%	percent
mg/kg	milligrams per kilogram
mg/L	milligrams per litre
pH units	pH units

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .



## Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)		Client sample ID	22-18 0-1							
		Sampling date/time	17-Oct-2022 00:00							
Analyte	Method	LOR	Unit	WT2219243-001	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Physical Tests</b>										
moisture	E144	0.25	%	7.53	--	--	--	--	--	--
<b>Metals</b>										
antimony	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	7.5 mg/kg	7.5 mg/kg	--	--
arsenic	E440	0.10	mg/kg	0.98	18 mg/kg	18 mg/kg	18 mg/kg	18 mg/kg	--	--
barium	E440	0.50	mg/kg	61.7	670 mg/kg	670 mg/kg	390 mg/kg	390 mg/kg	--	--
beryllium	E440	0.10	mg/kg	0.15	8 mg/kg	10 mg/kg	4 mg/kg	5 mg/kg	--	--
boron, hot water soluble	E487	0.10	mg/kg	0.16	2 mg/kg	2 mg/kg	1.5 mg/kg	1.5 mg/kg	--	--
boron	E440	5.0	mg/kg	7.1	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--
cadmium	E440	0.020	mg/kg	<0.020	1.9 mg/kg	1.9 mg/kg	1.2 mg/kg	1.2 mg/kg	--	--
chromium	E440	0.50	mg/kg	9.39	160 mg/kg	160 mg/kg	160 mg/kg	160 mg/kg	--	--
cobalt	E440	0.10	mg/kg	1.93	80 mg/kg	100 mg/kg	22 mg/kg	22 mg/kg	--	--
copper	E440	0.50	mg/kg	3.86	230 mg/kg	300 mg/kg	140 mg/kg	180 mg/kg	--	--
lead	E440	0.50	mg/kg	5.79	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--
mercury	E510	0.0050	mg/kg	0.0102	3.9 mg/kg	20 mg/kg	0.27 mg/kg	1.8 mg/kg	--	--
molybdenum	E440	0.10	mg/kg	0.60	40 mg/kg	40 mg/kg	6.9 mg/kg	6.9 mg/kg	--	--
nickel	E440	0.50	mg/kg	6.30	270 mg/kg	340 mg/kg	100 mg/kg	130 mg/kg	--	--
selenium	E440	0.20	mg/kg	<0.20	5.5 mg/kg	5.5 mg/kg	2.4 mg/kg	2.4 mg/kg	--	--
silver	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	20 mg/kg	25 mg/kg	--	--
thallium	E440	0.050	mg/kg	0.066	3.3 mg/kg	3.3 mg/kg	1 mg/kg	1 mg/kg	--	--
uranium	E440	0.050	mg/kg	0.386	33 mg/kg	33 mg/kg	23 mg/kg	23 mg/kg	--	--
vanadium	E440	0.20	mg/kg	7.33	86 mg/kg	86 mg/kg	86 mg/kg	86 mg/kg	--	--
zinc	E440	2.0	mg/kg	9.2	340 mg/kg	340 mg/kg	340 mg/kg	340 mg/kg	--	--
<b>Speciated Metals</b>										
chromium, hexavalent [Cr VI]	E532	0.10	mg/kg	<0.50	8 mg/kg	10 mg/kg	8 mg/kg	10 mg/kg	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--
benzene	E611A	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2219243-001 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611A	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	0.100	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611A	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2219243-001 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
xylene, total	E611A	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611A	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	13.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	14	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	132	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	149	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	13.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2-naphthalene	EC600	25	mg/kg	<25	--	--	--	--	--	--
F3-PAH	EC600	50	mg/kg	132	--	--	--	--	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	308	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L	-	-	NO	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	84.6	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	95.9	--	--	--	--	--	--
bromofluorobenzene, 4-	E611A	0.10	%	107	--	--	--	--	--	--
difluorobenzene, 1,4-	E611A	0.10	%	111	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	7.9 mg/kg	58 mg/kg	--	--
acenaphthylene	E641A	0.050	mg/kg	<0.050	0.15 mg/kg	0.17 mg/kg	0.15 mg/kg	0.17 mg/kg	--	--
anthracene	E641A	0.050	mg/kg	<0.050	0.67 mg/kg	0.74 mg/kg	0.67 mg/kg	0.74 mg/kg	--	--
benz(a)anthracene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.5 mg/kg	0.63 mg/kg	--	--
benzo(a)pyrene	E641A	0.050	mg/kg	<0.050	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	--	--
benzo(b+j)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
benzo(g,h,i)perylene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	6.6 mg/kg	7.8 mg/kg	--	--
benzo(k)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
chrysene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	7 mg/kg	7.8 mg/kg	--	--
dibenz(a,h)anthracene	E641A	0.050	mg/kg	<0.050	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	--	--
fluoranthene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	0.69 mg/kg	0.69 mg/kg	--	--
fluorene	E641A	0.050	mg/kg	<0.050	62 mg/kg	69 mg/kg	62 mg/kg	69 mg/kg	--	--
indeno(1,2,3-c,d)pyrene	E641A	0.050	mg/kg	<0.050	0.76 mg/kg	0.95 mg/kg	0.38 mg/kg	0.48 mg/kg	--	--
methylnaphthalene, 1+2-	E641A	0.050	mg/kg	<0.050	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 1-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 2-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
naphthalene	E641A	0.010	mg/kg	<0.010	9.6 mg/kg	28 mg/kg	0.6 mg/kg	0.75 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2219243-001 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
phenanthrene	E641A	0.050	mg/kg	<0.050	12 mg/kg	16 mg/kg	6.2 mg/kg	7.8 mg/kg	--	--
pyrene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	78 mg/kg	78 mg/kg	--	--
acridine-d9	E641A	0.1	%	82.4	--	--	--	--	--	--
chrysene-d12	E641A	0.1	%	108	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	81.9	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	84.7	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- |          |  |
|----------|--|
| ON153/04 | Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011) |
| T7-ICC-C | 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)                 |
| T7-ICC-F | 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)                   |
| T7-RPI-C | 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)                 |
| T7-RPI-F | 153 T7-Soil-Res/Park/Inst. Property Use (Fine)                   |



## Analytical Results

				Client sample ID						
				22-19 2-3.5						
				17-Oct-2022						
				00:00						
				WT2219243-003	ON153/04	ON153/04	ON153/04	ON153/04		
Analyte	Method	LOR	Unit		T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F		
<b>Physical Tests</b>										
moisture	E144	0.25	%	16.4	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
benzene	E611A	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
ethylbenzene	E611A	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
toluene	E611A	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
xylene, m+p-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611A	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611A	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L	-	-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	79.5	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	95.0	--	--	--	--	--	--
bromofluorobenzene, 4-	E611A	0.10	%	102	--	--	--	--	--	--
difluorobenzene, 1,4-	E611A	0.10	%	108	--	--	--	--	--	--
<b>Polychlorinated Biphenyls</b>										
Aroclor 1016	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1221	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1232	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1242	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1248	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1254	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1260	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1262	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--





Analyte	Method	LOR	Unit	WT2219243-003 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polychlorinated Biphenyls - Continued</b>										
Aroclor 1268	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
polychlorinated biphenyls [PCBs], total	E687	0.030	mg/kg	<0.030	<b>1.1 mg/kg</b>	<b>1.1 mg/kg</b>	<b>0.35 mg/kg</b>	<b>0.35 mg/kg</b>	--	--
decachlorobiphenyl	E687	0.1	%	86.1	--	--	--	--	--	--
tetrachloro-m-xylene	E687	0.1	%	83.1	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)		Client sample ID		22-20 0-1							
		Sampling date/time		17-Oct-2022 00:00							
Analyte	Method	LOR	Unit	WT2219243-004	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F			
<b>Physical Tests</b>											
moisture	E144	0.25	%	16.4	--	--	--	--	--	--	--
<b>Metals</b>											
antimony	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	7.5 mg/kg	7.5 mg/kg	--	--	--
arsenic	E440	0.10	mg/kg	1.84	18 mg/kg	18 mg/kg	18 mg/kg	18 mg/kg	--	--	--
barium	E440	0.50	mg/kg	231	670 mg/kg	670 mg/kg	390 mg/kg	390 mg/kg	--	--	--
beryllium	E440	0.10	mg/kg	0.65	8 mg/kg	10 mg/kg	4 mg/kg	5 mg/kg	--	--	--
boron, hot water soluble	E487	0.10	mg/kg	<0.10	2 mg/kg	2 mg/kg	1.5 mg/kg	1.5 mg/kg	--	--	--
boron	E440	5.0	mg/kg	6.9	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--	--
cadmium	E440	0.020	mg/kg	0.073	1.9 mg/kg	1.9 mg/kg	1.2 mg/kg	1.2 mg/kg	--	--	--
chromium	E440	0.50	mg/kg	47.8	160 mg/kg	160 mg/kg	160 mg/kg	160 mg/kg	--	--	--
cobalt	E440	0.10	mg/kg	8.54	80 mg/kg	100 mg/kg	22 mg/kg	22 mg/kg	--	--	--
copper	E440	0.50	mg/kg	19.6	230 mg/kg	300 mg/kg	140 mg/kg	180 mg/kg	--	--	--
lead	E440	0.50	mg/kg	6.80	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--	--
mercury	E510	0.0050	mg/kg	0.0256	3.9 mg/kg	20 mg/kg	0.27 mg/kg	1.8 mg/kg	--	--	--
molybdenum	E440	0.10	mg/kg	0.33	40 mg/kg	40 mg/kg	6.9 mg/kg	6.9 mg/kg	--	--	--
nickel	E440	0.50	mg/kg	23.5	270 mg/kg	340 mg/kg	100 mg/kg	130 mg/kg	--	--	--
selenium	E440	0.20	mg/kg	<0.20	5.5 mg/kg	5.5 mg/kg	2.4 mg/kg	2.4 mg/kg	--	--	--
silver	E440	0.10	mg/kg	0.11	40 mg/kg	50 mg/kg	20 mg/kg	25 mg/kg	--	--	--
thallium	E440	0.050	mg/kg	0.264	3.3 mg/kg	3.3 mg/kg	1 mg/kg	1 mg/kg	--	--	--
uranium	E440	0.050	mg/kg	0.788	33 mg/kg	33 mg/kg	23 mg/kg	23 mg/kg	--	--	--
vanadium	E440	0.20	mg/kg	49.7	86 mg/kg	86 mg/kg	86 mg/kg	86 mg/kg	--	--	--
zinc	E440	2.0	mg/kg	62.6	340 mg/kg	340 mg/kg	340 mg/kg	340 mg/kg	--	--	--
<b>Speciated Metals</b>											
chromium, hexavalent [Cr VI]	E532	0.10	mg/kg	<0.50	8 mg/kg	10 mg/kg	8 mg/kg	10 mg/kg	--	--	--
<b>Volatile Organic Compounds</b>											
benzene	E611A	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--	--
ethylbenzene	E611A	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--	--
toluene	E611A	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--	--
xylene, m+p-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--	--
xylene, o-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--	--
xylenes, total	E611A	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--	--



Analyte	Method	LOR	Unit	WT2219243-004 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
BTEX, total	E611A	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	64	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	67	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2-naphthalene	EC600	25	mg/kg	<25	--	--	--	--	--	--
F3-PAH	EC600	50	mg/kg	64	--	--	--	--	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	131	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2-(F2-F4 surr)	E601.SG-L	1.0	%	84.6	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	73.4	--	--	--	--	--	--
bromofluorobenzene, 4-	E611A	0.10	%	103	--	--	--	--	--	--
difluorobenzene, 1,4-	E611A	0.10	%	110	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	7.9 mg/kg	58 mg/kg	--	--
acenaphthylene	E641A	0.050	mg/kg	<0.050	0.15 mg/kg	0.17 mg/kg	0.15 mg/kg	0.17 mg/kg	--	--
anthracene	E641A	0.050	mg/kg	0.050	0.67 mg/kg	0.74 mg/kg	0.67 mg/kg	0.74 mg/kg	--	--
benz(a)anthracene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.5 mg/kg	0.63 mg/kg	--	--
benzo(a)pyrene	E641A	0.050	mg/kg	<0.050	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	--	--
benzo(b+j)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
benzo(g,h,i)perylene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	6.6 mg/kg	7.8 mg/kg	--	--
benzo(k)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
chrysene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	7 mg/kg	7.8 mg/kg	--	--
dibenz(a,h)anthracene	E641A	0.050	mg/kg	<0.050	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	--	--
fluoranthene	E641A	0.050	mg/kg	0.062	9.6 mg/kg	9.6 mg/kg	0.69 mg/kg	0.69 mg/kg	--	--
fluorene	E641A	0.050	mg/kg	<0.050	62 mg/kg	69 mg/kg	62 mg/kg	69 mg/kg	--	--
indeno(1,2,3-c,d)pyrene	E641A	0.050	mg/kg	<0.050	0.76 mg/kg	0.95 mg/kg	0.38 mg/kg	0.48 mg/kg	--	--
methylnaphthalene, 1+2-	E641A	0.050	mg/kg	0.134	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 1-	E641A	0.030	mg/kg	0.050	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 2-	E641A	0.030	mg/kg	0.084	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
naphthalene	E641A	0.010	mg/kg	0.086	9.6 mg/kg	28 mg/kg	0.6 mg/kg	0.75 mg/kg	--	--
phenanthrene	E641A	0.050	mg/kg	0.126	12 mg/kg	16 mg/kg	6.2 mg/kg	7.8 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2219243-004 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
pyrene	E641A	0.050	mg/kg	0.092	96 mg/kg	96 mg/kg	78 mg/kg	78 mg/kg	--	--
acridine-d9	E641A	0.1	%	94.8	--	--	--	--	--	--
chrysene-d12	E641A	0.1	%	128	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	92.4	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	97.4	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T7-ICC-C	153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
T7-ICC-F	153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
T7-RPI-C	153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
T7-RPI-F	153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

				Client sample ID						
				22-21 0-0.5						
				18-Oct-2022						
				00:00						
				WT2219243-006	ON153/04	ON153/04	ON153/04	ON153/04		
Analyte	Method	LOR	Unit		T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F		
<b>Physical Tests</b>										
moisture	E144	0.25	%	7.14	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
benzene	E611A	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
ethylbenzene	E611A	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
toluene	E611A	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
xylene, m+p-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611A	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611A	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	123	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	285	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	408	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L		-	NO	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	77.0	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	84.6	--	--	--	--	--	--
bromofluorobenzene, 4-	E611A	0.10	%	111	--	--	--	--	--	--
difluorobenzene, 1,4-	E611A	0.10	%	118	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

**No Breaches Found**



**Key:**

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T7-ICC-C	153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
T7-ICC-F	153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
T7-RPI-C	153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
T7-RPI-F	153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04	ON153/04	ON153/04		
				Sampling date/time	T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F		
Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)				22-22 0-1.25						
				18-Oct-2022 00:00						
				WT2219243-008						
<b>Physical Tests</b>										
moisture	E144	0.25	%	9.26	--	--	--	--	--	--
<b>Metals</b>										
antimony	E440	0.10	mg/kg	0.39	40 mg/kg	50 mg/kg	7.5 mg/kg	7.5 mg/kg	--	--
arsenic	E440	0.10	mg/kg	1.35	18 mg/kg	18 mg/kg	18 mg/kg	18 mg/kg	--	--
barium	E440	0.50	mg/kg	66.1	670 mg/kg	670 mg/kg	390 mg/kg	390 mg/kg	--	--
beryllium	E440	0.10	mg/kg	0.19	8 mg/kg	10 mg/kg	4 mg/kg	5 mg/kg	--	--
boron, hot water soluble	E487	0.10	mg/kg	0.18	2 mg/kg	2 mg/kg	1.5 mg/kg	1.5 mg/kg	--	--
boron	E440	5.0	mg/kg	5.6	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--
cadmium	E440	0.020	mg/kg	0.081	1.9 mg/kg	1.9 mg/kg	1.2 mg/kg	1.2 mg/kg	--	--
chromium	E440	0.50	mg/kg	15.0	160 mg/kg	160 mg/kg	160 mg/kg	160 mg/kg	--	--
cobalt	E440	0.10	mg/kg	3.17	80 mg/kg	100 mg/kg	22 mg/kg	22 mg/kg	--	--
copper	E440	0.50	mg/kg	10.5	230 mg/kg	300 mg/kg	140 mg/kg	180 mg/kg	--	--
lead	E440	0.50	mg/kg	11.0	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--
mercury	E510	0.0050	mg/kg	0.0139	3.9 mg/kg	20 mg/kg	0.27 mg/kg	1.8 mg/kg	--	--
molybdenum	E440	0.10	mg/kg	0.56	40 mg/kg	40 mg/kg	6.9 mg/kg	6.9 mg/kg	--	--
nickel	E440	0.50	mg/kg	7.10	270 mg/kg	340 mg/kg	100 mg/kg	130 mg/kg	--	--
selenium	E440	0.20	mg/kg	<0.20	5.5 mg/kg	5.5 mg/kg	2.4 mg/kg	2.4 mg/kg	--	--
silver	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	20 mg/kg	25 mg/kg	--	--
thallium	E440	0.050	mg/kg	0.095	3.3 mg/kg	3.3 mg/kg	1 mg/kg	1 mg/kg	--	--
uranium	E440	0.050	mg/kg	0.500	33 mg/kg	33 mg/kg	23 mg/kg	23 mg/kg	--	--
vanadium	E440	0.20	mg/kg	18.0	86 mg/kg	86 mg/kg	86 mg/kg	86 mg/kg	--	--
zinc	E440	2.0	mg/kg	39.0	340 mg/kg	340 mg/kg	340 mg/kg	340 mg/kg	--	--
<b>Speciated Metals</b>										
chromium, hexavalent [Cr VI]	E532	0.10	mg/kg	<0.50	8 mg/kg	10 mg/kg	8 mg/kg	10 mg/kg	--	--
<b>Volatile Organic Compounds</b>										
benzene	E611A	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
ethylbenzene	E611A	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
toluene	E611A	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
xylene, m+p-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611A	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2219243-008 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
BTEX, total	E611A	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	63	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	69	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2-naphthalene	EC600	25	mg/kg	<25	--	--	--	--	--	--
F3-PAH	EC600	50	mg/kg	63	--	--	--	--	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	132	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2-(F2-F4 surr)	E601.SG-L	1.0	%	85.6	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	86.6	--	--	--	--	--	--
bromofluorobenzene, 4-	E611A	0.10	%	108	--	--	--	--	--	--
difluorobenzene, 1,4-	E611A	0.10	%	116	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	7.9 mg/kg	58 mg/kg	--	--
acenaphthylene	E641A	0.050	mg/kg	<0.050	0.15 mg/kg	0.17 mg/kg	0.15 mg/kg	0.17 mg/kg	--	--
anthracene	E641A	0.050	mg/kg	<0.050	0.67 mg/kg	0.74 mg/kg	0.67 mg/kg	0.74 mg/kg	--	--
benz(a)anthracene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.5 mg/kg	0.63 mg/kg	--	--
benzo(a)pyrene	E641A	0.050	mg/kg	<0.050	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	--	--
benzo(b+j)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
benzo(g,h,i)perylene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	6.6 mg/kg	7.8 mg/kg	--	--
benzo(k)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
chrysene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	7 mg/kg	7.8 mg/kg	--	--
dibenz(a,h)anthracene	E641A	0.050	mg/kg	<0.050	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	--	--
fluoranthene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	0.69 mg/kg	0.69 mg/kg	--	--
fluorene	E641A	0.050	mg/kg	<0.050	62 mg/kg	69 mg/kg	62 mg/kg	69 mg/kg	--	--
indeno(1,2,3-c,d)pyrene	E641A	0.050	mg/kg	<0.050	0.76 mg/kg	0.95 mg/kg	0.38 mg/kg	0.48 mg/kg	--	--
methylnaphthalene, 1+2-	E641A	0.050	mg/kg	<0.050	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 1-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 2-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
naphthalene	E641A	0.010	mg/kg	<0.010	9.6 mg/kg	28 mg/kg	0.6 mg/kg	0.75 mg/kg	--	--
phenanthrene	E641A	0.050	mg/kg	<0.050	12 mg/kg	16 mg/kg	6.2 mg/kg	7.8 mg/kg	--	--





Analyte	Method	LOR	Unit	WT2219243-008 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
pyrene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	78 mg/kg	78 mg/kg	--	--
acridine-d9	E641A	0.1	%	92.3	--	--	--	--	--	--
chrysene-d12	E641A	0.1	%	120	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	88.1	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	93.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04	ON153/04	ON153/04		
				Sampling date/time	T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F		
Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)				22-23 0-1 19-Oct-2022 00:00	WT2219243-010					
<b>Physical Tests</b>										
moisture	E144	0.25	%	19.1	--	--	--	--	--	--
<b>Metals</b>										
antimony	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	7.5 mg/kg	7.5 mg/kg	--	--
arsenic	E440	0.10	mg/kg	2.45	18 mg/kg	18 mg/kg	18 mg/kg	18 mg/kg	--	--
barium	E440	0.50	mg/kg	175	670 mg/kg	670 mg/kg	390 mg/kg	390 mg/kg	--	--
beryllium	E440	0.10	mg/kg	0.62	8 mg/kg	10 mg/kg	4 mg/kg	5 mg/kg	--	--
boron, hot water soluble	E487	0.10	mg/kg	0.26	2 mg/kg	2 mg/kg	1.5 mg/kg	1.5 mg/kg	--	--
boron	E440	5.0	mg/kg	5.6	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--
cadmium	E440	0.020	mg/kg	0.175	1.9 mg/kg	1.9 mg/kg	1.2 mg/kg	1.2 mg/kg	--	--
chromium	E440	0.50	mg/kg	40.0	160 mg/kg	160 mg/kg	160 mg/kg	160 mg/kg	--	--
cobalt	E440	0.10	mg/kg	9.29	80 mg/kg	100 mg/kg	22 mg/kg	22 mg/kg	--	--
copper	E440	0.50	mg/kg	16.6	230 mg/kg	300 mg/kg	140 mg/kg	180 mg/kg	--	--
lead	E440	0.50	mg/kg	10.6	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--
mercury	E510	0.0050	mg/kg	0.0315	3.9 mg/kg	20 mg/kg	0.27 mg/kg	1.8 mg/kg	--	--
molybdenum	E440	0.10	mg/kg	0.62	40 mg/kg	40 mg/kg	6.9 mg/kg	6.9 mg/kg	--	--
nickel	E440	0.50	mg/kg	20.7	270 mg/kg	340 mg/kg	100 mg/kg	130 mg/kg	--	--
selenium	E440	0.20	mg/kg	0.27	5.5 mg/kg	5.5 mg/kg	2.4 mg/kg	2.4 mg/kg	--	--
silver	E440	0.10	mg/kg	0.10	40 mg/kg	50 mg/kg	20 mg/kg	25 mg/kg	--	--
thallium	E440	0.050	mg/kg	0.206	3.3 mg/kg	3.3 mg/kg	1 mg/kg	1 mg/kg	--	--
uranium	E440	0.050	mg/kg	0.874	33 mg/kg	33 mg/kg	23 mg/kg	23 mg/kg	--	--
vanadium	E440	0.20	mg/kg	52.4	86 mg/kg	86 mg/kg	86 mg/kg	86 mg/kg	--	--
zinc	E440	2.0	mg/kg	77.1	340 mg/kg	340 mg/kg	340 mg/kg	340 mg/kg	--	--
<b>Speciated Metals</b>										
chromium, hexavalent [Cr VI]	E532	0.10	mg/kg	<0.50	8 mg/kg	10 mg/kg	8 mg/kg	10 mg/kg	--	--
<b>Volatile Organic Compounds</b>										
benzene	E611A	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
ethylbenzene	E611A	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
toluene	E611A	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
xylene, m+p-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611A	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2219243-010 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
BTEX, total	E611A	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2-naphthalene	EC600	25	mg/kg	<25	--	--	--	--	--	--
F3-PAH	EC600	50	mg/kg	<50	--	--	--	--	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2-(F2-F4 surr)	E601.SG-L	1.0	%	80.3	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	84.0	--	--	--	--	--	--
bromofluorobenzene, 4-	E611A	0.10	%	101	--	--	--	--	--	--
difluorobenzene, 1,4-	E611A	0.10	%	108	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	7.9 mg/kg	58 mg/kg	--	--
acenaphthylene	E641A	0.050	mg/kg	<0.050	0.15 mg/kg	0.17 mg/kg	0.15 mg/kg	0.17 mg/kg	--	--
anthracene	E641A	0.050	mg/kg	<0.050	0.67 mg/kg	0.74 mg/kg	0.67 mg/kg	0.74 mg/kg	--	--
benz(a)anthracene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.5 mg/kg	0.63 mg/kg	--	--
benzo(a)pyrene	E641A	0.050	mg/kg	<0.050	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	--	--
benzo(b+j)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
benzo(g,h,i)perylene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	6.6 mg/kg	7.8 mg/kg	--	--
benzo(k)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
chrysene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	7 mg/kg	7.8 mg/kg	--	--
dibenz(a,h)anthracene	E641A	0.050	mg/kg	<0.050	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	--	--
fluoranthene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	0.69 mg/kg	0.69 mg/kg	--	--
fluorene	E641A	0.050	mg/kg	<0.050	62 mg/kg	69 mg/kg	62 mg/kg	69 mg/kg	--	--
indeno(1,2,3-c,d)pyrene	E641A	0.050	mg/kg	<0.050	0.76 mg/kg	0.95 mg/kg	0.38 mg/kg	0.48 mg/kg	--	--
methylnaphthalene, 1+2-	E641A	0.050	mg/kg	<0.050	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 1-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 2-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
naphthalene	E641A	0.010	mg/kg	<0.010	9.6 mg/kg	28 mg/kg	0.6 mg/kg	0.75 mg/kg	--	--
phenanthrene	E641A	0.050	mg/kg	<0.050	12 mg/kg	16 mg/kg	6.2 mg/kg	7.8 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2219243-010 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
pyrene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	78 mg/kg	78 mg/kg	--	--
acridine-d9	E641A	0.1	%	88.8	--	--	--	--	--	--
chrysene-d12	E641A	0.1	%	117	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	84.2	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	89.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)		Client sample ID		22-24 0-1.25		Sampling date/time		19-Oct-2022 00:00		WT2219243-012		ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
Analyte	Method	LOR	Unit														
<b>Physical Tests</b>																	
moisture	E144	0.25	%	24.6								--	--	--	--	--	--
<b>Metals</b>																	
antimony	E440	0.10	mg/kg	<0.10		40 mg/kg		50 mg/kg		7.5 mg/kg		7.5 mg/kg		--	--	--	--
arsenic	E440	0.10	mg/kg	1.98		18 mg/kg		18 mg/kg		18 mg/kg		18 mg/kg		--	--	--	--
barium	E440	0.50	mg/kg	328		670 mg/kg		670 mg/kg		390 mg/kg		390 mg/kg		--	--	--	--
beryllium	E440	0.10	mg/kg	0.85		8 mg/kg		10 mg/kg		4 mg/kg		5 mg/kg		--	--	--	--
boron, hot water soluble	E487	0.10	mg/kg	0.32		2 mg/kg		2 mg/kg		1.5 mg/kg		1.5 mg/kg		--	--	--	--
boron	E440	5.0	mg/kg	6.1		120 mg/kg		120 mg/kg		120 mg/kg		120 mg/kg		--	--	--	--
cadmium	E440	0.020	mg/kg	0.140		1.9 mg/kg		1.9 mg/kg		1.2 mg/kg		1.2 mg/kg		--	--	--	--
chromium	E440	0.50	mg/kg	62.3		160 mg/kg		160 mg/kg		160 mg/kg		160 mg/kg		--	--	--	--
cobalt	E440	0.10	mg/kg	11.4		80 mg/kg		100 mg/kg		22 mg/kg		22 mg/kg		--	--	--	--
copper	E440	0.50	mg/kg	20.5		230 mg/kg		300 mg/kg		140 mg/kg		180 mg/kg		--	--	--	--
lead	E440	0.50	mg/kg	9.66		120 mg/kg		120 mg/kg		120 mg/kg		120 mg/kg		--	--	--	--
mercury	E510	0.0050	mg/kg	0.0308		3.9 mg/kg		20 mg/kg		0.27 mg/kg		1.8 mg/kg		--	--	--	--
molybdenum	E440	0.10	mg/kg	0.36		40 mg/kg		40 mg/kg		6.9 mg/kg		6.9 mg/kg		--	--	--	--
nickel	E440	0.50	mg/kg	31.3		270 mg/kg		340 mg/kg		100 mg/kg		130 mg/kg		--	--	--	--
selenium	E440	0.20	mg/kg	0.24		5.5 mg/kg		5.5 mg/kg		2.4 mg/kg		2.4 mg/kg		--	--	--	--
silver	E440	0.10	mg/kg	<0.10		40 mg/kg		50 mg/kg		20 mg/kg		25 mg/kg		--	--	--	--
thallium	E440	0.050	mg/kg	0.289		3.3 mg/kg		3.3 mg/kg		1 mg/kg		1 mg/kg		--	--	--	--
uranium	E440	0.050	mg/kg	0.992		33 mg/kg		33 mg/kg		23 mg/kg		23 mg/kg		--	--	--	--
vanadium	E440	0.20	mg/kg	73.5		86 mg/kg		86 mg/kg		86 mg/kg		86 mg/kg		--	--	--	--
zinc	E440	2.0	mg/kg	94.3		340 mg/kg		340 mg/kg		340 mg/kg		340 mg/kg		--	--	--	--
<b>Speciated Metals</b>																	
chromium, hexavalent [Cr VI]	E532	0.10	mg/kg	<0.50		8 mg/kg		10 mg/kg		8 mg/kg		10 mg/kg		--	--	--	--
<b>Volatile Organic Compounds</b>																	
Acetone	E611D	0.50	mg/kg	<0.50		16 mg/kg		28 mg/kg		16 mg/kg		28 mg/kg		--	--	--	--
benzene	E611A	0.0050	mg/kg	<0.0050		0.32 mg/kg		0.4 mg/kg		0.21 mg/kg		0.17 mg/kg		--	--	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050		18 mg/kg		18 mg/kg		13 mg/kg		13 mg/kg		--	--	--	--
bromoform	E611D	0.050	mg/kg	<0.050		0.61 mg/kg		1.7 mg/kg		0.27 mg/kg		0.26 mg/kg		--	--	--	--
bromomethane	E611D	0.050	mg/kg	<0.050		0.05 mg/kg		0.05 mg/kg		0.05 mg/kg		0.05 mg/kg		--	--	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050		0.21 mg/kg		1.5 mg/kg		0.05 mg/kg		0.12 mg/kg		--	--	--	--



Analyte	Method	LOR	Unit	WT2219243-012 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611A	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611A	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2219243-012 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
xylene, total	E611A	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611A	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2-naphthalene	EC600	25	mg/kg	<25	--	--	--	--	--	--
F3-PAH	EC600	50	mg/kg	<50	--	--	--	--	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L	-	-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	83.6	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	79.8	--	--	--	--	--	--
bromofluorobenzene, 4-	E611A	0.10	%	95.7	--	--	--	--	--	--
difluorobenzene, 1,4-	E611A	0.10	%	101	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	7.9 mg/kg	58 mg/kg	--	--
acenaphthylene	E641A	0.050	mg/kg	<0.050	0.15 mg/kg	0.17 mg/kg	0.15 mg/kg	0.17 mg/kg	--	--
anthracene	E641A	0.050	mg/kg	<0.050	0.67 mg/kg	0.74 mg/kg	0.67 mg/kg	0.74 mg/kg	--	--
benz(a)anthracene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.5 mg/kg	0.63 mg/kg	--	--
benzo(a)pyrene	E641A	0.050	mg/kg	<0.050	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	--	--
benzo(b+j)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
benzo(g,h,i)perylene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	6.6 mg/kg	7.8 mg/kg	--	--
benzo(k)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
chrysene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	7 mg/kg	7.8 mg/kg	--	--
dibenz(a,h)anthracene	E641A	0.050	mg/kg	<0.050	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	--	--
fluoranthene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	0.69 mg/kg	0.69 mg/kg	--	--
fluorene	E641A	0.050	mg/kg	<0.050	62 mg/kg	69 mg/kg	62 mg/kg	69 mg/kg	--	--
indeno(1,2,3-c,d)pyrene	E641A	0.050	mg/kg	<0.050	0.76 mg/kg	0.95 mg/kg	0.38 mg/kg	0.48 mg/kg	--	--
methylnaphthalene, 1+2-	E641A	0.050	mg/kg	<0.050	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 1-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 2-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
naphthalene	E641A	0.010	mg/kg	<0.010	9.6 mg/kg	28 mg/kg	0.6 mg/kg	0.75 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2219243-012 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
phenanthrene	E641A	0.050	mg/kg	<0.050	12 mg/kg	16 mg/kg	6.2 mg/kg	7.8 mg/kg	--	--
pyrene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	78 mg/kg	78 mg/kg	--	--
acridine-d9	E641A	0.1	%	92.0	--	--	--	--	--	--
chrysene-d12	E641A	0.1	%	129	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	91.8	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	94.8	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- |          |  |
|----------|--|
| ON153/04 | Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011) |
| T7-ICC-C | 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)                 |
| T7-ICC-F | 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)                   |
| T7-RPI-C | 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)                 |
| T7-RPI-F | 153 T7-Soil-Res/Park/Inst. Property Use (Fine)                   |





## Analytical Results

				Client sample ID						
				22-25 3-4.5						
				19-Oct-2022						
				00:00						
Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)	Method	LOR	Unit	WT2219243-014	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Physical Tests</b>										
moisture	E144	0.25	%	24.1	--	--	--	--	--	--
<b>Particle Size</b>										
passing (9.5 mm)	E181	1.0	%	100	--	--	--	--	--	--
passing (4.75 mm)	E181	1.0	%	100	--	--	--	--	--	--
passing (19 mm)	E181	1.0	%	100	--	--	--	--	--	--
passing (25.4 mm)	E181	1.0	%	100	--	--	--	--	--	--
passing (38.1 mm)	E181	1.0	%	100	--	--	--	--	--	--
passing (50.8 mm)	E181	1.0	%	100	--	--	--	--	--	--
passing (76.2 mm)	E181	1.0	%	100	--	--	--	--	--	--
passing (1.0 mm)	E182	1.0	%	98.3	--	--	--	--	--	--
passing (0.841 mm)	E182	1.0	%	98.0	--	--	--	--	--	--
passing (0.50 mm)	E182	1.0	%	95.4	--	--	--	--	--	--
passing (0.420 mm)	E182	1.0	%	94.7	--	--	--	--	--	--
passing (0.250 mm)	E182	1.0	%	90.7	--	--	--	--	--	--
passing (0.149 mm)	E182	1.0	%	86.2	--	--	--	--	--	--
passing (0.125 mm)	E182	1.0	%	85.3	--	--	--	--	--	--
passing (0.075 mm)	E182	1.0	%	83.3	--	--	--	--	--	--
passing (0.063 mm)	E182	1.0	%	74.9	--	--	--	--	--	--
passing (0.05 mm)	E182	1.0	%	65.8	--	--	--	--	--	--
passing (0.0312 mm)	E183	1.0	%	56.8	--	--	--	--	--	--
passing (0.020 mm)	E183	1.0	%	51.3	--	--	--	--	--	--
passing (0.005 mm)	E183	1.0	%	38.0	--	--	--	--	--	--
passing (0.004 mm)	E183	1.0	%	36.6	--	--	--	--	--	--
passing (0.002 mm)	E183	1.0	%	32.5	--	--	--	--	--	--
grain size curve	E185	-	-	See Attached	--	--	--	--	--	--
passing (2.0 mm)	E181	1.0	%	100	--	--	--	--	--	--
<b>Metals</b>										
calcium, soluble ion content	E484	0.50	mg/L	17.6	--	--	--	--	--	--
magnesium, soluble ion content	E484	0.50	mg/L	3.05	--	--	--	--	--	--
sodium, soluble ion content	E484	0.50	mg/L	53.1	--	--	--	--	--	--
sodium adsorption ratio [SAR]	E484	0.10	-	3.07	12 -	12 -	5 -	5 -	--	--



Analyte	Method	LOR	Unit	WT2219243-014 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds</b>										
benzene	E611A	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
ethylbenzene	E611A	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
toluene	E611A	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
xylene, m+p-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611A	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611A	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	72.7	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	87.0	--	--	--	--	--	--
bromofluorobenzene, 4-	E611A	0.10	%	93.1	--	--	--	--	--	--
difluorobenzene, 1,4-	E611A	0.10	%	102	--	--	--	--	--	--
<b>Polychlorinated Biphenyls</b>										
Aroclor 1016	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1221	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1232	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1242	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1248	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1254	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1260	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1262	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1268	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
polychlorinated biphenyls [PCBs], total	E687	0.030	mg/kg	<0.030	1.1 mg/kg	1.1 mg/kg	0.35 mg/kg	0.35 mg/kg	--	--
decachlorobiphenyl	E687	0.1	%	86.9	--	--	--	--	--	--
tetrachloro-m-xylene	E687	0.1	%	84.2	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.



## No Breaches Found

**Key:**

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T7-ICC-C	153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
T7-ICC-F	153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
T7-RPI-C	153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
T7-RPI-F	153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04	ON153/04	ON153/04		
				22-25 7-8.5	T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F		
Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)				Sampling date/time						
				19-Oct-2022 00:00						
				WT2219243-015						
<b>Physical Tests</b>										
moisture	E144	0.25	%	23.4	--	--	--	--	--	--
pH (1:2 soil:CaCl2-aq)	E108A	0.10	pH units	6.92	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
benzene	E611A	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
ethylbenzene	E611A	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
toluene	E611A	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
xylene, m+p-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611A	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611A	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	75.2	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	84.2	--	--	--	--	--	--
bromofluorobenzene, 4-	E611A	0.10	%	92.0	--	--	--	--	--	--
difluorobenzene, 1,4-	E611A	0.10	%	99.7	--	--	--	--	--	--
<b>Polychlorinated Biphenyls</b>										
Aroclor 1016	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1221	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1232	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1242	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1248	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1254	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1260	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2219243-015 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polychlorinated Biphenyls - Continued</b>										
Aroclor 1262	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1268	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
polychlorinated biphenyls [PCBs], total	E687	0.030	mg/kg	<0.030	<b>1.1 mg/kg</b>	<b>1.1 mg/kg</b>	<b>0.35 mg/kg</b>	<b>0.35 mg/kg</b>	--	--
decachlorobiphenyl	E687	0.1	%	81.7	--	--	--	--	--	--
tetrachloro-m-xylene	E687	0.1	%	79.6	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- |          |  |
|----------|--|
| ON153/04 | Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011) |
| T7-ICC-C | 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)                 |
| T7-ICC-F | 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)                   |
| T7-RPI-C | 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)                 |
| T7-RPI-F | 153 T7-Soil-Res/Park/Inst. Property Use (Fine)                   |



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04	ON153/04	ON153/04			
				Sampling date/time	T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F			
Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)				22-26 0-1 20-Oct-2022 00:00	WT2219243-016						
<b>Physical Tests</b>											
moisture	E144	0.25	%	18.6	--	--	--	--	--	--	--
<b>Metals</b>											
antimony	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	7.5 mg/kg	7.5 mg/kg	--	--	--
arsenic	E440	0.10	mg/kg	2.16	18 mg/kg	18 mg/kg	18 mg/kg	18 mg/kg	--	--	--
barium	E440	0.50	mg/kg	170	670 mg/kg	670 mg/kg	390 mg/kg	390 mg/kg	--	--	--
beryllium	E440	0.10	mg/kg	0.63	8 mg/kg	10 mg/kg	4 mg/kg	5 mg/kg	--	--	--
boron, hot water soluble	E487	0.10	mg/kg	0.14	2 mg/kg	2 mg/kg	1.5 mg/kg	1.5 mg/kg	--	--	--
boron	E440	5.0	mg/kg	<5.0	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--	--
cadmium	E440	0.020	mg/kg	0.071	1.9 mg/kg	1.9 mg/kg	1.2 mg/kg	1.2 mg/kg	--	--	--
chromium	E440	0.50	mg/kg	40.4	160 mg/kg	160 mg/kg	160 mg/kg	160 mg/kg	--	--	--
cobalt	E440	0.10	mg/kg	8.79	80 mg/kg	100 mg/kg	22 mg/kg	22 mg/kg	--	--	--
copper	E440	0.50	mg/kg	20.4	230 mg/kg	300 mg/kg	140 mg/kg	180 mg/kg	--	--	--
lead	E440	0.50	mg/kg	7.55	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--	--
mercury	E510	0.0050	mg/kg	0.0375	3.9 mg/kg	20 mg/kg	0.27 mg/kg	1.8 mg/kg	--	--	--
molybdenum	E440	0.10	mg/kg	0.41	40 mg/kg	40 mg/kg	6.9 mg/kg	6.9 mg/kg	--	--	--
nickel	E440	0.50	mg/kg	20.4	270 mg/kg	340 mg/kg	100 mg/kg	130 mg/kg	--	--	--
selenium	E440	0.20	mg/kg	0.23	5.5 mg/kg	5.5 mg/kg	2.4 mg/kg	2.4 mg/kg	--	--	--
silver	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	20 mg/kg	25 mg/kg	--	--	--
thallium	E440	0.050	mg/kg	0.156	3.3 mg/kg	3.3 mg/kg	1 mg/kg	1 mg/kg	--	--	--
uranium	E440	0.050	mg/kg	0.766	33 mg/kg	33 mg/kg	23 mg/kg	23 mg/kg	--	--	--
vanadium	E440	0.20	mg/kg	49.8	86 mg/kg	86 mg/kg	86 mg/kg	86 mg/kg	--	--	--
zinc	E440	2.0	mg/kg	50.3	340 mg/kg	340 mg/kg	340 mg/kg	340 mg/kg	--	--	--
<b>Speciated Metals</b>											
chromium, hexavalent [Cr VI]	E532	0.10	mg/kg	<0.50	8 mg/kg	10 mg/kg	8 mg/kg	10 mg/kg	--	--	--
<b>Volatile Organic Compounds</b>											
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--	--



Analyte	Method	LOR	Unit	WT2219243-016 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2219243-016 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
xylene, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	74.0	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	85.5	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	0.10	%	63.4	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	98.7	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)





## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04	ON153/04	ON153/04			
				Sampling date/time	T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F			
Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)				22-27 0-1 20-Oct-2022 00:00	WT2219243-017						
<b>Physical Tests</b>											
moisture	E144	0.25	%	16.3	--	--	--	--	--	--	--
<b>Metals</b>											
antimony	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	7.5 mg/kg	7.5 mg/kg	--	--	--
arsenic	E440	0.10	mg/kg	0.87	18 mg/kg	18 mg/kg	18 mg/kg	18 mg/kg	--	--	--
barium	E440	0.50	mg/kg	70.1	670 mg/kg	670 mg/kg	390 mg/kg	390 mg/kg	--	--	--
beryllium	E440	0.10	mg/kg	0.29	8 mg/kg	10 mg/kg	4 mg/kg	5 mg/kg	--	--	--
boron, hot water soluble	E487	0.10	mg/kg	0.14	2 mg/kg	2 mg/kg	1.5 mg/kg	1.5 mg/kg	--	--	--
boron	E440	5.0	mg/kg	<5.0	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--	--
cadmium	E440	0.020	mg/kg	0.071	1.9 mg/kg	1.9 mg/kg	1.2 mg/kg	1.2 mg/kg	--	--	--
chromium	E440	0.50	mg/kg	20.1	160 mg/kg	160 mg/kg	160 mg/kg	160 mg/kg	--	--	--
cobalt	E440	0.10	mg/kg	4.71	80 mg/kg	100 mg/kg	22 mg/kg	22 mg/kg	--	--	--
copper	E440	0.50	mg/kg	6.33	230 mg/kg	300 mg/kg	140 mg/kg	180 mg/kg	--	--	--
lead	E440	0.50	mg/kg	3.72	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--	--
mercury	E510	0.0050	mg/kg	0.0172	3.9 mg/kg	20 mg/kg	0.27 mg/kg	1.8 mg/kg	--	--	--
molybdenum	E440	0.10	mg/kg	0.25	40 mg/kg	40 mg/kg	6.9 mg/kg	6.9 mg/kg	--	--	--
nickel	E440	0.50	mg/kg	10.9	270 mg/kg	340 mg/kg	100 mg/kg	130 mg/kg	--	--	--
selenium	E440	0.20	mg/kg	<0.20	5.5 mg/kg	5.5 mg/kg	2.4 mg/kg	2.4 mg/kg	--	--	--
silver	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	20 mg/kg	25 mg/kg	--	--	--
thallium	E440	0.050	mg/kg	0.077	3.3 mg/kg	3.3 mg/kg	1 mg/kg	1 mg/kg	--	--	--
uranium	E440	0.050	mg/kg	0.448	33 mg/kg	33 mg/kg	23 mg/kg	23 mg/kg	--	--	--
vanadium	E440	0.20	mg/kg	25.4	86 mg/kg	86 mg/kg	86 mg/kg	86 mg/kg	--	--	--
zinc	E440	2.0	mg/kg	30.8	340 mg/kg	340 mg/kg	340 mg/kg	340 mg/kg	--	--	--
<b>Speciated Metals</b>											
chromium, hexavalent [Cr VI]	E532	0.10	mg/kg	<0.50	8 mg/kg	10 mg/kg	8 mg/kg	10 mg/kg	--	--	--
<b>Volatile Organic Compounds</b>											
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--	--



Analyte	Method	LOR	Unit	WT2219243-017 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2219243-017 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
xylene, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	79.6	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	75.2	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	0.10	%	61.8	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	99.6	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>WT2219243</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 20-1009747; 20-1009748</p> <p><b>Sampler</b> : Antonia Cass</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 17</p> <p><b>No. of samples analysed</b> : 11</p>	<p><b>Page</b> : 1 of 20</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 21-Oct-2022 09:00</p> <p><b>Issue Date</b> : 08-Nov-2022 18:25</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous:** Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number:** Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO:** Data Quality Objective.
- LOR:** Limit of Reporting (detection limit).
- RPD:** Relative Percent Difference.

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### ***Workorder Comments***

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Matrix Spike outliers occur.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

### ***Outliers : Analysis Holding Time Compliance (Breaches)***

- Analysis Holding Time Outliers exist - please see following pages for full details.

### ***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



**Outliers : Quality Control Samples**

*Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes*

Matrix: **Soil/Solid**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Laboratory Control Sample (LCS) Recoveries</b>								
Metals	QC-MRG2-7193510 02	----	silver	7440-22-4	E440	56.2 % RRQC	80.0-120%	Recovery less than lower control limit
Speciated Metals	QC-719248-002	----	chromium, hexavalent [Cr VI]	18540-29-9	E532	73.9 % LCS-ND	80.0-120%	Recovery less than lower control limit
Volatile Organic Compounds	QC-719029-002	----	vinyl chloride	75-01-4	E611D	57.2 % MES	60.0-140%	Recovery less than lower control limit

**Result Qualifiers**

Qualifier	Description
LCS-ND	Lab Control Sample recovery was slightly outside ALS DQO. Reported non-detect results for associated samples were unaffected.
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).
RRQC	Refer to report comments for information regarding this QC result.



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-21 0-0.5	E581.F1	18-Oct-2022	27-Oct-2022	14 days	10 days	✓	28-Oct-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-22 0-1.25	E581.F1	18-Oct-2022	27-Oct-2022	14 days	10 days	✓	28-Oct-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-18 0-1	E581.F1	17-Oct-2022	27-Oct-2022	14 days	11 days	✓	28-Oct-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-19 2-3.5	E581.F1	17-Oct-2022	27-Oct-2022	14 days	11 days	✓	28-Oct-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-20 0-1	E581.F1	17-Oct-2022	27-Oct-2022	14 days	11 days	✓	28-Oct-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-26 0-1	E581.F1	20-Oct-2022	27-Oct-2022	14 days	8 days	✓	28-Oct-2022	40 days	1 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-27 0-1	E581.F1	20-Oct-2022	27-Oct-2022	14 days	8 days	✓	28-Oct-2022	40 days	1 days	✓	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-23 0-1	E581.F1	19-Oct-2022	27-Oct-2022	14 days	9 days	✔	28-Oct-2022	40 days	0 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-24 0-1.25	E581.F1	19-Oct-2022	27-Oct-2022	14 days	9 days	✔	28-Oct-2022	40 days	0 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-25 3-4.5	E581.F1	19-Oct-2022	27-Oct-2022	14 days	9 days	✔	28-Oct-2022	40 days	0 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-25 7-8.5	E581.F1	19-Oct-2022	27-Oct-2022	14 days	9 days	✔	28-Oct-2022	40 days	0 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-21 0-0.5	E601.SG-L	18-Oct-2022	28-Oct-2022	14 days	10 days	✔	07-Nov-2022	40 days	10 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-22 0-1.25	E601.SG-L	18-Oct-2022	28-Oct-2022	14 days	10 days	✔	07-Nov-2022	40 days	10 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-18 0-1	E601.SG-L	17-Oct-2022	28-Oct-2022	14 days	11 days	✔	07-Nov-2022	40 days	10 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-19 2-3.5	E601.SG-L	17-Oct-2022	28-Oct-2022	14 days	11 days	✔	07-Nov-2022	40 days	10 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-20 0-1	E601.SG-L	17-Oct-2022	28-Oct-2022	14 days	11 days	✔	07-Nov-2022	40 days	10 days	✔	





Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-26 0-1	E601.SG-L	20-Oct-2022	28-Oct-2022	14 days	8 days	✔	07-Nov-2022	40 days	10 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-27 0-1	E601.SG-L	20-Oct-2022	28-Oct-2022	14 days	8 days	✔	07-Nov-2022	40 days	10 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-23 0-1	E601.SG-L	19-Oct-2022	28-Oct-2022	14 days	9 days	✔	07-Nov-2022	40 days	10 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-24 0-1.25	E601.SG-L	19-Oct-2022	28-Oct-2022	14 days	9 days	✔	07-Nov-2022	40 days	10 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-25 3-4.5	E601.SG-L	19-Oct-2022	28-Oct-2022	14 days	9 days	✔	07-Nov-2022	40 days	10 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-25 7-8.5	E601.SG-L	19-Oct-2022	28-Oct-2022	14 days	9 days	✔	07-Nov-2022	40 days	10 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-22 0-1.25	E487	18-Oct-2022	28-Oct-2022	180 days	10 days	✔	01-Nov-2022	180 days	4 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-18 0-1	E487	17-Oct-2022	28-Oct-2022	180 days	11 days	✔	01-Nov-2022	180 days	4 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-20 0-1	E487	17-Oct-2022	28-Oct-2022	180 days	11 days	✔	01-Nov-2022	180 days	4 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-26 0-1	E487	20-Oct-2022	28-Oct-2022	180 days	8 days	✔	01-Nov-2022	180 days	4 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-27 0-1	E487	20-Oct-2022	28-Oct-2022	180 days	8 days	✔	01-Nov-2022	180 days	4 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-23 0-1	E487	19-Oct-2022	28-Oct-2022	180 days	9 days	✔	01-Nov-2022	180 days	4 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-24 0-1.25	E487	19-Oct-2022	28-Oct-2022	180 days	9 days	✔	01-Nov-2022	180 days	4 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-26 0-1	E510	20-Oct-2022	28-Oct-2022	----	----		02-Nov-2022	28 days	13 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-27 0-1	E510	20-Oct-2022	28-Oct-2022	----	----		02-Nov-2022	28 days	13 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-23 0-1	E510	19-Oct-2022	28-Oct-2022	----	----		02-Nov-2022	28 days	14 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-24 0-1.25	E510	19-Oct-2022	28-Oct-2022	----	----		02-Nov-2022	28 days	14 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-22 0-1.25	E510	18-Oct-2022	28-Oct-2022	----	----		02-Nov-2022	28 days	15 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-18 0-1	E510	17-Oct-2022	28-Oct-2022	----	----		02-Nov-2022	28 days	16 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-20 0-1	E510	17-Oct-2022	28-Oct-2022	----	----		02-Nov-2022	28 days	16 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-26 0-1	E440	20-Oct-2022	28-Oct-2022	----	----		02-Nov-2022	180 days	13 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-27 0-1	E440	20-Oct-2022	28-Oct-2022	----	----		02-Nov-2022	180 days	13 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-23 0-1	E440	19-Oct-2022	28-Oct-2022	----	----		02-Nov-2022	180 days	14 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-24 0-1.25	E440	19-Oct-2022	28-Oct-2022	----	----		02-Nov-2022	180 days	14 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-22 0-1.25	E440	18-Oct-2022	28-Oct-2022	----	----		02-Nov-2022	180 days	15 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-18 0-1	E440	17-Oct-2022	28-Oct-2022	----	----		02-Nov-2022	180 days	16 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-20 0-1	E440	17-Oct-2022	28-Oct-2022	----	----		02-Nov-2022	180 days	16 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Metals : Sodium Adsorption Ratio (SAR) - 1:2 Soil:Water (Dry)</b>											
Glass soil jar/Teflon lined cap 22-25 3-4.5	E484	19-Oct-2022	28-Oct-2022	180 days	9 days	✔	02-Nov-2022	180 days	5 days	✔	
<b>Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method</b>											
Glass soil jar/Teflon lined cap 22-25 3-4.5	E185	19-Oct-2022	----	----	----		04-Nov-2022	----	----		
<b>Particle Size : Particle Size Analysis - Hydrometer</b>											
Glass soil jar/Teflon lined cap 22-25 3-4.5	E183	19-Oct-2022	01-Nov-2022	----	----		01-Nov-2022	365 days	14 days	✔	
<b>Particle Size : Particle Size Analysis - Sieve &lt;2mm</b>											
Glass soil jar/Teflon lined cap 22-25 3-4.5	E182	19-Oct-2022	01-Nov-2022	----	----		01-Nov-2022	365 days	14 days	✔	
<b>Particle Size : Particle Size Analysis - Sieve &gt;2mm</b>											
Glass soil jar/Teflon lined cap 22-25 3-4.5	E181	19-Oct-2022	01-Nov-2022	----	----		01-Nov-2022	365 days	14 days	✔	
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-18 0-1	E144	17-Oct-2022	----	----	----		27-Oct-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-19 2-3.5	E144	17-Oct-2022	----	----	----		27-Oct-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-20 0-1	E144	17-Oct-2022	----	----	----		27-Oct-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-21 0-0.5	E144	18-Oct-2022	----	----	----		27-Oct-2022	----	----		



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-22 0-1.25	E144	18-Oct-2022	----	----	----		27-Oct-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-23 0-1	E144	19-Oct-2022	----	----	----		27-Oct-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-24 0-1.25	E144	19-Oct-2022	----	----	----		27-Oct-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-25 3-4.5	E144	19-Oct-2022	----	----	----		27-Oct-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-25 7-8.5	E144	19-Oct-2022	----	----	----		27-Oct-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-26 0-1	E144	20-Oct-2022	----	----	----		27-Oct-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-27 0-1	E144	20-Oct-2022	----	----	----		27-Oct-2022	----	----	
<b>Physical Tests : pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received</b>										
Glass soil jar/Teflon lined cap 22-25 7-8.5	E108A	19-Oct-2022	28-Oct-2022	----	----		29-Oct-2022	30 days	10 days	✔
<b>Polychlorinated Biphenyls : PCB Aroclors by GC-MS</b>										
Glass soil jar/Teflon lined cap 22-19 2-3.5	E687	17-Oct-2022	28-Oct-2022	----	----		07-Nov-2022	40 days	10 days	✔



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Polychlorinated Biphenyls : PCB Aroclors by GC-MS</b>										
Glass soil jar/Teflon lined cap 22-25 3-4.5	E687	19-Oct-2022	28-Oct-2022	----	----		07-Nov-2022	40 days	10 days	✔
<b>Polychlorinated Biphenyls : PCB Aroclors by GC-MS</b>										
Glass soil jar/Teflon lined cap 22-25 7-8.5	E687	19-Oct-2022	28-Oct-2022	----	----		07-Nov-2022	40 days	10 days	✔
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS</b>										
Glass soil jar/Teflon lined cap 22-22 0-1.25	E641A	18-Oct-2022	28-Oct-2022	14 days	10 days	✔	03-Nov-2022	40 days	6 days	✔
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS</b>										
Glass soil jar/Teflon lined cap 22-18 0-1	E641A	17-Oct-2022	28-Oct-2022	14 days	11 days	✔	03-Nov-2022	40 days	6 days	✔
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS</b>										
Glass soil jar/Teflon lined cap 22-20 0-1	E641A	17-Oct-2022	28-Oct-2022	14 days	11 days	✔	03-Nov-2022	40 days	6 days	✔
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS</b>										
Glass soil jar/Teflon lined cap 22-23 0-1	E641A	19-Oct-2022	28-Oct-2022	14 days	9 days	✔	03-Nov-2022	40 days	6 days	✔
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS</b>										
Glass soil jar/Teflon lined cap 22-24 0-1.25	E641A	19-Oct-2022	28-Oct-2022	14 days	9 days	✔	03-Nov-2022	40 days	6 days	✔
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>										
Glass soil jar/Teflon lined cap 22-22 0-1.25	E532	18-Oct-2022	28-Oct-2022	30 days	10 days	✔	02-Nov-2022	7 days	5 days	✔
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>										
Glass soil jar/Teflon lined cap 22-18 0-1	E532	17-Oct-2022	28-Oct-2022	30 days	11 days	✔	02-Nov-2022	7 days	5 days	✔



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-20 0-1	E532	17-Oct-2022	28-Oct-2022	30 days	11 days	✔	02-Nov-2022	7 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-26 0-1	E532	20-Oct-2022	28-Oct-2022	30 days	8 days	✔	02-Nov-2022	7 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-27 0-1	E532	20-Oct-2022	28-Oct-2022	30 days	8 days	✔	02-Nov-2022	7 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-23 0-1	E532	19-Oct-2022	28-Oct-2022	30 days	9 days	✔	02-Nov-2022	7 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-24 0-1.25	E532	19-Oct-2022	28-Oct-2022	30 days	9 days	✔	02-Nov-2022	7 days	5 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-21 0-0.5	E611A	18-Oct-2022	27-Oct-2022	14 days	10 days	✔	28-Oct-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-22 0-1.25	E611A	18-Oct-2022	27-Oct-2022	14 days	10 days	✔	28-Oct-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-18 0-1	E611A	17-Oct-2022	27-Oct-2022	14 days	11 days	✔	28-Oct-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-19 2-3.5	E611A	17-Oct-2022	27-Oct-2022	14 days	11 days	✔	28-Oct-2022	40 days	0 days	✔	



Matrix: Soil/Solid

Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-20 0-1	E611A	17-Oct-2022	27-Oct-2022	14 days	11 days	✓	28-Oct-2022	40 days	0 days	✓	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-23 0-1	E611A	19-Oct-2022	27-Oct-2022	14 days	9 days	✓	28-Oct-2022	40 days	0 days	✓	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-24 0-1.25	E611A	19-Oct-2022	27-Oct-2022	14 days	9 days	✓	28-Oct-2022	40 days	0 days	✓	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-25 3-4.5	E611A	19-Oct-2022	27-Oct-2022	14 days	9 days	✓	28-Oct-2022	40 days	0 days	✓	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-25 7-8.5	E611A	19-Oct-2022	27-Oct-2022	14 days	9 days	✓	28-Oct-2022	40 days	0 days	✓	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-24 0-1.25	E611D	19-Oct-2022	07-Nov-2022	14 days	20 days	* EHT	07-Nov-2022	40 days	0 days	✓	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-18 0-1	E611D	17-Oct-2022	07-Nov-2022	14 days	22 days	* EHT	07-Nov-2022	40 days	0 days	✓	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-26 0-1	E611D	20-Oct-2022	27-Oct-2022	14 days	8 days	✓	28-Oct-2022	40 days	1 days	✓	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-27 0-1	E611D	20-Oct-2022	27-Oct-2022	14 days	8 days	✓	28-Oct-2022	40 days	1 days	✓	

Legend & Qualifier Definitions



Page : 14 of 20  
Work Order : WT2219243  
Client : Omni-McCann Inc.  
Project : 0006-0103



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EHT: Exceeded ALS recommended hold time prior to analysis.

Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: \* = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		Evaluation
			QC	Regular	Actual	Expected	
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Boron-Hot Water Extractable by ICPOES	E487	719350	1	9	11.1	5.0	✓
BTEX by Headspace GC-MS	E611A	717796	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID	E581.F1	717797	2	40	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	719353	1	16	6.2	5.0	✓
Hexavalent Chromium (Cr VI) by IC	E532	719248	1	20	5.0	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	719351	1	9	11.1	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	719352	1	9	11.1	5.0	✓
Moisture Content by Gravimetry	E144	718802	1	20	5.0	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	719354	1	7	14.2	5.0	✓
Particle Size Analysis - Hydrometer	E183	725346	1	1	100.0	5.0	✓
Particle Size Analysis - Sieve <2mm	E182	725345	1	1	100.0	5.0	✓
PCB Aroclors by GC-MS	E687	719355	1	3	33.3	5.0	✓
pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received	E108A	719357	1	1	100.0	5.0	✓
Sodium Adsorption Ratio (SAR) - 1:2 Soil:Water (Dry)	E484	719356	1	1	100.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	719029	2	38	5.2	5.0	✓
<b>Laboratory Control Samples (LCS)</b>							
Boron-Hot Water Extractable by ICPOES	E487	719350	2	9	22.2	10.0	✓
BTEX by Headspace GC-MS	E611A	717796	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID	E581.F1	717797	2	40	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	719353	1	16	6.2	5.0	✓
Hexavalent Chromium (Cr VI) by IC	E532	719248	2	20	10.0	10.0	✓
Mercury in Soil/Solid by CVAAS	E510	719351	2	9	22.2	10.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	719352	2	9	22.2	10.0	✓
Moisture Content by Gravimetry	E144	718802	1	20	5.0	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	719354	1	7	14.2	5.0	✓
Particle Size Analysis - Hydrometer	E183	725346	1	1	100.0	5.0	✓
Particle Size Analysis - Sieve <2mm	E182	725345	1	1	100.0	5.0	✓
Particle Size Analysis - Sieve >2mm	E181	725344	1	1	100.0	5.0	✓
PCB Aroclors by GC-MS	E687	719355	1	3	33.3	5.0	✓
pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received	E108A	719357	1	1	100.0	5.0	✓
Sodium Adsorption Ratio (SAR) - 1:2 Soil:Water (Dry)	E484	719356	2	1	200.0	10.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	719029	2	38	5.2	5.0	✓
<b>Method Blanks (MB)</b>							
Boron-Hot Water Extractable by ICPOES	E487	719350	1	9	11.1	5.0	✓
BTEX by Headspace GC-MS	E611A	717796	1	20	5.0	5.0	✓



Matrix: **Soil/Solid**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
<b>Method Blanks (MB) - Continued</b>							
CCME PHC - F1 by Headspace GC-FID	E581.F1	717797	2	40	5.0	5.0	✔
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	719353	1	16	6.2	5.0	✔
Hexavalent Chromium (Cr VI) by IC	E532	719248	1	20	5.0	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	719351	1	9	11.1	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	719352	1	9	11.1	5.0	✔
Moisture Content by Gravimetry	E144	718802	1	20	5.0	5.0	✔
PAHs by Hex:Ace GC-MS	E641A	719354	1	7	14.2	5.0	✔
PCB Aroclors by GC-MS	E687	719355	1	3	33.3	5.0	✔
Sodium Adsorption Ratio (SAR) - 1:2 Soil:Water (Dry)	E484	719356	1	1	100.0	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	719029	2	38	5.2	5.0	✔
<b>Matrix Spikes (MS)</b>							
BTEX by Headspace GC-MS	E611A	717796	1	20	5.0	5.0	✔
CCME PHC - F1 by Headspace GC-FID	E581.F1	717797	2	40	5.0	5.0	✔
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	719353	1	16	6.2	5.0	✔
PAHs by Hex:Ace GC-MS	E641A	719354	1	7	14.2	5.0	✔
PCB Aroclors by GC-MS	E687	719355	1	3	33.3	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	719029	2	38	5.2	5.0	✔



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
pH by Meter (1:2 Soil:0.01M CaCl <sub>2</sub> Extraction) - As Received	E108A  Waterloo - Environmental	Soil/Solid	MOEE E3137A	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C) and is carried out in accordance with procedures described in the Analytical Protocol (prescriptive method). A minimum 10g portion of the sample, as received, is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil by centrifuging, settling, or decanting and then analyzed using a pH meter and electrode.
Moisture Content by Gravimetry	E144  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Particle Size Analysis - Sieve >2mm	E181  Saskatoon - Environmental	Soil/Solid	ASTM D6913-17 (mod)	Soil samples are disaggregated and sieved through a 2mm sieve. Material retained on the sieve is then further sieved through a series of sieves. The amount passing through the sieves is measured gravimetrically.
Particle Size Analysis - Sieve <2mm	E182  Saskatoon - Environmental	Soil/Solid	ASTM D6913-17 (mod)	Soil samples are disaggregated and sieved through a 2mm sieve. Material passed through the sieve is then further disaggregated using calgon solution and passed through a series of sieves. The amount passing through the sieves is measured gravimetrically.
Particle Size Analysis - Hydrometer	E183  Saskatoon - Environmental	Soil/Solid	ASTM D7928-21 (mod)	Soil material is separated from coarse material (>2mm). A specimen is then disaggregated through mixing with Calgon solution. The material is then suspended in solution wherein regular hydrometer readings are taken at specific time intervals. The principles of Stokes' Law are applied to determine the amount of material remaining in solution as well as the maximum particle size remaining in solution at the specified time.
Grain Size Report (Attachment) Hydrometer/Sieve Method	E185  Saskatoon - Environmental	Soil/Solid	ASTM D6913/D7928	A grain size curve is a graphical representation of the particle sizing of a sample representing the percent passing against the effective particle size.
Metals in Soil/Solid by CRC ICPMS	E440  Waterloo - Environmental	Soil/Solid	EPA 6020B (mod)	This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 2 mm sieve, and digested with HNO <sub>3</sub> and HCl.  Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines.  Analysis is by Collision/Reaction Cell ICPMS.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Sodium Adsorption Ratio (SAR) - 1:2 Soil:Water (Dry)	E484  Waterloo - Environmental	Soil/Solid	SW846 6010C	A dried, disaggregated solid sample is extracted with deionized water, the aqueous extract is separated from the solid, acidified and then analyzed using a ICP/OES. The concentrations of Na, Ca and Mg are reported as per CALA requirements for calculated parameters. These individual parameters are not for comparison to any guideline.
Boron-Hot Water Extractable by ICPOES	E487  Waterloo - Environmental	Soil/Solid	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).
Mercury in Soil/Solid by CVAAS	E510  Waterloo - Environmental	Soil/Solid	EPA 200.2/1631 Appendix (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO <sub>3</sub> and HCl, followed by CVAAS analysis.
Hexavalent Chromium (Cr VI) by IC	E532  Waterloo - Environmental	Soil/Solid	APHA 3500-CR C	Instrumental analysis is performed by ion chromatography with UV detection.
CCME PHC - F1 by Headspace GC-FID	E581.F1  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4).
BTEX by Headspace GC-MS	E611A  Waterloo - Environmental	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D  Waterloo - Environmental	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs by Hex:Ace GC-MS	E641A  Waterloo - Environmental	Soil/Solid	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are extracted with hexane/acetone and analyzed by GC-MS. If reported, IACR (index of additive cancer risk, unitless) and B(a)P toxic potency equivalent (in soil concentration units) are calculated as per CCME PAH Soil Quality Guidelines fact sheet (2010) or ABT1.
PCB Aroclors by GC-MS	E687  Waterloo - Environmental	Soil/Solid	EPA 8270E (mod)	PCB Aroclors are analyzed by GC-MS



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
F1-BTEX	EC580 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.
F2 to F3 minus PAH	EC600 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	F2-PAH = CCME Fraction 2 (C10-C16) minus Naphthalene F3-PAH = CCME Fraction 3 (C16-C34) minus select Polycyclic Aromatic Hydrocarbons (PAH) as per CCME Soil Tier 1

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Leach 1:2 Soil:Water for pH/EC	EP108 Waterloo - Environmental	Soil/Solid	BC WLAP METHOD: PH, ELECTROMETRIC, SOIL	The procedure involves mixing the dried (at <60°C) and sieved (No. 10 / 2mm) sample with deionized/distilled water at a 1:2 ratio of sediment to water.
Leach 1:2 Soil : 0.01CaCl2 - As Received for pH	EP108A Waterloo - Environmental	Soil/Solid	MOEE E3137A	A minimum 10g portion of the sample, as received, is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil by centrifuging, settling or decanting and then analyzed using a pH meter and electrode.
Digestion for Metals and Mercury	EP440 Waterloo - Environmental	Soil/Solid	EPA 200.2 (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO3 and HCl. This method is intended to liberate metals that may be environmentally available.
Boron-Hot Water Extractable	EP487 Waterloo - Environmental	Soil/Solid	HW EXTR, EPA 6010B	A dried solid sample is extracted with weak 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)
Preparation of Hexavalent Chromium (Cr VI) for IC	EP532 Waterloo - Environmental	Soil/Solid	EPA 3060A	Field moist samples are digested with a sodium hydroxide/sodium carbonate solution as described in EPA 3060A.
VOCs Methanol Extraction for Headspace Analysis	EP581 Waterloo - Environmental	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PHCs and PAHs Hexane-Acetone Tumbler Extraction	EP601 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1 (mod)	Samples are subsampled and Petroleum Hydrocarbons (PHC) and PAHs are extracted with 1:1 hexane:acetone using a rotary extractor.

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Project : 0006-0103



<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
Pesticides, PCB, PAH, and Neutral Extractable Chlorinated Hydrocarbons Extraction	EP660  Waterloo - Environmental	Soil/Solid	EPA 3570 (mod)	A homogenized subsample is extracted with organic solvents using a mechanical shaker.
Dry and Grind in Soil/Solid <60°C	EPP442  Waterloo - Environmental	Soil/Solid	Soil Sampling and Methods of Analysis, Carter 2008	After removal of any coarse fragments and reservation of wet subsamples a portion of homogenized sample is set in a tray and dried at less than 60°C until dry. The sample is then particle size reduced with an automated crusher or mortar and pestle, typically to <2 mm. Further size reduction may be needed for particular tests.

## QUALITY CONTROL REPORT

<p><b>Work Order</b> : <b>WT2219243</b></p> <p>Client : Omni-McCann Inc.</p> <p>Contact : Daniel Elliot</p> <p>Address : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p>Telephone :</p> <p>Project : 0006-0103</p> <p>PO : ----</p> <p>C-O-C number : 20-1009747; 20-1009748</p> <p>Sampler : Antonia Cass 705 243 5828</p> <p>Site : ----</p> <p>Quote number : Project 0006-0103</p> <p>No. of samples received : 17</p> <p>No. of samples analysed : 11</p>	<p>Page : 1 of 24</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Emily Smith</p> <p>Address : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 21-Oct-2022 09:00</p> <p>Date Analysis Commenced : 26-Oct-2022</p> <p>Issue Date : 08-Nov-2022 18:24</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Amanda Ganouri-Lumsden	Department Manager - Microbiology and Prep	Waterloo Centralized Prep, Waterloo, Ontario
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Waterloo Organics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario
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Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Waterloo Organics, Waterloo, Ontario



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Work Order : WT2219243  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## **General Comments**

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

### **Key :**

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

## **Workorder Comments**

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Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Soil/Solid

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Physical Tests (QC Lot: 718802)</b>											
WT2219761-002	Anonymous	moisture	----	E144	0.25	%	4.80	4.66	2.83%	20%	----
<b>Physical Tests (QC Lot: 719357)</b>											
WT2219243-015	22-25 7-8.5	pH (1:2 soil:CaCl2-aq)	----	E108A	0.10	pH units	6.92	6.93	0.144%	5%	----
<b>Particle Size (QC Lot: 725345)</b>											
WT2219243-014	22-25 3-4.5	passing (0.05 mm)	----	E182	1.0	%	65.8	65.8	0.00%	15%	----
		passing (0.063 mm)	----	E182	1.0	%	74.9	74.9	0.00%	15%	----
		passing (0.075 mm)	----	E182	1.0	%	83.3	83.3	0.00%	15%	----
		passing (0.125 mm)	----	E182	1.0	%	85.3	85.3	0.00%	15%	----
		passing (0.149 mm)	----	E182	1.0	%	86.2	86.2	0.00%	15%	----
		passing (0.250 mm)	----	E182	1.0	%	90.7	90.7	0.00%	15%	----
		passing (0.420 mm)	----	E182	1.0	%	94.7	94.7	0.00%	15%	----
		passing (0.50 mm)	----	E182	1.0	%	95.4	95.4	0.00%	15%	----
		passing (0.841 mm)	----	E182	1.0	%	98.0	98.0	0.00%	15%	----
passing (1.0 mm)	----	E182	1.0	%	98.3	98.3	0.00%	15%	----		
<b>Particle Size (QC Lot: 725346)</b>											
WT2219243-014	22-25 3-4.5	passing (0.002 mm)	----	E183	1.0	%	32.5	32.5	0.00%	20%	----
		passing (0.004 mm)	----	E183	1.0	%	36.6	36.6	0.00%	20%	----
		passing (0.005 mm)	----	E183	1.0	%	38.0	38.0	0.00%	20%	----
		passing (0.020 mm)	----	E183	1.0	%	51.3	51.3	0.00%	20%	----
		passing (0.0312 mm)	----	E183	1.0	%	56.8	56.8	0.00%	20%	----
<b>Metals (QC Lot: 719350)</b>											
WT2219142-001	Anonymous	boron, hot water soluble	7440-42-8	E487	0.10	mg/kg	0.53	0.55	3.64%	40%	----
<b>Metals (QC Lot: 719351)</b>											
WT2219142-001	Anonymous	mercury	7439-97-6	E510	0.0050	mg/kg	0.0571	0.0652	13.2%	40%	----
<b>Metals (QC Lot: 719352)</b>											
WT2219142-001	Anonymous	antimony	7440-36-0	E440	0.10	mg/kg	2.87	2.88	0.355%	30%	----
		arsenic	7440-38-2	E440	0.10	mg/kg	25.3	25.9	2.16%	30%	----
		barium	7440-39-3	E440	0.50	mg/kg	441	417	5.46%	40%	----
		beryllium	7440-41-7	E440	0.10	mg/kg	0.88	0.86	1.40%	30%	----
		boron	7440-42-8	E440	5.0	mg/kg	14.1	14.4	0.3	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Metals (QC Lot: 719352) - continued</b>											
WT2219142-001	Anonymous	cadmium	7440-43-9	E440	0.020	mg/kg	0.704	0.698	0.856%	30%	----
		chromium	7440-47-3	E440	0.50	mg/kg	28.8	28.9	0.212%	30%	----
		cobalt	7440-48-4	E440	0.10	mg/kg	14.8	15.0	1.19%	30%	----
		copper	7440-50-8	E440	0.50	mg/kg	65.4	67.1	2.46%	30%	----
		lead	7439-92-1	E440	0.50	mg/kg	146	151	3.64%	40%	----
		molybdenum	7439-98-7	E440	0.10	mg/kg	2.06	2.08	0.567%	40%	----
		nickel	7440-02-0	E440	0.50	mg/kg	36.9	37.4	1.50%	30%	----
		selenium	7782-49-2	E440	0.20	mg/kg	1.91	1.82	4.83%	30%	----
		silver	7440-22-4	E440	0.10	mg/kg	0.17	0.18	0.004	Diff <2x LOR	----
		thallium	7440-28-0	E440	0.050	mg/kg	0.268	0.278	0.011	Diff <2x LOR	----
		uranium	7440-61-1	E440	0.050	mg/kg	1.07	1.09	1.35%	30%	----
		vanadium	7440-62-2	E440	0.20	mg/kg	34.5	34.5	0.0904%	30%	----
		zinc	7440-66-6	E440	2.0	mg/kg	5170	5210	0.674%	30%	----
<b>Metals (QC Lot: 719356)</b>											
WT2219243-014	22-25 3-4.5	calcium, soluble ion content	7440-70-2	E484	0.50	mg/L	17.6	17.0	3.47%	30%	----
		magnesium, soluble ion content	7439-95-4	E484	0.50	mg/L	3.05	2.78	0.27	Diff <2x LOR	----
		sodium, soluble ion content	17341-25-2	E484	0.50	mg/L	53.1	52.2	1.71%	30%	----
<b>Speciated Metals (QC Lot: 719248)</b>											
TY2203231-001	Anonymous	chromium, hexavalent [Cr VI]	18540-29-9	E532	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 717796)</b>											
WT2219689-001	Anonymous	benzene	71-43-2	E611A	0.0050	mg/kg	<0.0050 µg/g	<0.0050	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015 µg/g	<0.015	0	Diff <2x LOR	----
		toluene	108-88-3	E611A	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611A	0.030	mg/kg	<0.030 µg/g	<0.030	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611A	0.030	mg/kg	<0.030 µg/g	<0.030	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 719029)</b>											
WT2219761-002	Anonymous	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 719029) - continued</b>											
WT2219761-002	Anonymous	dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	<0.045	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040	<0.040	0	Diff <2x LOR	----
		styrene	100-42-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 733554)</b>											
WT2220771-001	Anonymous	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50 µg/g	<0.50	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 733554) - continued</b>											
WT2220771-001	Anonymous	benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050 µg/g	<0.0050	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045 µg/g	<0.045	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030 µg/g	<0.030	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030 µg/g	<0.030	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015 µg/g	<0.015	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50 µg/g	<0.50	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50 µg/g	<0.50	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040 µg/g	<0.040	0	Diff <2x LOR	----
		styrene	100-42-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 733554) - continued</b>											
WT2220771-001	Anonymous	trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010 µg/g	<0.010	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050 µg/g	<0.050	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020 µg/g	<0.020	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030 µg/g	<0.030	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030 µg/g	<0.030	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 717797)</b>											
WT2219689-001	Anonymous	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0 µg/g	<5.0	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 719030)</b>											
WT2219761-002	Anonymous	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 719353)</b>											
WT2219142-001	Anonymous	F2 (C10-C16)	----	E601.SG-L	10	mg/kg	12	10	2	Diff <2x LOR	----
		F3 (C16-C34)	----	E601.SG-L	50	mg/kg	199	150	49	Diff <2x LOR	----
		F4 (C34-C50)	----	E601.SG-L	50	mg/kg	137	110	27	Diff <2x LOR	----
<b>Polycyclic Aromatic Hydrocarbons (QC Lot: 719354)</b>											
WT2219142-001	Anonymous	acenaphthene	83-32-9	E641A	0.075	mg/kg	<0.075	<0.075	0	Diff <2x LOR	----
		acenaphthylene	208-96-8	E641A	0.075	mg/kg	0.312	0.213	0.099	Diff <2x LOR	J
		anthracene	120-12-7	E641A	0.075	mg/kg	0.323	0.228	0.095	Diff <2x LOR	J
		benz(a)anthracene	56-55-3	E641A	0.075	mg/kg	1.34	0.922	37.0%	50%	----
		benzo(a)pyrene	50-32-8	E641A	0.075	mg/kg	1.83	1.16	44.5%	50%	----
		benzo(b+j)fluoranthene	n/a	E641A	0.075	mg/kg	2.43	1.63	39.1%	50%	----
		benzo(g,h,i)perylene	191-24-2	E641A	0.075	mg/kg	1.17	0.792	38.6%	50%	----
		benzo(k)fluoranthene	207-08-9	E641A	0.075	mg/kg	1.14	0.742	42.4%	50%	----
		chrysene	218-01-9	E641A	0.075	mg/kg	1.92	1.29	39.6%	50%	----
		dibenz(a,h)anthracene	53-70-3	E641A	0.075	mg/kg	0.307	0.205	0.103	Diff <2x LOR	J
		fluoranthene	206-44-0	E641A	0.075	mg/kg	3.97	2.52	44.5%	50%	----
		fluorene	86-73-7	E641A	0.075	mg/kg	0.160	0.113	0.047	Diff <2x LOR	J
		indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.075	mg/kg	1.31	0.868	40.3%	50%	----
		methylnaphthalene, 1-	90-12-0	E641A	0.030	mg/kg	0.326	0.265	20.7%	50%	----
		methylnaphthalene, 2-	91-57-6	E641A	0.030	mg/kg	0.364	0.308	16.6%	50%	----
		naphthalene	91-20-3	E641A	0.015	mg/kg	0.273	0.212	25.0%	50%	----
		phenanthrene	85-01-8	E641A	0.075	mg/kg	2.10	1.30	47.2%	50%	----
pyrene	129-00-0	E641A	0.075	mg/kg	3.20	2.05	43.7%	50%	----		
<b>Polychlorinated Biphenyls (QC Lot: 719355)</b>											
WT2219243-003	22-19 2-3.5	Aroclor 1016	12674-11-2	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Polychlorinated Biphenyls (QC Lot: 719355) - continued</b>											
WT2219243-003	22-19 2-3.5	Aroclor 1221	11104-28-2	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1232	11141-16-5	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1242	53469-21-9	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1248	12672-29-6	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1254	11097-69-1	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1260	11096-82-5	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1262	37324-23-5	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1268	11100-14-4	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----

**Qualifiers**

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



## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 718802)</b>						
moisture	---	E144	0.25	%	<0.25	---
<b>Metals (QCLot: 719350)</b>						
boron, hot water soluble	7440-42-8	E487	0.1	mg/kg	<0.10	---
<b>Metals (QCLot: 719351)</b>						
mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	---
<b>Metals (QCLot: 719352)</b>						
antimony	7440-36-0	E440	0.1	mg/kg	<0.10	---
arsenic	7440-38-2	E440	0.1	mg/kg	<0.10	---
barium	7440-39-3	E440	0.5	mg/kg	<0.50	---
beryllium	7440-41-7	E440	0.1	mg/kg	<0.10	---
boron	7440-42-8	E440	5	mg/kg	<5.0	---
cadmium	7440-43-9	E440	0.02	mg/kg	<0.020	---
chromium	7440-47-3	E440	0.5	mg/kg	<0.50	---
cobalt	7440-48-4	E440	0.1	mg/kg	<0.10	---
copper	7440-50-8	E440	0.5	mg/kg	<0.50	---
lead	7439-92-1	E440	0.5	mg/kg	<0.50	---
molybdenum	7439-98-7	E440	0.1	mg/kg	<0.10	---
nickel	7440-02-0	E440	0.5	mg/kg	<0.50	---
selenium	7782-49-2	E440	0.2	mg/kg	<0.20	---
silver	7440-22-4	E440	0.1	mg/kg	<0.10	---
thallium	7440-28-0	E440	0.05	mg/kg	<0.050	---
uranium	7440-61-1	E440	0.05	mg/kg	<0.050	---
vanadium	7440-62-2	E440	0.2	mg/kg	<0.20	---
zinc	7440-66-6	E440	2	mg/kg	<2.0	---
<b>Metals (QCLot: 719356)</b>						
calcium, soluble ion content	7440-70-2	E484	0.5	mg/L	<0.50	---
magnesium, soluble ion content	7439-95-4	E484	0.5	mg/L	<0.50	---
sodium, soluble ion content	17341-25-2	E484	0.5	mg/L	<0.50	---
<b>Speciated Metals (QCLot: 719248)</b>						
chromium, hexavalent [Cr VI]	18540-29-9	E532	0.1	mg/kg	<0.10	---
<b>Volatile Organic Compounds (QCLot: 717796)</b>						
benzene	71-43-2	E611A	0.005	mg/kg	<0.0050	---





Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 717796) - continued</b>						
ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015	----
toluene	108-88-3	E611A	0.05	mg/kg	<0.050	----
xylene, m+p-	179601-23-1	E611A	0.03	mg/kg	<0.030	----
xylene, o-	95-47-6	E611A	0.03	mg/kg	<0.030	----
<b>Volatile Organic Compounds (QCLot: 719029)</b>						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	----
benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	----
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	----
bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	----
bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	----
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	----
chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	----
chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	----
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	----
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	----
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	----
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	----
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	----
dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	----
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	----
ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	----
hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	----
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	----
styrene	100-42-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	----



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatil Organic Compounds (QCLot: 719029) - continued</b>						
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----
<b>Volatil Organic Compounds (QCLot: 733554)</b>						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	----
benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	----
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	----
bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	----
bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	----
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	----
chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	----
chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	----
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	----
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	----
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	----
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	----
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	----
dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	----
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	----
ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	----



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 733554) - continued</b>						
hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	----
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	----
styrene	100-42-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----
<b>Hydrocarbons (QCLot: 717797)</b>						
F1 (C6-C10)	----	E581.F1	5	mg/kg	<5.0	----
<b>Hydrocarbons (QCLot: 719030)</b>						
F1 (C6-C10)	----	E581.F1	5	mg/kg	<5.0	----
<b>Hydrocarbons (QCLot: 719353)</b>						
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 719354)</b>						
acenaphthene	83-32-9	E641A	0.05	mg/kg	<0.050	----
acenaphthylene	208-96-8	E641A	0.05	mg/kg	<0.050	----
anthracene	120-12-7	E641A	0.05	mg/kg	<0.050	----
benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	<0.050	----
benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	<0.050	----
benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	<0.050	----
benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	<0.050	----
benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	<0.050	----
chrysene	218-01-9	E641A	0.05	mg/kg	<0.050	----
dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	<0.050	----



Sub-Matrix: **Soil/Solid**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 719354) - continued</b>						
fluoranthene	206-44-0	E641A	0.05	mg/kg	<0.050	----
fluorene	86-73-7	E641A	0.05	mg/kg	<0.050	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	<0.050	----
methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	<0.030	----
methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	<0.030	----
naphthalene	91-20-3	E641A	0.01	mg/kg	<0.010	----
phenanthrene	85-01-8	E641A	0.05	mg/kg	<0.050	----
pyrene	129-00-0	E641A	0.05	mg/kg	<0.050	----
<b>Polychlorinated Biphenyls (QCLot: 719355)</b>						
Aroclor 1016	12674-11-2	E687	0.01	mg/kg	<0.010	----
Aroclor 1221	11104-28-2	E687	0.01	mg/kg	<0.010	----
Aroclor 1232	11141-16-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1242	53469-21-9	E687	0.01	mg/kg	<0.010	----
Aroclor 1248	12672-29-6	E687	0.01	mg/kg	<0.010	----
Aroclor 1254	11097-69-1	E687	0.01	mg/kg	<0.010	----
Aroclor 1260	11096-82-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1262	37324-23-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1268	11100-14-4	E687	0.01	mg/kg	<0.010	----



## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Physical Tests (QCLot: 718802)</b>									
moisture	----	E144	0.25	%	50 %	100	90.0	110	----
<b>Physical Tests (QCLot: 719357)</b>									
pH (1:2 soil:CaCl2-aq)	----	E108A	----	pH units	7 pH units	100	98.0	102	----
<b>Metals (QCLot: 719350)</b>									
boron, hot water soluble	7440-42-8	E487	0.1	mg/kg	1.33333 mg/kg	106	70.0	130	----
<b>Metals (QCLot: 719351)</b>									
mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	108	80.0	120	----
<b>Metals (QCLot: 719352)</b>									
antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	114	80.0	120	----
arsenic	7440-38-2	E440	0.1	mg/kg	100 mg/kg	108	80.0	120	----
barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	109	80.0	120	----
beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	99.6	80.0	120	----
boron	7440-42-8	E440	5	mg/kg	100 mg/kg	95.6	80.0	120	----
cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	108	80.0	120	----
chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	104	80.0	120	----
cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	104	80.0	120	----
copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	102	80.0	120	----
lead	7439-92-1	E440	0.5	mg/kg	50 mg/kg	107	80.0	120	----
molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	110	80.0	120	----
nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	105	80.0	120	----
selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	107	80.0	120	----
silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	# 56.2	80.0	120	RRQC
thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	102	80.0	120	----
uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	101	80.0	120	----
vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	107	80.0	120	----
zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	104	80.0	120	----
<b>Metals (QCLot: 719356)</b>									
calcium, soluble ion content	7440-70-2	E484	0.5	mg/L	300 mg/L	108	80.0	120	----
magnesium, soluble ion content	7439-95-4	E484	0.5	mg/L	50 mg/L	101	80.0	120	----
sodium, soluble ion content	17341-25-2	E484	0.5	mg/L	50 mg/L	102	80.0	120	----
<b>Speciated Metals (QCLot: 719248)</b>									



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Speciated Metals (QCLot: 719248) - continued</b>									
chromium, hexavalent [Cr VI]	18540-29-9	E532	0.1	mg/kg	0.8 mg/kg	# 73.9	80.0	120	LCS-ND
<b>Volatile Organic Compounds (QCLot: 717796)</b>									
benzene	71-43-2	E611A	0.005	mg/kg	3.475 mg/kg	103	70.0	130	----
ethylbenzene	100-41-4	E611A	0.015	mg/kg	3.475 mg/kg	100	70.0	130	----
toluene	108-88-3	E611A	0.05	mg/kg	3.475 mg/kg	104	70.0	130	----
xylene, m+p-	179601-23-1	E611A	0.03	mg/kg	6.95 mg/kg	104	70.0	130	----
xylene, o-	95-47-6	E611A	0.03	mg/kg	3.475 mg/kg	102	70.0	130	----
<b>Volatile Organic Compounds (QCLot: 719029)</b>									
Acetone	67-64-1	E611D	0.5	mg/kg	3.475 mg/kg	99.2	60.0	140	----
benzene	71-43-2	E611D	0.005	mg/kg	3.475 mg/kg	92.8	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.475 mg/kg	87.5	50.0	140	----
bromoform	75-25-2	E611D	0.05	mg/kg	3.475 mg/kg	101	70.0	130	----
bromomethane	74-83-9	E611D	0.05	mg/kg	3.475 mg/kg	72.3	50.0	140	----
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.475 mg/kg	84.8	70.0	130	----
chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.475 mg/kg	87.8	70.0	130	----
chloroform	67-66-3	E611D	0.05	mg/kg	3.475 mg/kg	84.9	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.475 mg/kg	96.3	60.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.475 mg/kg	85.6	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.475 mg/kg	87.7	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.475 mg/kg	87.3	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.475 mg/kg	84.6	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.475 mg/kg	50.4	50.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.475 mg/kg	88.4	60.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.475 mg/kg	91.8	60.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.475 mg/kg	67.2	60.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.475 mg/kg	80.4	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.475 mg/kg	77.5	60.0	130	----
dichloromethane	75-09-2	E611D	0.045	mg/kg	3.475 mg/kg	77.2	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.475 mg/kg	80.6	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.475 mg/kg	72.6	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.475 mg/kg	79.7	70.0	130	----
ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.475 mg/kg	99.7	70.0	130	----
hexane, n-	110-54-3	E611D	0.05	mg/kg	3.475 mg/kg	82.6	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.475 mg/kg	87.1	60.0	140	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.475 mg/kg	78.0	60.0	140	----



Sub-Matrix: Soil/Solid

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
<b>Volatile Organic Compounds (QCLot: 719029) - continued</b>									
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.475 mg/kg	87.2	70.0	130	----
styrene	100-42-5	E611D	0.05	mg/kg	3.475 mg/kg	105	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.475 mg/kg	80.8	60.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.475 mg/kg	103	60.0	130	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.475 mg/kg	92.8	60.0	130	----
toluene	108-88-3	E611D	0.05	mg/kg	3.475 mg/kg	107	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.475 mg/kg	80.3	60.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.475 mg/kg	95.7	60.0	130	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.475 mg/kg	70.1	60.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.475 mg/kg	74.2	50.0	140	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.475 mg/kg	# 57.2	60.0	140	MES
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	108	70.0	130	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	3.475 mg/kg	104	70.0	130	----
<b>Volatile Organic Compounds (QCLot: 733554)</b>									
Acetone	67-64-1	E611D	0.5	mg/kg	3.475 mg/kg	113	60.0	140	----
benzene	71-43-2	E611D	0.005	mg/kg	3.475 mg/kg	110	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.475 mg/kg	110	50.0	140	----
bromoform	75-25-2	E611D	0.05	mg/kg	3.475 mg/kg	97.6	70.0	130	----
bromomethane	74-83-9	E611D	0.05	mg/kg	3.475 mg/kg	109	50.0	140	----
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.475 mg/kg	99.5	70.0	130	----
chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.475 mg/kg	104	70.0	130	----
chloroform	67-66-3	E611D	0.05	mg/kg	3.475 mg/kg	107	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.475 mg/kg	101	60.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.475 mg/kg	102	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.475 mg/kg	107	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.475 mg/kg	106	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.475 mg/kg	107	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.475 mg/kg	93.9	50.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.475 mg/kg	108	60.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.475 mg/kg	105	60.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.475 mg/kg	103	60.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.475 mg/kg	103	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.475 mg/kg	108	60.0	130	----
dichloromethane	75-09-2	E611D	0.045	mg/kg	3.475 mg/kg	112	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.475 mg/kg	107	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.475 mg/kg	102	70.0	130	----



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 733554) - continued</b>									
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.475 mg/kg	97.4	70.0	130	----
ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.475 mg/kg	98.6	70.0	130	----
hexane, n-	110-54-3	E611D	0.05	mg/kg	3.475 mg/kg	101	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.475 mg/kg	105	60.0	140	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.475 mg/kg	86.6	60.0	140	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.475 mg/kg	103	70.0	130	----
styrene	100-42-5	E611D	0.05	mg/kg	3.475 mg/kg	99.7	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.475 mg/kg	96.6	60.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.475 mg/kg	108	60.0	130	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.475 mg/kg	98.1	60.0	130	----
toluene	108-88-3	E611D	0.05	mg/kg	3.475 mg/kg	104	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.475 mg/kg	100	60.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.475 mg/kg	107	60.0	130	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.475 mg/kg	100	60.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.475 mg/kg	104	50.0	140	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.475 mg/kg	94.6	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	106	70.0	130	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	3.475 mg/kg	96.2	70.0	130	----
<b>Hydrocarbons (QCLot: 717797)</b>									
F1 (C6-C10)	---	E581.F1	5	mg/kg	69.1875 mg/kg	97.2	80.0	120	----
<b>Hydrocarbons (QCLot: 719030)</b>									
F1 (C6-C10)	---	E581.F1	5	mg/kg	69.1875 mg/kg	97.7	80.0	120	----
<b>Hydrocarbons (QCLot: 719353)</b>									
F2 (C10-C16)	---	E601.SG-L	10	mg/kg	924.49 mg/kg	86.2	70.0	130	----
F3 (C16-C34)	---	E601.SG-L	50	mg/kg	1108.95 mg/kg	91.5	70.0	130	----
F4 (C34-C50)	---	E601.SG-L	50	mg/kg	1071.36 mg/kg	88.3	70.0	130	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 719354)</b>									
acenaphthene	83-32-9	E641A	0.05	mg/kg	0.5 mg/kg	85.7	60.0	130	----
acenaphthylene	208-96-8	E641A	0.05	mg/kg	0.5 mg/kg	93.6	60.0	130	----
anthracene	120-12-7	E641A	0.05	mg/kg	0.5 mg/kg	98.2	60.0	130	----
benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	0.5 mg/kg	98.0	60.0	130	----
benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	0.5 mg/kg	94.4	60.0	130	----
benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	0.5 mg/kg	93.9	60.0	130	----
benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	0.5 mg/kg	79.2	60.0	130	----





Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 719354) - continued</b>									
benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	0.5 mg/kg	95.9	60.0	130	----
chrysene	218-01-9	E641A	0.05	mg/kg	0.5 mg/kg	106	60.0	130	----
dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	0.5 mg/kg	85.5	60.0	130	----
fluoranthene	206-44-0	E641A	0.05	mg/kg	0.5 mg/kg	93.1	60.0	130	----
fluorene	86-73-7	E641A	0.05	mg/kg	0.5 mg/kg	93.1	60.0	130	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	0.5 mg/kg	81.6	60.0	130	----
methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	0.5 mg/kg	79.9	60.0	130	----
methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	0.5 mg/kg	78.6	60.0	130	----
naphthalene	91-20-3	E641A	0.01	mg/kg	0.5 mg/kg	69.8	60.0	130	----
phenanthrene	85-01-8	E641A	0.05	mg/kg	0.5 mg/kg	92.1	60.0	130	----
pyrene	129-00-0	E641A	0.05	mg/kg	0.5 mg/kg	93.7	60.0	130	----
<b>Polychlorinated Biphenyls (QCLot: 719355)</b>									
Aroclor 1016	12674-11-2	E687	0.01	mg/kg	0.01 mg/kg	93.9	60.0	140	----
Aroclor 1221	11104-28-2	E687	0.01	mg/kg	0.01 mg/kg	93.9	60.0	140	----
Aroclor 1232	11141-16-5	E687	0.01	mg/kg	0.01 mg/kg	93.9	60.0	140	----
Aroclor 1242	53469-21-9	E687	0.01	mg/kg	0.01 mg/kg	93.9	60.0	140	----
Aroclor 1248	12672-29-6	E687	0.01	mg/kg	0.01 mg/kg	77.7	60.0	140	----
Aroclor 1254	11097-69-1	E687	0.01	mg/kg	0.01 mg/kg	78.5	60.0	140	----
Aroclor 1260	11096-82-5	E687	0.01	mg/kg	0.01 mg/kg	90.6	60.0	140	----
Aroclor 1262	37324-23-5	E687	0.01	mg/kg	0.01 mg/kg	90.6	60.0	140	----
Aroclor 1268	11100-14-4	E687	0.01	mg/kg	0.01 mg/kg	90.6	60.0	140	----

**Qualifiers**

Qualifier	Description
LCS-ND	Lab Control Sample recovery was slightly outside ALS DQO. Reported non-detect results for associated samples were unaffected.
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).
RRQC	Refer to report comments for information regarding this QC result.



### Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 717796)</b>										
WT2219689-001	Anonymous	benzene	71-43-2	E611A	2.70 mg/kg	3.125 mg/kg	99.9	60.0	140	----
		ethylbenzene	100-41-4	E611A	2.44 mg/kg	3.125 mg/kg	90.5	60.0	140	----
		toluene	108-88-3	E611A	2.62 mg/kg	3.125 mg/kg	97.0	60.0	140	----
		xylene, m+p-	179601-23-1	E611A	5.13 mg/kg	6.25 mg/kg	94.9	60.0	140	----
		xylene, o-	95-47-6	E611A	2.57 mg/kg	3.125 mg/kg	95.1	60.0	140	----
<b>Volatile Organic Compounds (QCLot: 719029)</b>										
WT2219761-002	Anonymous	Acetone	67-64-1	E611D	2.41 mg/kg	3.125 mg/kg	98.4	50.0	140	----
		benzene	71-43-2	E611D	2.45 mg/kg	3.125 mg/kg	100	50.0	140	----
		bromodichloromethane	75-27-4	E611D	2.36 mg/kg	3.125 mg/kg	96.3	50.0	140	----
		bromoform	75-25-2	E611D	2.33 mg/kg	3.125 mg/kg	95.2	50.0	140	----
		bromomethane	74-83-9	E611D	1.96 mg/kg	3.125 mg/kg	80.1	50.0	140	----
		carbon tetrachloride	56-23-5	E611D	2.34 mg/kg	3.125 mg/kg	95.8	50.0	140	----
		chlorobenzene	108-90-7	E611D	2.38 mg/kg	3.125 mg/kg	97.4	50.0	140	----
		chloroform	67-66-3	E611D	2.26 mg/kg	3.125 mg/kg	92.5	50.0	140	----
		dibromochloromethane	124-48-1	E611D	2.26 mg/kg	3.125 mg/kg	92.2	50.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	2.00 mg/kg	3.125 mg/kg	81.6	50.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	2.31 mg/kg	3.125 mg/kg	94.3	50.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	2.42 mg/kg	3.125 mg/kg	99.1	50.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	2.42 mg/kg	3.125 mg/kg	98.9	50.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	1.61 mg/kg	3.125 mg/kg	65.7	50.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	2.22 mg/kg	3.125 mg/kg	90.6	50.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	2.28 mg/kg	3.125 mg/kg	93.2	50.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	2.26 mg/kg	3.125 mg/kg	92.5	50.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	2.01 mg/kg	3.125 mg/kg	82.2	50.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	2.28 mg/kg	3.125 mg/kg	93.1	50.0	140	----
		dichloromethane	75-09-2	E611D	2.21 mg/kg	3.125 mg/kg	90.2	50.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	2.32 mg/kg	3.125 mg/kg	95.1	50.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	2.37 mg/kg	3.125 mg/kg	96.9	50.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	2.42 mg/kg	3.125 mg/kg	99.1	50.0	140	----
		ethylbenzene	100-41-4	E611D	2.37 mg/kg	3.125 mg/kg	96.8	50.0	140	----
		hexane, n-	110-54-3	E611D	2.26 mg/kg	3.125 mg/kg	92.3	50.0	140	----



Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
<b>Volatile Organic Compounds (QCLot: 719029) - continued</b>										
WT2219761-002	Anonymous	methyl ethyl ketone [MEK]	78-93-3	E611D	2.44 mg/kg	3.125 mg/kg	99.8	50.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	2.19 mg/kg	3.125 mg/kg	89.7	50.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.44 mg/kg	3.125 mg/kg	99.9	50.0	140	----
		styrene	100-42-5	E611D	2.47 mg/kg	3.125 mg/kg	101	50.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.13 mg/kg	3.125 mg/kg	87.0	50.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	2.22 mg/kg	3.125 mg/kg	90.6	50.0	140	----
		tetrachloroethylene	127-18-4	E611D	2.67 mg/kg	3.125 mg/kg	109	50.0	140	----
		toluene	108-88-3	E611D	2.50 mg/kg	3.125 mg/kg	102	50.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	2.18 mg/kg	3.125 mg/kg	89.1	50.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	2.04 mg/kg	3.125 mg/kg	83.6	50.0	140	----
		trichloroethylene	79-01-6	E611D	2.24 mg/kg	3.125 mg/kg	91.6	50.0	140	----
		trichlorofluoromethane	75-69-4	E611D	2.11 mg/kg	3.125 mg/kg	86.2	50.0	140	----
		vinyl chloride	75-01-4	E611D	1.87 mg/kg	3.125 mg/kg	76.4	50.0	140	----
		xylene, m+p-	179601-23-1	E611D	4.84 mg/kg	6.25 mg/kg	99.0	50.0	140	----
		xylene, o-	95-47-6	E611D	2.36 mg/kg	3.125 mg/kg	96.3	50.0	140	----
<b>Volatile Organic Compounds (QCLot: 733554)</b>										
WT2220771-001	Anonymous	Acetone	67-64-1	E611D	3.06 mg/kg	3.125 mg/kg	129	50.0	140	----
		benzene	71-43-2	E611D	2.60 mg/kg	3.125 mg/kg	110	50.0	140	----
		bromodichloromethane	75-27-4	E611D	2.63 mg/kg	3.125 mg/kg	111	50.0	140	----
		bromoform	75-25-2	E611D	2.15 mg/kg	3.125 mg/kg	90.6	50.0	140	----
		bromomethane	74-83-9	E611D	2.61 mg/kg	3.125 mg/kg	110	50.0	140	----
		carbon tetrachloride	56-23-5	E611D	2.32 mg/kg	3.125 mg/kg	97.8	50.0	140	----
		chlorobenzene	108-90-7	E611D	2.39 mg/kg	3.125 mg/kg	100	50.0	140	----
		chloroform	67-66-3	E611D	2.53 mg/kg	3.125 mg/kg	107	50.0	140	----
		dibromochloromethane	124-48-1	E611D	2.30 mg/kg	3.125 mg/kg	96.8	50.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	2.30 mg/kg	3.125 mg/kg	97.0	50.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	2.46 mg/kg	3.125 mg/kg	104	50.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	2.42 mg/kg	3.125 mg/kg	102	50.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	2.44 mg/kg	3.125 mg/kg	102	50.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	3.13 mg/kg	3.125 mg/kg	132	50.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	2.58 mg/kg	3.125 mg/kg	109	50.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	2.46 mg/kg	3.125 mg/kg	104	50.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	2.51 mg/kg	3.125 mg/kg	106	50.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	2.46 mg/kg	3.125 mg/kg	103	50.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	2.54 mg/kg	3.125 mg/kg	107	50.0	140	----



Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
<b>Volatile Organic Compounds (QCLot: 733554) - continued</b>										
WT2220771-001	Anonymous	dichloromethane	75-09-2	E611D	2.71 mg/kg	3.125 mg/kg	114	50.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	2.58 mg/kg	3.125 mg/kg	108	50.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	2.15 mg/kg	3.125 mg/kg	90.8	50.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	2.01 mg/kg	3.125 mg/kg	84.6	50.0	140	----
		ethylbenzene	100-41-4	E611D	2.25 mg/kg	3.125 mg/kg	94.7	50.0	140	----
		hexane, n-	110-54-3	E611D	2.54 mg/kg	3.125 mg/kg	107	50.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	2.35 mg/kg	3.125 mg/kg	98.8	50.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	1.98 mg/kg	3.125 mg/kg	83.5	50.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.41 mg/kg	3.125 mg/kg	102	50.0	140	----
		styrene	100-42-5	E611D	2.22 mg/kg	3.125 mg/kg	93.6	50.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.23 mg/kg	3.125 mg/kg	94.0	50.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	2.49 mg/kg	3.125 mg/kg	105	50.0	140	----
		tetrachloroethylene	127-18-4	E611D	2.22 mg/kg	3.125 mg/kg	93.4	50.0	140	----
		toluene	108-88-3	E611D	2.40 mg/kg	3.125 mg/kg	101	50.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	2.33 mg/kg	3.125 mg/kg	98.2	50.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	2.48 mg/kg	3.125 mg/kg	105	50.0	140	----
		trichloroethylene	79-01-6	E611D	2.32 mg/kg	3.125 mg/kg	97.9	50.0	140	----
		trichlorofluoromethane	75-69-4	E611D	2.62 mg/kg	3.125 mg/kg	110	50.0	140	----
		vinyl chloride	75-01-4	E611D	2.44 mg/kg	3.125 mg/kg	103	50.0	140	----
		xylene, m+p-	179601-23-1	E611D	4.86 mg/kg	6.25 mg/kg	102	50.0	140	----
		xylene, o-	95-47-6	E611D	2.19 mg/kg	3.125 mg/kg	92.1	50.0	140	----
<b>Hydrocarbons (QCLot: 717797)</b>										
WT2219689-001	Anonymous	F1 (C6-C10)	----	E581.F1	46.1 mg/kg	62.5 mg/kg	85.3	60.0	140	----
<b>Hydrocarbons (QCLot: 719030)</b>										
WT2219761-002	Anonymous	F1 (C6-C10)	----	E581.F1	57.2 mg/kg	62.5 mg/kg	117	60.0	140	----
<b>Hydrocarbons (QCLot: 719353)</b>										
WT2219142-001	Anonymous	F2 (C10-C16)	----	E601.SG-L	614 mg/kg	924.49 mg/kg	83.4	60.0	140	----
		F3 (C16-C34)	----	E601.SG-L	757 mg/kg	1108.95 mg/kg	85.7	60.0	140	----
		F4 (C34-C50)	----	E601.SG-L	693 mg/kg	1071.36 mg/kg	81.2	60.0	140	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 719354)</b>										
WT2219142-001	Anonymous	acenaphthene	83-32-9	E641A	0.331 mg/kg	0.5 mg/kg	82.9	50.0	140	----
		acenaphthylene	208-96-8	E641A	0.283 mg/kg	0.5 mg/kg	70.9	50.0	140	----
		anthracene	120-12-7	E641A	0.310 mg/kg	0.5 mg/kg	77.6	50.0	140	----
		benz(a)anthracene	56-55-3	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B



Sub-Matrix: Soil/Solid

Laboratory sample ID					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	Target	MS	Low	High	
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 719354) - continued</b>										
WT2219142-001	Anonymous	benzo(a)pyrene	50-32-8	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		benzo(b+j)fluoranthene	n/a	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		benzo(g,h,i)perylene	191-24-2	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		benzo(k)fluoranthene	207-08-9	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		chrysene	218-01-9	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		dibenz(a,h)anthracene	53-70-3	E641A	0.203 mg/kg	0.5 mg/kg	50.9	50.0	140	----
		fluoranthene	206-44-0	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		fluorene	86-73-7	E641A	0.343 mg/kg	0.5 mg/kg	85.8	50.0	140	----
		indeno(1,2,3-c,d)pyrene	193-39-5	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		methylnaphthalene, 1-	90-12-0	E641A	0.310 mg/kg	0.5 mg/kg	77.7	50.0	140	----
		methylnaphthalene, 2-	91-57-6	E641A	0.305 mg/kg	0.5 mg/kg	76.3	50.0	140	----
		naphthalene	91-20-3	E641A	0.296 mg/kg	0.5 mg/kg	74.2	50.0	140	----
		phenanthrene	85-01-8	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		pyrene	129-00-0	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
<b>Polychlorinated Biphenyls (QCLot: 719355)</b>										
WT2219243-003	22-19 2-3.5	Aroclor 1016	12674-11-2	E687	0.009 mg/kg	0.01 mg/kg	93.5	50.0	150	----
		Aroclor 1221	11104-28-2	E687	0.009 mg/kg	0.01 mg/kg	93.5	50.0	150	----
		Aroclor 1232	11141-16-5	E687	0.009 mg/kg	0.01 mg/kg	93.5	50.0	150	----
		Aroclor 1242	53469-21-9	E687	0.009 mg/kg	0.01 mg/kg	92.4	50.0	150	----
		Aroclor 1248	12672-29-6	E687	0.009 mg/kg	0.01 mg/kg	93.5	50.0	150	----
		Aroclor 1254	11097-69-1	E687	0.008 mg/kg	0.01 mg/kg	78.2	50.0	150	----
		Aroclor 1260	11096-82-5	E687	0.009 mg/kg	0.01 mg/kg	94.6	50.0	150	----
		Aroclor 1262	37324-23-5	E687	0.010 mg/kg	0.01 mg/kg	95.5	50.0	150	----
		Aroclor 1268	11100-14-4	E687	0.010 mg/kg	0.01 mg/kg	95.5	50.0	150	----

**Qualifiers**

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.



## Reference Material (RM) Report

A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
<b>Particle Size (QCLot: 725344)</b>									
	RM	passing (19 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (2.0 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (25.4 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (38.1 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (4.75 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (50.8 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (76.2 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (9.5 mm)	----	E181	100 %	100	90.0	110	----
<b>Particle Size (QCLot: 725345)</b>									
	RM	passing (0.05 mm)	----	E182	49.81 %	99.0	90.0	110	----
	RM	passing (0.063 mm)	----	E182	54.27 %	98.8	90.8	109	----
	RM	passing (0.075 mm)	----	E182	58.38 %	98.5	91.4	109	----
	RM	passing (0.125 mm)	----	E182	68.06 %	98.5	92.7	107	----
	RM	passing (0.149 mm)	----	E182	72.71 %	98.4	93.1	107	----
	RM	passing (0.250 mm)	----	E182	85.38 %	99.4	94.1	106	----
	RM	passing (0.420 mm)	----	E182	92.78 %	100.0	94.6	105	----
	RM	passing (0.50 mm)	----	E182	93.78 %	100.0	94.7	105	----
	RM	passing (0.841 mm)	----	E182	97.34 %	99.8	94.9	105	----
	RM	passing (1.0 mm)	----	E182	97.77 %	99.8	94.9	105	----
<b>Particle Size (QCLot: 725346)</b>									
	RM	passing (0.002 mm)	----	E183	21.14 %	97.0	76.0	124	----
	RM	passing (0.004 mm)	----	E183	24.64 %	99.1	80.0	120	----
	RM	passing (0.005 mm)	----	E183	25.91 %	100	82.0	118	----
	RM	passing (0.020 mm)	----	E183	37.12 %	110	87.0	113	----
	RM	passing (0.0312 mm)	----	E183	42.58 %	105	88.0	112	----
<b>Metals (QCLot: 719350)</b>									
	RM	boron, hot water soluble	7440-42-8	E487	1.4938 mg/kg	93.3	60.0	140	----
<b>Metals (QCLot: 719351)</b>									



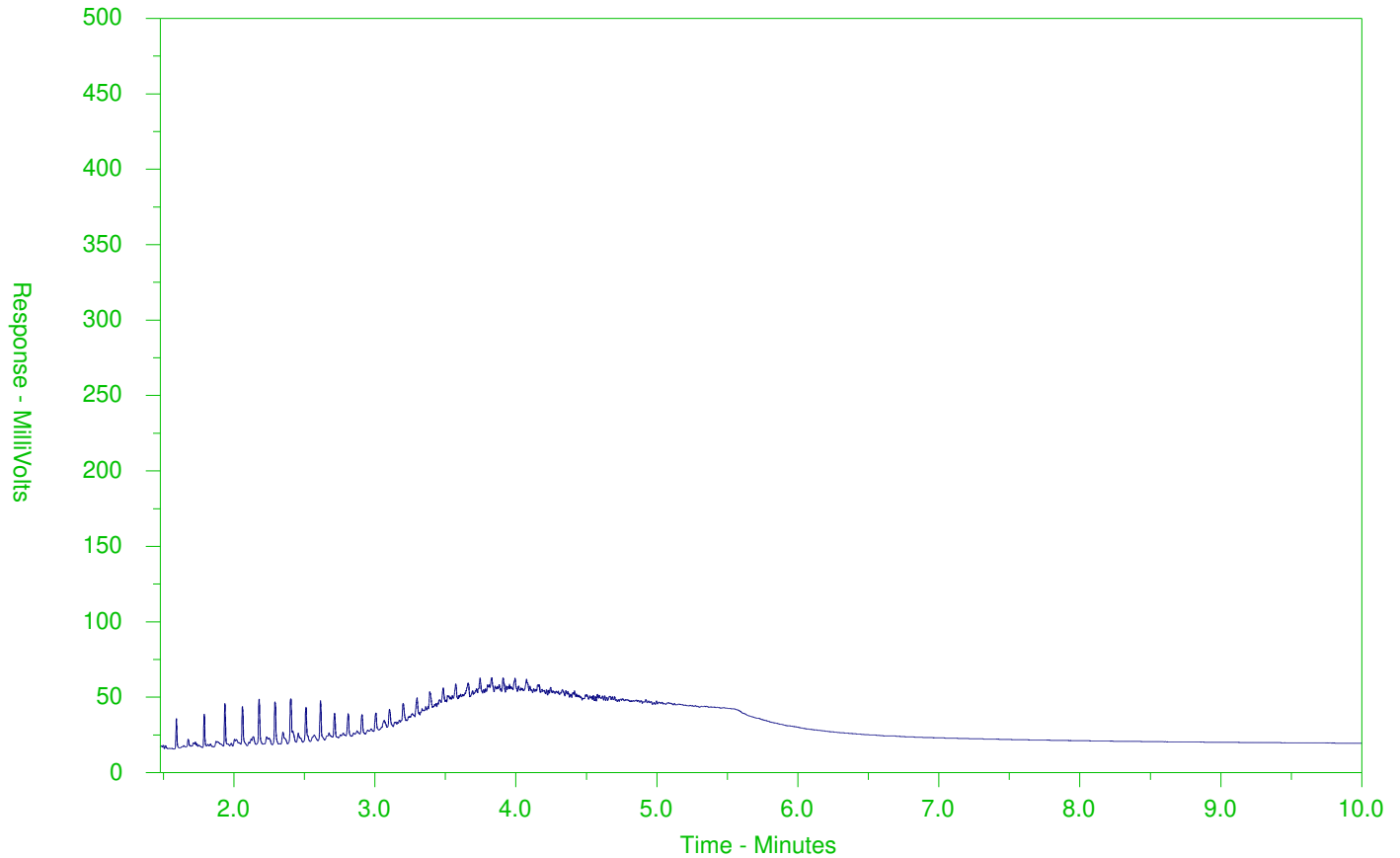
Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
<b>Metals (QCLot: 719351) - continued</b>									
	RM	mercury	7439-97-6	E510	0.0585 mg/kg	113	70.0	130	----
<b>Metals (QCLot: 719352)</b>									
	RM	antimony	7440-36-0	E440	3.99 mg/kg	113	70.0	130	----
	RM	arsenic	7440-38-2	E440	3.73 mg/kg	106	70.0	130	----
	RM	barium	7440-39-3	E440	105 mg/kg	106	70.0	130	----
	RM	beryllium	7440-41-7	E440	0.349 mg/kg	105	70.0	130	----
	RM	boron	7440-42-8	E440	8.5 mg/kg	114	40.0	160	----
	RM	cadmium	7440-43-9	E440	0.91 mg/kg	100	70.0	130	----
	RM	chromium	7440-47-3	E440	101 mg/kg	108	70.0	130	----
	RM	cobalt	7440-48-4	E440	6.9 mg/kg	107	70.0	130	----
	RM	copper	7440-50-8	E440	123 mg/kg	103	70.0	130	----
	RM	lead	7439-92-1	E440	267 mg/kg	103	70.0	130	----
	RM	molybdenum	7439-98-7	E440	1.03 mg/kg	108	70.0	130	----
	RM	nickel	7440-02-0	E440	26.7 mg/kg	110	70.0	130	----
	RM	silver	7440-22-4	E440	4.06 mg/kg	108	70.0	130	----
	RM	thallium	7440-28-0	E440	0.0786 mg/kg	104	40.0	160	----
	RM	uranium	7440-61-1	E440	0.52 mg/kg	103	70.0	130	----
	RM	vanadium	7440-62-2	E440	32.7 mg/kg	107	70.0	130	----
	RM	zinc	7440-66-6	E440	297 mg/kg	105	70.0	130	----
<b>Metals (QCLot: 719356)</b>									
	RM	calcium, soluble ion content	7440-70-2	E484	86.59 mg/L	106	70.0	130	----
	RM	magnesium, soluble ion content	7439-95-4	E484	25.74 mg/L	106	70.0	130	----
	RM	sodium, soluble ion content	17341-25-2	E484	30.05 mg/L	100	70.0	130	----
<b>Speciated Metals (QCLot: 719248)</b>									
	RM	chromium, hexavalent [Cr VI]	18540-29-9	E532	172 mg/kg	97.0	70.0	130	----

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2219243-001-E601.SG-L  
 Client Sample ID: 22-18 0-1



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

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

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

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

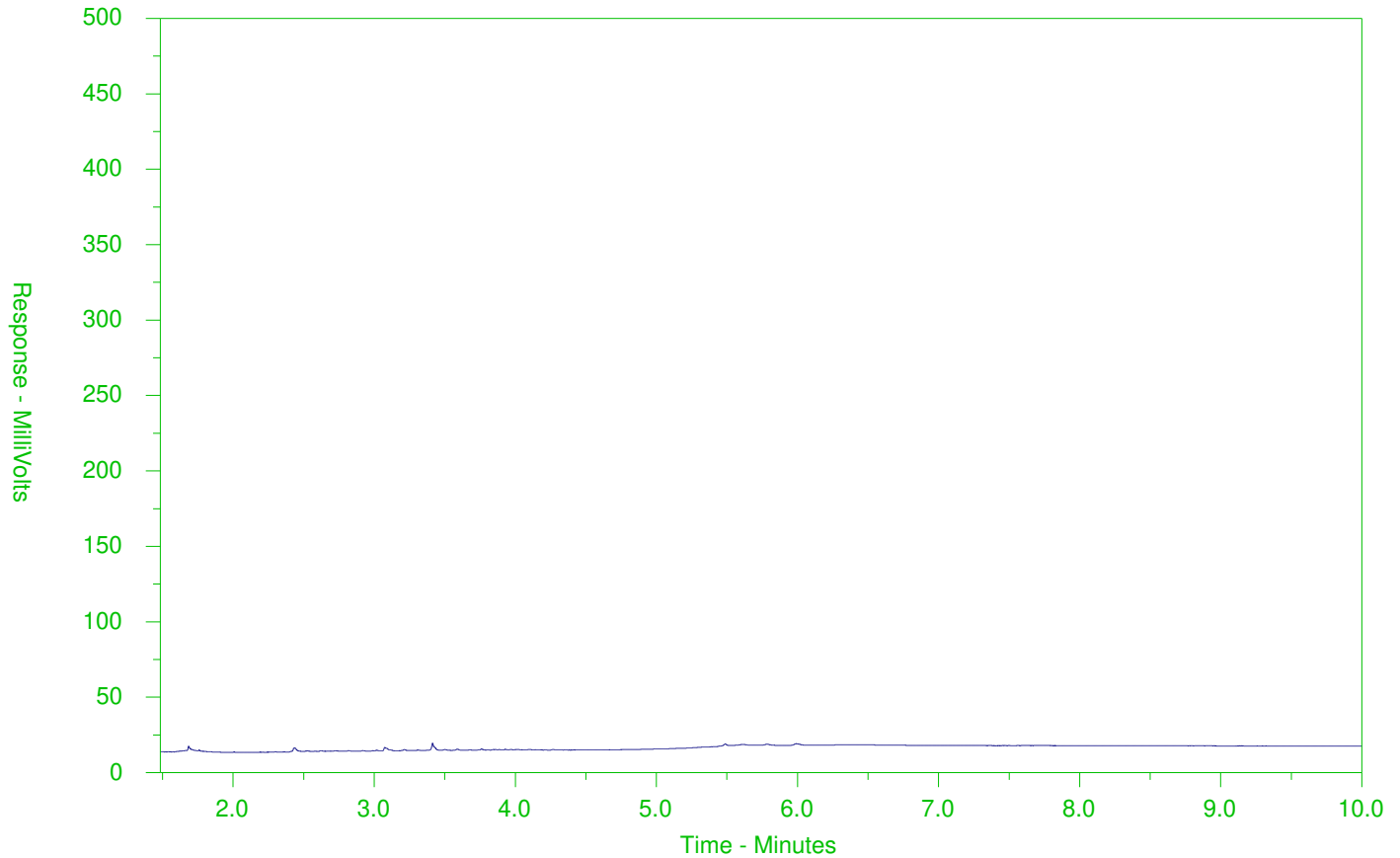
Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).



# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2219243-003-E601.SG-L  
 Client Sample ID: 22-19 2-3.5



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

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

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

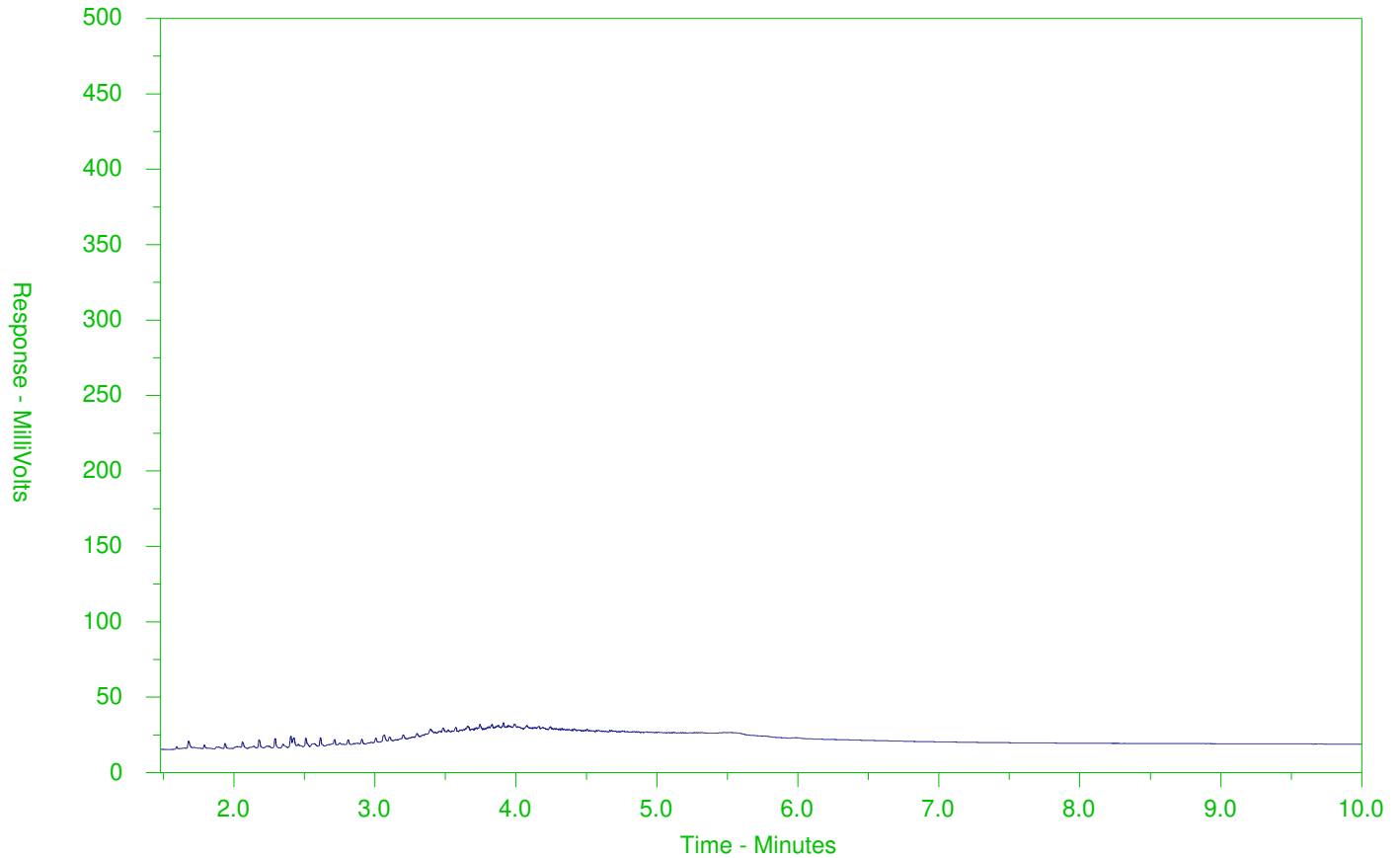
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2219243-004-E601.SG-L  
 Client Sample ID: 22-20 0-1



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

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

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

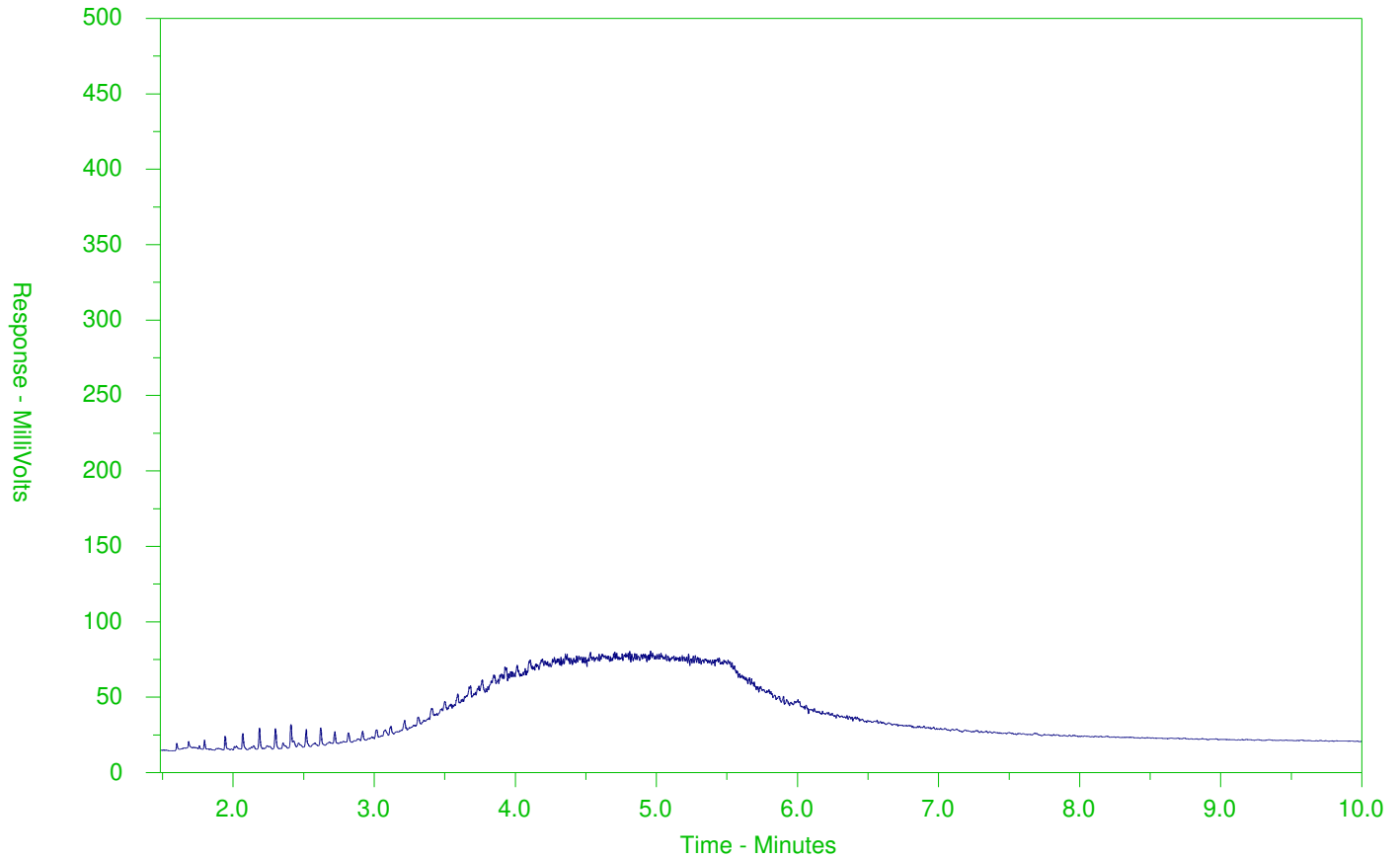
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2219243-006-E601.SG-L  
 Client Sample ID: 22-21 0-0.5



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

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

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

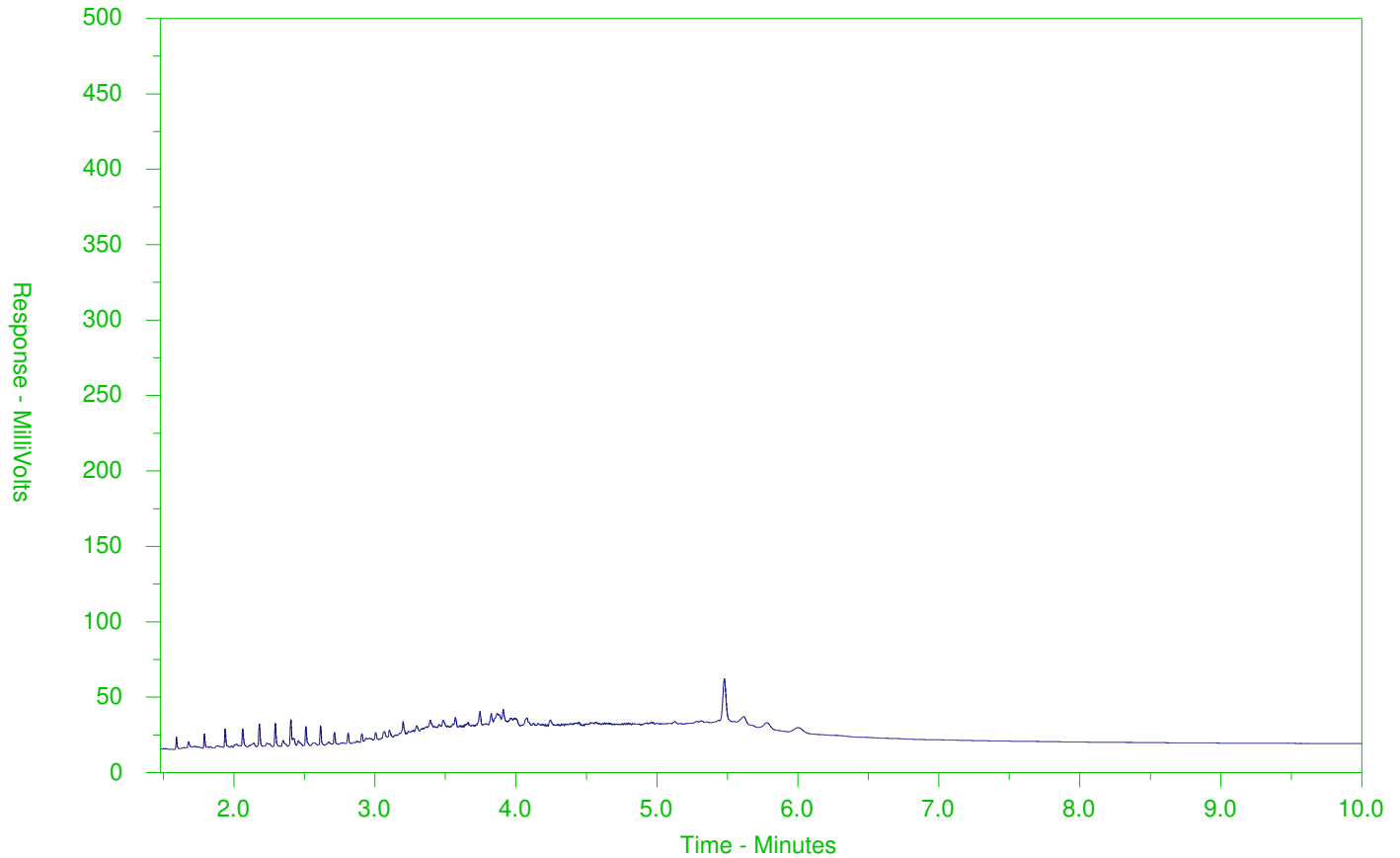
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2219243-008-E601.SG-L  
 Client Sample ID: 22-22 0-1.25



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

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

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

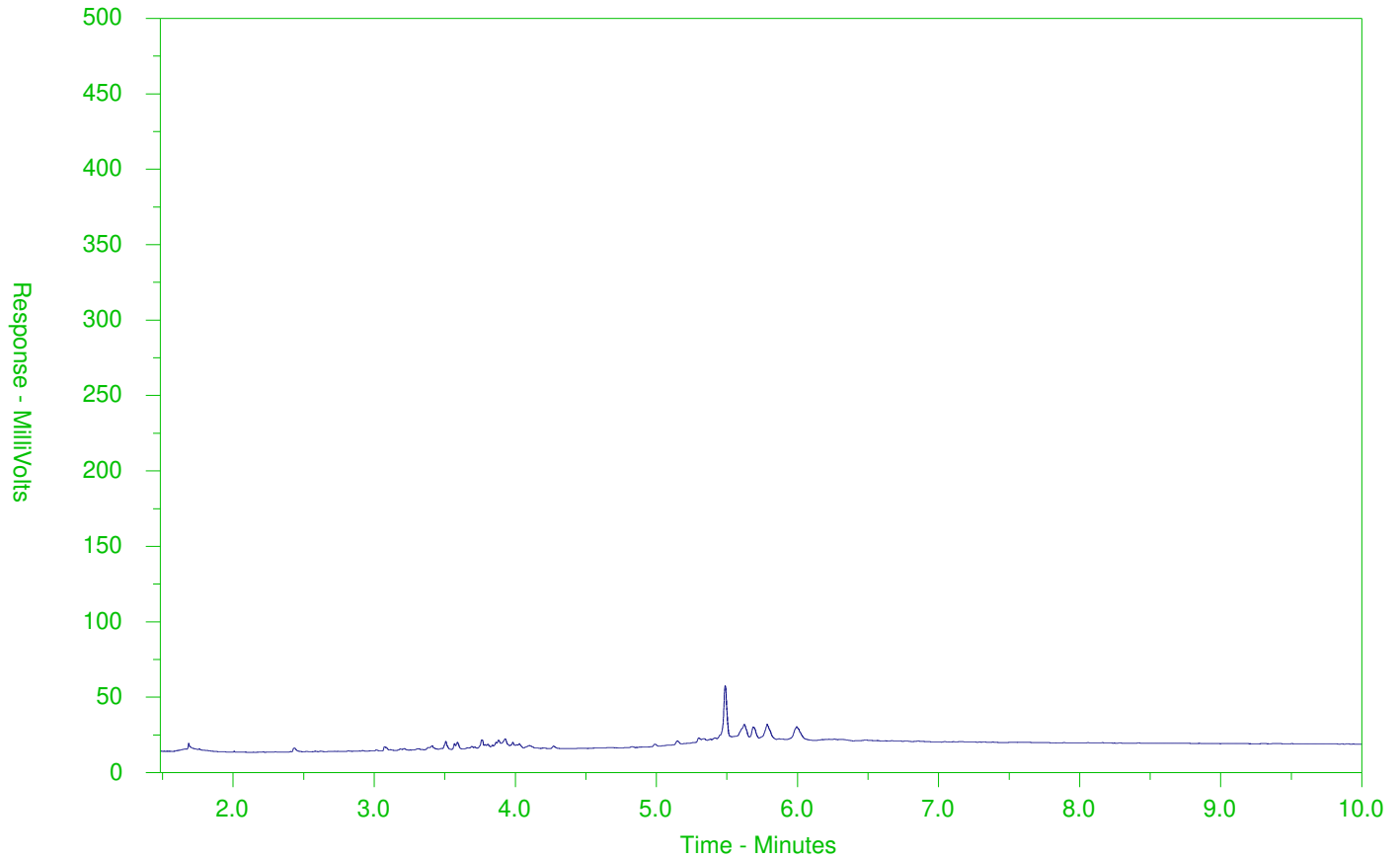
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2219243-010-E601.SG-L  
 Client Sample ID: 22-23 0-1



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

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

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

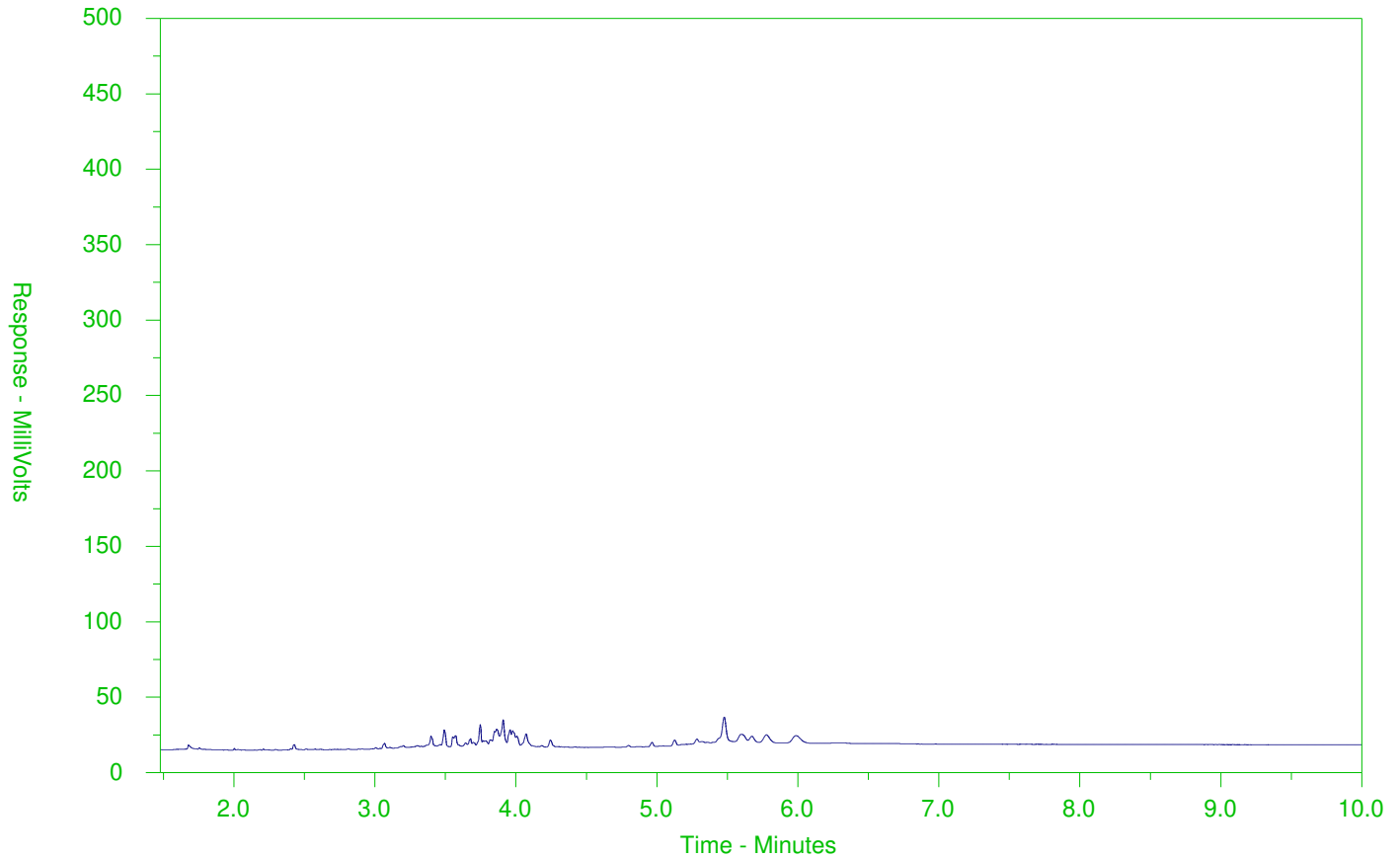
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2219243-012-E601.SG-L  
 Client Sample ID: 22-24 0-1.25



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

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

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

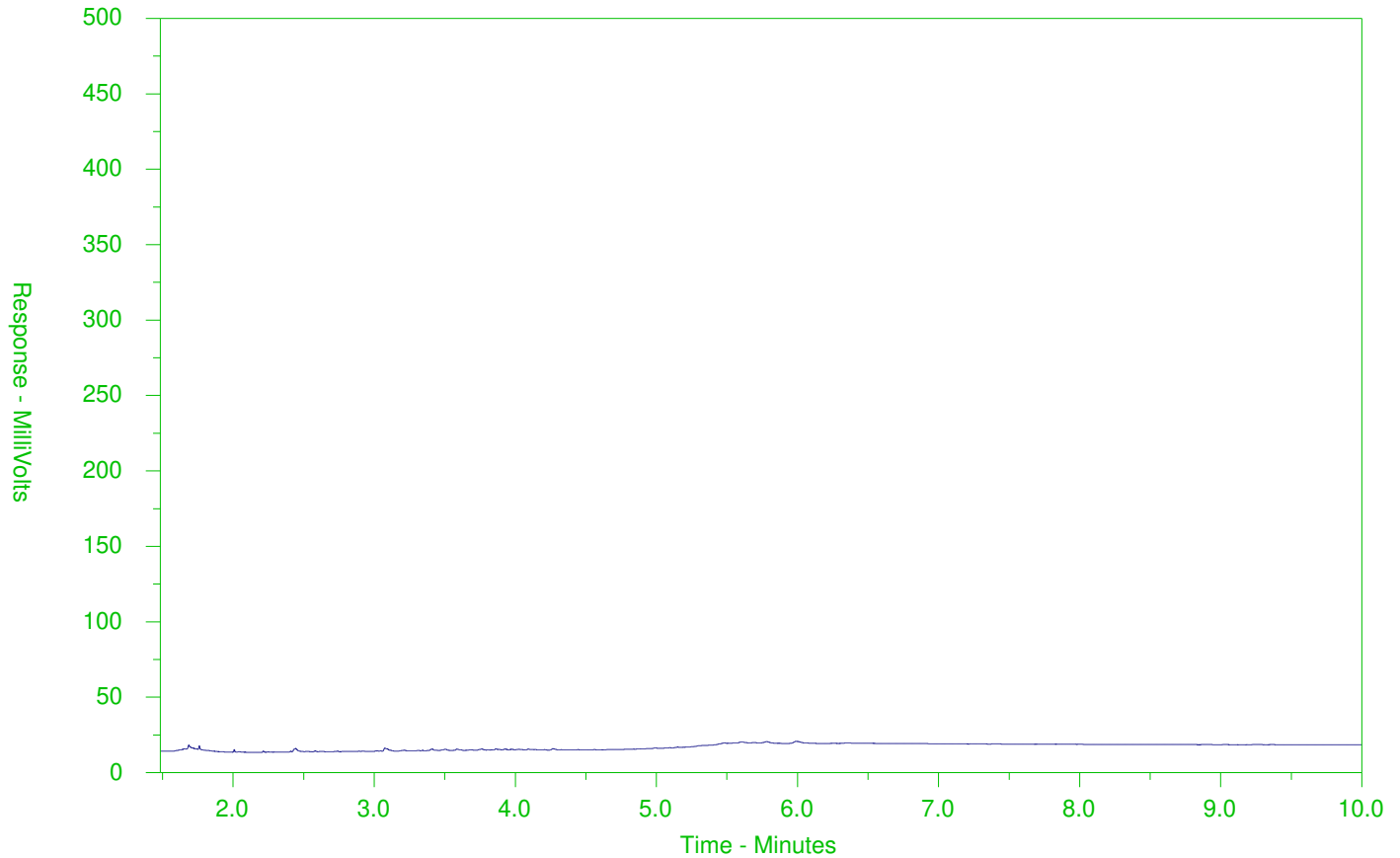
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2219243-014-E601.SG-L  
 Client Sample ID: 22-25 3-4.5



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

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

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

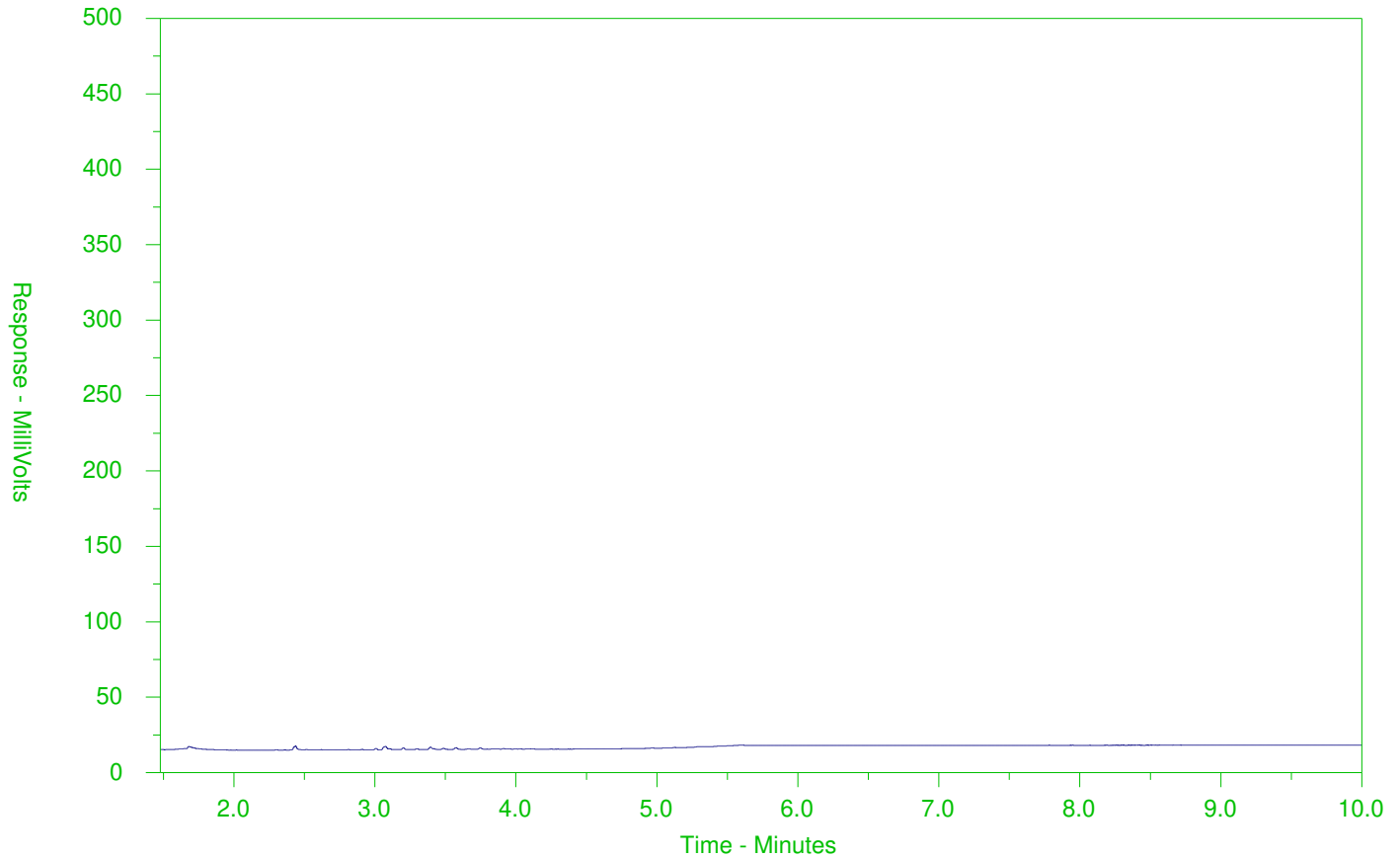
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2219243-015-E601.SG-L  
 Client Sample ID: 22-25 7-8.5



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

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

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

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

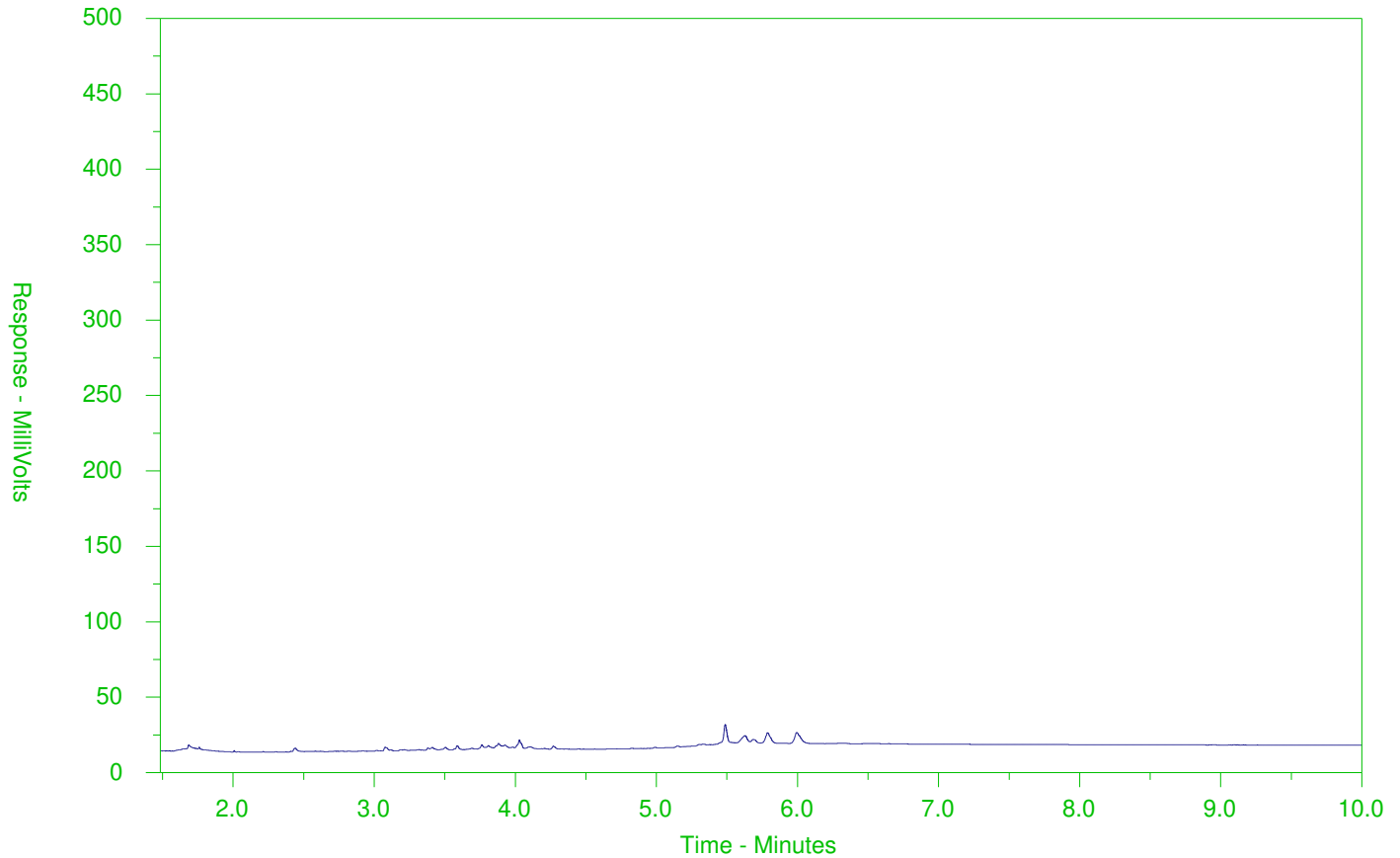
Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).



# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2219243-016-E601.SG-L  
 Client Sample ID: 22-26 0-1



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

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

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

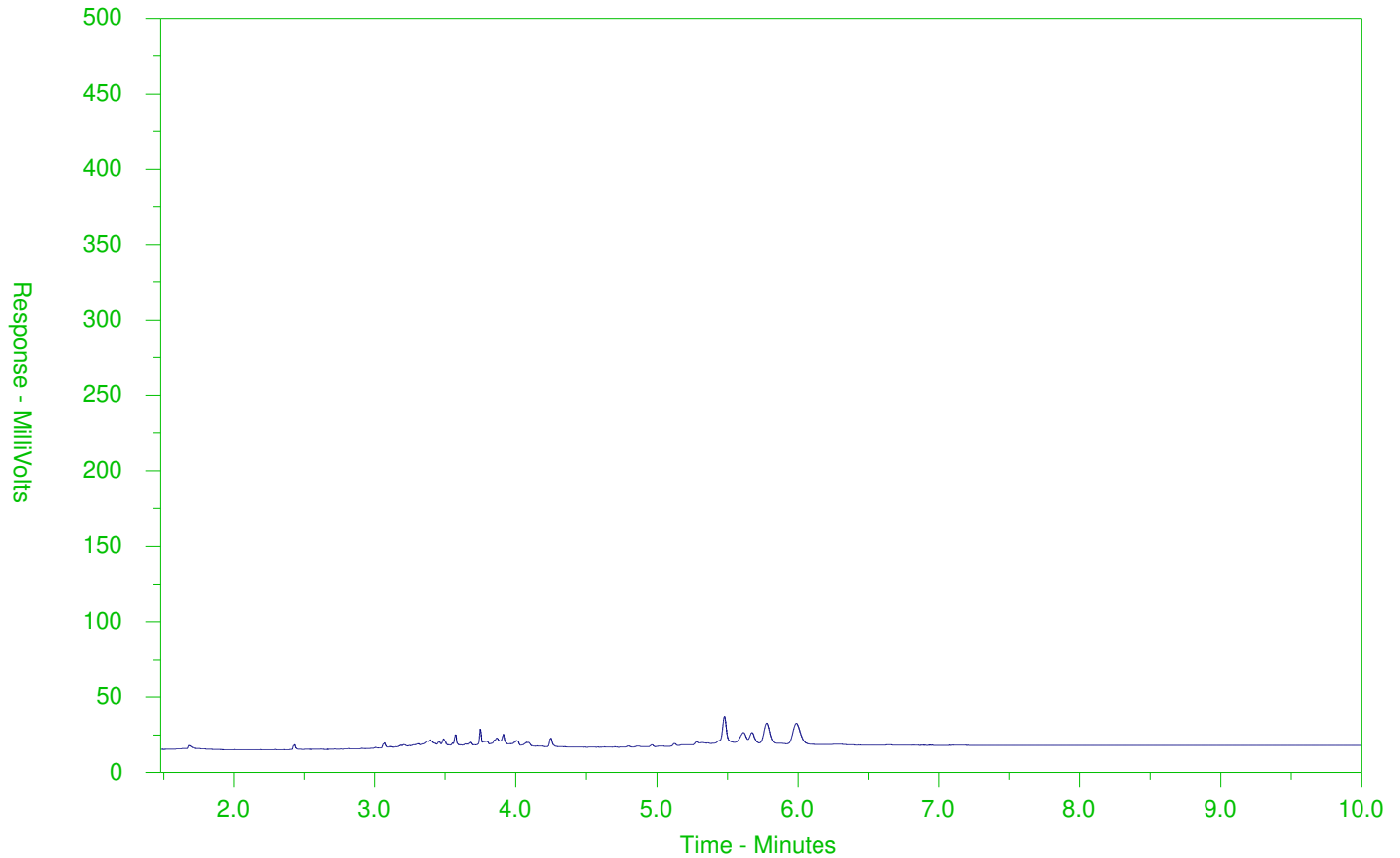
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2219243-017-E601.SG-L  
 Client Sample ID: 22-27 0-1



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

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

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

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

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



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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20 - 1009747

Page 1 of 2

Environmental Division  
Water 30

Work Order Reference  
WT2219243



Telephone: +1 519 886 89 0

<b>Report To</b> Contact and company name below will appear on the final report Company: <b>Omani-McLennan Inc.</b> Contact: <b>Daniel Elliot</b> Phone: <b>613-857-4436</b> Company address below will appear on the final report Street: <b>1755 Woodward Drive, Unit 200</b> City/Province: <b>OTTAWA ON</b> Postal Code: <b>K2C 0P9</b>		<b>Reports / Recipients</b> Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL) Merge COC/QCI Reports with COA <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 of Fax: <b>Antonia Cass</b> Email 2: <b>Daniel Elliot</b> Email 3: <b>Keisha Goss</b>		<b>Turnaround Time (TAT) Requested</b> <input checked="" type="checkbox"/> Routine (R) if received by 3pm M-F - no surcharges apply <input type="checkbox"/> 4 day (P4) if received by 3pm M-F - 20% rush surcharge minimum <input type="checkbox"/> 3 day (P3) if received by 3pm M-F - 25% rush surcharge minimum <input type="checkbox"/> 2 day (P2) if received by 3pm M-F - 50% rush surcharge minimum <input type="checkbox"/> 1 day (P1) if received by 3pm M-F - 100% rush surcharge minimum <input type="checkbox"/> Same day (E) if received by 10am M-F - 200% rush surcharge. Additional fee may apply to rush requests on weekends, statutory holidays and non-routine test. Date and Time Required for all E&P TATs:	
<b>Invoice Recipients</b> Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 of Fax: <b>Antonia Cass</b> Email 2:		<b>Analysis Request</b> Indicate Filtered (F), Preserved (P) or Filtered and Preserved (FP) Sample 1: <b>PHC</b> Sample 2: <b>BTEX</b> Sample 3: <b>VOC</b> Sample 4: <b>PAH</b> Sample 5: <b>Metals</b> Sample 6: <b>Cr (G)</b> Sample 7: <b>Hg</b> Sample 8: <b>PCBs</b>		<b>NUMBER OF CONTAINERS</b> Sample 1: 4 Sample 2: 2 Sample 3: 4 Sample 4: 4 Sample 5: 2 Sample 6: 3 Sample 7: 2 Sample 8: 4 Sample 9: 2 Sample 10: 4 Sample 11: 2 Sample 12: 4 Sample 13: 2 Sample 14: 4 Sample 15: 2	
<b>Project Information</b> ALS Account # / Quote #: <b>290036</b> Job #: <b>0006-0103</b> PO / AFE: LSD:		<b>ALS Contact: Eric Robbins</b> Date: <b>17-Oct-22</b> Time (hr:mm): Sample Type:		<b>Sampler: Antonia Cass</b> Date: <b>17-Oct-22</b> Time (hr:mm): Sample Type:	
<b>Shipping Information</b> Shipping Method: <input type="checkbox"/> NONE <input type="checkbox"/> ICE <input checked="" type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED Submission: Comments identified on Sample Receipt/Notification: <input type="checkbox"/> YES <input type="checkbox"/> NO Cooler/Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> Sample Custody Seal's Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A INITIAL COOLER TEMPERATURES °C: <b>7.4</b> FINAL COOLER TEMPERATURES °C: <b>11.0</b>		<b>SHIPMENT RELEASE (client use)</b> Released by: <b>Antonia Cass</b> Date: <b>20-Oct-22</b> Time: <b>22:00</b>		<b>FINAL SHIPMENT RECEPTION (ALS use only)</b> Received by: <b>MA</b> Date: <b>2022-10-22</b> Time: <b>10:30</b>	
<b>Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)</b> Drinking Water (DW) Samples (client use) Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO		<b>Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)</b> Notes: <b>Q. Page 153/104 - Table 7</b> <b>Samples for RSC</b>		<b>SHIPMENT RELEASE (client use)</b> Released by: <b>Goss</b> Date: <b>10/21/22</b> Time: <b>9:00</b>	

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION  
 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.  
 US1910 S02-778/799  
 WHITE - LABORATORY COPY YELLOW - CLIENT COPY

Chain of Custody (COC) / Analytical Request Form

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<b>Report To</b> Contact and company name below will appear on the final report Company: <u>Omni-McLann Inc.</u> Contact: <u>Daniel Elliot</u> Phone: <u>613-817-4436</u> Company address below will appear on the final report Street: <u>1755 Woodward Drive</u> City/Province: <u>Ottawa, ON</u> Postal Code: <u>K2L 0M9</u>		<b>Reports / Recipients</b> Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL) Merge COC/QCI Reports with COA <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A Compare Results to Criteria on Report - provide details below if box checked Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: <u>antoniamc@omni-mcclann.com</u> Email 2: <u>dan@omni-mcclann.com</u> Email 3: <u>Krishna@omni-mcclann.com</u>		<b>Turnaround Time (TAT) Requested</b> <input type="checkbox"/> Routine [R] if received by 3pm M-F - no surcharges apply <input type="checkbox"/> 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum <input type="checkbox"/> 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum <input type="checkbox"/> 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum <input type="checkbox"/> 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum Same day [E] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests		AFFIX ALS BARCODE LABEL HERE (ALS use only)	
Invoice To: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Copy of Invoice with Report: <input type="checkbox"/> YES <input type="checkbox"/> NO		<b>Invoice Recipients</b> Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: <u>inv@city@omni-mcclann.com</u> Email 2: _____ AFE/Cost Center: _____ Major/Minor Code: _____ Routing Code: _____ Requisition#: _____ Location: _____		<b>Date and Time Required for all TATs</b> For all tests with rush TATs requested, please contact your AM to confirm availability.		COMMUNITY ID: 000-0000	
<b>Company:</b> _____ <b>Contact:</b> _____		<b>Project Information</b> ALS Account # / Quote #: <u>Q90026</u> Job #: <u>0006-0103</u> PO / AFE: _____ LSD: _____		<b>Analysis Request</b> Indicate Filtered (F), Preserved (P) or Filtered and Preserved (FP) below		SUSPECTED HAZARD (see notes) EXTENDED STORAGE REQUIRED SAMPLES ON HOLD	
ALS Lab Work Order #: <u>WT0019243</u> Sample Identification and/or Coordinates (This description will appear on the report)		ALS Contact: <u>Eric Dobbins</u> Sampler: <u>Antonia Cass</u>		PHC BTEX VOC PAH Metals Cr(C6) Hg PCBs SAR RSC grain size PH		NUMBER OF CONTAINERS 2 4 4 4 4	
Drinking Water (DW) Samples (client use) Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO Are samples for human consumption use? <input type="checkbox"/> YES <input type="checkbox"/> NO		Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only) RSC 0.Rsg. 153/04 - Table 7 Samples for RSC		Cooling Method: <input type="checkbox"/> NONE <input type="checkbox"/> ICE <input checked="" type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED Submission Comments Identified on Sample Receipt Notification: <input type="checkbox"/> YES <input type="checkbox"/> NO Cooler/Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A <input type="checkbox"/> Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A INITIAL COOLER TEMPERATURES °C: _____ FINAL COOLER TEMPERATURES °C: _____		SAMPLE RECEIPT DETAILS (ALS use only)	
SHIPMENT RELEASE (client use) Released by: <u>Antonia Cass</u> Date: <u>20-Oct-22</u> Time: <u>22:00</u>		INITIAL SHIPMENT RECEPTION (ALS use only) Received by: <u>MA</u> Date: <u>2022-10-22</u> Time: <u>10:30</u>		SHIPPING INFORMATION 1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.		FINAL SHIPMENT RECEPTION (ALS use only)	



## CERTIFICATE OF ANALYSIS

<p><b>Work Order</b> : <b>WT2219916</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 19</p> <p><b>No. of samples analysed</b> : 19</p>	<p><b>Page</b> : 1 of 17</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo ON Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 28-Oct-2022 10:00</p> <p><b>Date Analysis Commenced</b> : 01-Nov-2022</p> <p><b>Issue Date</b> : 14-Nov-2022 17:18</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Hedy Lai	Team Leader - Inorganics	Sask Soils, Saskatoon, Saskatchewan
Jeremy Gingras	Team Leader - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Organics, Waterloo, Ontario
Jon Fisher	Department Manager - Inorganics	Inorganics, Waterloo, Ontario
Jon Fisher	Department Manager - Inorganics	Metals, Waterloo, Ontario
Joseph Scharbach		Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Organics, Waterloo, Ontario



## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances  
LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	no unit
%	percent
mg/kg	milligrams per kilogram
pH units	pH units

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

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

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

## Qualifiers

<i>Qualifier</i>	<i>Description</i>
AI	Analytical interferences may be present. Result may be biased high.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).



## Analytical Results

Sub-Matrix: Soil/Solid					Client sample ID				
(Matrix: Soil/Solid)					22-28 0.25-1.5	22-29 0.25-1.5	22-29 2.5-3.75	22-30 0-1.75	DUP1
Client sampling date / time					21-Oct-2022	21-Oct-2022	21-Oct-2022	21-Oct-2022	21-Oct-2022
Analyte	CAS Number	Method	LOR	Unit	WT2219916-001	WT2219916-002	WT2219916-003	WT2219916-004	WT2219916-005
					Result	Result	Result	Result	Result
<b>Physical Tests</b>									
moisture	----	E144	0.25	%	11.1	8.67	16.4	17.9	17.6
<b>Metals</b>									
antimony	7440-36-0	E440	0.10	mg/kg	<0.10	<0.10	<0.10	0.20	0.14
arsenic	7440-38-2	E440	0.10	mg/kg	1.67	2.51	2.87	2.28	2.07
barium	7440-39-3	E440	0.50	mg/kg	70.1	173	120	114	105
beryllium	7440-41-7	E440	0.10	mg/kg	0.23	0.33	0.46	0.44	0.40
boron	7440-42-8	E440	5.0	mg/kg	<5.0	8.5	<5.0	5.2	5.0
boron, hot water soluble	7440-42-8	E487	0.10	mg/kg	0.11	0.40	0.16	0.29	0.30
cadmium	7440-43-9	E440	0.020	mg/kg	0.035	0.087	0.143	0.593	0.507
chromium	7440-47-3	E440	0.50	mg/kg	11.1	13.9	20.3	23.9	22.8
cobalt	7440-48-4	E440	0.10	mg/kg	4.46	5.36	7.23	6.30	5.82
copper	7440-50-8	E440	0.50	mg/kg	<20.0	<20.0	<20.0	<20.0	<20.0
lead	7439-92-1	E440	0.50	mg/kg	4.18	7.30	8.21	30.2	22.3
mercury	7439-97-6	E510	0.0050	mg/kg	0.0068	0.0272	0.0445	0.0619	0.0557
molybdenum	7439-98-7	E440	0.10	mg/kg	0.42	0.55	0.52	0.59	0.52
nickel	7440-02-0	E440	0.50	mg/kg	7.77	10.1	12.9	12.6	11.5
selenium	7782-49-2	E440	0.20	mg/kg	<0.20	<0.20	0.24	0.35	0.36
silver	7440-22-4	E440	0.10	mg/kg	<0.10	<0.10	0.12	0.11	0.11
thallium	7440-28-0	E440	0.050	mg/kg	0.101	0.154	0.147	0.127	0.117
uranium	7440-61-1	E440	0.050	mg/kg	0.477	0.559	0.785	0.858	0.806
vanadium	7440-62-2	E440	0.20	mg/kg	22.5	21.6	33.8	35.4	33.9
zinc	7440-66-6	E440	2.0	mg/kg	15.4	20.4	31.8	106	87.2
<b>Speciated Metals</b>									
chromium, hexavalent [Cr VI]	18540-29-9	E532	0.10	mg/kg	<0.10	<0.10	0.22	<0.10	<0.10
<b>Volatile Organic Compounds</b>									
benzene	71-43-2	E611A	0.0050	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015	<0.015	<0.015	<0.015	<0.015
toluene	108-88-3	E611A	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050
xylene, m+p-	179601-23-1	E611A	0.030	mg/kg	<0.030	<0.030	<0.030	<0.030	<0.030
xylene, o-	95-47-6	E611A	0.030	mg/kg	<0.030	<0.030	<0.030	<0.030	<0.030



## Analytical Results

Sub-Matrix: Soil/Solid					Client sample ID	22-28 0.25-1.5	22-29 0.25-1.5	22-29 2.5-3.75	22-30 0-1.75	DUP1
(Matrix: Soil/Solid)					Client sampling date / time	21-Oct-2022	21-Oct-2022	21-Oct-2022	21-Oct-2022	21-Oct-2022
Analyte	CAS Number	Method	LOR	Unit	WT2219916-001	WT2219916-002	WT2219916-003	WT2219916-004	WT2219916-005	
					Result	Result	Result	Result	Result	
<b>Volatile Organic Compounds</b>										
xylenes, total	1330-20-7	E611A	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
BTEX, total	----	E611A	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
<b>Hydrocarbons</b>										
F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	<10	<10	<10	<10	<10
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	58	<50	<50	<50	55
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	76	<50	<50	<50	53
F1-BTEX	----	EC580	5.0	mg/kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
hydrocarbons, total (C6-C50)	----	EC581	80	mg/kg	<80	134	<80	<80	<80	108
chromatogram to baseline at nC50	n/a	E601.SG-L	-	-	YES	YES	YES	YES	YES	YES
<b>Hydrocarbons Surrogates</b>										
bromobenzotrifluoride, 2- (F2-F4 surr)	392-83-6	E601.SG-L	1.0	%	80.3	82.8	84.3	84.8	85.3	85.3
dichlorotoluene, 3,4-	97-75-0	E581.F1	1.0	%	115	99.3	96.2	82.3	85.2	85.2
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	460-00-4	E611A	0.10	%	113	98.8	91.0	90.6	87.4	87.4
difluorobenzene, 1,4-	540-36-3	E611A	0.10	%	129	111	102	102	99.2	99.2
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	83-32-9	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
acenaphthylene	208-96-8	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
anthracene	120-12-7	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
benz(a)anthracene	56-55-3	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
benzo(a)pyrene	50-32-8	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
benzo(b+j)fluoranthene	n/a	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
benzo(g,h,i)perylene	191-24-2	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
benzo(k)fluoranthene	207-08-9	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
chrysene	218-01-9	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
dibenz(a,h)anthracene	53-70-3	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
fluoranthene	206-44-0	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
fluorene	86-73-7	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
indeno(1,2,3-c,d)pyrene	193-39-5	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050





## Analytical Results

Sub-Matrix: Soil/Solid

(Matrix: Soil/Solid)

					Client sample ID	22-28 0.25-1.5	22-29 0.25-1.5	22-29 2.5-3.75	22-30 0-1.75	DUP1
					Client sampling date / time	21-Oct-2022	21-Oct-2022	21-Oct-2022	21-Oct-2022	21-Oct-2022
Analyte	CAS Number	Method	LOR	Unit	WT2219916-001	WT2219916-002	WT2219916-003	WT2219916-004	WT2219916-005	
					Result	Result	Result	Result	Result	
<b>Polycyclic Aromatic Hydrocarbons</b>										
methylnaphthalene, 1-	90-12-0	E642F	0.030	mg/kg	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
methylnaphthalene, 1+2-	----	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
methylnaphthalene, 2-naphthalene	91-57-6	E642F	0.030	mg/kg	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
phenanthrene	91-20-3	E642F	0.010	mg/kg	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
pyrene	85-01-8	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	129-00-0	E642F	0.050	mg/kg	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
<b>Polycyclic Aromatic Hydrocarbons Surrogates</b>										
fluorobiphenyl, 2-	321-60-8	E642F	0.1	%	88.5	90.6	90.4	91.4	92.2	
terphenyl-d14, p-	1718-51-0	E642F	0.1	%	84.6	88.4	90.3	93.1	94.1	

Please refer to the General Comments section for an explanation of any qualifiers detected.



## Analytical Results

Sub-Matrix: Soil/Solid

Client sample ID

					22-31 0-1	22-31 2.5-3.5	22-14B 0-2	22-14B 2.5-4	DUP 2
					24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022
Analyte	CAS Number	Method	LOR	Unit	WT2219916-006	WT2219916-007	WT2219916-008	WT2219916-009	WT2219916-010
					Result	Result	Result	Result	Result
<b>Physical Tests</b>									
moisture	----	E144	0.25	%	10.2	----	9.14	14.3	12.0
pH (1:2 soil:CaCl2-aq)	----	E108A	0.10	pH units	----	7.88	----	----	----
<b>Particle Size</b>									
passing (9.5 mm)	----	E181	1.0	%	----	99.2	----	----	----
passing (4.75 mm)	----	E181	1.0	%	----	98.6	----	----	----
passing (19 mm)	----	E181	1.0	%	----	100	----	----	----
passing (25.4 mm)	----	E181	1.0	%	----	100	----	----	----
passing (38.1 mm)	----	E181	1.0	%	----	100	----	----	----
passing (50.8 mm)	----	E181	1.0	%	----	100	----	----	----
passing (76.2 mm)	----	E181	1.0	%	----	100	----	----	----
passing (1.0 mm)	----	E182	1.0	%	----	90.5	----	----	----
passing (0.841 mm)	----	E182	1.0	%	----	89.3	----	----	----
passing (0.50 mm)	----	E182	1.0	%	----	82.9	----	----	----
passing (0.420 mm)	----	E182	1.0	%	----	81.2	----	----	----
passing (0.250 mm)	----	E182	1.0	%	----	71.5	----	----	----
passing (0.149 mm)	----	E182	1.0	%	----	60.0	----	----	----
passing (0.125 mm)	----	E182	1.0	%	----	55.8	----	----	----
passing (0.075 mm)	----	E182	1.0	%	----	47.1	----	----	----
passing (0.063 mm)	----	E182	1.0	%	----	44.2	----	----	----
passing (0.05 mm)	----	E182	1.0	%	----	41.0	----	----	----
passing (0.0312 mm)	----	E183	1.0	%	----	35.4	----	----	----
passing (0.020 mm)	----	E183	1.0	%	----	30.3	----	----	----
passing (0.005 mm)	----	E183	1.0	%	----	15.4	----	----	----
passing (0.004 mm)	----	E183	1.0	%	----	13.7	----	----	----
passing (0.002 mm)	----	E183	1.0	%	----	9.0	----	----	----
grain size curve	----	E185	-	-	----	See Attached	----	----	----
passing (2.0 mm)	----	E181	1.0	%	----	97.1	----	----	----
<b>Metals</b>									
antimony	7440-36-0	E440	0.10	mg/kg	<0.10	----	<0.10	<0.10	<0.10
arsenic	7440-38-2	E440	0.10	mg/kg	1.92	----	1.68	2.73	1.76



## Analytical Results

Sub-Matrix: Soil/Solid

Client sample ID

(Matrix: Soil/Solid)

					22-31 0-1	22-31 2.5-3.5	22-14B 0-2	22-14B 2.5-4	DUP 2
Client sampling date / time					24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022
Analyte	CAS Number	Method	LOR	Unit	WT2219916-006	WT2219916-007	WT2219916-008	WT2219916-009	WT2219916-010
					Result	Result	Result	Result	Result
<b>Metals</b>									
barium	7440-39-3	E440	0.50	mg/kg	103	----	195	142	188
beryllium	7440-41-7	E440	0.10	mg/kg	0.29	----	0.31	0.48	0.34
boron	7440-42-8	E440	5.0	mg/kg	<5.0	----	7.8	<5.0	7.4
boron, hot water soluble	7440-42-8	E487	0.10	mg/kg	0.14	----	0.21	0.12	0.17
cadmium	7440-43-9	E440	0.020	mg/kg	0.112	----	0.069	0.142	0.074
chromium	7440-47-3	E440	0.50	mg/kg	18.2	----	14.8	24.0	15.4
cobalt	7440-48-4	E440	0.10	mg/kg	5.59	----	4.64	7.95	4.94
copper	7440-50-8	E440	0.50	mg/kg	<20.0	----	<20.0	20.7	<20.0
lead	7439-92-1	E440	0.50	mg/kg	8.24	----	7.21	9.05	7.83
mercury	7439-97-6	E510	0.0050	mg/kg	0.0137	----	0.0178	0.0299	0.0180
molybdenum	7439-98-7	E440	0.10	mg/kg	0.43	----	0.48	0.62	0.49
nickel	7440-02-0	E440	0.50	mg/kg	9.86	----	10.1	14.7	10.8
selenium	7782-49-2	E440	0.20	mg/kg	<0.20	----	<0.20	<0.20	<0.20
silver	7440-22-4	E440	0.10	mg/kg	<0.10	----	<0.10	0.13	<0.10
thallium	7440-28-0	E440	0.050	mg/kg	0.103	----	0.147	0.168	0.152
uranium	7440-61-1	E440	0.050	mg/kg	0.535	----	0.488	0.777	0.504
vanadium	7440-62-2	E440	0.20	mg/kg	26.9	----	24.2	38.6	25.3
zinc	7440-66-6	E440	2.0	mg/kg	29.4	----	20.7	42.6	22.0
<b>Speciated Metals</b>									
chromium, hexavalent [Cr VI]	18540-29-9	E532	0.10	mg/kg	<0.10	----	<0.10	<0.10	<0.10
<b>Volatile Organic Compounds</b>									
benzene	71-43-2	E611A	0.0050	mg/kg	<0.0050	----	<0.0050	<0.0050	<0.0050
ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015	----	<0.015	<0.015	<0.015
toluene	108-88-3	E611A	0.050	mg/kg	<0.050	----	<0.050	<0.050	<0.050
xylene, m+p-	179601-23-1	E611A	0.030	mg/kg	<0.030	----	<0.030	<0.030	<0.030
xylene, o-	95-47-6	E611A	0.030	mg/kg	<0.030	----	<0.030	<0.030	<0.030
xylenes, total	1330-20-7	E611A	0.050	mg/kg	<0.050	----	<0.050	<0.050	<0.050
BTEX, total	----	E611A	0.10	mg/kg	<0.10	----	<0.10	<0.10	<0.10
<b>Hydrocarbons</b>									
F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0	----	<5.0	<5.0	<5.0



## Analytical Results

Sub-Matrix: Soil/Solid					Client sample ID	22-31 0-1	22-31 2.5-3.5	22-14B 0-2	22-14B 2.5-4	DUP 2
(Matrix: Soil/Solid)					Client sampling date / time	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022
Analyte	CAS Number	Method	LOR	Unit	WT2219916-006	WT2219916-007	WT2219916-008	WT2219916-009	WT2219916-010	
					Result	Result	Result	Result	Result	
<b>Hydrocarbons</b>										
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	----	<10	<10	<10	
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	----	536	70	628	
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	119	----	1070	101	1290	
F4G-sg	----	E601.F4G-L	250	mg/kg	720	----	3900	----	4950	
F1-BTEX	----	EC580	5.0	mg/kg	<5.0	----	<5.0	<5.0	<5.0	
hydrocarbons, total (C6-C50)	----	EC581	80	mg/kg	119	----	1610	171	1920	
chromatogram to baseline at nC50	n/a	E601.SG-L	-	-	NO	----	NO	YES	NO	
<b>Hydrocarbons Surrogates</b>										
bromobenzotrifluoride, 2- (F2-F4 surr)	392-83-6	E601.SG-L	1.0	%	84.3	----	85.4	89.8	83.4	
dichlorotoluene, 3,4-	97-75-0	E581.F1	1.0	%	86.5	----	80.9	84.2	85.4	
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	460-00-4	E611A	0.10	%	87.8	----	97.5	94.9	95.3	
difluorobenzene, 1,4-	540-36-3	E611A	0.10	%	100	----	114	108	110	
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	83-32-9	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	<0.050	<0.050 <sup>DLM</sup>	
acenaphthylene	208-96-8	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	<0.050	<0.050 <sup>DLM</sup>	
anthracene	120-12-7	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	<0.050	<0.050 <sup>DLM</sup>	
benz(a)anthracene	56-55-3	E642F	0.050	mg/kg	0.057	----	<0.050 <sup>DLM</sup>	<0.050	<0.050 <sup>DLM</sup>	
benzo(a)pyrene	50-32-8	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	<0.050	<0.050 <sup>DLM</sup>	
benzo(b+j)fluoranthene	n/a	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	<0.050	<0.050 <sup>DLM</sup>	
benzo(g,h,i)perylene	191-24-2	E642F	0.050	mg/kg	<0.050	----	0.096	<0.050	0.088	
benzo(k)fluoranthene	207-08-9	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	<0.050	<0.050 <sup>DLM</sup>	
chrysene	218-01-9	E642F	0.050	mg/kg	0.051	----	0.097 <sup>AI</sup>	<0.050	0.089 <sup>AI</sup>	
dibenz(a,h)anthracene	53-70-3	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	<0.050	<0.050 <sup>DLM</sup>	
fluoranthene	206-44-0	E642F	0.050	mg/kg	0.112	----	<0.050 <sup>DLM</sup>	<0.050	<0.050 <sup>DLM</sup>	
fluorene	86-73-7	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	<0.050	<0.050 <sup>DLM</sup>	
indeno(1,2,3-c,d)pyrene	193-39-5	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	<0.050	<0.050 <sup>DLM</sup>	
methylnaphthalene, 1-	90-12-0	E642F	0.030	mg/kg	<0.030	----	0.042	<0.030	0.033	
methylnaphthalene, 1+2-	----	E642F	0.050	mg/kg	<0.050	----	0.096	<0.050	0.071	
methylnaphthalene, 2-	91-57-6	E642F	0.030	mg/kg	<0.030	----	0.054	<0.030	0.038	



## Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)					Client sample ID	22-31 0-1	22-31 2.5-3.5	22-14B 0-2	22-14B 2.5-4	DUP 2
Client sampling date / time					24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022
Analyte	CAS Number	Method	LOR	Unit	WT2219916-006	WT2219916-007	WT2219916-008	WT2219916-009	WT2219916-010	
					Result	Result	Result	Result	Result	
<b>Polycyclic Aromatic Hydrocarbons</b>										
naphthalene	91-20-3	E642F	0.010	mg/kg	<0.010	----	<0.020 <sup>DLM</sup>	<0.010	<0.020 <sup>DLM</sup>	
phenanthrene	85-01-8	E642F	0.050	mg/kg	0.105	----	0.071	<0.050	0.057	
pyrene	129-00-0	E642F	0.050	mg/kg	0.083	----	<0.050 <sup>DLM</sup>	<0.050	<0.050 <sup>DLM</sup>	
<b>Polycyclic Aromatic Hydrocarbons Surrogates</b>										
fluorobiphenyl, 2-	321-60-8	E642F	0.1	%	92.0	----	77.5	91.6	79.6	
terphenyl-d14, p-	1718-51-0	E642F	0.1	%	93.7	----	78.0	94.4	80.6	

Please refer to the General Comments section for an explanation of any qualifiers detected.



## Analytical Results

Sub-Matrix: Soil/Solid

Client sample ID

					22-15B 0-1	22-15B 4-4.25	22-16B 0-1	22-16B 2.5-3	22-17B 0-0.75
					25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	26-Oct-2022
Analyte	CAS Number	Method	LOR	Unit	WT2219916-011	WT2219916-012	WT2219916-013	WT2219916-014	WT2219916-015
					Result	Result	Result	Result	Result
<b>Physical Tests</b>									
moisture	----	E144	0.25	%	12.6	9.52	5.12	11.2	3.06
<b>Metals</b>									
antimony	7440-36-0	E440	0.10	mg/kg	0.47	----	<0.10	----	<0.10
arsenic	7440-38-2	E440	0.10	mg/kg	2.15	----	2.02	----	1.73
barium	7440-39-3	E440	0.50	mg/kg	89.9	----	122	----	84.2
beryllium	7440-41-7	E440	0.10	mg/kg	0.28	----	0.22	----	0.23
boron	7440-42-8	E440	5.0	mg/kg	<5.0	----	9.1	----	6.7
boron, hot water soluble	7440-42-8	E487	0.10	mg/kg	0.28	----	0.21	----	0.19
cadmium	7440-43-9	E440	0.020	mg/kg	0.279	----	0.030	----	0.040
chromium	7440-47-3	E440	0.50	mg/kg	16.5	----	8.10	----	8.22
cobalt	7440-48-4	E440	0.10	mg/kg	4.59	----	4.38	----	2.99
copper	7440-50-8	E440	0.50	mg/kg	<20.0	----	<20.0	----	<20.0
lead	7439-92-1	E440	0.50	mg/kg	59.6	----	9.63	----	7.53
mercury	7439-97-6	E510	0.0050	mg/kg	0.0230	----	0.0099	----	0.0074
molybdenum	7439-98-7	E440	0.10	mg/kg	0.51	----	0.77	----	0.60
nickel	7440-02-0	E440	0.50	mg/kg	14.0	----	10.1	----	8.75
selenium	7782-49-2	E440	0.20	mg/kg	<0.20	----	<0.20	----	<0.20
silver	7440-22-4	E440	0.10	mg/kg	0.12	----	<0.10	----	<0.10
thallium	7440-28-0	E440	0.050	mg/kg	0.084	----	0.211	----	0.103
uranium	7440-61-1	E440	0.050	mg/kg	0.582	----	0.299	----	0.308
vanadium	7440-62-2	E440	0.20	mg/kg	22.1	----	12.0	----	20.9
zinc	7440-66-6	E440	2.0	mg/kg	46.7	----	10.2	----	12.6
<b>Speciated Metals</b>									
chromium, hexavalent [Cr VI]	18540-29-9	E532	0.10	mg/kg	<0.10	----	<0.10	----	<0.10
<b>Volatile Organic Compounds</b>									
Acetone	67-64-1	E611D	0.50	mg/kg	----	<0.50	----	<0.50	----
benzene	71-43-2	E611A	0.0050	mg/kg	<0.0050	----	<0.0050	----	<0.0050
benzene	71-43-2	E611D	0.0050	mg/kg	----	<0.0050	----	<0.0050	----
bromodichloromethane	75-27-4	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----
bromoform	75-25-2	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----



## Analytical Results

Sub-Matrix: Soil/Solid					Client sample ID	22-15B 0-1	22-15B 4-4.25	22-16B 0-1	22-16B 2.5-3	22-17B 0-0.75
(Matrix: Soil/Solid)					Client sampling date / time	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	26-Oct-2022
Analyte	CAS Number	Method	LOR	Unit	WT2219916-011	WT2219916-012	WT2219916-013	WT2219916-014	WT2219916-015	
					Result	Result	Result	Result	Result	
<b>Volatile Organic Compounds</b>										
bromomethane	74-83-9	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
chlorobenzene	108-90-7	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
chloroform	67-66-3	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
dibromochloromethane	124-48-1	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
dichloromethane	75-09-2	E611D	0.045	mg/kg	----	<0.045	----	<0.045	----	
dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
dichloropropylene, cis+trans-1,3-	542-75-6	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	----	<0.030	----	<0.030	----	
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	----	<0.030	----	<0.030	----	
ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015	----	<0.015	----	<0.015	
ethylbenzene	100-41-4	E611D	0.015	mg/kg	----	<0.015	----	<0.015	----	
hexane, n-	110-54-3	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	----	<0.50	----	<0.50	----	
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	----	<0.50	----	<0.50	----	
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	----	<0.040	----	<0.040	----	
styrene	100-42-5	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	
tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----	



## Analytical Results

Sub-Matrix: Soil/Solid

Client sample ID

(Matrix: Soil/Solid)

					22-15B 0-1	22-15B 4-4.25	22-16B 0-1	22-16B 2.5-3	22-17B 0-0.75
Client sampling date / time					25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	26-Oct-2022
Analyte	CAS Number	Method	LOR	Unit	WT2219916-011	WT2219916-012	WT2219916-013	WT2219916-014	WT2219916-015
					Result	Result	Result	Result	Result
<b>Volatile Organic Compounds</b>									
toluene	108-88-3	E611A	0.050	mg/kg	<0.050	----	<0.050	----	<0.050
toluene	108-88-3	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----
trichloroethylene	79-01-6	E611D	0.010	mg/kg	----	<0.010	----	<0.010	----
trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----
vinyl chloride	75-01-4	E611D	0.020	mg/kg	----	<0.020	----	<0.020	----
xylene, m+p-	179601-23-1	E611A	0.030	mg/kg	<0.030	----	<0.030	----	<0.030
xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	----	<0.030	----	<0.030	----
xylene, o-	95-47-6	E611A	0.030	mg/kg	<0.030	----	<0.030	----	<0.030
xylene, o-	95-47-6	E611D	0.030	mg/kg	----	<0.030	----	<0.030	----
xylenes, total	1330-20-7	E611A	0.050	mg/kg	<0.050	----	<0.050	----	<0.050
xylenes, total	1330-20-7	E611D	0.050	mg/kg	----	<0.050	----	<0.050	----
BTEX, total	----	E611A	0.10	mg/kg	<0.10	----	<0.10	----	<0.10
BTEX, total	----	E611D	0.10	mg/kg	----	<0.10	----	<0.10	----
<b>Hydrocarbons</b>									
F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0	----	<5.0	----	<5.0
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	----	<20 <sup>DLM</sup>	----	<50 <sup>DLM</sup>
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	52	----	365 <sup>DLM</sup>	----	1540 <sup>DLM</sup>
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	82	----	1530 <sup>DLM</sup>	----	5020 <sup>DLM</sup>
F4G-sg	----	E601.F4G-L	250	mg/kg	----	----	7040	----	18100
F1-BTEX	----	EC580	5.0	mg/kg	<5.0	----	<5.0	----	<5.0
hydrocarbons, total (C6-C50)	----	EC581	80	mg/kg	134	----	1900	----	6560
chromatogram to baseline at nC50	n/a	E601.SG-L	-	-	YES	----	NO	----	NO
<b>Hydrocarbons Surrogates</b>									
bromobenzotrifluoride, 2- (F2-F4 surr)	392-83-6	E601.SG-L	1.0	%	87.1	----	82.8	----	83.6
dichlorotoluene, 3,4-	97-75-0	E581.F1	1.0	%	89.8	----	77.8	----	63.2
<b>Volatile Organic Compounds Surrogates</b>									
bromofluorobenzene, 4-	460-00-4	E611A	0.10	%	96.4	----	96.9	----	95.3
bromofluorobenzene, 4-	460-00-4	E611D	0.10	%	----	112	----	108	----





## Analytical Results

Sub-Matrix: Soil/Solid

Client sample ID

(Matrix: Soil/Solid)

					22-15B 0-1	22-15B 4-4.25	22-16B 0-1	22-16B 2.5-3	22-17B 0-0.75
Client sampling date / time					25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	26-Oct-2022
Analyte	CAS Number	Method	LOR	Unit	WT2219916-011	WT2219916-012	WT2219916-013	WT2219916-014	WT2219916-015
					Result	Result	Result	Result	Result
<b>Volatile Organic Compounds Surrogates</b>									
difluorobenzene, 1,4-	540-36-3	E611A	0.10	%	110	----	112	----	113
difluorobenzene, 1,4-	540-36-3	E611D	0.10	%	----	95.4	----	90.9	----
<b>Polycyclic Aromatic Hydrocarbons</b>									
acenaphthene	83-32-9	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	----	<0.050 <sup>DLM</sup>
acenaphthylene	208-96-8	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	----	<0.050 <sup>DLM</sup>
anthracene	120-12-7	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	----	<0.050 <sup>DLM</sup>
benz(a)anthracene	56-55-3	E642F	0.050	mg/kg	0.074	----	<0.050 <sup>DLM</sup>	----	<0.050 <sup>DLM</sup>
benzo(a)pyrene	50-32-8	E642F	0.050	mg/kg	0.092	----	<0.050 <sup>DLM</sup>	----	0.072
benzo(b+j)fluoranthene	n/a	E642F	0.050	mg/kg	0.114	----	<0.050 <sup>DLM</sup>	----	0.081
benzo(g,h,i)perylene	191-24-2	E642F	0.050	mg/kg	0.069	----	<0.050 <sup>DLM</sup>	----	0.177
benzo(k)fluoranthene	207-08-9	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	----	<0.050 <sup>DLM</sup>
chrysene	218-01-9	E642F	0.050	mg/kg	0.081	----	<0.050 <sup>DLM</sup>	----	0.198 <sup>AI</sup>
dibenz(a,h)anthracene	53-70-3	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	----	0.050
fluoranthene	206-44-0	E642F	0.050	mg/kg	0.081	----	<0.050 <sup>DLM</sup>	----	<0.050 <sup>DLM</sup>
fluorene	86-73-7	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	----	<0.050 <sup>DLM</sup>
indeno(1,2,3-c,d)pyrene	193-39-5	E642F	0.050	mg/kg	0.060	----	<0.050 <sup>DLM</sup>	----	0.055
methylnaphthalene, 1-	90-12-0	E642F	0.030	mg/kg	<0.030	----	<0.030 <sup>DLM</sup>	----	<0.030 <sup>DLM</sup>
methylnaphthalene, 1+2-	----	E642F	0.050	mg/kg	<0.050	----	<0.050	----	<0.050
methylnaphthalene, 2-	91-57-6	E642F	0.030	mg/kg	<0.030	----	<0.030 <sup>DLM</sup>	----	<0.030 <sup>DLM</sup>
naphthalene	91-20-3	E642F	0.010	mg/kg	<0.010	----	<0.020 <sup>DLM</sup>	----	<0.020 <sup>DLM</sup>
phenanthrene	85-01-8	E642F	0.050	mg/kg	<0.050	----	<0.050 <sup>DLM</sup>	----	0.053
pyrene	129-00-0	E642F	0.050	mg/kg	0.068	----	<0.050 <sup>DLM</sup>	----	<0.050 <sup>DLM</sup>
<b>Polycyclic Aromatic Hydrocarbons Surrogates</b>									
fluorobiphenyl, 2-	321-60-8	E642F	0.1	%	92.0	----	78.5	----	74.2
terphenyl-d14, p-	1718-51-0	E642F	0.1	%	96.8	----	78.6	----	76.6

Please refer to the General Comments section for an explanation of any qualifiers detected.



## Analytical Results

Sub-Matrix: Soil/Solid					Client sample ID	22-17B 2.5-3.5	DUP3	22-03C 0-1	22-03C 2.5-2.75	----
(Matrix: Soil/Solid)					Client sampling date / time	26-Oct-2022	26-Oct-2022	26-Oct-2022	26-Oct-2022	----
Analyte	CAS Number	Method	LOR	Unit	WT2219916-016	WT2219916-017	WT2219916-018	WT2219916-019	-----	
					Result	Result	Result	Result	----	
<b>Physical Tests</b>										
moisture	----	E144	0.25	%	10.6	11.2	16.1	22.6	----	
<b>Metals</b>										
antimony	7440-36-0	E440	0.10	mg/kg	----	----	0.26	----	----	
arsenic	7440-38-2	E440	0.10	mg/kg	----	----	2.17	----	----	
barium	7440-39-3	E440	0.50	mg/kg	----	----	96.4	----	----	
beryllium	7440-41-7	E440	0.10	mg/kg	----	----	0.37	----	----	
boron	7440-42-8	E440	5.0	mg/kg	----	----	5.8	----	----	
boron, hot water soluble	7440-42-8	E487	0.10	mg/kg	----	----	0.23	----	----	
cadmium	7440-43-9	E440	0.020	mg/kg	----	----	0.258	----	----	
chromium	7440-47-3	E440	0.50	mg/kg	----	----	25.2	----	----	
cobalt	7440-48-4	E440	0.10	mg/kg	----	----	6.15	----	----	
copper	7440-50-8	E440	0.50	mg/kg	----	----	20.4	----	----	
lead	7439-92-1	E440	0.50	mg/kg	----	----	24.1	----	----	
mercury	7439-97-6	E510	0.0050	mg/kg	----	----	0.0216	----	----	
molybdenum	7439-98-7	E440	0.10	mg/kg	----	----	0.68	----	----	
nickel	7440-02-0	E440	0.50	mg/kg	----	----	13.4	----	----	
selenium	7782-49-2	E440	0.20	mg/kg	----	----	0.21	----	----	
silver	7440-22-4	E440	0.10	mg/kg	----	----	<0.10	----	----	
thallium	7440-28-0	E440	0.050	mg/kg	----	----	0.135	----	----	
uranium	7440-61-1	E440	0.050	mg/kg	----	----	0.598	----	----	
vanadium	7440-62-2	E440	0.20	mg/kg	----	----	36.0	----	----	
zinc	7440-66-6	E440	2.0	mg/kg	----	----	65.2	----	----	
<b>Speciated Metals</b>										
chromium, hexavalent [Cr VI]	18540-29-9	E532	0.10	mg/kg	----	----	<0.10	----	----	
<b>Volatile Organic Compounds</b>										
Acetone	67-64-1	E611D	0.50	mg/kg	<0.50	<0.50	----	<0.50	----	
benzene	71-43-2	E611A	0.0050	mg/kg	----	----	<0.0050	----	----	
benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050	<0.0050	----	<0.0050	----	
bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
bromoform	75-25-2	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	



## Analytical Results

Sub-Matrix: Soil/Solid					Client sample ID	22-17B 2.5-3.5	DUP3	22-03C 0-1	22-03C 2.5-2.75	----
(Matrix: Soil/Solid)					Client sampling date / time	26-Oct-2022	26-Oct-2022	26-Oct-2022	26-Oct-2022	----
Analyte	CAS Number	Method	LOR	Unit	WT2219916-016	WT2219916-017	WT2219916-018	WT2219916-019	-----	
					Result	Result	Result	Result	----	
<b>Volatile Organic Compounds</b>										
bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
chloroform	67-66-3	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	<0.045	----	<0.045	----	
dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
dichloropropylene, cis+trans-1,3-	542-75-6	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030	<0.030	----	<0.030	----	
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030	<0.030	----	<0.030	----	
ethylbenzene	100-41-4	E611A	0.015	mg/kg	----	----	<0.015	----	----	
ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	<0.015	----	<0.015	----	
hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50	<0.50	----	<0.50	----	
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50	<0.50	----	<0.50	----	
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040	<0.040	----	<0.040	----	
styrene	100-42-5	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	



## Analytical Results

Sub-Matrix: Soil/Solid					Client sample ID	22-17B 2.5-3.5	DUP3	22-03C 0-1	22-03C 2.5-2.75	----
(Matrix: Soil/Solid)					Client sampling date / time	26-Oct-2022	26-Oct-2022	26-Oct-2022	26-Oct-2022	----
Analyte	CAS Number	Method	LOR	Unit	WT2219916-016	WT2219916-017	WT2219916-018	WT2219916-019	-----	
					Result	Result	Result	Result	----	
<b>Volatile Organic Compounds</b>										
toluene	108-88-3	E611A	0.050	mg/kg	----	----	<0.050	----	----	
toluene	108-88-3	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010	<0.010	----	<0.010	----	
trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020	<0.020	----	<0.020	----	
xylene, m+p-	179601-23-1	E611A	0.030	mg/kg	----	----	<0.030	----	----	
xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030	<0.030	----	<0.030	----	
xylene, o-	95-47-6	E611A	0.030	mg/kg	----	----	<0.030	----	----	
xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030	<0.030	----	<0.030	----	
xylenes, total	1330-20-7	E611A	0.050	mg/kg	----	----	<0.050	----	----	
xylenes, total	1330-20-7	E611D	0.050	mg/kg	<0.050	<0.050	----	<0.050	----	
BTEX, total	----	E611A	0.10	mg/kg	----	----	<0.10	----	----	
BTEX, total	----	E611D	0.10	mg/kg	<0.10	<0.10	----	<0.10	----	
<b>Hydrocarbons</b>										
F1 (C6-C10)	----	E581.F1	5.0	mg/kg	----	----	<5.0	----	----	
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	----	----	<10	----	----	
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	----	----	106	----	----	
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	----	----	405	----	----	
F4G-sg	----	E601.F4G-L	250	mg/kg	----	----	2370	----	----	
F1-BTEX	----	EC580	5.0	mg/kg	----	----	<5.0	----	----	
hydrocarbons, total (C6-C50)	----	EC581	80	mg/kg	----	----	511	----	----	
chromatogram to baseline at nC50	n/a	E601.SG-L	-	-	----	----	NO	----	----	
<b>Hydrocarbons Surrogates</b>										
bromobenzotrifluoride, 2- (F2-F4 surr)	392-83-6	E601.SG-L	1.0	%	----	----	80.3	----	----	
dichlorotoluene, 3,4-	97-75-0	E581.F1	1.0	%	----	----	101	----	----	
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	460-00-4	E611A	0.10	%	----	----	106	----	----	
bromofluorobenzene, 4-	460-00-4	E611D	0.10	%	105	103	----	111	----	



## Analytical Results

Sub-Matrix: Soil/Solid					Client sample ID	22-17B 2.5-3.5	DUP3	22-03C 0-1	22-03C 2.5-2.75	----
(Matrix: Soil/Solid)					Client sampling date / time	26-Oct-2022	26-Oct-2022	26-Oct-2022	26-Oct-2022	----
Analyte	CAS Number	Method	LOR	Unit	WT2219916-016	WT2219916-017	WT2219916-018	WT2219916-019	-----	
					Result	Result	Result	Result	----	
<b>Volatile Organic Compounds Surrogates</b>										
difluorobenzene, 1,4-	540-36-3	E611A	0.10	%	----	----	118	----	----	
difluorobenzene, 1,4-	540-36-3	E611D	0.10	%	88.6	85.9	----	92.9	----	
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	83-32-9	E642F	0.050	mg/kg	----	----	<0.050 <sup>DLM</sup>	----	----	
acenaphthylene	208-96-8	E642F	0.050	mg/kg	----	----	<0.050 <sup>DLM</sup>	----	----	
anthracene	120-12-7	E642F	0.050	mg/kg	----	----	<0.050 <sup>DLM</sup>	----	----	
benz(a)anthracene	56-55-3	E642F	0.050	mg/kg	----	----	<0.050 <sup>DLM</sup>	----	----	
benzo(a)pyrene	50-32-8	E642F	0.050	mg/kg	----	----	<0.050 <sup>DLM</sup>	----	----	
benzo(b+j)fluoranthene	n/a	E642F	0.050	mg/kg	----	----	<0.050 <sup>DLM</sup>	----	----	
benzo(g,h,i)perylene	191-24-2	E642F	0.050	mg/kg	----	----	<0.050 <sup>DLM</sup>	----	----	
benzo(k)fluoranthene	207-08-9	E642F	0.050	mg/kg	----	----	<0.050 <sup>DLM</sup>	----	----	
chrysene	218-01-9	E642F	0.050	mg/kg	----	----	<0.050 <sup>DLM</sup>	----	----	
dibenz(a,h)anthracene	53-70-3	E642F	0.050	mg/kg	----	----	<0.050 <sup>DLM</sup>	----	----	
fluoranthene	206-44-0	E642F	0.050	mg/kg	----	----	<0.050 <sup>DLM</sup>	----	----	
fluorene	86-73-7	E642F	0.050	mg/kg	----	----	<0.050 <sup>DLM</sup>	----	----	
indeno(1,2,3-c,d)pyrene	193-39-5	E642F	0.050	mg/kg	----	----	<0.050 <sup>DLM</sup>	----	----	
methylnaphthalene, 1-	90-12-0	E642F	0.030	mg/kg	----	----	<0.030 <sup>DLM</sup>	----	----	
methylnaphthalene, 1+2-	----	E642F	0.050	mg/kg	----	----	<0.050	----	----	
methylnaphthalene, 2-	91-57-6	E642F	0.030	mg/kg	----	----	<0.030 <sup>DLM</sup>	----	----	
naphthalene	91-20-3	E642F	0.010	mg/kg	----	----	<0.020 <sup>DLM</sup>	----	----	
phenanthrene	85-01-8	E642F	0.050	mg/kg	----	----	<0.050 <sup>DLM</sup>	----	----	
pyrene	129-00-0	E642F	0.050	mg/kg	----	----	<0.050 <sup>DLM</sup>	----	----	
<b>Polycyclic Aromatic Hydrocarbons Surrogates</b>										
fluorobiphenyl, 2-	321-60-8	E642F	0.1	%	----	----	74.9	----	----	
terphenyl-d14, p-	1718-51-0	E642F	0.1	%	----	----	77.4	----	----	

Please refer to the General Comments section for an explanation of any qualifiers detected.

## QUALITY CONTROL INTERPRETIVE REPORT

<p><b>Work Order</b> : <b>WT2219916</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 19</p> <p><b>No. of samples analysed</b> : 19</p>	<p><b>Page</b> : 1 of 24</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 28-Oct-2022 10:00</p> <p><b>Issue Date</b> : 14-Nov-2022 17:19</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

### ***Workorder Comments***

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Matrix Spike outliers occur.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

### ***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

### ***Outliers : Frequency of Quality Control Samples***

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.



**Outliers : Quality Control Samples**

*Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes*

Matrix: **Soil/Solid**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Laboratory Control Sample (LCS) Recoveries</b>								
Volatile Organic Compounds	QC-726927-002	----	dichlorodifluoromethane	75-71-8	E611D	37.5 % <sup>LCS-L</sup>	50.0-140%	Recovery less than lower control limit

**Result Qualifiers**

Qualifier	Description
LCS-L	Lab Control Sample recovery was below ALS DQO. Reference Material and/or Matrix Spike results were acceptable. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.





## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-14B 0-2	E581.F1	24-Oct-2022	02-Nov-2022	14 days	10 days	✓	03-Nov-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-14B 2.5-4	E581.F1	24-Oct-2022	02-Nov-2022	14 days	10 days	✓	03-Nov-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-31 0-1	E581.F1	24-Oct-2022	02-Nov-2022	14 days	10 days	✓	03-Nov-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] DUP 2	E581.F1	24-Oct-2022	02-Nov-2022	14 days	10 days	✓	03-Nov-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-28 0.25-1.5	E581.F1	21-Oct-2022	02-Nov-2022	14 days	13 days	✓	03-Nov-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-29 0.25-1.5	E581.F1	21-Oct-2022	02-Nov-2022	14 days	13 days	✓	03-Nov-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-29 2.5-3.75	E581.F1	21-Oct-2022	02-Nov-2022	14 days	13 days	✓	03-Nov-2022	40 days	0 days	✓	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-30 0-1.75	E581.F1	21-Oct-2022	02-Nov-2022	14 days	13 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] DUP1	E581.F1	21-Oct-2022	02-Nov-2022	14 days	13 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-03C 0-1	E581.F1	26-Oct-2022	02-Nov-2022	14 days	8 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-17B 0-0.75	E581.F1	26-Oct-2022	02-Nov-2022	14 days	8 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-15B 0-1	E581.F1	25-Oct-2022	02-Nov-2022	14 days	9 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-16B 0-1	E581.F1	25-Oct-2022	02-Nov-2022	14 days	9 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Hydrocarbons : CCME PHCs - F4G by Gravimetry (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-16B 0-1	E601.F4G-L	25-Oct-2022	04-Nov-2022	14 days	10 days	✔	07-Nov-2022	40 days	3 days	✔	
<b>Hydrocarbons : CCME PHCs - F4G by Gravimetry (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-14B 0-2	E601.F4G-L	24-Oct-2022	04-Nov-2022	14 days	11 days	✔	07-Nov-2022	40 days	3 days	✔	
<b>Hydrocarbons : CCME PHCs - F4G by Gravimetry (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-31 0-1	E601.F4G-L	24-Oct-2022	04-Nov-2022	14 days	11 days	✔	07-Nov-2022	40 days	3 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHCs - F4G by Gravimetry (Low Level)</b>											
Glass soil jar/Teflon lined cap DUP 2	E601.F4G-L	24-Oct-2022	04-Nov-2022	14 days	11 days	✔	07-Nov-2022	40 days	3 days	✔	
<b>Hydrocarbons : CCME PHCs - F4G by Gravimetry (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-03C 0-1	E601.F4G-L	26-Oct-2022	04-Nov-2022	14 days	9 days	✔	07-Nov-2022	40 days	3 days	✔	
<b>Hydrocarbons : CCME PHCs - F4G by Gravimetry (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-17B 0-0.75	E601.F4G-L	26-Oct-2022	04-Nov-2022	14 days	9 days	✔	07-Nov-2022	40 days	3 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-14B 0-2	E601.SG-L	24-Oct-2022	03-Nov-2022	14 days	10 days	✔	07-Nov-2022	40 days	4 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-14B 2.5-4	E601.SG-L	24-Oct-2022	03-Nov-2022	14 days	10 days	✔	07-Nov-2022	40 days	4 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-31 0-1	E601.SG-L	24-Oct-2022	03-Nov-2022	14 days	10 days	✔	07-Nov-2022	40 days	4 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap DUP 2	E601.SG-L	24-Oct-2022	03-Nov-2022	14 days	10 days	✔	07-Nov-2022	40 days	4 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-28 0.25-1.5	E601.SG-L	21-Oct-2022	03-Nov-2022	14 days	13 days	✔	07-Nov-2022	40 days	4 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-29 0.25-1.5	E601.SG-L	21-Oct-2022	03-Nov-2022	14 days	13 days	✔	07-Nov-2022	40 days	4 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-29 2.5-3.75	E601.SG-L	21-Oct-2022	03-Nov-2022	14 days	13 days	✔	07-Nov-2022	40 days	4 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-30 0-1.75	E601.SG-L	21-Oct-2022	03-Nov-2022	14 days	13 days	✔	07-Nov-2022	40 days	4 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap DUP1	E601.SG-L	21-Oct-2022	03-Nov-2022	14 days	13 days	✔	07-Nov-2022	40 days	4 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-03C 0-1	E601.SG-L	26-Oct-2022	03-Nov-2022	14 days	8 days	✔	07-Nov-2022	40 days	4 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-17B 0-0.75	E601.SG-L	26-Oct-2022	03-Nov-2022	14 days	8 days	✔	07-Nov-2022	40 days	4 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-15B 0-1	E601.SG-L	25-Oct-2022	03-Nov-2022	14 days	9 days	✔	07-Nov-2022	40 days	4 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-16B 0-1	E601.SG-L	25-Oct-2022	03-Nov-2022	14 days	9 days	✔	07-Nov-2022	40 days	4 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-03C 0-1	E487	26-Oct-2022	11-Nov-2022	180 days	17 days	✔	11-Nov-2022	180 days	0 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-17B 0-0.75	E487	26-Oct-2022	11-Nov-2022	180 days	17 days	✔	11-Nov-2022	180 days	0 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-15B 0-1	E487	25-Oct-2022	11-Nov-2022	180 days	18 days	✔	11-Nov-2022	180 days	0 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-16B 0-1	E487	25-Oct-2022	11-Nov-2022	180 days	18 days	✔	11-Nov-2022	180 days	0 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-14B 0-2	E487	24-Oct-2022	11-Nov-2022	180 days	19 days	✔	11-Nov-2022	180 days	0 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-14B 2.5-4	E487	24-Oct-2022	11-Nov-2022	180 days	19 days	✔	11-Nov-2022	180 days	0 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-31 0-1	E487	24-Oct-2022	11-Nov-2022	180 days	19 days	✔	11-Nov-2022	180 days	0 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap DUP 2	E487	24-Oct-2022	11-Nov-2022	180 days	19 days	✔	11-Nov-2022	180 days	0 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-28 0.25-1.5	E487	21-Oct-2022	11-Nov-2022	180 days	22 days	✔	11-Nov-2022	180 days	0 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-29 0.25-1.5	E487	21-Oct-2022	11-Nov-2022	180 days	22 days	✔	11-Nov-2022	180 days	0 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-29 2.5-3.75	E487	21-Oct-2022	11-Nov-2022	180 days	22 days	✔	11-Nov-2022	180 days	0 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-30 0-1.75	E487	21-Oct-2022	11-Nov-2022	180 days	22 days	✔	11-Nov-2022	180 days	0 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap DUP1	E487	21-Oct-2022	11-Nov-2022	180 days	22 days	✔	11-Nov-2022	180 days	0 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-03C 0-1	E510	26-Oct-2022	11-Nov-2022	----	----		14-Nov-2022	28 days	20 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-17B 0-0.75	E510	26-Oct-2022	11-Nov-2022	----	----		14-Nov-2022	28 days	20 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-15B 0-1	E510	25-Oct-2022	11-Nov-2022	----	----		14-Nov-2022	28 days	21 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-16B 0-1	E510	25-Oct-2022	11-Nov-2022	----	----		14-Nov-2022	28 days	21 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-14B 0-2	E510	24-Oct-2022	11-Nov-2022	----	----		14-Nov-2022	28 days	22 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-14B 2.5-4	E510	24-Oct-2022	11-Nov-2022	----	----		14-Nov-2022	28 days	22 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-31 0-1	E510	24-Oct-2022	11-Nov-2022	----	----		14-Nov-2022	28 days	22 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
Glass soil jar/Teflon lined cap DUP 2	E510	24-Oct-2022	11-Nov-2022	----	----		14-Nov-2022	28 days	22 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
Glass soil jar/Teflon lined cap 22-28 0.25-1.5	E510	21-Oct-2022	11-Nov-2022	----	----		14-Nov-2022	28 days	25 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
Glass soil jar/Teflon lined cap 22-29 0.25-1.5	E510	21-Oct-2022	11-Nov-2022	----	----		14-Nov-2022	28 days	25 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
Glass soil jar/Teflon lined cap 22-29 2.5-3.75	E510	21-Oct-2022	11-Nov-2022	----	----		14-Nov-2022	28 days	25 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
Glass soil jar/Teflon lined cap 22-30 0-1.75	E510	21-Oct-2022	11-Nov-2022	----	----		14-Nov-2022	28 days	25 days	✔
<b>Metals : Mercury in Soil/Solid by CVAAS</b>										
Glass soil jar/Teflon lined cap DUP1	E510	21-Oct-2022	11-Nov-2022	----	----		14-Nov-2022	28 days	25 days	✔
<b>Metals : Metals in Soil/Solid by CRC ICPCS</b>										
Glass soil jar/Teflon lined cap 22-03C 0-1	E440	26-Oct-2022	11-Nov-2022	----	----		11-Nov-2022	180 days	17 days	✔
<b>Metals : Metals in Soil/Solid by CRC ICPCS</b>										
Glass soil jar/Teflon lined cap 22-17B 0-0.75	E440	26-Oct-2022	11-Nov-2022	----	----		11-Nov-2022	180 days	17 days	✔
<b>Metals : Metals in Soil/Solid by CRC ICPCS</b>										
Glass soil jar/Teflon lined cap 22-15B 0-1	E440	25-Oct-2022	11-Nov-2022	----	----		11-Nov-2022	180 days	18 days	✔



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-16B 0-1	E440	25-Oct-2022	11-Nov-2022	----	----		11-Nov-2022	180 days	18 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-14B 0-2	E440	24-Oct-2022	11-Nov-2022	----	----		11-Nov-2022	180 days	19 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-14B 2.5-4	E440	24-Oct-2022	11-Nov-2022	----	----		11-Nov-2022	180 days	19 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-31 0-1	E440	24-Oct-2022	11-Nov-2022	----	----		11-Nov-2022	180 days	19 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap DUP 2	E440	24-Oct-2022	11-Nov-2022	----	----		11-Nov-2022	180 days	19 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-28 0.25-1.5	E440	21-Oct-2022	11-Nov-2022	----	----		11-Nov-2022	180 days	22 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-29 0.25-1.5	E440	21-Oct-2022	11-Nov-2022	----	----		11-Nov-2022	180 days	22 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-29 2.5-3.75	E440	21-Oct-2022	11-Nov-2022	----	----		11-Nov-2022	180 days	22 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-30 0-1.75	E440	21-Oct-2022	11-Nov-2022	----	----		11-Nov-2022	180 days	22 days	✔	





Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap DUP1	E440	21-Oct-2022	11-Nov-2022	----	----		11-Nov-2022	180 days	22 days	✔	
<b>Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method</b>											
Glass soil jar/Teflon lined cap 22-31 2.5-3.5	E185	24-Oct-2022	----	----	----		07-Nov-2022	----	----		
<b>Particle Size : Particle Size Analysis - Hydrometer</b>											
Glass soil jar/Teflon lined cap 22-31 2.5-3.5	E183	24-Oct-2022	02-Nov-2022	----	----		02-Nov-2022	365 days	10 days	✔	
<b>Particle Size : Particle Size Analysis - Sieve &lt;2mm</b>											
Glass soil jar/Teflon lined cap 22-31 2.5-3.5	E182	24-Oct-2022	02-Nov-2022	----	----		02-Nov-2022	365 days	10 days	✔	
<b>Particle Size : Particle Size Analysis - Sieve &gt;2mm</b>											
Glass soil jar/Teflon lined cap 22-31 2.5-3.5	E181	24-Oct-2022	02-Nov-2022	----	----		02-Nov-2022	365 days	10 days	✔	
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-03C 0-1	E144	26-Oct-2022	----	----	----		02-Nov-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-03C 2.5-2.75	E144	26-Oct-2022	----	----	----		02-Nov-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-14B 0-2	E144	24-Oct-2022	----	----	----		02-Nov-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-14B 2.5-4	E144	24-Oct-2022	----	----	----		02-Nov-2022	----	----		



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-15B 0-1	E144	25-Oct-2022	----	----	----		02-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-15B 4-4.25	E144	25-Oct-2022	----	----	----		02-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-16B 0-1	E144	25-Oct-2022	----	----	----		02-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-16B 2.5-3	E144	25-Oct-2022	----	----	----		02-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-17B 0-0.75	E144	26-Oct-2022	----	----	----		02-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-17B 2.5-3.5	E144	26-Oct-2022	----	----	----		02-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-28 0.25-1.5	E144	21-Oct-2022	----	----	----		02-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-29 0.25-1.5	E144	21-Oct-2022	----	----	----		02-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-29 2.5-3.75	E144	21-Oct-2022	----	----	----		02-Nov-2022	----	----	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-30 0-1.75	E144	21-Oct-2022	----	----	----		02-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-31 0-1	E144	24-Oct-2022	----	----	----		02-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap DUP 2	E144	24-Oct-2022	----	----	----		02-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap DUP1	E144	21-Oct-2022	----	----	----		02-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap DUP3	E144	26-Oct-2022	----	----	----		02-Nov-2022	----	----	
<b>Physical Tests : pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received</b>										
Glass soil jar/Teflon lined cap 22-31 2.5-3.5	E108A	24-Oct-2022	03-Nov-2022	----	----		03-Nov-2022	30 days	10 days	✔
<b>Polycyclic Aromatic Hydrocarbons : PAHs by MeOH:Tol GC-MS</b>										
Glass soil jar/Teflon lined cap 22-14B 0-2	E642F	24-Oct-2022	03-Nov-2022	14 days	10 days	✔	07-Nov-2022	40 days	5 days	✔
<b>Polycyclic Aromatic Hydrocarbons : PAHs by MeOH:Tol GC-MS</b>										
Glass soil jar/Teflon lined cap 22-14B 2.5-4	E642F	24-Oct-2022	03-Nov-2022	14 days	10 days	✔	07-Nov-2022	40 days	5 days	✔
<b>Polycyclic Aromatic Hydrocarbons : PAHs by MeOH:Tol GC-MS</b>										
Glass soil jar/Teflon lined cap 22-31 0-1	E642F	24-Oct-2022	03-Nov-2022	14 days	10 days	✔	07-Nov-2022	40 days	5 days	✔



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Polycyclic Aromatic Hydrocarbons : PAHs by MeOH:Tol GC-MS</b>											
Glass soil jar/Teflon lined cap DUP 2	E642F	24-Oct-2022	03-Nov-2022	14 days	10 days	✔	07-Nov-2022	40 days	5 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by MeOH:Tol GC-MS</b>											
Glass soil jar/Teflon lined cap 22-28 0.25-1.5	E642F	21-Oct-2022	03-Nov-2022	14 days	13 days	✔	07-Nov-2022	40 days	5 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by MeOH:Tol GC-MS</b>											
Glass soil jar/Teflon lined cap 22-29 0.25-1.5	E642F	21-Oct-2022	03-Nov-2022	14 days	13 days	✔	07-Nov-2022	40 days	5 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by MeOH:Tol GC-MS</b>											
Glass soil jar/Teflon lined cap 22-29 2.5-3.75	E642F	21-Oct-2022	03-Nov-2022	14 days	13 days	✔	07-Nov-2022	40 days	5 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by MeOH:Tol GC-MS</b>											
Glass soil jar/Teflon lined cap 22-30 0-1.75	E642F	21-Oct-2022	03-Nov-2022	14 days	13 days	✔	07-Nov-2022	40 days	5 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by MeOH:Tol GC-MS</b>											
Glass soil jar/Teflon lined cap DUP1	E642F	21-Oct-2022	03-Nov-2022	14 days	13 days	✔	07-Nov-2022	40 days	5 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by MeOH:Tol GC-MS</b>											
Glass soil jar/Teflon lined cap 22-03C 0-1	E642F	26-Oct-2022	03-Nov-2022	14 days	8 days	✔	07-Nov-2022	40 days	5 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by MeOH:Tol GC-MS</b>											
Glass soil jar/Teflon lined cap 22-17B 0-0.75	E642F	26-Oct-2022	03-Nov-2022	14 days	8 days	✔	07-Nov-2022	40 days	5 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by MeOH:Tol GC-MS</b>											
Glass soil jar/Teflon lined cap 22-15B 0-1	E642F	25-Oct-2022	03-Nov-2022	14 days	9 days	✔	07-Nov-2022	40 days	5 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Polycyclic Aromatic Hydrocarbons : PAHs by MeOH:Tol GC-MS</b>											
Glass soil jar/Teflon lined cap 22-16B 0-1	E642F	25-Oct-2022	03-Nov-2022	14 days	9 days	✔	07-Nov-2022	40 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-14B 0-2	E532	24-Oct-2022	03-Nov-2022	30 days	10 days	✔	08-Nov-2022	7 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-14B 2.5-4	E532	24-Oct-2022	03-Nov-2022	30 days	10 days	✔	08-Nov-2022	7 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-31 0-1	E532	24-Oct-2022	03-Nov-2022	30 days	10 days	✔	08-Nov-2022	7 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap DUP 2	E532	24-Oct-2022	03-Nov-2022	30 days	10 days	✔	08-Nov-2022	7 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-28 0.25-1.5	E532	21-Oct-2022	03-Nov-2022	30 days	13 days	✔	08-Nov-2022	7 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-29 0.25-1.5	E532	21-Oct-2022	03-Nov-2022	30 days	13 days	✔	08-Nov-2022	7 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-29 2.5-3.75	E532	21-Oct-2022	03-Nov-2022	30 days	13 days	✔	08-Nov-2022	7 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-30 0-1.75	E532	21-Oct-2022	03-Nov-2022	30 days	13 days	✔	08-Nov-2022	7 days	5 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap DUP1	E532	21-Oct-2022	03-Nov-2022	30 days	13 days	✔	08-Nov-2022	7 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-03C 0-1	E532	26-Oct-2022	03-Nov-2022	30 days	8 days	✔	08-Nov-2022	7 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-17B 0-0.75	E532	26-Oct-2022	03-Nov-2022	30 days	8 days	✔	08-Nov-2022	7 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-15B 0-1	E532	25-Oct-2022	03-Nov-2022	30 days	9 days	✔	08-Nov-2022	7 days	5 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-16B 0-1	E532	25-Oct-2022	03-Nov-2022	30 days	9 days	✔	08-Nov-2022	7 days	5 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-14B 0-2	E611A	24-Oct-2022	02-Nov-2022	14 days	10 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-14B 2.5-4	E611A	24-Oct-2022	02-Nov-2022	14 days	10 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-31 0-1	E611A	24-Oct-2022	02-Nov-2022	14 days	10 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] DUP 2	E611A	24-Oct-2022	02-Nov-2022	14 days	10 days	✔	03-Nov-2022	40 days	0 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-28 0.25-1.5	E611A	21-Oct-2022	02-Nov-2022	14 days	13 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-29 0.25-1.5	E611A	21-Oct-2022	02-Nov-2022	14 days	13 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-29 2.5-3.75	E611A	21-Oct-2022	02-Nov-2022	14 days	13 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-30 0-1.75	E611A	21-Oct-2022	02-Nov-2022	14 days	13 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] DUP1	E611A	21-Oct-2022	02-Nov-2022	14 days	13 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-03C 0-1	E611A	26-Oct-2022	02-Nov-2022	14 days	8 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-17B 0-0.75	E611A	26-Oct-2022	02-Nov-2022	14 days	8 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-15B 0-1	E611A	25-Oct-2022	02-Nov-2022	14 days	9 days	✔	03-Nov-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-16B 0-1	E611A	25-Oct-2022	02-Nov-2022	14 days	9 days	✔	03-Nov-2022	40 days	0 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-03C 2.5-2.75	E611D	26-Oct-2022	02-Nov-2022	14 days	8 days	✔	03-Nov-2022	40 days	1 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-17B 2.5-3.5	E611D	26-Oct-2022	02-Nov-2022	14 days	8 days	✔	03-Nov-2022	40 days	1 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] DUP3	E611D	26-Oct-2022	02-Nov-2022	14 days	8 days	✔	03-Nov-2022	40 days	1 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-15B 4-4.25	E611D	25-Oct-2022	02-Nov-2022	14 days	9 days	✔	03-Nov-2022	40 days	1 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-16B 2.5-3	E611D	25-Oct-2022	02-Nov-2022	14 days	9 days	✔	03-Nov-2022	40 days	1 days	✔	

**Legend & Qualifier Definitions**

Rec. HT: ALS recommended hold time (see units).





## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Boron-Hot Water Extractable by ICPOES	E487	727657	1	19	5.2	5.0	✔
BTEX by Headspace GC-MS	E611A	726588	1	20	5.0	5.0	✔
CCME PHC - F1 by Headspace GC-FID	E581.F1	726589	1	20	5.0	5.0	✔
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	733426	0	6	0.0	5.0	✖
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	727656	1	19	5.2	5.0	✔
Hexavalent Chromium (Cr VI) by IC	E532	727655	1	19	5.2	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	727658	1	19	5.2	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	727659	1	19	5.2	5.0	✔
Moisture Content by Gravimetry	E144	726321	1	20	5.0	5.0	✔
PAHs by MeOH:Tol GC-MS	E642F	727654	1	13	7.6	5.0	✔
Particle Size Analysis - Hydrometer	E183	727095	1	1	100.0	5.0	✔
Particle Size Analysis - Sieve <2mm	E182	727094	1	1	100.0	5.0	✔
pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received	E108A	727660	1	7	14.2	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	726927	1	20	5.0	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
Boron-Hot Water Extractable by ICPOES	E487	727657	2	19	10.5	10.0	✔
BTEX by Headspace GC-MS	E611A	726588	1	20	5.0	5.0	✔
CCME PHC - F1 by Headspace GC-FID	E581.F1	726589	1	20	5.0	5.0	✔
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	733426	1	6	16.6	5.0	✔
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	727656	1	19	5.2	5.0	✔
Hexavalent Chromium (Cr VI) by IC	E532	727655	2	19	10.5	10.0	✔
Mercury in Soil/Solid by CVAAS	E510	727658	2	19	10.5	10.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	727659	2	19	10.5	10.0	✔
Moisture Content by Gravimetry	E144	726321	1	20	5.0	5.0	✔
PAHs by MeOH:Tol GC-MS	E642F	727654	1	13	7.6	5.0	✔
Particle Size Analysis - Hydrometer	E183	727095	1	1	100.0	5.0	✔
Particle Size Analysis - Sieve <2mm	E182	727094	1	1	100.0	5.0	✔
Particle Size Analysis - Sieve >2mm	E181	727093	1	1	100.0	5.0	✔
pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received	E108A	727660	1	7	14.2	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	726927	1	20	5.0	5.0	✔
<b>Method Blanks (MB)</b>							
Boron-Hot Water Extractable by ICPOES	E487	727657	1	19	5.2	5.0	✔
BTEX by Headspace GC-MS	E611A	726588	1	20	5.0	5.0	✔
CCME PHC - F1 by Headspace GC-FID	E581.F1	726589	1	20	5.0	5.0	✔
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	733426	1	6	16.6	5.0	✔



Matrix: **Soil/Solid**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
<b>Method Blanks (MB) - Continued</b>							
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	727656	1	19	5.2	5.0	✔
Hexavalent Chromium (Cr VI) by IC	E532	727655	1	19	5.2	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	727658	1	19	5.2	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	727659	1	19	5.2	5.0	✔
Moisture Content by Gravimetry	E144	726321	1	20	5.0	5.0	✔
PAHs by MeOH:Tol GC-MS	E642F	727654	1	13	7.6	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	726927	1	20	5.0	5.0	✔
<b>Matrix Spikes (MS)</b>							
BTEX by Headspace GC-MS	E611A	726588	1	20	5.0	5.0	✔
CCME PHC - F1 by Headspace GC-FID	E581.F1	726589	1	20	5.0	5.0	✔
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	733426	0	6	0.0	5.0	✖
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	727656	1	19	5.2	5.0	✔
PAHs by MeOH:Tol GC-MS	E642F	727654	1	13	7.6	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	726927	1	20	5.0	5.0	✔



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
pH by Meter (1:2 Soil:0.01M CaCl <sub>2</sub> Extraction) - As Received	E108A  Waterloo - Environmental	Soil/Solid	MOEE E3137A	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C) and is carried out in accordance with procedures described in the Analytical Protocol (prescriptive method). A minimum 10g portion of the sample, as received, is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil by centrifuging, settling, or decanting and then analyzed using a pH meter and electrode.
Moisture Content by Gravimetry	E144  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Particle Size Analysis - Sieve >2mm	E181  Saskatoon - Environmental	Soil/Solid	ASTM D6913-17 (mod)	Soil samples are disaggregated and sieved through a 2mm sieve. Material retained on the sieve is then further sieved through a series of sieves. The amount passing through the sieves is measured gravimetrically.
Particle Size Analysis - Sieve <2mm	E182  Saskatoon - Environmental	Soil/Solid	ASTM D6913-17 (mod)	Soil samples are disaggregated and sieved through a 2mm sieve. Material passed through the sieve is then further disaggregated using calgon solution and passed through a series of sieves. The amount passing through the sieves is measured gravimetrically.
Particle Size Analysis - Hydrometer	E183  Saskatoon - Environmental	Soil/Solid	ASTM D7928-21 (mod)	Soil material is separated from coarse material (>2mm). A specimen is then disaggregated through mixing with Calgon solution. The material is then suspended in solution wherein regular hydrometer readings are taken at specific time intervals. The principles of Stokes' Law are applied to determine the amount of material remaining in solution as well as the maximum particle size remaining in solution at the specified time.
Grain Size Report (Attachment) Hydrometer/Sieve Method	E185  Saskatoon - Environmental	Soil/Solid	ASTM D6913/D7928	A grain size curve is a graphical representation of the particle sizing of a sample representing the percent passing against the effective particle size.
Metals in Soil/Solid by CRC ICPMS	E440  Waterloo - Environmental	Soil/Solid	EPA 6020B (mod)	This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 2 mm sieve, and digested with HNO <sub>3</sub> and HCl.  Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines.  Analysis is by Collision/Reaction Cell ICPMS.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Boron-Hot Water Extractable by ICPOES	E487  Waterloo - Environmental	Soil/Solid	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).
Mercury in Soil/Solid by CVAAS	E510  Waterloo - Environmental	Soil/Solid	EPA 200.2/1631 Appendix (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO <sub>3</sub> and HCl, followed by CVAAS analysis.
Hexavalent Chromium (Cr VI) by IC	E532  Waterloo - Environmental	Soil/Solid	APHA 3500-CR C	Instrumental analysis is performed by ion chromatography with UV detection.
CCME PHC - F1 by Headspace GC-FID	E581.F1  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	A portion of the silica gel treated sample extract is filtered and dried at 105°C and the mass of the residual gravimetric heavy hydrocarbons (F4G) is determined gravimetrically.
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4).
BTEX by Headspace GC-MS	E611A  Waterloo - Environmental	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D  Waterloo - Environmental	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs by MeOH:Tol GC-MS	E642F  Waterloo - Environmental	Soil/Solid	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are extracted with methanol/toluene and analyzed by GC-MS. If reported, IACR (index of additive cancer risk, unitless) and B(a)P toxic potency equivalent (in soil concentration units) are calculated as per CCME PAH Soil Quality Guidelines fact sheet (2010) or ABT1.
F1-BTEX	EC580  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Sum F1 to F4 (C6-C50)	EC581  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.
Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Leach 1:2 Soil : 0.01CaCl <sub>2</sub> - As Received for pH	EP108A  Waterloo - Environmental	Soil/Solid	MOEE E3137A	A minimum 10g portion of the sample, as received, is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil by centrifuging, settling or decanting and then analyzed using a pH meter and electrode.
Digestion for Metals and Mercury	EP440  Waterloo - Environmental	Soil/Solid	EPA 200.2 (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO <sub>3</sub> and HCl. This method is intended to liberate metals that may be environmentally available.
Boron-Hot Water Extractable	EP487  Waterloo - Environmental	Soil/Solid	HW EXTR, EPA 6010B	A dried solid sample is extracted with weak 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)
Preparation of Hexavalent Chromium (Cr VI) for IC	EP532  Waterloo - Environmental	Soil/Solid	EPA 3060A	Field moist samples are digested with a sodium hydroxide/sodium carbonate solution as described in EPA 3060A.
VOCs Methanol Extraction for Headspace Analysis	EP581  Waterloo - Environmental	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PHCs and PAHs Hexane-Acetone Tumbler Extraction	EP601  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1 (mod)	Samples are subsampled and Petroleum Hydrocarbons (PHC) and PAHs are extracted with 1:1 hexane:acetone using a rotary extractor.
Pesticides, PCB, PAH, and Neutral Extractable Chlorinated Hydrocarbons Extraction (High Level)	EP660-H  Waterloo - Environmental	Soil/Solid	EPA 3570 (mod)	A homogenized subsample is extracted with organic solvents using a mechanical shaker.
Dry and Grind in Soil/Solid <60°C	EPP442  Waterloo - Environmental	Soil/Solid	Soil Sampling and Methods of Analysis, Carter 2008	After removal of any coarse fragments and reservation of wet subsamples a portion of homogenized sample is set in a tray and dried at less than 60°C until dry. The sample is then particle size reduced with an automated crusher or mortar and pestle, typically to <2 mm. Further size reduction may be needed for particular tests.

## QUALITY CONTROL REPORT

**Work Order** : **WT2219916**  
**Client** : Omni-McCann Inc.  
**Contact** : Daniel Elliot  
**Address** : 1755 Woodward Dr. Suite 200  
 Ottawa ON Canada K2C 0P9  
**Telephone** :  
**Project** : 0006-0103  
**PO** : ----  
**C-O-C number** : ----  
**Sampler** : ---- 705 243 5828  
**Site** : ----  
**Quote number** : Project 0006-0103  
**No. of samples received** : 19  
**No. of samples analysed** : 19

**Page** : 1 of 19  
**Laboratory** : Waterloo - Environmental  
**Account Manager** : Emily Smith  
**Address** : 60 Northland Road, Unit 1  
 Waterloo, Ontario Canada N2V 2B8  
**Telephone** : +1 519 886 6910  
**Date Samples Received** : 28-Oct-2022 10:00  
**Date Analysis Commenced** : 01-Nov-2022  
**Issue Date** : 14-Nov-2022 17:19

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Hedy Lai	Team Leader - Inorganics	Saskatoon Sask Soils, Saskatoon, Saskatchewan
Jeremy Gingras	Team Leader - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
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Jon Fisher	Department Manager - Inorganics	Waterloo Metals, Waterloo, Ontario
Joseph Scharbach		Waterloo Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Waterloo Organics, Waterloo, Ontario

Page : 2 of 19  
Work Order : WT2219916  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## **General Comments**

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

### **Key :**

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

## **Workorder Comments**

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Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Soil/Solid

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Physical Tests (QC Lot: 726321)</b>											
WT2219916-001	22-28 0.25-1.5	moisture	----	E144	0.25	%	11.1	10.8	2.37%	20%	----
<b>Physical Tests (QC Lot: 727660)</b>											
WT2219916-007	22-31 2.5-3.5	pH (1:2 soil:CaCl2-aq)	----	E108A	0.10	pH units	7.88	7.92	0.506%	5%	----
<b>Particle Size (QC Lot: 727094)</b>											
WT2219916-007	22-31 2.5-3.5	passing (0.05 mm)	----	E182	1.0	%	41.0	40.1	2.36%	15%	----
		passing (0.063 mm)	----	E182	1.0	%	44.2	43.8	0.808%	15%	----
		passing (0.075 mm)	----	E182	1.0	%	47.1	47.3	0.421%	15%	----
		passing (0.125 mm)	----	E182	1.0	%	55.8	55.8	0.0848%	15%	----
		passing (0.149 mm)	----	E182	1.0	%	60.0	60.0	0.0422%	15%	----
		passing (0.250 mm)	----	E182	1.0	%	71.5	71.6	0.0496%	15%	----
		passing (0.420 mm)	----	E182	1.0	%	81.2	81.0	0.182%	15%	----
		passing (0.50 mm)	----	E182	1.0	%	82.9	82.7	0.180%	15%	----
		passing (0.841 mm)	----	E182	1.0	%	89.3	89.2	0.143%	15%	----
passing (1.0 mm)	----	E182	1.0	%	90.5	90.4	0.122%	15%	----		
<b>Particle Size (QC Lot: 727095)</b>											
WT2219916-007	22-31 2.5-3.5	passing (0.002 mm)	----	E183	1.0	%	9.0	8.3	0.7	Diff <2x LOR	----
		passing (0.004 mm)	----	E183	1.0	%	13.7	12.5	8.89%	20%	----
		passing (0.005 mm)	----	E183	1.0	%	15.4	14.0	9.74%	20%	----
		passing (0.020 mm)	----	E183	1.0	%	30.3	28.3	6.88%	20%	----
		passing (0.0312 mm)	----	E183	1.0	%	35.4	33.4	5.89%	20%	----
<b>Metals (QC Lot: 727657)</b>											
WT2219916-001	22-28 0.25-1.5	boron, hot water soluble	7440-42-8	E487	0.10	mg/kg	0.11	0.11	0.0004	Diff <2x LOR	----
<b>Metals (QC Lot: 727658)</b>											
WT2219916-001	22-28 0.25-1.5	mercury	7439-97-6	E510	0.0050	mg/kg	0.0068	0.0076	0.0009	Diff <2x LOR	----
<b>Metals (QC Lot: 727659)</b>											
WT2219916-001	22-28 0.25-1.5	antimony	7440-36-0	E440	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		arsenic	7440-38-2	E440	0.10	mg/kg	1.67	1.69	1.31%	30%	----
		barium	7440-39-3	E440	0.50	mg/kg	70.1	70.9	1.13%	40%	----
		beryllium	7440-41-7	E440	0.10	mg/kg	0.23	0.23	0.004	Diff <2x LOR	----
		boron	7440-42-8	E440	5.0	mg/kg	<5.0	5.0	0.007	Diff <2x LOR	----





Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Metals (QC Lot: 727659) - continued</b>											
WT2219916-001	22-28 0.25-1.5	cadmium	7440-43-9	E440	0.020	mg/kg	0.035	0.035	0.0001	Diff <2x LOR	----
		chromium	7440-47-3	E440	0.50	mg/kg	11.1	11.2	1.02%	30%	----
		cobalt	7440-48-4	E440	0.10	mg/kg	4.46	4.50	1.02%	30%	----
		copper	7440-50-8	E440	20.0	mg/kg	<20.0	<20.0	0	Diff <2x LOR	----
		lead	7439-92-1	E440	0.50	mg/kg	4.18	4.01	4.22%	40%	----
		molybdenum	7439-98-7	E440	0.10	mg/kg	0.42	0.40	0.02	Diff <2x LOR	----
		nickel	7440-02-0	E440	0.50	mg/kg	7.77	7.98	2.72%	30%	----
		selenium	7782-49-2	E440	0.20	mg/kg	<0.20	<0.20	0	Diff <2x LOR	----
		silver	7440-22-4	E440	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		thallium	7440-28-0	E440	0.050	mg/kg	0.101	0.096	0.005	Diff <2x LOR	----
		uranium	7440-61-1	E440	0.050	mg/kg	0.477	0.442	7.46%	30%	----
		vanadium	7440-62-2	E440	0.20	mg/kg	22.5	21.9	2.63%	30%	----
		zinc	7440-66-6	E440	2.0	mg/kg	15.4	16.1	3.99%	30%	----
<b>Speciated Metals (QC Lot: 727655)</b>											
WT2219916-001	22-28 0.25-1.5	chromium, hexavalent [Cr VI]	18540-29-9	E532	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 726588)</b>											
WT2219916-001	22-28 0.25-1.5	benzene	71-43-2	E611A	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----
		toluene	108-88-3	E611A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 726927)</b>											
WT2219913-006	Anonymous	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050	0.0050	0.00005	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 726927) - continued</b>											
WT2219913-006	Anonymous	dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	<0.045	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040	<0.040	0	Diff <2x LOR	----
		styrene	100-42-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 726589)</b>											
WT2219916-001	22-28 0.25-1.5	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 727656)</b>											
WT2219916-001	22-28 0.25-1.5	F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	<10	0	Diff <2x LOR	----
		F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	<50	0	Diff <2x LOR	----
		F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	<50	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Polycyclic Aromatic Hydrocarbons (QC Lot: 727654)</b>											
WT2219916-001	22-28 0.25-1.5	acenaphthene	83-32-9	E642F	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		acenaphthylene	208-96-8	E642F	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		anthracene	120-12-7	E642F	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		benz(a)anthracene	56-55-3	E642F	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		benzo(a)pyrene	50-32-8	E642F	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		benzo(b+j)fluoranthene	n/a	E642F	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		benzo(g,h,i)perylene	191-24-2	E642F	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		benzo(k)fluoranthene	207-08-9	E642F	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chrysene	218-01-9	E642F	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibenz(a,h)anthracene	53-70-3	E642F	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		fluoranthene	206-44-0	E642F	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		fluorene	86-73-7	E642F	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		indeno(1,2,3-c,d)pyrene	193-39-5	E642F	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		methylnaphthalene, 1-	90-12-0	E642F	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		methylnaphthalene, 2-	91-57-6	E642F	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		naphthalene	91-20-3	E642F	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		phenanthrene	85-01-8	E642F	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		pyrene	129-00-0	E642F	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----



## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 726321)</b>						
moisture	---	E144	0.25	%	<0.25	---
<b>Metals (QCLot: 727657)</b>						
boron, hot water soluble	7440-42-8	E487	0.1	mg/kg	<0.10	---
<b>Metals (QCLot: 727658)</b>						
mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	---
<b>Metals (QCLot: 727659)</b>						
antimony	7440-36-0	E440	0.1	mg/kg	<0.10	---
arsenic	7440-38-2	E440	0.1	mg/kg	<0.10	---
barium	7440-39-3	E440	0.5	mg/kg	<0.50	---
beryllium	7440-41-7	E440	0.1	mg/kg	<0.10	---
boron	7440-42-8	E440	5	mg/kg	<5.0	---
cadmium	7440-43-9	E440	0.02	mg/kg	<0.020	---
chromium	7440-47-3	E440	0.5	mg/kg	<0.50	---
cobalt	7440-48-4	E440	0.1	mg/kg	<0.10	---
copper	7440-50-8	E440	0.5	mg/kg	<0.50	---
lead	7439-92-1	E440	0.5	mg/kg	<0.50	---
molybdenum	7439-98-7	E440	0.1	mg/kg	<0.10	---
nickel	7440-02-0	E440	0.5	mg/kg	<0.50	---
selenium	7782-49-2	E440	0.2	mg/kg	<0.20	---
silver	7440-22-4	E440	0.1	mg/kg	<0.10	---
thallium	7440-28-0	E440	0.05	mg/kg	<0.050	---
uranium	7440-61-1	E440	0.05	mg/kg	<0.050	---
vanadium	7440-62-2	E440	0.2	mg/kg	<0.20	---
zinc	7440-66-6	E440	2	mg/kg	<2.0	---
<b>Speciated Metals (QCLot: 727655)</b>						
chromium, hexavalent [Cr VI]	18540-29-9	E532	0.1	mg/kg	<0.10	---
<b>Volatile Organic Compounds (QCLot: 726588)</b>						
benzene	71-43-2	E611A	0.005	mg/kg	<0.0050	---
ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015	---
toluene	108-88-3	E611A	0.05	mg/kg	<0.050	---
xylene, m+p-	179601-23-1	E611A	0.03	mg/kg	<0.030	---
xylene, o-	95-47-6	E611A	0.03	mg/kg	<0.030	---



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 726927)</b>						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	----
benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	----
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	----
bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	----
bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	----
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	----
chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	----
chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	----
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	----
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	----
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	----
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	----
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	----
dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	----
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	----
ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	----
hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	----
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	----
styrene	100-42-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	----
tetrachloroethane, 1,1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 726927) - continued</b>						
trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----
<b>Hydrocarbons (QCLot: 726589)</b>						
F1 (C6-C10)	----	E581.F1	5	mg/kg	<5.0	----
<b>Hydrocarbons (QCLot: 727656)</b>						
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	----
<b>Hydrocarbons (QCLot: 733426)</b>						
F4G-sg	----	E601.F4G-L	250	mg/kg	<250	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 727654)</b>						
acenaphthene	83-32-9	E642F	0.05	mg/kg	<0.050	----
acenaphthylene	208-96-8	E642F	0.05	mg/kg	<0.050	----
anthracene	120-12-7	E642F	0.05	mg/kg	<0.050	----
benz(a)anthracene	56-55-3	E642F	0.05	mg/kg	<0.050	----
benzo(a)pyrene	50-32-8	E642F	0.05	mg/kg	<0.050	----
benzo(b+j)fluoranthene	n/a	E642F	0.05	mg/kg	<0.050	----
benzo(g,h,i)perylene	191-24-2	E642F	0.05	mg/kg	<0.050	----
benzo(k)fluoranthene	207-08-9	E642F	0.05	mg/kg	<0.050	----
chrysene	218-01-9	E642F	0.05	mg/kg	<0.050	----
dibenz(a,h)anthracene	53-70-3	E642F	0.05	mg/kg	<0.050	----
fluoranthene	206-44-0	E642F	0.05	mg/kg	<0.050	----
fluorene	86-73-7	E642F	0.05	mg/kg	<0.050	----
indeno(1,2,3-c,d)pyrene	193-39-5	E642F	0.05	mg/kg	<0.050	----
methylnaphthalene, 1-	90-12-0	E642F	0.03	mg/kg	<0.030	----
methylnaphthalene, 2-	91-57-6	E642F	0.03	mg/kg	<0.030	----
naphthalene	91-20-3	E642F	0.01	mg/kg	<0.010	----
phenanthrene	85-01-8	E642F	0.05	mg/kg	<0.050	----
pyrene	129-00-0	E642F	0.05	mg/kg	<0.050	----

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Work Order : WT2219916  
Client : Omni-McCann Inc.  
Project : 0006-0103

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## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Physical Tests (QCLot: 726321)</b>									
moisture	----	E144	0.25	%	50 %	100	90.0	110	----
<b>Physical Tests (QCLot: 727660)</b>									
pH (1:2 soil:CaCl2-aq)	----	E108A	----	pH units	7 pH units	101	98.0	102	----
<b>Metals (QCLot: 727657)</b>									
boron, hot water soluble	7440-42-8	E487	0.1	mg/kg	1.33333 mg/kg	104	70.0	130	----
<b>Metals (QCLot: 727658)</b>									
mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	104	80.0	120	----
<b>Metals (QCLot: 727659)</b>									
antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	99.8	80.0	120	----
arsenic	7440-38-2	E440	0.1	mg/kg	100 mg/kg	104	80.0	120	----
barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	103	80.0	120	----
beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	88.7	80.0	120	----
boron	7440-42-8	E440	5	mg/kg	100 mg/kg	88.2	80.0	120	----
cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	97.1	80.0	120	----
chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	96.6	80.0	120	----
cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	96.3	80.0	120	----
copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	94.2	80.0	120	----
lead	7439-92-1	E440	0.5	mg/kg	50 mg/kg	95.2	80.0	120	----
molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	104	80.0	120	----
nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	95.7	80.0	120	----
selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	99.0	80.0	120	----
silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	88.1	80.0	120	----
thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	92.8	80.0	120	----
uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	100	80.0	120	----
vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	99.5	80.0	120	----
zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	96.6	80.0	120	----
<b>Speciated Metals (QCLot: 727655)</b>									
chromium, hexavalent [Cr VI]	18540-29-9	E532	0.1	mg/kg	0.8 mg/kg	87.4	80.0	120	----
<b>Volatile Organic Compounds (QCLot: 726588)</b>									
benzene	71-43-2	E611A	0.005	mg/kg	3.475 mg/kg	117	70.0	130	----





Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 726588) - continued</b>									
ethylbenzene	100-41-4	E611A	0.015	mg/kg	3.475 mg/kg	102	70.0	130	----
toluene	108-88-3	E611A	0.05	mg/kg	3.475 mg/kg	103	70.0	130	----
xylene, m+p-	179601-23-1	E611A	0.03	mg/kg	6.95 mg/kg	96.3	70.0	130	----
xylene, o-	95-47-6	E611A	0.03	mg/kg	3.475 mg/kg	99.9	70.0	130	----
<b>Volatile Organic Compounds (QCLot: 726927)</b>									
Acetone	67-64-1	E611D	0.5	mg/kg	3.475 mg/kg	101	60.0	140	----
benzene	71-43-2	E611D	0.005	mg/kg	3.475 mg/kg	113	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.475 mg/kg	122	50.0	140	----
bromoform	75-25-2	E611D	0.05	mg/kg	3.475 mg/kg	80.0	70.0	130	----
bromomethane	74-83-9	E611D	0.05	mg/kg	3.475 mg/kg	78.8	50.0	140	----
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.475 mg/kg	122	70.0	130	----
chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.475 mg/kg	99.4	70.0	130	----
chloroform	67-66-3	E611D	0.05	mg/kg	3.475 mg/kg	114	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.475 mg/kg	101	60.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.475 mg/kg	88.5	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.475 mg/kg	95.6	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.475 mg/kg	98.6	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.475 mg/kg	99.6	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.475 mg/kg	# 37.5	50.0	140	LCS-L
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.475 mg/kg	107	60.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.475 mg/kg	103	60.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.475 mg/kg	102	60.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.475 mg/kg	102	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.475 mg/kg	107	60.0	130	----
dichloromethane	75-09-2	E611D	0.045	mg/kg	3.475 mg/kg	103	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.475 mg/kg	107	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.475 mg/kg	105	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.475 mg/kg	91.1	70.0	130	----
ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.475 mg/kg	101	70.0	130	----
hexane, n-	110-54-3	E611D	0.05	mg/kg	3.475 mg/kg	96.7	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.475 mg/kg	102	60.0	140	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.475 mg/kg	95.7	60.0	140	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.475 mg/kg	101	70.0	130	----
styrene	100-42-5	E611D	0.05	mg/kg	3.475 mg/kg	98.4	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.475 mg/kg	104	60.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.475 mg/kg	95.4	60.0	130	----



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 726927) - continued</b>									
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.475 mg/kg	103	60.0	130	----
toluene	108-88-3	E611D	0.05	mg/kg	3.475 mg/kg	98.1	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.475 mg/kg	108	60.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.475 mg/kg	88.0	60.0	130	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.475 mg/kg	116	60.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.475 mg/kg	94.0	50.0	140	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.475 mg/kg	72.6	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	104	70.0	130	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	3.475 mg/kg	98.0	70.0	130	----
<b>Hydrocarbons (QCLot: 726589)</b>									
F1 (C6-C10)	----	E581.F1	5	mg/kg	69.1875 mg/kg	100	80.0	120	----
<b>Hydrocarbons (QCLot: 727656)</b>									
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	875.7188 mg/kg	93.0	70.0	130	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	1061.494 mg/kg	87.4	70.0	130	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	971.6625 mg/kg	71.7	70.0	130	----
<b>Hydrocarbons (QCLot: 733426)</b>									
F4G-sg	----	E601.F4G-L	250	mg/kg	1298.6 mg/kg	73.8	70.0	130	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 727654)</b>									
acenaphthene	83-32-9	E642F	0.05	mg/kg	0.8 mg/kg	88.6	60.0	130	----
acenaphthylene	208-96-8	E642F	0.05	mg/kg	0.8 mg/kg	88.6	60.0	130	----
anthracene	120-12-7	E642F	0.05	mg/kg	0.8 mg/kg	94.8	60.0	130	----
benz(a)anthracene	56-55-3	E642F	0.05	mg/kg	0.8 mg/kg	93.4	60.0	130	----
benzo(a)pyrene	50-32-8	E642F	0.05	mg/kg	0.8 mg/kg	99.7	60.0	130	----
benzo(b+j)fluoranthene	n/a	E642F	0.05	mg/kg	0.8 mg/kg	83.4	60.0	130	----
benzo(g,h,i)perylene	191-24-2	E642F	0.05	mg/kg	0.8 mg/kg	94.1	60.0	130	----
benzo(k)fluoranthene	207-08-9	E642F	0.05	mg/kg	0.8 mg/kg	105	60.0	130	----
chrysene	218-01-9	E642F	0.05	mg/kg	0.8 mg/kg	105	60.0	130	----
dibenz(a,h)anthracene	53-70-3	E642F	0.05	mg/kg	0.8 mg/kg	91.0	60.0	130	----
fluoranthene	206-44-0	E642F	0.05	mg/kg	0.8 mg/kg	87.9	60.0	130	----
fluorene	86-73-7	E642F	0.05	mg/kg	0.8 mg/kg	87.2	60.0	130	----
indeno(1,2,3-c,d)pyrene	193-39-5	E642F	0.05	mg/kg	0.8 mg/kg	81.4	60.0	130	----
methylnaphthalene, 1-	90-12-0	E642F	0.03	mg/kg	0.8 mg/kg	92.5	60.0	130	----
methylnaphthalene, 2-	91-57-6	E642F	0.03	mg/kg	0.8 mg/kg	90.4	60.0	130	----
naphthalene	91-20-3	E642F	0.01	mg/kg	0.8 mg/kg	90.4	60.0	130	----



Sub-Matrix: **Soil/Solid**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 727654) - continued</b>									
phenanthrene	85-01-8	E642F	0.05	mg/kg	0.8 mg/kg	91.4	60.0	130	----
pyrene	129-00-0	E642F	0.05	mg/kg	0.8 mg/kg	88.6	60.0	130	----

**Qualifiers**

Qualifier	Description
LCS-L	Lab Control Sample recovery was below ALS DQO. Reference Material and/or Matrix Spike results were acceptable. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.



### Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 726588)</b>										
WT2219916-001	22-28 0.25-1.5	benzene	71-43-2	E611A	2.62 mg/kg	3.125 mg/kg	113	60.0	140	----
		ethylbenzene	100-41-4	E611A	2.36 mg/kg	3.125 mg/kg	102	60.0	140	----
		toluene	108-88-3	E611A	2.40 mg/kg	3.125 mg/kg	103	60.0	140	----
		xylene, m+p-	179601-23-1	E611A	4.46 mg/kg	6.25 mg/kg	95.9	60.0	140	----
		xylene, o-	95-47-6	E611A	2.32 mg/kg	3.125 mg/kg	99.8	60.0	140	----
<b>Volatile Organic Compounds (QCLot: 726927)</b>										
WT2219913-006	Anonymous	Acetone	67-64-1	E611D	2.18 mg/kg	3.125 mg/kg	90.4	50.0	140	----
		benzene	71-43-2	E611D	2.32 mg/kg	3.125 mg/kg	95.9	50.0	140	----
		bromodichloromethane	75-27-4	E611D	2.66 mg/kg	3.125 mg/kg	110	50.0	140	----
		bromoform	75-25-2	E611D	1.99 mg/kg	3.125 mg/kg	82.5	50.0	140	----
		bromomethane	74-83-9	E611D	2.09 mg/kg	3.125 mg/kg	86.3	50.0	140	----
		carbon tetrachloride	56-23-5	E611D	2.49 mg/kg	3.125 mg/kg	103	50.0	140	----
		chlorobenzene	108-90-7	E611D	2.39 mg/kg	3.125 mg/kg	98.7	50.0	140	----
		chloroform	67-66-3	E611D	2.30 mg/kg	3.125 mg/kg	95.2	50.0	140	----
		dibromochloromethane	124-48-1	E611D	2.45 mg/kg	3.125 mg/kg	101	50.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	2.21 mg/kg	3.125 mg/kg	91.4	50.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	2.29 mg/kg	3.125 mg/kg	94.6	50.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	2.32 mg/kg	3.125 mg/kg	95.8	50.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	2.34 mg/kg	3.125 mg/kg	97.0	50.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	1.80 mg/kg	3.125 mg/kg	74.4	50.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	2.35 mg/kg	3.125 mg/kg	97.1	50.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	2.28 mg/kg	3.125 mg/kg	94.2	50.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	2.23 mg/kg	3.125 mg/kg	92.4	50.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	2.38 mg/kg	3.125 mg/kg	98.4	50.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	2.32 mg/kg	3.125 mg/kg	96.0	50.0	140	----
		dichloromethane	75-09-2	E611D	2.31 mg/kg	3.125 mg/kg	95.5	50.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	2.34 mg/kg	3.125 mg/kg	96.9	50.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	2.28 mg/kg	3.125 mg/kg	94.3	50.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	2.23 mg/kg	3.125 mg/kg	92.1	50.0	140	----
		ethylbenzene	100-41-4	E611D	2.41 mg/kg	3.125 mg/kg	99.8	50.0	140	----
		hexane, n-	110-54-3	E611D	2.32 mg/kg	3.125 mg/kg	95.8	50.0	140	----



Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
<b>Volatile Organic Compounds (QCLot: 726927) - continued</b>										
WT2219913-006	Anonymous	methyl ethyl ketone [MEK]	78-93-3	E611D	2.22 mg/kg	3.125 mg/kg	91.7	50.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	2.21 mg/kg	3.125 mg/kg	91.5	50.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.42 mg/kg	3.125 mg/kg	100	50.0	140	----
		styrene	100-42-5	E611D	2.38 mg/kg	3.125 mg/kg	98.5	50.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.49 mg/kg	3.125 mg/kg	103	50.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	2.38 mg/kg	3.125 mg/kg	98.4	50.0	140	----
		tetrachloroethylene	127-18-4	E611D	2.45 mg/kg	3.125 mg/kg	101	50.0	140	----
		toluene	108-88-3	E611D	2.36 mg/kg	3.125 mg/kg	97.8	50.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	2.44 mg/kg	3.125 mg/kg	101	50.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	2.20 mg/kg	3.125 mg/kg	90.9	50.0	140	----
		trichloroethylene	79-01-6	E611D	2.34 mg/kg	3.125 mg/kg	96.7	50.0	140	----
		trichlorofluoromethane	75-69-4	E611D	2.30 mg/kg	3.125 mg/kg	95.3	50.0	140	----
		vinyl chloride	75-01-4	E611D	1.93 mg/kg	3.125 mg/kg	79.8	50.0	140	----
		xylene, m+p-	179601-23-1	E611D	4.94 mg/kg	6.25 mg/kg	102	50.0	140	----
		xylene, o-	95-47-6	E611D	2.35 mg/kg	3.125 mg/kg	97.2	50.0	140	----
<b>Hydrocarbons (QCLot: 726589)</b>										
WT2219916-001	22-28 0.25-1.5	F1 (C6-C10)	----	E581.F1	37.5 mg/kg	62.5 mg/kg	80.8	60.0	140	----
<b>Hydrocarbons (QCLot: 727656)</b>										
WT2219916-001	22-28 0.25-1.5	F2 (C10-C16)	----	E601.SG-L	696 mg/kg	924.49 mg/kg	89.3	60.0	140	----
		F3 (C16-C34)	----	E601.SG-L	794 mg/kg	1108.95 mg/kg	84.9	60.0	140	----
		F4 (C34-C50)	----	E601.SG-L	765 mg/kg	1071.36 mg/kg	84.7	60.0	140	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 727654)</b>										
WT2219916-001	22-28 0.25-1.5	acenaphthene	83-32-9	E642F	0.731 mg/kg	0.8 mg/kg	92.2	50.0	140	----
		acenaphthylene	208-96-8	E642F	0.772 mg/kg	0.8 mg/kg	97.4	50.0	140	----
		anthracene	120-12-7	E642F	0.803 mg/kg	0.8 mg/kg	101	50.0	140	----
		benz(a)anthracene	56-55-3	E642F	0.886 mg/kg	0.8 mg/kg	112	50.0	140	----
		benzo(a)pyrene	50-32-8	E642F	0.863 mg/kg	0.8 mg/kg	109	50.0	140	----
		benzo(b+j)fluoranthene	n/a	E642F	0.706 mg/kg	0.8 mg/kg	89.0	50.0	140	----
		benzo(g,h,i)perylene	191-24-2	E642F	0.751 mg/kg	0.8 mg/kg	94.7	50.0	140	----
		benzo(k)fluoranthene	207-08-9	E642F	0.819 mg/kg	0.8 mg/kg	103	50.0	140	----
		chrysene	218-01-9	E642F	0.812 mg/kg	0.8 mg/kg	102	50.0	140	----
		dibenz(a,h)anthracene	53-70-3	E642F	0.732 mg/kg	0.8 mg/kg	92.3	50.0	140	----
		fluoranthene	206-44-0	E642F	0.748 mg/kg	0.8 mg/kg	94.4	50.0	140	----
		fluorene	86-73-7	E642F	0.732 mg/kg	0.8 mg/kg	92.4	50.0	140	----

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 Work Order : WT2219916  
 Client : Omni-McCann Inc.  
 Project : 0006-0103



Sub-Matrix: **Soil/Solid**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 727654) - continued</b>										
WT2219916-001	22-28 0.25-1.5	indeno(1,2,3-c,d)pyrene	193-39-5	E642F	0.639 mg/kg	0.8 mg/kg	80.6	50.0	140	----
		methylnaphthalene, 1-	90-12-0	E642F	0.753 mg/kg	0.8 mg/kg	94.9	50.0	140	----
		methylnaphthalene, 2-	91-57-6	E642F	0.736 mg/kg	0.8 mg/kg	92.9	50.0	140	----
		naphthalene	91-20-3	E642F	0.723 mg/kg	0.8 mg/kg	91.2	50.0	140	----
		phenanthrene	85-01-8	E642F	0.724 mg/kg	0.8 mg/kg	91.3	50.0	140	----
		pyrene	129-00-0	E642F	0.749 mg/kg	0.8 mg/kg	94.4	50.0	140	----



## Reference Material (RM) Report

A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
<b>Particle Size (QCLot: 727093)</b>									
	RM	passing (19 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (2.0 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (25.4 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (38.1 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (4.75 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (50.8 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (76.2 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (9.5 mm)	----	E181	100 %	100	90.0	110	----
<b>Particle Size (QCLot: 727094)</b>									
	RM	passing (0.05 mm)	----	E182	49.81 %	96.8	90.0	110	----
	RM	passing (0.063 mm)	----	E182	54.27 %	97.5	90.8	109	----
	RM	passing (0.075 mm)	----	E182	58.38 %	98.1	91.4	109	----
	RM	passing (0.125 mm)	----	E182	68.06 %	96.2	92.7	107	----
	RM	passing (0.149 mm)	----	E182	72.71 %	95.6	93.1	107	----
	RM	passing (0.250 mm)	----	E182	85.38 %	97.3	94.1	106	----
	RM	passing (0.420 mm)	----	E182	92.78 %	99.1	94.6	105	----
	RM	passing (0.50 mm)	----	E182	93.78 %	99.2	94.7	105	----
	RM	passing (0.841 mm)	----	E182	97.34 %	99.4	94.9	105	----
	RM	passing (1.0 mm)	----	E182	97.77 %	99.5	94.9	105	----
<b>Particle Size (QCLot: 727095)</b>									
	RM	passing (0.002 mm)	----	E183	21.14 %	94.4	76.0	124	----
	RM	passing (0.004 mm)	----	E183	24.64 %	95.1	80.0	120	----
	RM	passing (0.005 mm)	----	E183	25.91 %	96.8	82.0	118	----
	RM	passing (0.020 mm)	----	E183	37.12 %	102	87.0	113	----
	RM	passing (0.0312 mm)	----	E183	42.58 %	102	88.0	112	----
<b>Metals (QCLot: 727657)</b>									
	RM	boron, hot water soluble	7440-42-8	E487	1.4938 mg/kg	109	60.0	140	----
<b>Metals (QCLot: 727658)</b>									



Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
<b>Metals (QCLot: 727658) - continued</b>									
	RM	mercury	7439-97-6	E510	0.0585 mg/kg	102	70.0	130	----
<b>Metals (QCLot: 727659)</b>									
	RM	antimony	7440-36-0	E440	3.99 mg/kg	97.5	70.0	130	----
	RM	arsenic	7440-38-2	E440	3.73 mg/kg	104	70.0	130	----
	RM	barium	7440-39-3	E440	105 mg/kg	106	70.0	130	----
	RM	beryllium	7440-41-7	E440	0.349 mg/kg	95.3	70.0	130	----
	RM	boron	7440-42-8	E440	8.5 mg/kg	96.1	40.0	160	----
	RM	cadmium	7440-43-9	E440	0.91 mg/kg	94.4	70.0	130	----
	RM	chromium	7440-47-3	E440	101 mg/kg	98.0	70.0	130	----
	RM	cobalt	7440-48-4	E440	6.9 mg/kg	98.2	70.0	130	----
	RM	copper	7440-50-8	E440	123 mg/kg	99.4	70.0	130	----
	RM	lead	7439-92-1	E440	267 mg/kg	97.7	70.0	130	----
	RM	molybdenum	7439-98-7	E440	1.03 mg/kg	105	70.0	130	----
	RM	nickel	7440-02-0	E440	26.7 mg/kg	99.4	70.0	130	----
	RM	silver	7440-22-4	E440	4.06 mg/kg	109	70.0	130	----
	RM	thallium	7440-28-0	E440	0.0786 mg/kg	95.8	40.0	160	----
	RM	uranium	7440-61-1	E440	0.52 mg/kg	98.4	70.0	130	----
	RM	vanadium	7440-62-2	E440	32.7 mg/kg	99.3	70.0	130	----
	RM	zinc	7440-66-6	E440	297 mg/kg	97.8	70.0	130	----
<b>Speciated Metals (QCLot: 727655)</b>									
	RM	chromium, hexavalent [Cr VI]	18540-29-9	E532	172 mg/kg	89.3	70.0	130	----





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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20-1009754

Environmental Division
Waterloo
Work Order Reference
WT2219916



Telephone: +1 519 886 6910

Report To: Omni-McCann Inc. Reports / Recipients: Select Report Format: PDF, EXCEL, EDO (DIGITAL). Turnaround Time (TAT) Requested: Routine [R] if received by 3pm M-F. Project Information: ALS Account # 40026, Job # 0006-0103. Oil and Gas Required Fields (client use): AFE/Cost Center, Major/Minor Code, Requisitioner, Location. Sample Table with columns for Sample #, Identification, Date, Time, Sample Type, and various analytes (PHC, ATEX, PAH, Metals, Cr6, Hg, VOC, RSC Grain size, PH). Includes sections for Drinking Water (DW) Samples, Shipping Release, and Initial/Final Shipment Reception.

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION
WHITE - LABORATORY COPY YELLOW - CLIENT COPY
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.

MA US-024 Sol-056/059



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Chain of Custody (COC) / Analytical Request Form

COC Number: 20-1009749

Canada Toll Free: 1 800 668 9878

Page 2 of 2

<b>Report To</b> Contact and company name below will appear on the final report Company: <u>Omni-McCann Inc.</u> Contact: <u>Daniel Elliot</u> Phone: <u>613-857-4936</u> Company address below will appear on the final report Street: <u>1755 Woodward Drive, Unit 200</u> City/Province: <u>Ottawa, ON</u> Postal Code: <u>K2C 0P9</u>		<b>Reports / Recipients</b> Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL) Merge QC/QCI Reports with COA <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: <u>dun@omnimcann.com</u> Email 2: <u>antonija@omnimcann.com</u> Email 3: <u>kristina@omnimcann.com</u>		<b>Turnaround Time (TAT) Requested</b> <input checked="" type="checkbox"/> Routine [R] if received by 3pm M-F - no surcharges apply <input type="checkbox"/> 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum <input type="checkbox"/> 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum <input type="checkbox"/> 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum <input type="checkbox"/> 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum <input type="checkbox"/> Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests <b>Date and Time Required for all E&amp;P TATs:</b> dd-mm-yy hh:mm am/pm		<b>AFFIX ALS BARCODE LABEL HERE (ALS use only)</b>																																																																																																										
<b>Invoice To</b> Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Copy of invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		<b>Invoice Recipients</b> Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: <u>invoicing@omnimcann.com</u> Email 2:		<b>Date and Time Required for all E&amp;P TATs:</b> dd-mm-yy hh:mm am/pm																																																																																																												
<b>Project Information</b> ALS Account # / Quote # <u>90026</u> Job #: <u>0006-0103</u> PO / AFE: LSD:		<b>Oil and Gas Required Fields (client use)</b> AFE/Cost Center: PO# Major/Minor Code: Routing Code: Requisitioner: Location:		<b>Analysis Request</b> Indicate Filtered (F), Preserved (P) or Filtered and Preserved (FP) below <table border="1"> <tr> <th rowspan="2">NUMBER OF CONTAINERS</th> <th rowspan="2">PHC</th> <th rowspan="2">BTEX</th> <th rowspan="2">PAH</th> <th rowspan="2">Metals</th> <th rowspan="2">Cr6</th> <th rowspan="2">Hg</th> <th rowspan="2">VOL</th> <th colspan="3">SAMPLES ON HOLD</th> <th rowspan="2">EXTENDED STORAGE REQUIRED</th> <th rowspan="2">SUSPECTED HAZARD (see notes)</th> </tr> <tr> <th></th> <th></th> <th></th> </tr> <tr> <td>4</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>		NUMBER OF CONTAINERS	PHC	BTEX	PAH	Metals	Cr6	Hg	VOL	SAMPLES ON HOLD			EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)				4	X	X	X	X	X	X							3							X						4	X	X	X	X	X	X							3							X						3							X						4	X	X	X	X	X	X							3							X					
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<b>ALS Lab Work Order # (ALS use only):</b>		<b>ALS Contact:</b> <u>Eric</u>		<b>Sampler:</b> <u>Antonija Cass</u>																																																																																																												
<b>ALS Sample # (ALS use only)</b>	<b>Sample Identification and/or Coordinates (This description will appear on the report)</b>	<b>Date (dd-mm-yy)</b>	<b>Time (hh:mm)</b>	<b>Sample Type</b>	<b>NUMBER OF CONTAINERS</b>	<b>PHC</b>	<b>BTEX</b>	<b>PAH</b>	<b>Metals</b>	<b>Cr6</b>	<b>Hg</b>	<b>VOL</b>	<b>SAMPLES ON HOLD</b>	<b>EXTENDED STORAGE REQUIRED</b>	<b>SUSPECTED HAZARD (see notes)</b>																																																																																																	
	<u>22-16B 0-1</u>	<u>25-OCT-22</u>			<u>4</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>																																																																																																					
	<u>22-16B 2.5-3</u>	<u>25-OCT-22</u>			<u>3</u>							<u>X</u>																																																																																																				
	<u>22-17B 0-0.75</u>	<u>26-OCT-22</u>			<u>4</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>																																																																																																					
	<u>22-17B 2.5-3.5</u>	<u>26-OCT-22</u>			<u>3</u>							<u>X</u>																																																																																																				
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	<u>22-03C 2.5-2.75</u>	<u>26-OCT-22</u>			<u>3</u>							<u>X</u>																																																																																																				

<b>Drinking Water (DW) Samples<sup>1</sup> (client use)</b> Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO		<b>Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)</b> <u>D. Reg 153/04 Table 7 FOR RSC</u>		<b>SAMPLE RECEIPT DETAILS (ALS use only)</b> Cooling Method: <input type="checkbox"/> NONE <input type="checkbox"/> ICE <input checked="" type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED Submission Comments identified on Sample Receipt Notification: <input type="checkbox"/> YES <input type="checkbox"/> NO Cooler Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A Sample Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> N/A INITIAL COOLER TEMPERATURES °C: <u>2.7</u> FINAL COOLER TEMPERATURES °C: <u>3.5</u>	
<b>SHIPMENT RELEASE (client use)</b> Released by: <u>Antonija Cass</u> Date: <u>26-OCT-22</u> Time: <u>15:15</u>		<b>INITIAL SHIPMENT RECEPTION (ALS use only)</b> Received by: <u>[Signature]</u> Date: <u>10/27/22</u> Time: <u>14:00</u>		<b>FINAL SHIPMENT RECEPTION (ALS use only)</b> Received by: <u>[Signature]</u> Date: <u>10/28/22</u> Time: <u>10:00</u>	

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION  
 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.  
 AUG 2019 FRONT




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## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

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<p><b>Work Order</b> : <b>WT2220569</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 20-1009750</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 1</p> <p><b>No. of samples analysed</b> : 1</p>	<p><b>Page</b> : 1 of 4</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 01-Nov-2022 16:40</p> <p><b>Date Analysis Commenced</b> : 03-Nov-2022</p> <p><b>Issue Date</b> : 08-Nov-2022 15:39</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).**

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### *Signatories*

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Organics, Waterloo, Ontario
Niral Patel		Centralized Prep, Waterloo, Ontario

## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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. Guidelines 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.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
%	percent
mg/kg	milligrams per kilogram

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04	ON153/04	ON153/04		
				22-04C 2.5-4.25	T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F		
Sub-Matrix: Soil (Matrix: Soil/Solid)				Sampling date/time						
				28-Oct-2022 00:00						
				WT2220569-001						
<b>Physical Tests</b>										
moisture	E144	0.25	%	7.75	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2220569-001 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	0.10	%	101	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	115	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>WT2220569</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 20-1009750</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 1</p> <p><b>No. of samples analysed</b> : 1</p>	<p><b>Page</b> : 1 of 6</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 01-Nov-2022 16:40</p> <p><b>Issue Date</b> : 08-Nov-2022 15:39</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
  - CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
  - DQO: Data Quality Objective.
  - LOR: Limit of Reporting (detection limit).
  - RPD: Relative Percent Difference.
- 

### ***Workorder Comments***

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Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.





**Outliers : Quality Control Samples**

*Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes*

Matrix: **Soil/Solid**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Matrix Spike (MS) Recoveries</b>								
Volatile Organic Compounds	Anonymous	Anonymous	Acetone	67-64-1	E611D	163 % <sup>RRQC</sup>	50.0-140%	Recovery greater than upper data quality objective
Volatile Organic Compounds	Anonymous	Anonymous	methyl ethyl ketone [MEK]	78-93-3	E611D	155 % <sup>RRQC</sup>	50.0-140%	Recovery greater than upper data quality objective
Volatile Organic Compounds	Anonymous	Anonymous	methyl isobutyl ketone [MIBK]	108-10-1	E611D	144 % <sup>MES</sup>	50.0-140%	Recovery greater than upper data quality objective

**Result Qualifiers**

Qualifier	Description
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).
RRQC	Refer to report comments for information regarding this QC result.



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-04C 2.5-4.25	E144	28-Oct-2022	----	----	----		03-Nov-2022	----	----	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>										
Glass soil methanol vial [ON MECP] 22-04C 2.5-4.25	E611D	28-Oct-2022	07-Nov-2022	14 days	10 days	✓	07-Nov-2022	40 days	0 days	✓

### Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Moisture Content by Gravimetry	E144	729697	1	18	5.5	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	732987	1	20	5.0	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
Moisture Content by Gravimetry	E144	729697	1	18	5.5	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	732987	1	20	5.0	5.0	✔
<b>Method Blanks (MB)</b>							
Moisture Content by Gravimetry	E144	729697	1	18	5.5	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	732987	1	20	5.0	5.0	✔
<b>Matrix Spikes (MS)</b>							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	732987	1	20	5.0	5.0	✔



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

<i>Analytical Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
Moisture Content by Gravimetry	E144  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D  Waterloo - Environmental	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
VOCs Methanol Extraction for Headspace Analysis	EP581  Waterloo - Environmental	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.

## QUALITY CONTROL REPORT

<b>Work Order</b>	<b>: WT2220569</b>	<b>Page</b>	: 1 of 10
<b>Client</b>	: Omni-McCann Inc.	<b>Laboratory</b>	: Waterloo - Environmental
<b>Contact</b>	: Daniel Elliot	<b>Account Manager</b>	: Emily Smith
<b>Address</b>	: 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9	<b>Address</b>	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
<b>Telephone</b>	:	<b>Telephone</b>	: +1 519 886 6910
<b>Project</b>	: 0006-0103	<b>Date Samples Received</b>	: 01-Nov-2022 16:40
<b>PO</b>	: ----	<b>Date Analysis Commenced</b>	: 03-Nov-2022
<b>C-O-C number</b>	: 20-1009750	<b>Issue Date</b>	: 08-Nov-2022 15:39
<b>Sampler</b>	: ----                    705 243 5828		
<b>Site</b>	: ----		
<b>Quote number</b>	: Project 0006-0103		
<b>No. of samples received</b>	: 1		
<b>No. of samples analysed</b>	: 1		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Waterloo Organics, Waterloo, Ontario
Niral Patel		Waterloo Centralized Prep, Waterloo, Ontario

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Work Order : WT2220569  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## **General Comments**

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

### **Key :**

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

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## **Workorder Comments**

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Soil/Solid

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Physical Tests (QC Lot: 729697)</b>											
WT2220203-001	Anonymous	moisture	----	E144	0.25	%	10.2	10.0	2.04%	20%	----
<b>Volatile Organic Compounds (QC Lot: 732987)</b>											
WT2220257-009	Anonymous	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	<0.045	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040	<0.040	0	Diff <2x LOR	----



Sub-Matrix: **Soil/Solid**

*Laboratory Duplicate (DUP) Report*

<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Original Result</i>	<i>Duplicate Result</i>	<i>RPD(%) or Difference</i>	<i>Duplicate Limits</i>	<i>Qualifier</i>
<b>Volatile Organic Compounds (QC Lot: 732987) - continued</b>											
WT2220257-009	Anonymous	styrene	100-42-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----





## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 729697)</b>						
moisture	---	E144	0.25	%	<0.25	---
<b>Volatile Organic Compounds (QCLot: 732987)</b>						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	---
benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	---
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	---
bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	---
bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	---
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	---
chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	---
chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	---
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	---
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	---
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	---
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	---
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	---
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	---
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	---
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	---
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	---
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	---
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	---
dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	---
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	---
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	---
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	---
ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	---
hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	---
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	---
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	---
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	---
styrene	100-42-5	E611D	0.05	mg/kg	<0.050	---
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	---

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 Work Order : WT2220569  
 Client : Omni-McCann Inc.  
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Sub-Matrix: **Soil/Solid**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
<b>Volatile Organic Compounds (QCLot: 732987) - continued</b>						
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----



## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
Analyte	CAS Number	Method	LOR	Unit	Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
<b>Physical Tests (QCLot: 729697)</b>									
moisture	---	E144	0.25	%	50 %	101	90.0	110	---
<b>Volatile Organic Compounds (QCLot: 732987)</b>									
Acetone	67-64-1	E611D	0.5	mg/kg	3.475 mg/kg	112	60.0	140	---
benzene	71-43-2	E611D	0.005	mg/kg	3.475 mg/kg	91.9	70.0	130	---
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.475 mg/kg	96.6	50.0	140	---
bromoform	75-25-2	E611D	0.05	mg/kg	3.475 mg/kg	86.0	70.0	130	---
bromomethane	74-83-9	E611D	0.05	mg/kg	3.475 mg/kg	86.9	50.0	140	---
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.475 mg/kg	86.6	70.0	130	---
chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.475 mg/kg	95.2	70.0	130	---
chloroform	67-66-3	E611D	0.05	mg/kg	3.475 mg/kg	90.6	70.0	130	---
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.475 mg/kg	92.5	60.0	130	---
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.475 mg/kg	92.0	70.0	130	---
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.475 mg/kg	95.6	70.0	130	---
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.475 mg/kg	93.2	70.0	130	---
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.475 mg/kg	95.0	70.0	130	---
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.475 mg/kg	59.4	50.0	140	---
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.475 mg/kg	92.8	60.0	130	---
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.475 mg/kg	93.7	60.0	130	---
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.475 mg/kg	89.9	60.0	130	---
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.475 mg/kg	90.1	70.0	130	---
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.475 mg/kg	89.1	60.0	130	---
dichloromethane	75-09-2	E611D	0.045	mg/kg	3.475 mg/kg	95.5	70.0	130	---
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.475 mg/kg	91.7	70.0	130	---
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.475 mg/kg	93.1	70.0	130	---
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.475 mg/kg	89.6	70.0	130	---
ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.475 mg/kg	90.6	70.0	130	---
hexane, n-	110-54-3	E611D	0.05	mg/kg	3.475 mg/kg	82.8	70.0	130	---
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.475 mg/kg	104	60.0	140	---
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.475 mg/kg	97.8	60.0	140	---
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.475 mg/kg	92.4	70.0	130	---
styrene	100-42-5	E611D	0.05	mg/kg	3.475 mg/kg	89.6	70.0	130	---
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.475 mg/kg	94.0	60.0	130	---



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 732987) - continued</b>									
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.475 mg/kg	79.2	60.0	130	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.475 mg/kg	90.5	60.0	130	----
toluene	108-88-3	E611D	0.05	mg/kg	3.475 mg/kg	87.3	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.475 mg/kg	85.4	60.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.475 mg/kg	92.7	60.0	130	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.475 mg/kg	88.6	60.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.475 mg/kg	86.5	50.0	140	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.475 mg/kg	71.9	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	85.8	70.0	130	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	3.475 mg/kg	85.6	70.0	130	----



### Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 732987)</b>										
WT2220257-009	Anonymous	Acetone	67-64-1	E611D	3.30 mg/kg	3.125 mg/kg	163	50.0	140	RRQC
		benzene	71-43-2	E611D	2.31 mg/kg	3.125 mg/kg	114	50.0	140	----
		bromodichloromethane	75-27-4	E611D	2.50 mg/kg	3.125 mg/kg	124	50.0	140	----
		bromoform	75-25-2	E611D	2.36 mg/kg	3.125 mg/kg	117	50.0	140	----
		bromomethane	74-83-9	E611D	2.21 mg/kg	3.125 mg/kg	109	50.0	140	----
		carbon tetrachloride	56-23-5	E611D	2.11 mg/kg	3.125 mg/kg	104	50.0	140	----
		chlorobenzene	108-90-7	E611D	2.36 mg/kg	3.125 mg/kg	117	50.0	140	----
		chloroform	67-66-3	E611D	2.29 mg/kg	3.125 mg/kg	113	50.0	140	----
		dibromochloromethane	124-48-1	E611D	2.43 mg/kg	3.125 mg/kg	120	50.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	2.47 mg/kg	3.125 mg/kg	122	50.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	2.37 mg/kg	3.125 mg/kg	117	50.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	2.20 mg/kg	3.125 mg/kg	109	50.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	2.27 mg/kg	3.125 mg/kg	112	50.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	1.89 mg/kg	3.125 mg/kg	93.6	50.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	2.31 mg/kg	3.125 mg/kg	114	50.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	2.50 mg/kg	3.125 mg/kg	123	50.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	2.23 mg/kg	3.125 mg/kg	110	50.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	2.28 mg/kg	3.125 mg/kg	113	50.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	2.19 mg/kg	3.125 mg/kg	108	50.0	140	----
		dichloromethane	75-09-2	E611D	2.45 mg/kg	3.125 mg/kg	121	50.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	2.36 mg/kg	3.125 mg/kg	117	50.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	2.32 mg/kg	3.125 mg/kg	115	50.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	2.22 mg/kg	3.125 mg/kg	110	50.0	140	----
		ethylbenzene	100-41-4	E611D	2.19 mg/kg	3.125 mg/kg	108	50.0	140	----
		hexane, n-	110-54-3	E611D	2.05 mg/kg	3.125 mg/kg	102	50.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	3.13 mg/kg	3.125 mg/kg	155	50.0	140	RRQC
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	2.90 mg/kg	3.125 mg/kg	144	50.0	140	MES
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.25 mg/kg	3.125 mg/kg	111	50.0	140	----
		styrene	100-42-5	E611D	2.26 mg/kg	3.125 mg/kg	112	50.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.37 mg/kg	3.125 mg/kg	117	50.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	2.25 mg/kg	3.125 mg/kg	111	50.0	140	----



Sub-Matrix: **Soil/Solid**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
<b>Volatile Organic Compounds (QCLot: 732987) - continued</b>										
WT2220257-009	Anonymous	tetrachloroethylene	127-18-4	E611D	2.14 mg/kg	3.125 mg/kg	106	50.0	140	----
		toluene	108-88-3	E611D	2.13 mg/kg	3.125 mg/kg	105	50.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	2.10 mg/kg	3.125 mg/kg	104	50.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	2.46 mg/kg	3.125 mg/kg	121	50.0	140	----
		trichloroethylene	79-01-6	E611D	2.18 mg/kg	3.125 mg/kg	108	50.0	140	----
		trichlorofluoromethane	75-69-4	E611D	2.17 mg/kg	3.125 mg/kg	107	50.0	140	----
		vinyl chloride	75-01-4	E611D	1.88 mg/kg	3.125 mg/kg	92.7	50.0	140	----
		xylene, m+p-	179601-23-1	E611D	4.15 mg/kg	6.25 mg/kg	103	50.0	140	----
		xylene, o-	95-47-6	E611D	2.10 mg/kg	3.125 mg/kg	104	50.0	140	----

### Qualifiers

Qualifier	Description
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).
RRQC	Refer to report comments for information regarding this QC result.



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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9978

COC Number: 20-1009750

Page 1 of 1

Environmental Division  
Waterloo

Work Order Reference  
WT2220569



Telephone: +1 519 886 8910

Company: Omni-McConn, Inc.

Contact: Daniel Elliot

Phone: 613-557-4936

Company address below will appear on the final report

Street: 1355 Woodward Drive, Unit 200

City/Province: Ottawa, ON

Postal Code: K2C 0P4

Invoice To: Same as Report To

Company: Copy of Invoice with Report

Contact: Email 1 or Fax

Project Information

ALS Account # / Quote #: 090026

Job #: 6006-0103

PO / A/E:

LSD:

ALS Lab Work Order #: W1220569

ALS Sample # (ALS use only): 22-04C 2.5-4.25

Sample Identification and/or Coordinates (This description will appear on the report)

Date: 28-Oct-22

Time: 11:30

Sample Type: Soil

Sampler: Antonia (uss)

ALS Contact: Eric

Requisitioner:

Location:

AFECost Center:

Material Code:

Routing Code:

Requisitioner:

Location:

AFECost Center:

Material Code:

Routing Code:

Requisitioner:

Location:

AFECost Center:

Material Code:

Routing Code:

Requisitioner:

Location:

AFECost Center:

Reports / Recipients

Select Report Format: PDF, EXCEL, BOD (Optional)

Merge COC/OCI Reports with COA

Compare Results to Criteria on Report

Select Distribution: Email, Mail, Fax

Email 1 or Fax: dun@omnimcconn.com

Email 2: antonia@omnimcconn.com

Email 3: ksmith@omnimcconn.com

Invoice Recipients

Select Invoice Distribution: Email, Mail, Fax

Email 1 or Fax: invoicing@omnimcconn.com

Email 2

Oil and Gas Required Fields (client use)

AFECost Center:

Material Code:

Routing Code:

Requisitioner:

Location:

AFECost Center:

Material Code:

Routing Code:

Requisitioner:

Location:

AFECost Center:

Material Code:

Routing Code:

Requisitioner:

Location:

AFECost Center:

Material Code:

Routing Code:

Requisitioner:

Location:

AFECost Center:

Material Code:

Routing Code:

Requisitioner:

Location:

AFECost Center:

Material Code:

Routing Code:

Requisitioner:

Location:

AFECost Center:

Touraround Time (TAT) Requested

Route: [R] if received by 3pm M-F - no surcharges apply

4 day [P4] if received by 3pm M-F - 20% rush surcharge

3 day [P3] if received by 3pm M-F - 25% rush surcharge

2 day [P2] if received by 3pm M-F - 50% rush surcharge

1 day [P1] if received by 3pm M-F - 100% rush surcharge

Same day [P0] if received by 10am M-S - 200% rush surcharge

For all tests with rush TAT's requested

Indicate Filtered (F), Preserved (P) or F

Analys

NUMBER OF CONTAINERS

VOC

3

X

SAMPLES ON HOLD

EXTENDED STORAGE REQ

SUSPECTED HAZARD (see notes)

Drinking Water (DW) Samples (client use)

Are samples taken from a Regulated DW System?

Are samples for human consumption/ use?

SHIPPING RELEASE (client use)

Released by: Antonia (uss)

Date: 01-NOV-22

Time: 10:30

Received by: Eric Dobbin

Date: 11/1/22

Time: 8:40

Received by: P

Date: 3-NOV-22

Time: 9:22

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

O: Reg. 153/04 Table 7

FOR RSC

SHIPPING RELEASE (client use)

Released by: Antonia (uss)

Date: 01-NOV-22

Time: 10:30

Received by: Eric Dobbin

Date: 11/1/22

Time: 8:40

Received by: P

Date: 3-NOV-22

Time: 9:22

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: NONE, ICE, ICEPACKS, FROZEN, COOLING INITIATED

Substitution Comments Identified on Sample Receipt Notification: YES, NO, N/A

Cooler Custody Seals Intact: YES, NO, N/A

Sample Custody Seals Intact: YES, NO, N/A

INITIAL COOLER TEMPERATURES %: 97

INITIAL COOLER TEMPERATURES %: 91

SHIPPING RELEASE (client use)

Released by: Antonia (uss)

Date: 01-NOV-22

Time: 10:30

Received by: P

Date: 3-NOV-22

Time: 9:22

ALS 2020 FORM

SOL-456, VS-052



## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

<p><b>Work Order</b> : <b>WT2220705</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 20-1009753</p> <p><b>Sampler</b> : AC</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 1</p> <p><b>No. of samples analysed</b> : 1</p>	<p><b>Page</b> : 1 of 3</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 03-Nov-2022 12:15</p> <p><b>Date Analysis Commenced</b> : 07-Nov-2022</p> <p><b>Issue Date</b> : 14-Nov-2022 16:47</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Amanda Ganouri-Lumsden	Department Manager - Microbiology and Prep	Centralized Prep, Waterloo, Ontario
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Organics, Waterloo, Ontario
Jeremy Gingras	Team Leader - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Organics, Waterloo, Ontario
Jon Fisher	Department Manager - Inorganics	Metals, Waterloo, Ontario



## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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. Guidelines 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.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-------------	--------------------

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .

Page : 3 of 3  
Work Order : WT2220705  
Client : Omni-McCann Inc.  
Project : 0006-0103

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>WT2220705</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 20-1009753</p> <p><b>Sampler</b> : AC</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 1</p> <p><b>No. of samples analysed</b> : 1</p>	<p><b>Page</b> : 1 of 9</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 03-Nov-2022 12:15</p> <p><b>Issue Date</b> : 14-Nov-2022 16:46</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
  - CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
  - DQO: Data Quality Objective.
  - LOR: Limit of Reporting (detection limit).
  - RPD: Relative Percent Difference.
- 

### ***Workorder Comments***

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Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

---

### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- Duplicate outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



**Outliers : Quality Control Samples**

*Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes*

Matrix: **Soil/Solid**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Duplicate (DUP) RPDs</b>								
Speciated Metals	Anonymous	Anonymous	chromium, hexavalent [Cr VI]	18540-29-9	E532	83.5 % DUP-H	35%	Duplicate RPD does not meet the DQO for this test.
Hydrocarbons	Anonymous	Anonymous	F3 (C16-C34)	----	E601.SG-L	61.0 % DUP-H	40%	Duplicate RPD does not meet the DQO for this test.

**Result Qualifiers**

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-35 0-1	E581.F1	02-Nov-2022	08-Nov-2022	14 days	7 days	✓	09-Nov-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHCs - F4G by Gravimetry (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-35 0-1	E601.F4G-L	02-Nov-2022	09-Nov-2022	14 days	8 days	✓	14-Nov-2022	40 days	5 days	✓	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-35 0-1	E601.SG-L	02-Nov-2022	08-Nov-2022	14 days	7 days	✓	14-Nov-2022	40 days	6 days	✓	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-35 0-1	E487	02-Nov-2022	10-Nov-2022	180 days	8 days	✓	10-Nov-2022	180 days	0 days	✓	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-35 0-1	E510	02-Nov-2022	10-Nov-2022	----	----		10-Nov-2022	28 days	8 days	✓	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-35 0-1	E440	02-Nov-2022	10-Nov-2022	----	----		10-Nov-2022	180 days	8 days	✓	
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-35 0-1	E144	02-Nov-2022	----	----	----		07-Nov-2022	----	----		



Matrix: **Soil/Solid**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS</b>										
Glass soil jar/Teflon lined cap 22-35 0-1	E641A	02-Nov-2022	08-Nov-2022	14 days	7 days	✔	09-Nov-2022	40 days	1 days	✔
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>										
Glass soil jar/Teflon lined cap 22-35 0-1	E532	02-Nov-2022	08-Nov-2022	30 days	6 days	✔	10-Nov-2022	7 days	2 days	✔
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>										
Glass soil methanol vial [ON MECP] 22-35 0-1	E611D	02-Nov-2022	08-Nov-2022	14 days	7 days	✔	09-Nov-2022	40 days	0 days	✔

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: \* = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Boron-Hot Water Extractable by ICPOES	E487	735583	1	12	8.3	5.0	✓
CCME PHC - F1 by Headspace GC-FID	E581.F1	736127	1	20	5.0	5.0	✓
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	741883	1	7	14.2	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	735214	1	16	6.2	5.0	✓
Hexavalent Chromium (Cr VI) by IC	E532	734373	1	19	5.2	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	735579	1	12	8.3	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	735580	1	12	8.3	5.0	✓
Moisture Content by Gravimetry	E144	734356	1	19	5.2	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	735215	1	6	16.6	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	736128	1	20	5.0	5.0	✓
<b>Laboratory Control Samples (LCS)</b>							
Boron-Hot Water Extractable by ICPOES	E487	735583	2	12	16.6	10.0	✓
CCME PHC - F1 by Headspace GC-FID	E581.F1	736127	1	20	5.0	5.0	✓
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	741883	1	7	14.2	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	735214	1	16	6.2	5.0	✓
Hexavalent Chromium (Cr VI) by IC	E532	734373	2	19	10.5	10.0	✓
Mercury in Soil/Solid by CVAAS	E510	735579	2	12	16.6	10.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	735580	2	12	16.6	10.0	✓
Moisture Content by Gravimetry	E144	734356	1	19	5.2	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	735215	1	6	16.6	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	736128	1	20	5.0	5.0	✓
<b>Method Blanks (MB)</b>							
Boron-Hot Water Extractable by ICPOES	E487	735583	1	12	8.3	5.0	✓
CCME PHC - F1 by Headspace GC-FID	E581.F1	736127	1	20	5.0	5.0	✓
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	741883	1	7	14.2	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	735214	1	16	6.2	5.0	✓
Hexavalent Chromium (Cr VI) by IC	E532	734373	1	19	5.2	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	735579	1	12	8.3	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	735580	1	12	8.3	5.0	✓
Moisture Content by Gravimetry	E144	734356	1	19	5.2	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	735215	1	6	16.6	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	736128	1	20	5.0	5.0	✓
<b>Matrix Spikes (MS)</b>							
CCME PHC - F1 by Headspace GC-FID	E581.F1	736127	1	20	5.0	5.0	✓
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	741883	1	7	14.2	5.0	✓





Matrix: **Soil/Solid**

Evaluation: \* = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
<b>Matrix Spikes (MS) - Continued</b>							
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	735214	1	16	6.2	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	735215	1	6	16.6	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	736128	1	20	5.0	5.0	✓



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Moisture Content by Gravimetry	E144 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Metals in Soil/Solid by CRC ICPMS	E440 Waterloo - Environmental	Soil/Solid	EPA 6020B (mod)	This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 2 mm sieve, and digested with HNO <sub>3</sub> and HCl.  Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines.  Analysis is by Collision/Reaction Cell ICPMS.
Boron-Hot Water Extractable by ICPOES	E487 Waterloo - Environmental	Soil/Solid	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).
Mercury in Soil/Solid by CVAAS	E510 Waterloo - Environmental	Soil/Solid	EPA 200.2/1631 Appendix (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO <sub>3</sub> and HCl, followed by CVAAS analysis.
Hexavalent Chromium (Cr VI) by IC	E532 Waterloo - Environmental	Soil/Solid	APHA 3500-CR C	Instrumental analysis is performed by ion chromatography with UV detection.
CCME PHC - F1 by Headspace GC-FID	E581.F1 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	A portion of the silica gel treated sample extract is filtered and dried at 105°C and the mass of the residual gravimetric heavy hydrocarbons (F4G) is determined gravimetrically.
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4).



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
VOCs (Eastern Canada List) by Headspace GC-MS	E611D Waterloo - Environmental	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs by Hex:Ace GC-MS	E641A Waterloo - Environmental	Soil/Solid	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are extracted with hexane/acetone and analyzed by GC-MS. If reported, IACR (index of additive cancer risk, unitless) and B(a)P toxic potency equivalent (in soil concentration units) are calculated as per CCME PAH Soil Quality Guidelines fact sheet (2010) or ABT1.
F1-BTEX	EC580 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.
F2 to F3 minus PAH	EC600 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	F2-PAH = CCME Fraction 2 (C10-C16) minus Naphthalene F3-PAH = CCME Fraction 3 (C16-C34) minus select Polycyclic Aromatic Hydrocarbons (PAH) as per CCME Soil Tier 1

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for Metals and Mercury	EP440 Waterloo - Environmental	Soil/Solid	EPA 200.2 (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO <sub>3</sub> and HCl. This method is intended to liberate metals that may be environmentally available.
Boron-Hot Water Extractable	EP487 Waterloo - Environmental	Soil/Solid	HW EXTR, EPA 6010B	A dried solid sample is extracted with weak 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)
Preparation of Hexavalent Chromium (Cr VI) for IC	EP532 Waterloo - Environmental	Soil/Solid	EPA 3060A	Field moist samples are digested with a sodium hydroxide/sodium carbonate solution as described in EPA 3060A.
VOCs Methanol Extraction for Headspace Analysis	EP581 Waterloo - Environmental	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PHCs and PAHs Hexane-Acetone Tumbler Extraction	EP601 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1 (mod)	Samples are subsampled and Petroleum Hydrocarbons (PHC) and PAHs are extracted with 1:1 hexane:acetone using a rotary extractor.

## QUALITY CONTROL REPORT

<p><b>Work Order</b> : <b>WT2220705</b></p> <p>Client : Omni-McCann Inc.</p> <p>Contact : Daniel Elliot</p> <p>Address : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p>Telephone :</p> <p>Project : 0006-0103</p> <p>PO : ----</p> <p>C-O-C number : 20-1009753</p> <p>Sampler : AC                      705 243 5828</p> <p>Site : ----</p> <p>Quote number : Project 0006-0103</p> <p>No. of samples received : 1</p> <p>No. of samples analysed : 1</p>	<p>Page : 1 of 16</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Emily Smith</p> <p>Address : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 03-Nov-2022 12:15</p> <p>Date Analysis Commenced : 07-Nov-2022</p> <p>Issue Date : 14-Nov-2022 16:46</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Amanda Ganouri-Lumsden	Department Manager - Microbiology and Prep	Waterloo Centralized Prep, Waterloo, Ontario
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Waterloo Organics, Waterloo, Ontario
Jeremy Gingras	Team Leader - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Waterloo Organics, Waterloo, Ontario
Jon Fisher	Department Manager - Inorganics	Waterloo Metals, Waterloo, Ontario

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Work Order : WT2220705  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## **General Comments**

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

### **Key :**

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

## **Workorder Comments**

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Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Soil/Solid

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Physical Tests (QC Lot: 734356)</b>											
CG2215342-001	Anonymous	moisture	----	E144	0.25	%	48.0	49.8	3.67%	20%	----
<b>Metals (QC Lot: 735579)</b>											
WT2219037-002	Anonymous	mercury	7439-97-6	E510	0.0050	mg/kg	0.0132	0.0141	0.0009	Diff <2x LOR	----
<b>Metals (QC Lot: 735580)</b>											
WT2219037-002	Anonymous	antimony	7440-36-0	E440	0.10	mg/kg	0.17	0.16	0.008	Diff <2x LOR	----
		arsenic	7440-38-2	E440	0.10	mg/kg	3.94	4.14	4.94%	30%	----
		barium	7440-39-3	E440	0.50	mg/kg	116	110	4.88%	40%	----
		beryllium	7440-41-7	E440	0.10	mg/kg	0.73	0.74	1.62%	30%	----
		boron	7440-42-8	E440	5.0	mg/kg	12.1	12.3	0.2	Diff <2x LOR	----
		cadmium	7440-43-9	E440	0.020	mg/kg	0.086	0.086	0.0007	Diff <2x LOR	----
		chromium	7440-47-3	E440	0.50	mg/kg	25.4	25.6	1.01%	30%	----
		cobalt	7440-48-4	E440	0.10	mg/kg	10.9	11.3	3.66%	30%	----
		copper	7440-50-8	E440	0.50	mg/kg	22.7	22.2	2.26%	30%	----
		lead	7439-92-1	E440	0.50	mg/kg	9.29	10.0	7.96%	40%	----
		molybdenum	7439-98-7	E440	0.10	mg/kg	0.38	0.36	0.02	Diff <2x LOR	----
		nickel	7440-02-0	E440	0.50	mg/kg	24.6	25.2	2.40%	30%	----
		selenium	7782-49-2	E440	0.20	mg/kg	<0.20	<0.20	0	Diff <2x LOR	----
		silver	7440-22-4	E440	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		thallium	7440-28-0	E440	0.050	mg/kg	0.147	0.162	0.014	Diff <2x LOR	----
uranium	7440-61-1	E440	0.050	mg/kg	0.480	0.543	12.5%	30%	----		
vanadium	7440-62-2	E440	0.20	mg/kg	36.8	37.2	0.838%	30%	----		
zinc	7440-66-6	E440	2.0	mg/kg	54.3	55.3	1.88%	30%	----		
<b>Metals (QC Lot: 735583)</b>											
WT2219037-002	Anonymous	boron, hot water soluble	7440-42-8	E487	0.10	mg/kg	0.10	<0.10	0.002	Diff <2x LOR	----
<b>Speciated Metals (QC Lot: 734373)</b>											
WT2220613-013	Anonymous	chromium, hexavalent [Cr VI]	18540-29-9	E532	0.10	mg/kg	0.52	1.26	83.5%	35%	DUP-H
<b>Volatile Organic Compounds (QC Lot: 736128)</b>											
WT2220613-018	Anonymous	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 736128) - continued</b>											
WT2220613-018	Anonymous	bromoform	75-25-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	<0.045	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040	<0.040	0	Diff <2x LOR	----
		styrene	100-42-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 736128) - continued</b>											
WT2220613-018	Anonymous	vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 735214)</b>											
WT2219037-004	Anonymous	F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	<10	0	Diff <2x LOR	----
		F3 (C16-C34)	----	E601.SG-L	50	mg/kg	523	278	61.0%	40%	DUP-H
		F4 (C34-C50)	----	E601.SG-L	50	mg/kg	154	92	62	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 736127)</b>											
WT2220613-018	Anonymous	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 741883)</b>											
WT2219037-004	Anonymous	F4G-sg	----	E601.F4G-L	250	mg/kg	620	410	210	Diff <2x LOR	----
<b>Polycyclic Aromatic Hydrocarbons (QC Lot: 735215)</b>											
WT2219037-004	Anonymous	acenaphthene	83-32-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		acenaphthylene	208-96-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		anthracene	120-12-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		benz(a)anthracene	56-55-3	E641A	0.050	mg/kg	<0.050	0.059	0.009	Diff <2x LOR	J
		benzo(a)pyrene	50-32-8	E641A	0.050	mg/kg	<0.050	0.069	0.019	Diff <2x LOR	J
		benzo(b+j)fluoranthene	n/a	E641A	0.050	mg/kg	0.056	0.094	0.039	Diff <2x LOR	J
		benzo(g,h,i)perylene	191-24-2	E641A	0.050	mg/kg	<0.050	0.056	0.006	Diff <2x LOR	J
		benzo(k)fluoranthene	207-08-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chrysene	218-01-9	E641A	0.050	mg/kg	<0.050	0.070	0.020	Diff <2x LOR	J
		dibenz(a,h)anthracene	53-70-3	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		fluoranthene	206-44-0	E641A	0.050	mg/kg	0.079	0.148	0.069	Diff <2x LOR	J
		fluorene	86-73-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.050	mg/kg	<0.050	0.060	0.010	Diff <2x LOR	J
		methylnaphthalene, 1-	90-12-0	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		methylnaphthalene, 2-	91-57-6	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		naphthalene	91-20-3	E641A	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
phenanthrene	85-01-8	E641A	0.050	mg/kg	<0.050	0.067	0.017	Diff <2x LOR	J		
pyrene	129-00-0	E641A	0.050	mg/kg	0.066	0.125	0.059	Diff <2x LOR	J		



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Work Order : WT2220705  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## Qualifiers

<i>Qualifier</i>	<i>Description</i>
<i>DUP-H</i>	<i>Duplicate results outside ALS DQO, due to sample heterogeneity.</i>
<i>J</i>	<i>Duplicate results and limits are expressed in terms of absolute difference.</i>

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## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 734356)</b>						
moisture	---	E144	0.25	%	<0.25	---
<b>Metals (QCLot: 735579)</b>						
mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	---
<b>Metals (QCLot: 735580)</b>						
antimony	7440-36-0	E440	0.1	mg/kg	<0.10	---
arsenic	7440-38-2	E440	0.1	mg/kg	<0.10	---
barium	7440-39-3	E440	0.5	mg/kg	<0.50	---
beryllium	7440-41-7	E440	0.1	mg/kg	<0.10	---
boron	7440-42-8	E440	5	mg/kg	<5.0	---
cadmium	7440-43-9	E440	0.02	mg/kg	<0.020	---
chromium	7440-47-3	E440	0.5	mg/kg	<0.50	---
cobalt	7440-48-4	E440	0.1	mg/kg	<0.10	---
copper	7440-50-8	E440	0.5	mg/kg	<0.50	---
lead	7439-92-1	E440	0.5	mg/kg	<0.50	---
molybdenum	7439-98-7	E440	0.1	mg/kg	<0.10	---
nickel	7440-02-0	E440	0.5	mg/kg	<0.50	---
selenium	7782-49-2	E440	0.2	mg/kg	<0.20	---
silver	7440-22-4	E440	0.1	mg/kg	<0.10	---
thallium	7440-28-0	E440	0.05	mg/kg	<0.050	---
uranium	7440-61-1	E440	0.05	mg/kg	<0.050	---
vanadium	7440-62-2	E440	0.2	mg/kg	<0.20	---
zinc	7440-66-6	E440	2	mg/kg	<2.0	---
<b>Metals (QCLot: 735583)</b>						
boron, hot water soluble	7440-42-8	E487	0.1	mg/kg	<0.10	---
<b>Speciated Metals (QCLot: 734373)</b>						
chromium, hexavalent [Cr VI]	18540-29-9	E532	0.1	mg/kg	<0.10	---
<b>Volatile Organic Compounds (QCLot: 736128)</b>						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	---
benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	---
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	---
bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	---
bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	---



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 736128) - continued</b>						
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	----
chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	----
chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	----
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	----
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	----
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	----
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	----
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	----
dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	----
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	----
ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	----
hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	----
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	----
styrene	100-42-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----



Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Hydrocarbons (QCLot: 735214)</b>						
F2 (C10-C16)	---	E601.SG-L	10	mg/kg	<10	---
F3 (C16-C34)	---	E601.SG-L	50	mg/kg	<50	---
F4 (C34-C50)	---	E601.SG-L	50	mg/kg	<50	---
<b>Hydrocarbons (QCLot: 736127)</b>						
F1 (C6-C10)	---	E581.F1	5	mg/kg	<5.0	---
<b>Hydrocarbons (QCLot: 741883)</b>						
F4G-sg	---	E601.F4G-L	250	mg/kg	<250	---
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 735215)</b>						
acenaphthene	83-32-9	E641A	0.05	mg/kg	<0.050	---
acenaphthylene	208-96-8	E641A	0.05	mg/kg	<0.050	---
anthracene	120-12-7	E641A	0.05	mg/kg	<0.050	---
benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	<0.050	---
benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	<0.050	---
benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	<0.050	---
benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	<0.050	---
benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	<0.050	---
chrysene	218-01-9	E641A	0.05	mg/kg	<0.050	---
dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	<0.050	---
fluoranthene	206-44-0	E641A	0.05	mg/kg	<0.050	---
fluorene	86-73-7	E641A	0.05	mg/kg	<0.050	---
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	<0.050	---
methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	<0.030	---
methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	<0.030	---
naphthalene	91-20-3	E641A	0.01	mg/kg	<0.010	---
phenanthrene	85-01-8	E641A	0.05	mg/kg	<0.050	---
pyrene	129-00-0	E641A	0.05	mg/kg	<0.050	---



## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Physical Tests (QCLot: 734356)</b>									
moisture	----	E144	0.25	%	50 %	99.9	90.0	110	----
<b>Metals (QCLot: 735579)</b>									
mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	97.0	80.0	120	----
<b>Metals (QCLot: 735580)</b>									
antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	106	80.0	120	----
arsenic	7440-38-2	E440	0.1	mg/kg	100 mg/kg	101	80.0	120	----
barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	96.2	80.0	120	----
beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	92.5	80.0	120	----
boron	7440-42-8	E440	5	mg/kg	100 mg/kg	91.2	80.0	120	----
cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	98.6	80.0	120	----
chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	96.1	80.0	120	----
cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	95.5	80.0	120	----
copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	91.8	80.0	120	----
lead	7439-92-1	E440	0.5	mg/kg	50 mg/kg	98.7	80.0	120	----
molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	101	80.0	120	----
nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	94.6	80.0	120	----
selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	97.0	80.0	120	----
silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	93.7	80.0	120	----
thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	99.3	80.0	120	----
uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	91.4	80.0	120	----
vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	99.3	80.0	120	----
zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	93.0	80.0	120	----
<b>Metals (QCLot: 735583)</b>									
boron, hot water soluble	7440-42-8	E487	0.1	mg/kg	1.33333 mg/kg	103	70.0	130	----
<b>Speciated Metals (QCLot: 734373)</b>									
chromium, hexavalent [Cr VI]	18540-29-9	E532	0.1	mg/kg	0.8 mg/kg	91.3	80.0	120	----
<b>Volatile Organic Compounds (QCLot: 736128)</b>									
Acetone	67-64-1	E611D	0.5	mg/kg	3.475 mg/kg	109	60.0	140	----
benzene	71-43-2	E611D	0.005	mg/kg	3.475 mg/kg	110	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.475 mg/kg	115	50.0	140	----



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 736128) - continued</b>									
bromoform	75-25-2	E611D	0.05	mg/kg	3.475 mg/kg	96.2	70.0	130	----
bromomethane	74-83-9	E611D	0.05	mg/kg	3.475 mg/kg	99.9	50.0	140	----
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.475 mg/kg	106	70.0	130	----
chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.475 mg/kg	107	70.0	130	----
chloroform	67-66-3	E611D	0.05	mg/kg	3.475 mg/kg	111	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.475 mg/kg	107	60.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.475 mg/kg	101	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.475 mg/kg	111	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.475 mg/kg	113	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.475 mg/kg	114	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.475 mg/kg	73.4	50.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.475 mg/kg	114	60.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.475 mg/kg	106	60.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.475 mg/kg	107	60.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.475 mg/kg	108	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.475 mg/kg	113	60.0	130	----
dichloromethane	75-09-2	E611D	0.045	mg/kg	3.475 mg/kg	109	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.475 mg/kg	110	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.475 mg/kg	105	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.475 mg/kg	105	70.0	130	----
ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.475 mg/kg	107	70.0	130	----
hexane, n-	110-54-3	E611D	0.05	mg/kg	3.475 mg/kg	105	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.475 mg/kg	104	60.0	140	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.475 mg/kg	104	60.0	140	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.475 mg/kg	107	70.0	130	----
styrene	100-42-5	E611D	0.05	mg/kg	3.475 mg/kg	106	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.475 mg/kg	108	60.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.475 mg/kg	108	60.0	130	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.475 mg/kg	106	60.0	130	----
toluene	108-88-3	E611D	0.05	mg/kg	3.475 mg/kg	111	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.475 mg/kg	110	60.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.475 mg/kg	106	60.0	130	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.475 mg/kg	107	60.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.475 mg/kg	102	50.0	140	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.475 mg/kg	87.9	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	107	70.0	130	----



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 736128) - continued</b>									
xylene, o-	95-47-6	E611D	0.03	mg/kg	3.475 mg/kg	109	70.0	130	----
<b>Hydrocarbons (QCLot: 735214)</b>									
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	916.995 mg/kg	88.6	70.0	130	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	1190.25 mg/kg	92.7	70.0	130	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	879.735 mg/kg	91.4	70.0	130	----
<b>Hydrocarbons (QCLot: 736127)</b>									
F1 (C6-C10)	----	E581.F1	5	mg/kg	69.1875 mg/kg	116	80.0	120	----
<b>Hydrocarbons (QCLot: 741883)</b>									
F4G-sg	----	E601.F4G-L	250	mg/kg	1298.6 mg/kg	89.8	70.0	130	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 735215)</b>									
acenaphthene	83-32-9	E641A	0.05	mg/kg	0.5 mg/kg	88.9	60.0	130	----
acenaphthylene	208-96-8	E641A	0.05	mg/kg	0.5 mg/kg	93.6	60.0	130	----
anthracene	120-12-7	E641A	0.05	mg/kg	0.5 mg/kg	89.0	60.0	130	----
benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	0.5 mg/kg	87.5	60.0	130	----
benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	0.5 mg/kg	93.5	60.0	130	----
benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	0.5 mg/kg	93.7	60.0	130	----
benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	0.5 mg/kg	83.9	60.0	130	----
benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	0.5 mg/kg	90.1	60.0	130	----
chrysene	218-01-9	E641A	0.05	mg/kg	0.5 mg/kg	87.9	60.0	130	----
dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	0.5 mg/kg	88.6	60.0	130	----
fluoranthene	206-44-0	E641A	0.05	mg/kg	0.5 mg/kg	89.1	60.0	130	----
fluorene	86-73-7	E641A	0.05	mg/kg	0.5 mg/kg	90.3	60.0	130	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	0.5 mg/kg	82.4	60.0	130	----
methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	0.5 mg/kg	84.4	60.0	130	----
methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	0.5 mg/kg	80.4	60.0	130	----
naphthalene	91-20-3	E641A	0.01	mg/kg	0.5 mg/kg	80.6	60.0	130	----
phenanthrene	85-01-8	E641A	0.05	mg/kg	0.5 mg/kg	84.6	60.0	130	----
pyrene	129-00-0	E641A	0.05	mg/kg	0.5 mg/kg	88.8	60.0	130	----



### Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 736128)</b>										
WT2220613-018	Anonymous	Acetone	67-64-1	E611D	2.32 mg/kg	3.125 mg/kg	112	50.0	140	----
		benzene	71-43-2	E611D	2.25 mg/kg	3.125 mg/kg	109	50.0	140	----
		bromodichloromethane	75-27-4	E611D	2.40 mg/kg	3.125 mg/kg	116	50.0	140	----
		bromoform	75-25-2	E611D	2.10 mg/kg	3.125 mg/kg	102	50.0	140	----
		bromomethane	74-83-9	E611D	2.00 mg/kg	3.125 mg/kg	97.2	50.0	140	----
		carbon tetrachloride	56-23-5	E611D	2.10 mg/kg	3.125 mg/kg	102	50.0	140	----
		chlorobenzene	108-90-7	E611D	2.17 mg/kg	3.125 mg/kg	105	50.0	140	----
		chloroform	67-66-3	E611D	2.28 mg/kg	3.125 mg/kg	111	50.0	140	----
		dibromochloromethane	124-48-1	E611D	2.27 mg/kg	3.125 mg/kg	110	50.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	2.18 mg/kg	3.125 mg/kg	106	50.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	2.22 mg/kg	3.125 mg/kg	108	50.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	2.19 mg/kg	3.125 mg/kg	106	50.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	2.22 mg/kg	3.125 mg/kg	108	50.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	1.56 mg/kg	3.125 mg/kg	75.7	50.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	2.29 mg/kg	3.125 mg/kg	111	50.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	2.26 mg/kg	3.125 mg/kg	110	50.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	2.11 mg/kg	3.125 mg/kg	102	50.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	2.19 mg/kg	3.125 mg/kg	106	50.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	2.23 mg/kg	3.125 mg/kg	108	50.0	140	----
		dichloromethane	75-09-2	E611D	2.22 mg/kg	3.125 mg/kg	108	50.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	2.30 mg/kg	3.125 mg/kg	111	50.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	2.19 mg/kg	3.125 mg/kg	106	50.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	2.22 mg/kg	3.125 mg/kg	108	50.0	140	----
		ethylbenzene	100-41-4	E611D	2.13 mg/kg	3.125 mg/kg	103	50.0	140	----
		hexane, n-	110-54-3	E611D	2.10 mg/kg	3.125 mg/kg	102	50.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	2.32 mg/kg	3.125 mg/kg	113	50.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	2.43 mg/kg	3.125 mg/kg	118	50.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.16 mg/kg	3.125 mg/kg	105	50.0	140	----
		styrene	100-42-5	E611D	2.18 mg/kg	3.125 mg/kg	106	50.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.23 mg/kg	3.125 mg/kg	108	50.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	2.43 mg/kg	3.125 mg/kg	118	50.0	140	----





Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 736128) - continued</b>										
WT2220613-018	Anonymous	tetrachloroethylene	127-18-4	E611D	2.05 mg/kg	3.125 mg/kg	99.6	50.0	140	----
		toluene	108-88-3	E611D	2.22 mg/kg	3.125 mg/kg	108	50.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	2.20 mg/kg	3.125 mg/kg	107	50.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	2.28 mg/kg	3.125 mg/kg	110	50.0	140	----
		trichloroethylene	79-01-6	E611D	2.13 mg/kg	3.125 mg/kg	103	50.0	140	----
		trichlorofluoromethane	75-69-4	E611D	2.03 mg/kg	3.125 mg/kg	98.4	50.0	140	----
		vinyl chloride	75-01-4	E611D	1.74 mg/kg	3.125 mg/kg	84.2	50.0	140	----
		xylene, m+p-	179601-23-1	E611D	4.26 mg/kg	6.25 mg/kg	103	50.0	140	----
		xylene, o-	95-47-6	E611D	2.18 mg/kg	3.125 mg/kg	106	50.0	140	----
<b>Hydrocarbons (QCLot: 735214)</b>										
WT2219037-004	Anonymous	F2 (C10-C16)	----	E601.SG-L	592 mg/kg	916.995 mg/kg	82.7	60.0	140	----
		F3 (C16-C34)	----	E601.SG-L	650 mg/kg	1190.25 mg/kg	70.0	60.0	140	----
		F4 (C34-C50)	----	E601.SG-L	564 mg/kg	879.735 mg/kg	82.1	60.0	140	----
<b>Hydrocarbons (QCLot: 736127)</b>										
WT2220613-018	Anonymous	F1 (C6-C10)	----	E581.F1	43.4 mg/kg	62.5 mg/kg	105	60.0	140	----
<b>Hydrocarbons (QCLot: 741883)</b>										
WT2219037-004	Anonymous	F4G-sg	----	E601.F4G-L	640 mg/kg	1298.6 mg/kg	63.1	60.0	140	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 735215)</b>										
WT2219037-004	Anonymous	acenaphthene	83-32-9	E641A	0.344 mg/kg	0.5 mg/kg	89.8	50.0	140	----
		acenaphthylene	208-96-8	E641A	0.360 mg/kg	0.5 mg/kg	94.2	50.0	140	----
		anthracene	120-12-7	E641A	0.369 mg/kg	0.5 mg/kg	96.4	50.0	140	----
		benz(a)anthracene	56-55-3	E641A	0.304 mg/kg	0.5 mg/kg	79.6	50.0	140	----
		benzo(a)pyrene	50-32-8	E641A	0.364 mg/kg	0.5 mg/kg	95.1	50.0	140	----
		benzo(b+j)fluoranthene	n/a	E641A	0.311 mg/kg	0.5 mg/kg	81.4	50.0	140	----
		benzo(g,h,i)perylene	191-24-2	E641A	0.314 mg/kg	0.5 mg/kg	82.0	50.0	140	----
		benzo(k)fluoranthene	207-08-9	E641A	0.326 mg/kg	0.5 mg/kg	85.3	50.0	140	----
		chrysene	218-01-9	E641A	0.295 mg/kg	0.5 mg/kg	77.3	50.0	140	----
		dibenz(a,h)anthracene	53-70-3	E641A	0.338 mg/kg	0.5 mg/kg	88.4	50.0	140	----
		fluoranthene	206-44-0	E641A	0.322 mg/kg	0.5 mg/kg	84.2	50.0	140	----
		fluorene	86-73-7	E641A	0.345 mg/kg	0.5 mg/kg	90.3	50.0	140	----
		indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.308 mg/kg	0.5 mg/kg	80.5	50.0	140	----
		methylnaphthalene, 1-	90-12-0	E641A	0.347 mg/kg	0.5 mg/kg	90.8	50.0	140	----
		methylnaphthalene, 2-	91-57-6	E641A	0.344 mg/kg	0.5 mg/kg	89.9	50.0	140	----
		naphthalene	91-20-3	E641A	0.347 mg/kg	0.5 mg/kg	90.6	50.0	140	----

Page : 15 of 16  
 Work Order : WT2220705  
 Client : Omni-McCann Inc.  
 Project : 0006-0103



Sub-Matrix: **Soil/Solid**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 735215) - continued</b>										
WT2219037-004	Anonymous	phenanthrene	85-01-8	E641A	0.323 mg/kg	0.5 mg/kg	84.5	50.0	140	----
		pyrene	129-00-0	E641A	0.327 mg/kg	0.5 mg/kg	85.5	50.0	140	----



## Reference Material (RM) Report

A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

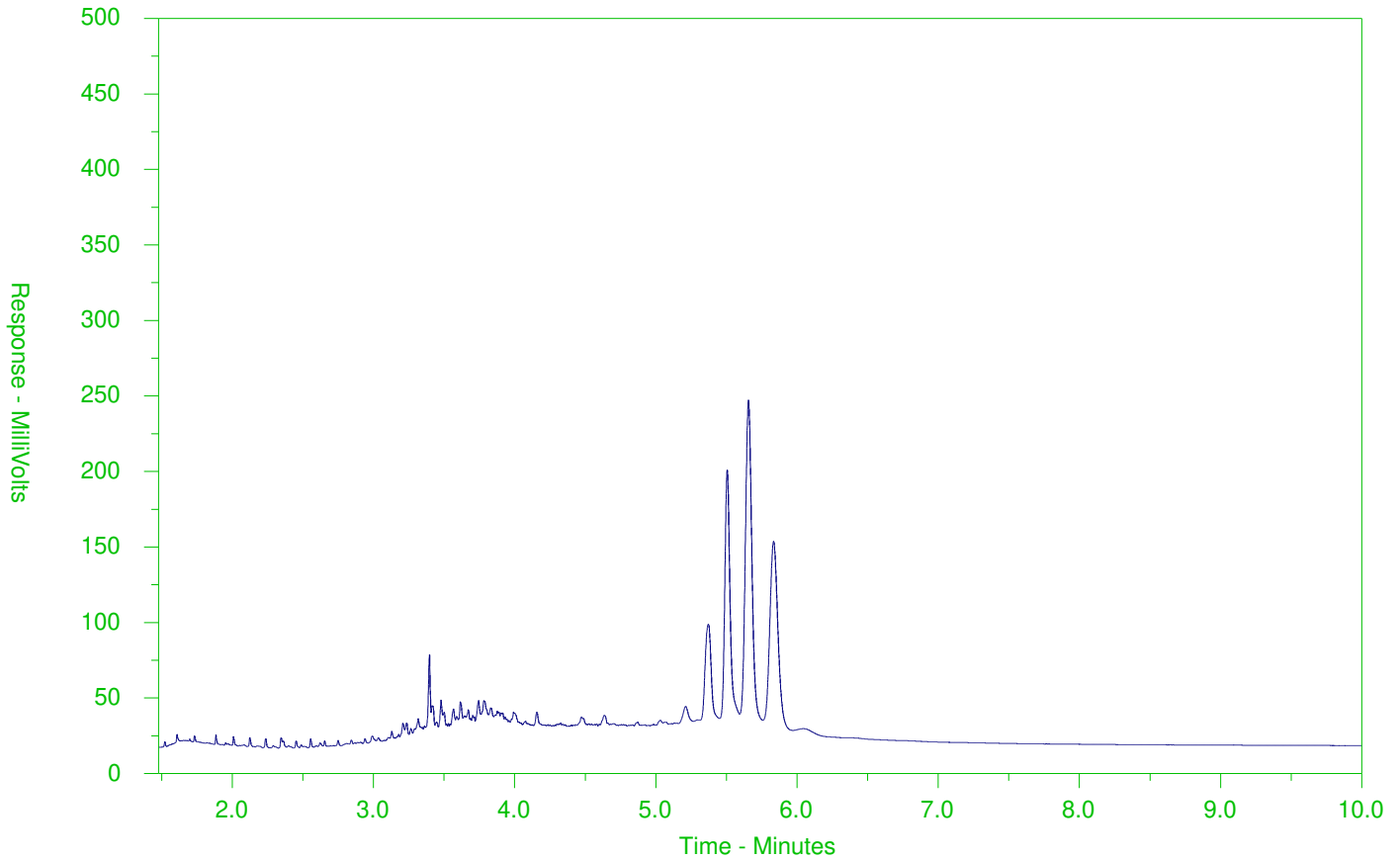
Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
<b>Metals (QCLot: 735579)</b>									
	RM	mercury	7439-97-6	E510	0.0585 mg/kg	109	70.0	130	----
<b>Metals (QCLot: 735580)</b>									
	RM	antimony	7440-36-0	E440	3.99 mg/kg	92.6	70.0	130	----
	RM	arsenic	7440-38-2	E440	3.73 mg/kg	101	70.0	130	----
	RM	barium	7440-39-3	E440	105 mg/kg	102	70.0	130	----
	RM	beryllium	7440-41-7	E440	0.349 mg/kg	95.2	70.0	130	----
	RM	boron	7440-42-8	E440	8.5 mg/kg	97.8	40.0	160	----
	RM	cadmium	7440-43-9	E440	0.91 mg/kg	101	70.0	130	----
	RM	chromium	7440-47-3	E440	101 mg/kg	92.3	70.0	130	----
	RM	cobalt	7440-48-4	E440	6.9 mg/kg	96.6	70.0	130	----
	RM	copper	7440-50-8	E440	123 mg/kg	96.5	70.0	130	----
	RM	lead	7439-92-1	E440	267 mg/kg	98.5	70.0	130	----
	RM	molybdenum	7439-98-7	E440	1.03 mg/kg	106	70.0	130	----
	RM	nickel	7440-02-0	E440	26.7 mg/kg	98.4	70.0	130	----
	RM	thallium	7440-28-0	E440	0.0786 mg/kg	94.1	40.0	160	----
	RM	uranium	7440-61-1	E440	0.52 mg/kg	92.1	70.0	130	----
	RM	vanadium	7440-62-2	E440	32.7 mg/kg	96.6	70.0	130	----
	RM	zinc	7440-66-6	E440	297 mg/kg	95.4	70.0	130	----
<b>Metals (QCLot: 735583)</b>									
	RM	boron, hot water soluble	7440-42-8	E487	1.4938 mg/kg	95.1	60.0	140	----
<b>Speciated Metals (QCLot: 734373)</b>									
	RM	chromium, hexavalent [Cr VI]	18540-29-9	E532	172 mg/kg	93.1	70.0	130	----

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2220705-001-E601.SG-L  
 Client Sample ID: 22-35 0-1



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

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

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

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

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



www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20 -

Environmental Division  
Waterloo

Work Order Reference  
WT22220705

Report To: Contact and company name below will appear on the final report

Company: Omni-McCann Inc.

Contact: Daniel Elliott

Phone: 613-857-4136

Address: PMS Woodward Drive, Unit 200

City/Province: Ottawa, ON

Postal Code: K2C0P9

Invoice To: Same as Report To

Copy of Invoice with Report

Company: Project Information

ALS Account # / Quote # Q06626

Job #: 006-0103

PO / AFE: LSD:

ALS Lab Work Order # (ALS use only):

ALS Sample # (ALS use only):

Sample Identification and/or Coordinates (This description will appear on the report)

Date (dd-mm-yy)

Time (hh:mm)

Sample Type

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Drinking Water (DW) Samples (client use)

Are samples taken from a Regulated DW System?

Are samples for human consumption/ use?

Released by: Antonia Cass

Date: 3-NOV-22

Time: 12:15

Received by: Eric

Date: 03/11/22

Time: 12:15

Received by: Bob

Date: 03/11/22

Time: 12:15

Received by: Bob

Date: 03/11/22

Time: 12:15

Received by: Bob

Date: 03/11/22

Time: 12:15

Received by: Bob

Date: 03/11/22

Time: 12:15

Received by: Bob

Date: 03/11/22

Reports / Recipients

Select Report Format: PDF EXCEL ESD (DIGITAL)

Merge QC/QC Reports with COA

Complete Results to Criteria on Report - provide details below, if box checked

Select Distribution: EMAIL MAIL FAX

Email 1 or Fax: antonia.mccann@omni-mccann.com

Email 2: antonia.mccann@omni-mccann.com

Email 3: krishna@omni-mccann.com

Select Invoice Distribution: EMAIL MAIL FAX

Email 1 or Fax: invoicing@omni-mccann.com

Email 2

Oil and Gas Required Fields (client use)

AFE/Coat Center: PO#

Major/Minor Code: Routing Code:

Requestioner: Location:

ALS Contact: Eric

Sampler: Antonia Cass

Turnaround Time (TAT) Requested

Routine (R) if received by 3pm M-F - no surcharges apply

4 day (4d) if received by 3pm M-F - 20% rush surcharge minimum

3 day (3d) if received by 3pm M-F - 25% rush surcharge minimum

2 day (2d) if received by 3pm M-F - 50% rush surcharge minimum

1 day (1d) if received by 3pm M-F - 100% rush surcharge minimum

Same day (E) if received by 10am M-F - 200% rush surcharge. Additional may apply to rush requests on weekends, statutory holidays and non-routine

Date and Time Required for all ESR TATs:

For all tests with rush TATs requested, please contact your AM to confirm availability.

Analysis Request

Indicate Filled (F), Preserved (P) or Filled and Preserved (FP) below

NUMBER OF CONTAINERS

DHC

VOC

PAH

Metals

Cr 6

Hg

SAMPLES ON HOLD

EXTENDED STORAGE REQUIRED

SUSPECTED HAZARD (see notes)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: NONE ICE ICE PACKS FROZEN COOLING INITIATED

Submission Comments Identified on Sample Receipt Notification: YES NO

Cooler Custody Seals Intact: YES NO N/A

INITIAL COOLER TEMPERATURES °C

INITIAL COOLER TEMPERATURES °C

FINAL SHIPMENT RECEPTION (ALS use only)

Date: 11/04/22

Time: 9:00

Received by: Bob

Date: 11/04/22

Time: 9:00

Telephone: +1 519 886 6910



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

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

VS-066  
SOL-492



## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

<p><b>Work Order</b> : <b>WT2221344</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 8</p> <p><b>No. of samples analysed</b> : 8</p>	<p><b>Page</b> : 1 of 21</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 10-Nov-2022 09:10</p> <p><b>Date Analysis Commenced</b> : 11-Nov-2022</p> <p><b>Issue Date</b> : 24-Nov-2022 18:29</p>
--	--

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Amanda Ganouri-Lumsden	Department Manager - Microbiology and Prep	Centralized Prep, Waterloo, Ontario
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Organics, Waterloo, Ontario
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Metals, Waterloo, Ontario
Hedy Lai	Team Leader - Inorganics	Sask Soils, Saskatoon, Saskatchewan
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Organics, Waterloo, Ontario

## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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. Guidelines 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.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	no units
%	percent
mg/kg	milligrams per kilogram

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .

## Qualifiers

<i>Qualifier</i>	<i>Description</i>
DLQ	Detection Limit raised due to co-eluting interference. GCMS qualifier ion ratio did not meet acceptance criteria.
RRR	Refer to report comments for issues regarding this analysis.



## Analytical Results

				Client sample ID							
				22-36 0-0.75							
				Sampling date/time							
				07-Nov-2022 00:00							
Sub-Matrix: Soil (Matrix: Soil/Solid)					WT2221344-001	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
Analyte	Method	LOR	Unit								
<b>Physical Tests</b>											
moisture	E144	0.25	%	22.2	--	--	--	--	--	--	
<b>Particle Size</b>											
passing (9.5 mm)	E181	1.0	%	100	--	--	--	--	--	--	
passing (4.75 mm)	E181	1.0	%	100	--	--	--	--	--	--	
passing (19 mm)	E181	1.0	%	100	--	--	--	--	--	--	
passing (25.4 mm)	E181	1.0	%	100	--	--	--	--	--	--	
passing (38.1 mm)	E181	1.0	%	100	--	--	--	--	--	--	
passing (50.8 mm)	E181	1.0	%	100	--	--	--	--	--	--	
passing (76.2 mm)	E181	1.0	%	100	--	--	--	--	--	--	
passing (1.0 mm)	E182	1.0	%	95.3	--	--	--	--	--	--	
passing (0.841 mm)	E182	1.0	%	94.5	--	--	--	--	--	--	
passing (0.50 mm)	E182	1.0	%	87.0	--	--	--	--	--	--	
passing (0.420 mm)	E182	1.0	%	85.1	--	--	--	--	--	--	
passing (0.250 mm)	E182	1.0	%	73.6	--	--	--	--	--	--	
passing (0.149 mm)	E182	1.0	%	54.9	--	--	--	--	--	--	
passing (0.125 mm)	E182	1.0	%	50.8	--	--	--	--	--	--	
passing (0.075 mm)	E182	1.0	%	42.2	--	--	--	--	--	--	
passing (0.063 mm)	E182	1.0	%	38.0	--	--	--	--	--	--	
passing (0.05 mm)	E182	1.0	%	33.3	--	--	--	--	--	--	
passing (0.0312 mm)	E183	1.0	%	26.0	--	--	--	--	--	--	
passing (0.020 mm)	E183	1.0	%	20.8	--	--	--	--	--	--	
passing (0.005 mm)	E183	1.0	%	12.2	--	--	--	--	--	--	
passing (0.004 mm)	E183	1.0	%	11.0	--	--	--	--	--	--	
passing (0.002 mm)	E183	1.0	%	9.1	--	--	--	--	--	--	
grain size curve	E185	-	-	See Attached	--	--	--	--	--	--	
passing (2.0 mm)	E181	1.0	%	99.5	--	--	--	--	--	--	
<b>Metals</b>											
antimony	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	7.5 mg/kg	7.5 mg/kg	--	--	
arsenic	E440	0.10	mg/kg	1.71	18 mg/kg	18 mg/kg	18 mg/kg	18 mg/kg	--	--	
barium	E440	0.50	mg/kg	118	670 mg/kg	670 mg/kg	390 mg/kg	390 mg/kg	--	--	
beryllium	E440	0.10	mg/kg	0.54	8 mg/kg	10 mg/kg	4 mg/kg	5 mg/kg	--	--	





Analyte	Method	LOR	Unit	WT2221344-001 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Metals - Continued</b>										
boron, hot water soluble	E487	0.10	mg/kg	0.22	2 mg/kg	2 mg/kg	1.5 mg/kg	1.5 mg/kg	--	--
boron	E440	5.0	mg/kg	<5.0	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--
cadmium	E440	0.020	mg/kg	0.186	1.9 mg/kg	1.9 mg/kg	1.2 mg/kg	1.2 mg/kg	--	--
chromium	E440	0.50	mg/kg	33.0	160 mg/kg	160 mg/kg	160 mg/kg	160 mg/kg	--	--
cobalt	E440	0.10	mg/kg	8.38	80 mg/kg	100 mg/kg	22 mg/kg	22 mg/kg	--	--
copper	E440	0.50	mg/kg	9.63	230 mg/kg	300 mg/kg	140 mg/kg	180 mg/kg	--	--
lead	E440	0.50	mg/kg	7.69	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--
mercury	E510	0.0050	mg/kg	0.0385	3.9 mg/kg	20 mg/kg	0.27 mg/kg	1.8 mg/kg	--	--
molybdenum	E440	0.10	mg/kg	0.39	40 mg/kg	40 mg/kg	6.9 mg/kg	6.9 mg/kg	--	--
nickel	E440	0.50	mg/kg	15.7	270 mg/kg	340 mg/kg	100 mg/kg	130 mg/kg	--	--
selenium	E440	0.20	mg/kg	0.26	5.5 mg/kg	5.5 mg/kg	2.4 mg/kg	2.4 mg/kg	--	--
silver	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	20 mg/kg	25 mg/kg	--	--
thallium	E440	0.050	mg/kg	0.115	3.3 mg/kg	3.3 mg/kg	1 mg/kg	1 mg/kg	--	--
uranium	E440	0.050	mg/kg	0.816	33 mg/kg	33 mg/kg	23 mg/kg	23 mg/kg	--	--
vanadium	E440	0.20	mg/kg	46.6	86 mg/kg	86 mg/kg	86 mg/kg	86 mg/kg	--	--
zinc	E440	2.0	mg/kg	54.6	340 mg/kg	340 mg/kg	340 mg/kg	340 mg/kg	--	--
<b>Speciated Metals</b>										
chromium, hexavalent [Cr VI]	E532	0.10	mg/kg	<0.10	8 mg/kg	10 mg/kg	8 mg/kg	10 mg/kg	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2221344-001 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L		-	YES	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2221344-001 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Hydrocarbons Surrogates - Continued</b>										
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	83.4	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	87.7	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	0.10	%	81.0	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	90.1	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T7-ICC-C	153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
T7-ICC-F	153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
T7-RPI-C	153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
T7-RPI-F	153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)	Method	LOR	Unit	Client sample ID						
				22-20 2-4						
Analyte				Sampling date/time	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
				07-Nov-2022 00:00	WT2221344-002					
<b>Physical Tests</b>										
moisture	E144	0.25	%		19.4	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2221344-002 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	0.10	%	84.2	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	92.5	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04	ON153/04	ON153/04		
				Sampling date/time	T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F		
Sub-Matrix: Soil (Matrix: Soil/Solid)				22-22 2.5-3						
				07-Nov-2022 00:00						
				WT2221344-003						
<b>Physical Tests</b>										
moisture	E144	0.25	%	12.0	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2221344-003 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	0.10	%	87.4	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	97.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- |          |  |
|----------|--|
| ON153/04 | Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011) |
| T7-ICC-C | 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)                 |
| T7-ICC-F | 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)                   |
| T7-RPI-C | 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)                 |
| T7-RPI-F | 153 T7-Soil-Res/Park/Inst. Property Use (Fine)                   |



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID						
				22-23 1-2						
Sub-Matrix: Soil (Matrix: Soil/Solid)				Sampling date/time						
				07-Nov-2022 00:00						
				WT2221344-004	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Physical Tests</b>										
moisture	E144	0.25	%	23.1	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	0.046	RRR 1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--





Analyte	Method	LOR	Unit	WT2221344-004 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	0.10	%	85.7	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	96.6	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T7-ICC-C	153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
T7-ICC-F	153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
T7-RPI-C	153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
T7-RPI-F	153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID							
				Sampling date/time	DUP4	ON153/04	ON153/04	ON153/04	ON153/04		
				WT2221344-005	07-Nov-2022 00:00	T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F		
<b>Physical Tests</b>											
moisture	E144	0.25	%	6.22	--	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>											
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--	--



Analyte	Method	LOR	Unit	WT2221344-005 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	0.10	%	89.0	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	99.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T7-ICC-C	153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
T7-ICC-F	153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
T7-RPI-C	153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
T7-RPI-F	153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04	ON153/04	ON153/04		
				Sampling date/time	T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F		
				22-37 0-0.5						
Sub-Matrix: Soil (Matrix: Soil/Solid)				08-Nov-2022 00:00						
				WT2221344-006						
<b>Physical Tests</b>										
moisture	E144	0.25	%	15.5	--	--	--	--	--	--
<b>Metals</b>										
antimony	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	7.5 mg/kg	7.5 mg/kg	--	--
arsenic	E440	0.10	mg/kg	1.71	18 mg/kg	18 mg/kg	18 mg/kg	18 mg/kg	--	--
barium	E440	0.50	mg/kg	100	670 mg/kg	670 mg/kg	390 mg/kg	390 mg/kg	--	--
beryllium	E440	0.10	mg/kg	0.33	8 mg/kg	10 mg/kg	4 mg/kg	5 mg/kg	--	--
boron, hot water soluble	E487	0.10	mg/kg	0.38	2 mg/kg	2 mg/kg	1.5 mg/kg	1.5 mg/kg	--	--
boron	E440	5.0	mg/kg	5.9	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--
cadmium	E440	0.020	mg/kg	0.093	1.9 mg/kg	1.9 mg/kg	1.2 mg/kg	1.2 mg/kg	--	--
chromium	E440	0.50	mg/kg	19.8	160 mg/kg	160 mg/kg	160 mg/kg	160 mg/kg	--	--
cobalt	E440	0.10	mg/kg	5.81	80 mg/kg	100 mg/kg	22 mg/kg	22 mg/kg	--	--
copper	E440	0.50	mg/kg	14.1	230 mg/kg	300 mg/kg	140 mg/kg	180 mg/kg	--	--
lead	E440	0.50	mg/kg	6.08	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--
mercury	E510	0.0050	mg/kg	0.0193	3.9 mg/kg	20 mg/kg	0.27 mg/kg	1.8 mg/kg	--	--
molybdenum	E440	0.10	mg/kg	0.43	40 mg/kg	40 mg/kg	6.9 mg/kg	6.9 mg/kg	--	--
nickel	E440	0.50	mg/kg	11.1	270 mg/kg	340 mg/kg	100 mg/kg	130 mg/kg	--	--
selenium	E440	0.20	mg/kg	<0.20	5.5 mg/kg	5.5 mg/kg	2.4 mg/kg	2.4 mg/kg	--	--
silver	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	20 mg/kg	25 mg/kg	--	--
thallium	E440	0.050	mg/kg	0.114	3.3 mg/kg	3.3 mg/kg	1 mg/kg	1 mg/kg	--	--
uranium	E440	0.050	mg/kg	0.645	33 mg/kg	33 mg/kg	23 mg/kg	23 mg/kg	--	--
vanadium	E440	0.20	mg/kg	31.1	86 mg/kg	86 mg/kg	86 mg/kg	86 mg/kg	--	--
zinc	E440	2.0	mg/kg	32.0	340 mg/kg	340 mg/kg	340 mg/kg	340 mg/kg	--	--
<b>Speciated Metals</b>										
chromium, hexavalent [Cr VI]	E532	0.10	mg/kg	<0.10	8 mg/kg	10 mg/kg	8 mg/kg	10 mg/kg	--	--
<b>Volatile Organic Compounds</b>										
benzene	E611A	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
ethylbenzene	E611A	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
toluene	E611A	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
xylene, m+p-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611A	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2221344-006 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
BTEX, total	E611A	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2-naphthalene	EC600	25	mg/kg	<25	--	--	--	--	--	--
F3-PAH	EC600	50	mg/kg	<50	--	--	--	--	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2-(F2-F4 surr)	E601.SG-L	1.0	%	91.9	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	120	--	--	--	--	--	--
bromofluorobenzene, 4-	E611A	0.10	%	109	--	--	--	--	--	--
difluorobenzene, 1,4-	E611A	0.10	%	125	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	7.9 mg/kg	58 mg/kg	--	--
acenaphthylene	E641A	0.050	mg/kg	<0.050	0.15 mg/kg	0.17 mg/kg	0.15 mg/kg	0.17 mg/kg	--	--
anthracene	E641A	0.050	mg/kg	<0.050	0.67 mg/kg	0.74 mg/kg	0.67 mg/kg	0.74 mg/kg	--	--
benz(a)anthracene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.5 mg/kg	0.63 mg/kg	--	--
benzo(a)pyrene	E641A	0.050	mg/kg	<0.050	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	--	--
benzo(b+j)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
benzo(g,h,i)perylene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	6.6 mg/kg	7.8 mg/kg	--	--
benzo(k)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
chrysene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	7 mg/kg	7.8 mg/kg	--	--
dibenz(a,h)anthracene	E641A	0.050	mg/kg	<0.050	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	--	--
fluoranthene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	0.69 mg/kg	0.69 mg/kg	--	--
fluorene	E641A	0.050	mg/kg	<0.050	62 mg/kg	69 mg/kg	62 mg/kg	69 mg/kg	--	--
indeno(1,2,3-c,d)pyrene	E641A	0.050	mg/kg	<0.050	0.76 mg/kg	0.95 mg/kg	0.38 mg/kg	0.48 mg/kg	--	--
methylnaphthalene, 1+2-	E641A	0.050	mg/kg	<0.050	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 1-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 2-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
naphthalene	E641A	0.010	mg/kg	<0.010	9.6 mg/kg	28 mg/kg	0.6 mg/kg	0.75 mg/kg	--	--
phenanthrene	E641A	0.050	mg/kg	<0.050	12 mg/kg	16 mg/kg	6.2 mg/kg	7.8 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2221344-006 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
pyrene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	78 mg/kg	78 mg/kg	--	--
acridine-d9	E641A	0.1	%	72.5	--	--	--	--	--	--
chrysene-d12	E641A	0.1	%	73.2	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	66.8	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	74.7	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

				Client sample ID						
				22-38 0-0.75						
				08-Nov-2022						
				00:00						
Sub-Matrix: Soil (Matrix: Soil/Solid)	Method	LOR	Unit	WT2221344-007	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Physical Tests</b>										
moisture	E144	0.25	%	9.63	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
benzene	E611A	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
ethylbenzene	E611A	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
toluene	E611A	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
xylene, m+p-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611A	0.030	mg/kg	<0.141	DLQ	--	--	--	--	--
xylenes, total	E611A	0.050	mg/kg	<0.144	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611A	0.10	mg/kg	<0.15	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L	-	-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	84.2	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	127	--	--	--	--	--	--
bromofluorobenzene, 4-	E611A	0.10	%	116	--	--	--	--	--	--
difluorobenzene, 1,4-	E611A	0.10	%	134	--	--	--	--	--	--
<b>Polychlorinated Biphenyls</b>										
Aroclor 1016	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1221	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1232	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1242	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1248	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1254	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1260	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1262	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2221344-007 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polychlorinated Biphenyls - Continued</b>										
Aroclor 1268	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
polychlorinated biphenyls [PCBs], total	E687	0.030	mg/kg	<0.030	<b>1.1 mg/kg</b>	<b>1.1 mg/kg</b>	<b>0.35 mg/kg</b>	<b>0.35 mg/kg</b>	--	--
decachlorobiphenyl	E687	0.1	%	139	--	--	--	--	--	--
tetrachloro-m-xylene	E687	0.1	%	87.9	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)





## Analytical Results

				Client sample ID						
				22-38 0.75-2						
				08-Nov-2022						
				00:00						
Sub-Matrix: Soil (Matrix: Soil/Solid)	Method	LOR	Unit	WT2221344-008	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Physical Tests</b>										
moisture	E144	0.25	%	4.57	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
benzene	E611A	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
ethylbenzene	E611A	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
toluene	E611A	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
xylene, m+p-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611A	0.030	mg/kg	<0.063	DLQ	--	--	--	--	--
xylenes, total	E611A	0.050	mg/kg	<0.070	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611A	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L	-	-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	89.3	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	96.8	--	--	--	--	--	--
bromofluorobenzene, 4-	E611A	0.10	%	95.1	--	--	--	--	--	--
difluorobenzene, 1,4-	E611A	0.10	%	108	--	--	--	--	--	--
<b>Polychlorinated Biphenyls</b>										
Aroclor 1016	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1221	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1232	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1242	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1248	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1254	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1260	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1262	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2221344-008 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polychlorinated Biphenyls - Continued</b>										
Aroclor 1268	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
polychlorinated biphenyls [PCBs], total	E687	0.030	mg/kg	<0.030	<b>1.1 mg/kg</b>	<b>1.1 mg/kg</b>	<b>0.35 mg/kg</b>	<b>0.35 mg/kg</b>	--	--
decachlorobiphenyl	E687	0.1	%	138	--	--	--	--	--	--
tetrachloro-m-xylene	E687	0.1	%	91.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>WT2221344</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 8</p> <p><b>No. of samples analysed</b> : 8</p>	<p><b>Page</b> : 1 of 13</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 10-Nov-2022 09:10</p> <p><b>Issue Date</b> : 24-Nov-2022 18:29</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

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### ***Workorder Comments***

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Matrix Spike outliers occur.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



**Outliers : Quality Control Samples**

*Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes*

Matrix: **Soil/Solid**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Laboratory Control Sample (LCS) Recoveries</b>								
Hydrocarbons	QC-742975-002	----	F1 (C6-C10)	----	E581.F1	122 % <sup>LCS-H</sup>	80.0-120%	Recovery greater than upper control limit
Polycyclic Aromatic Hydrocarbons	QC-744686-002	----	benzo(k)fluoranthene	207-08-9	E641A	59.2 % <sup>LCS-ND</sup>	60.0-130%	Recovery less than lower control limit

**Result Qualifiers**

Qualifier	Description
LCS-H	Lab Control Sample recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.
LCS-ND	Lab Control Sample recovery was slightly outside ALS DQO. Reported non-detect results for associated samples were unaffected.



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-37 0-0.5	E581.F1	08-Nov-2022	14-Nov-2022	14 days	7 days	✓	15-Nov-2022	40 days	1 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-38 0.75-2	E581.F1	08-Nov-2022	14-Nov-2022	14 days	7 days	✓	15-Nov-2022	40 days	1 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-38 0-0.75	E581.F1	08-Nov-2022	14-Nov-2022	14 days	7 days	✓	15-Nov-2022	40 days	1 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-36 0-0.75	E581.F1	07-Nov-2022	15-Nov-2022	14 days	8 days	✓	15-Nov-2022	40 days	1 days	✓	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-37 0-0.5	E601.SG-L	08-Nov-2022	16-Nov-2022	14 days	8 days	✓	17-Nov-2022	40 days	1 days	✓	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-38 0.75-2	E601.SG-L	08-Nov-2022	16-Nov-2022	14 days	8 days	✓	17-Nov-2022	40 days	1 days	✓	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-38 0-0.75	E601.SG-L	08-Nov-2022	16-Nov-2022	14 days	8 days	✓	17-Nov-2022	40 days	1 days	✓	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-36 0-0.75	E601.SG-L	07-Nov-2022	16-Nov-2022	14 days	9 days	✔	17-Nov-2022	40 days	1 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-37 0-0.5	E487	08-Nov-2022	23-Nov-2022	180 days	16 days	✔	23-Nov-2022	180 days	0 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-36 0-0.75	E487	07-Nov-2022	23-Nov-2022	180 days	17 days	✔	23-Nov-2022	180 days	0 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-37 0-0.5	E510	08-Nov-2022	23-Nov-2022	----	----		23-Nov-2022	28 days	16 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-36 0-0.75	E510	07-Nov-2022	23-Nov-2022	----	----		23-Nov-2022	28 days	17 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-37 0-0.5	E440	08-Nov-2022	23-Nov-2022	----	----		23-Nov-2022	180 days	16 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-36 0-0.75	E440	07-Nov-2022	23-Nov-2022	----	----		23-Nov-2022	180 days	17 days	✔	
<b>Particle Size : Grain Size Report (Attachment) Hydrometer/Sieve Method</b>											
Glass soil jar/Teflon lined cap 22-36 0-0.75	E185	07-Nov-2022	----	----	----		18-Nov-2022	----	----		
<b>Particle Size : Particle Size Analysis - Hydrometer</b>											
Glass soil jar/Teflon lined cap 22-36 0-0.75	E183	07-Nov-2022	16-Nov-2022	----	----		16-Nov-2022	365 days	9 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Particle Size : Particle Size Analysis - Sieve &lt;2mm</b>										
Glass soil jar/Teflon lined cap 22-36 0-0.75	E182	07-Nov-2022	16-Nov-2022	----	----		16-Nov-2022	365 days	9 days	✔
<b>Particle Size : Particle Size Analysis - Sieve &gt;2mm</b>										
Glass soil jar/Teflon lined cap 22-36 0-0.75	E181	07-Nov-2022	16-Nov-2022	----	----		16-Nov-2022	365 days	9 days	✔
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-20 2-4	E144	07-Nov-2022	----	----	----		14-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-22 2.5-3	E144	07-Nov-2022	----	----	----		14-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-23 1-2	E144	07-Nov-2022	----	----	----		14-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-36 0-0.75	E144	07-Nov-2022	----	----	----		14-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-37 0-0.5	E144	08-Nov-2022	----	----	----		14-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-38 0.75-2	E144	08-Nov-2022	----	----	----		14-Nov-2022	----	----	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap 22-38 0-0.75	E144	08-Nov-2022	----	----	----		14-Nov-2022	----	----	





Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Physical Tests : Moisture Content by Gravimetry</b>										
Glass soil jar/Teflon lined cap DUP4	E144	07-Nov-2022	----	----	----		14-Nov-2022	----	----	
<b>Polychlorinated Biphenyls : PCB Aroclors by GC-MS</b>										
Glass soil jar/Teflon lined cap 22-38 0.75-2	E687	08-Nov-2022	15-Nov-2022	----	----		16-Nov-2022	40 days	1 days	✔
<b>Polychlorinated Biphenyls : PCB Aroclors by GC-MS</b>										
Glass soil jar/Teflon lined cap 22-38 0-0.75	E687	08-Nov-2022	15-Nov-2022	----	----		16-Nov-2022	40 days	1 days	✔
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hex: Ace GC-MS</b>										
Glass soil jar/Teflon lined cap 22-37 0-0.5	E641A	08-Nov-2022	16-Nov-2022	14 days	8 days	✔	16-Nov-2022	40 days	1 days	✔
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>										
Glass soil jar/Teflon lined cap 22-37 0-0.5	E532	08-Nov-2022	15-Nov-2022	30 days	8 days	✔	16-Nov-2022	7 days	1 days	✔
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>										
Glass soil jar/Teflon lined cap 22-36 0-0.75	E532	07-Nov-2022	15-Nov-2022	30 days	9 days	✔	16-Nov-2022	7 days	1 days	✔
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>										
Glass soil methanol vial [ON MECP] 22-37 0-0.5	E611A	08-Nov-2022	14-Nov-2022	14 days	7 days	✔	15-Nov-2022	40 days	1 days	✔
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>										
Glass soil methanol vial [ON MECP] 22-38 0.75-2	E611A	08-Nov-2022	14-Nov-2022	14 days	7 days	✔	15-Nov-2022	40 days	1 days	✔
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>										
Glass soil methanol vial [ON MECP] 22-38 0-0.75	E611A	08-Nov-2022	14-Nov-2022	14 days	7 days	✔	15-Nov-2022	40 days	1 days	✔



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-20 2-4	E611D	07-Nov-2022	15-Nov-2022	14 days	8 days	✔	15-Nov-2022	40 days	1 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-22 2.5-3	E611D	07-Nov-2022	15-Nov-2022	14 days	8 days	✔	15-Nov-2022	40 days	1 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-23 1-2	E611D	07-Nov-2022	15-Nov-2022	14 days	8 days	✔	15-Nov-2022	40 days	1 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-36 0-0.75	E611D	07-Nov-2022	15-Nov-2022	14 days	8 days	✔	15-Nov-2022	40 days	1 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] DUP4	E611D	07-Nov-2022	15-Nov-2022	14 days	8 days	✔	15-Nov-2022	40 days	1 days	✔	

**Legend & Qualifier Definitions**

Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		Evaluation
			QC	Regular	Actual	Expected	
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Boron-Hot Water Extractable by ICPOES	E487	741334	1	2	50.0	5.0	✔
BTEX by Headspace GC-MS	E611A	742038	1	20	5.0	5.0	✔
CCME PHC - F1 by Headspace GC-FID	E581.F1	742039	2	27	7.4	5.0	✔
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	744687	1	15	6.6	5.0	✔
Hexavalent Chromium (Cr VI) by IC	E532	744082	1	20	5.0	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	741331	1	2	50.0	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	741332	1	20	5.0	5.0	✔
Moisture Content by Gravimetry	E144	742876	1	20	5.0	5.0	✔
PAHs by Hex:Ace GC-MS	E641A	744686	1	8	12.5	5.0	✔
Particle Size Analysis - Hydrometer	E183	745294	1	1	100.0	5.0	✔
Particle Size Analysis - Sieve <2mm	E182	745293	1	1	100.0	5.0	✔
PCB Aroclors by GC-MS	E687	742887	1	19	5.2	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	742974	1	20	5.0	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
Boron-Hot Water Extractable by ICPOES	E487	741334	2	2	100.0	10.0	✔
BTEX by Headspace GC-MS	E611A	742038	1	20	5.0	5.0	✔
CCME PHC - F1 by Headspace GC-FID	E581.F1	742039	2	27	7.4	5.0	✔
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	744687	1	15	6.6	5.0	✔
Hexavalent Chromium (Cr VI) by IC	E532	744082	2	20	10.0	10.0	✔
Mercury in Soil/Solid by CVAAS	E510	741331	2	2	100.0	10.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	741332	2	20	10.0	10.0	✔
Moisture Content by Gravimetry	E144	742876	1	20	5.0	5.0	✔
PAHs by Hex:Ace GC-MS	E641A	744686	1	8	12.5	5.0	✔
Particle Size Analysis - Hydrometer	E183	745294	1	1	100.0	5.0	✔
Particle Size Analysis - Sieve <2mm	E182	745293	1	1	100.0	5.0	✔
Particle Size Analysis - Sieve >2mm	E181	745292	1	1	100.0	5.0	✔
PCB Aroclors by GC-MS	E687	742887	1	19	5.2	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	742974	1	20	5.0	5.0	✔
<b>Method Blanks (MB)</b>							
Boron-Hot Water Extractable by ICPOES	E487	741334	1	2	50.0	5.0	✔
BTEX by Headspace GC-MS	E611A	742038	1	20	5.0	5.0	✔
CCME PHC - F1 by Headspace GC-FID	E581.F1	742039	2	27	7.4	5.0	✔
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	744687	1	15	6.6	5.0	✔
Hexavalent Chromium (Cr VI) by IC	E532	744082	1	20	5.0	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	741331	1	2	50.0	5.0	✔



Matrix: **Soil/Solid**

Evaluation: \* = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
<b>Method Blanks (MB) - Continued</b>							
Metals in Soil/Solid by CRC ICPMS	E440	741332	1	20	5.0	5.0	✓
Moisture Content by Gravimetry	E144	742876	1	20	5.0	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	744686	1	8	12.5	5.0	✓
PCB Aroclors by GC-MS	E687	742887	1	19	5.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	742974	1	20	5.0	5.0	✓
<b>Matrix Spikes (MS)</b>							
BTEX by Headspace GC-MS	E611A	742038	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID	E581.F1	742039	2	27	7.4	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	744687	1	15	6.6	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	744686	1	8	12.5	5.0	✓
PCB Aroclors by GC-MS	E687	742887	1	19	5.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	742974	1	20	5.0	5.0	✓



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Moisture Content by Gravimetry	E144 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Particle Size Analysis - Sieve >2mm	E181 Saskatoon - Environmental	Soil/Solid	ASTM D6913-17 (mod)	Soil samples are disaggregated and sieved through a 2mm sieve. Material retained on the sieve is then further sieved through a series of sieves. The amount passing through the sieves is measured gravimetrically.
Particle Size Analysis - Sieve <2mm	E182 Saskatoon - Environmental	Soil/Solid	ASTM D6913-17 (mod)	Soil samples are disaggregated and sieved through a 2mm sieve. Material passed through the sieve is then further disaggregated using calgon solution and passed through a series of sieves. The amount passing through the sieves is measured gravimetrically.
Particle Size Analysis - Hydrometer	E183 Saskatoon - Environmental	Soil/Solid	ASTM D7928-21 (mod)	Soil material is separated from coarse material (>2mm). A specimen is then disaggregated through mixing with Calgon solution. The material is then suspended in solution wherein regular hydrometer readings are taken at specific time intervals. The principles of Stokes' Law are applied to determine the amount of material remaining in solution as well as the maximum particle size remaining in solution at the specified time.
Grain Size Report (Attachment) Hydrometer/Sieve Method	E185 Saskatoon - Environmental	Soil/Solid	ASTM D6913/D7928	A grain size curve is a graphical representation of the particle sizing of a sample representing the percent passing against the effective particle size.
Metals in Soil/Solid by CRC ICPMS	E440 Waterloo - Environmental	Soil/Solid	EPA 6020B (mod)	<p>This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 2 mm sieve, and digested with HNO<sub>3</sub> and HCl.</p> <p>Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines.</p> <p>Analysis is by Collision/Reaction Cell ICPMS.</p>
Boron-Hot Water Extractable by ICPOES	E487 Waterloo - Environmental	Soil/Solid	HW EXTR, EPA 6010B	<p>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.</p> <p>Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).</p>



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Mercury in Soil/Solid by CVAAS	E510 Waterloo - Environmental	Soil/Solid	EPA 200.2/1631 Appendix (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO <sub>3</sub> and HCl, followed by CVAAS analysis.
Hexavalent Chromium (Cr VI) by IC	E532 Waterloo - Environmental	Soil/Solid	APHA 3500-CR C	Instrumental analysis is performed by ion chromatography with UV detection.
CCME PHC - F1 by Headspace GC-FID	E581.F1 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4).
BTEX by Headspace GC-MS	E611A Waterloo - Environmental	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D Waterloo - Environmental	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs by Hex:Ace GC-MS	E641A Waterloo - Environmental	Soil/Solid	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are extracted with hexane/acetone and analyzed by GC-MS. If reported, IACR (index of additive cancer risk, unitless) and B(a)P toxic potency equivalent (in soil concentration units) are calculated as per CCME PAH Soil Quality Guidelines fact sheet (2010) or ABT1.
PCB Aroclors by GC-MS	E687 Waterloo - Environmental	Soil/Solid	EPA 8270E (mod)	PCB Aroclors are analyzed by GC-MS
F1-BTEX	EC580 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.
F2 to F3 minus PAH	EC600 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	F2-PAH = CCME Fraction 2 (C10-C16) minus Naphthalene F3-PAH = CCME Fraction 3 (C16-C34) minus select Polycyclic Aromatic Hydrocarbons (PAH) as per CCME Soil Tier 1



Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for Metals and Mercury	EP440  Waterloo - Environmental	Soil/Solid	EPA 200.2 (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO <sub>3</sub> and HCl. This method is intended to liberate metals that may be environmentally available.
Boron-Hot Water Extractable	EP487  Waterloo - Environmental	Soil/Solid	HW EXTR, EPA 6010B	A dried solid sample is extracted with weak 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)
Preparation of Hexavalent Chromium (Cr VI) for IC	EP532  Waterloo - Environmental	Soil/Solid	EPA 3060A	Field moist samples are digested with a sodium hydroxide/sodium carbonate solution as described in EPA 3060A.
VOCs Methanol Extraction for Headspace Analysis	EP581  Waterloo - Environmental	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PHCs and PAHs Hexane-Acetone Tumbler Extraction	EP601  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1 (mod)	Samples are subsampled and Petroleum Hydrocarbons (PHC) and PAHs are extracted with 1:1 hexane:acetone using a rotary extractor.
Pesticides, PCB, PAH, and Neutral Extractable Chlorinated Hydrocarbons Extraction	EP660  Waterloo - Environmental	Soil/Solid	EPA 3570 (mod)	A homogenized subsample is extracted with organic solvents using a mechanical shaker.
Dry and Grind in Soil/Solid <60°C	EPP442  Waterloo - Environmental	Soil/Solid	Soil Sampling and Methods of Analysis, Carter 2008	After removal of any coarse fragments and reservation of wet subsamples a portion of homogenized sample is set in a tray and dried at less than 60°C until dry. The sample is then particle size reduced with an automated crusher or mortar and pestle, typically to <2 mm. Further size reduction may be needed for particular tests.

## QUALITY CONTROL REPORT

<p><b>Work Order</b> : <b>WT2221344</b></p> <p>Client : Omni-McCann Inc.</p> <p>Contact : Daniel Elliot</p> <p>Address : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p>Telephone :</p> <p>Project : 0006-0103</p> <p>PO : ----</p> <p>C-O-C number : ----</p> <p>Sampler : ----                    705 243 5828</p> <p>Site : ----</p> <p>Quote number : Project 0006-0103</p> <p>No. of samples received : 8</p> <p>No. of samples analysed : 8</p>	<p>Page : 1 of 19</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Emily Smith</p> <p>Address : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 10-Nov-2022 09:10</p> <p>Date Analysis Commenced : 11-Nov-2022</p> <p>Issue Date : 24-Nov-2022 18:29</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Amanda Ganouri-Lumsden	Department Manager - Microbiology and Prep	Waterloo Centralized Prep, Waterloo, Ontario
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Waterloo Organics, Waterloo, Ontario
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario
Hedy Lai	Team Leader - Inorganics	Saskatoon Sask Soils, Saskatoon, Saskatchewan
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Waterloo Organics, Waterloo, Ontario



Page : 2 of 19  
Work Order : WT2221344  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

### Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

## Workorder Comments

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Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Soil/Solid

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Physical Tests (QC Lot: 742876)</b>											
WT2221344-001	22-36 0-0.75	moisture	----	E144	0.25	%	22.2	22.5	1.20%	20%	----
<b>Particle Size (QC Lot: 745293)</b>											
WT2221344-001	22-36 0-0.75	passing (0.05 mm)	----	E182	1.0	%	33.3	33.3	0.0374%	15%	----
		passing (0.063 mm)	----	E182	1.0	%	38.0	38.2	0.755%	15%	----
		passing (0.075 mm)	----	E182	1.0	%	42.2	42.8	1.27%	15%	----
		passing (0.125 mm)	----	E182	1.0	%	50.8	50.8	0.0127%	15%	----
		passing (0.149 mm)	----	E182	1.0	%	54.9	54.6	0.492%	15%	----
		passing (0.250 mm)	----	E182	1.0	%	73.6	74.0	0.517%	15%	----
		passing (0.420 mm)	----	E182	1.0	%	85.1	85.4	0.404%	15%	----
		passing (0.50 mm)	----	E182	1.0	%	87.0	87.3	0.262%	15%	----
		passing (0.841 mm)	----	E182	1.0	%	94.5	94.2	0.311%	15%	----
passing (1.0 mm)	----	E182	1.0	%	95.3	95.0	0.280%	15%	----		
<b>Particle Size (QC Lot: 745294)</b>											
WT2221344-001	22-36 0-0.75	passing (0.002 mm)	----	E183	1.0	%	9.1	9.2	0.09	Diff <2x LOR	----
		passing (0.004 mm)	----	E183	1.0	%	11.0	10.9	1.08%	20%	----
		passing (0.005 mm)	----	E183	1.0	%	12.2	12.2	0.0176%	20%	----
		passing (0.020 mm)	----	E183	1.0	%	20.8	21.9	4.84%	20%	----
		passing (0.0312 mm)	----	E183	1.0	%	26.0	26.4	1.77%	20%	----
<b>Metals (QC Lot: 741331)</b>											
WT2221344-001	22-36 0-0.75	mercury	7439-97-6	E510	0.0050	mg/kg	0.0385	0.0369	4.14%	40%	----
<b>Metals (QC Lot: 741332)</b>											
WT2221344-001	22-36 0-0.75	antimony	7440-36-0	E440	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		arsenic	7440-38-2	E440	0.10	mg/kg	1.71	1.66	2.82%	30%	----
		barium	7440-39-3	E440	0.50	mg/kg	118	110	6.31%	40%	----
		beryllium	7440-41-7	E440	0.10	mg/kg	0.54	0.51	0.04	Diff <2x LOR	----
		boron	7440-42-8	E440	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
		cadmium	7440-43-9	E440	0.020	mg/kg	0.186	0.173	7.63%	30%	----
		chromium	7440-47-3	E440	0.50	mg/kg	33.0	32.4	1.64%	30%	----
		cobalt	7440-48-4	E440	0.10	mg/kg	8.38	8.23	1.84%	30%	----
		copper	7440-50-8	E440	0.50	mg/kg	9.63	9.62	0.104%	30%	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Metals (QC Lot: 741332) - continued</b>											
WT2221344-001	22-36 0-0.75	lead	7439-92-1	E440	0.50	mg/kg	7.69	7.28	5.48%	40%	----
		molybdenum	7439-98-7	E440	0.10	mg/kg	0.39	0.38	0.02	Diff <2x LOR	----
		nickel	7440-02-0	E440	0.50	mg/kg	15.7	15.5	1.03%	30%	----
		selenium	7782-49-2	E440	0.20	mg/kg	0.26	0.27	0.008	Diff <2x LOR	----
		silver	7440-22-4	E440	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		thallium	7440-28-0	E440	0.050	mg/kg	0.115	0.114	0.002	Diff <2x LOR	----
		uranium	7440-61-1	E440	0.050	mg/kg	0.816	0.790	3.26%	30%	----
		vanadium	7440-62-2	E440	0.20	mg/kg	46.6	45.9	1.59%	30%	----
		zinc	7440-66-6	E440	2.0	mg/kg	54.6	53.2	2.51%	30%	----
<b>Metals (QC Lot: 741334)</b>											
WT2221344-001	22-36 0-0.75	boron, hot water soluble	7440-42-8	E487	0.10	mg/kg	0.22	0.22	0.006	Diff <2x LOR	----
<b>Speciated Metals (QC Lot: 744082)</b>											
WT2219142-002	Anonymous	chromium, hexavalent [Cr VI]	18540-29-9	E532	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 742038)</b>											
WT2221224-001	Anonymous	benzene	71-43-2	E611A	0.0071	mg/kg	<0.0071	<0.0071	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611A	0.018	mg/kg	<0.018	<0.018	0	Diff <2x LOR	----
		toluene	108-88-3	E611A	0.058	mg/kg	<0.058	<0.058	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 742974)</b>											
WT2221344-001	22-36 0-0.75	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 742974) - continued</b>											
WT2221344-001	22-36 0-0.75	dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	<0.045	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040	<0.040	0	Diff <2x LOR	----
		styrene	100-42-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 742039)</b>											
WT2221224-001	Anonymous	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 742975)</b>											
WT2221344-001	22-36 0-0.75	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 744687)</b>											
WT2221252-005	Anonymous	F2 (C10-C16)	----	E601.SG-L	10	mg/kg	78	110	33.3%	40%	----
		F3 (C16-C34)	----	E601.SG-L	50	mg/kg	318	382	18.2%	40%	----
		F4 (C34-C50)	----	E601.SG-L	50	mg/kg	386	402	4.10%	40%	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Polycyclic Aromatic Hydrocarbons (QC Lot: 744686)</b>											
WT2221252-005	Anonymous	acenaphthene	83-32-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		acenaphthylene	208-96-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		anthracene	120-12-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		benz(a)anthracene	56-55-3	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		benzo(a)pyrene	50-32-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		benzo(b+j)fluoranthene	n/a	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		benzo(g,h,i)perylene	191-24-2	E641A	0.050	mg/kg	0.051	<0.050	0.001	Diff <2x LOR	J
		benzo(k)fluoranthene	207-08-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chrysene	218-01-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibenz(a,h)anthracene	53-70-3	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		fluoranthene	206-44-0	E641A	0.050	mg/kg	0.078	0.060	0.017	Diff <2x LOR	J
		fluorene	86-73-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		methylnaphthalene, 1-	90-12-0	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		methylnaphthalene, 2-	91-57-6	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		naphthalene	91-20-3	E641A	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		phenanthrene	85-01-8	E641A	0.050	mg/kg	0.055	<0.050	0.005	Diff <2x LOR	J
		pyrene	129-00-0	E641A	0.050	mg/kg	0.074	0.062	0.011	Diff <2x LOR	J
<b>Polychlorinated Biphenyls (QC Lot: 742887)</b>											
WT2221353-025	Anonymous	Aroclor 1016	12674-11-2	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1221	11104-28-2	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1232	11141-16-5	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1242	53469-21-9	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1248	12672-29-6	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1254	11097-69-1	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1260	11096-82-5	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1262	37324-23-5	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1268	11100-14-4	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----

**Qualifiers**

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



## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 742876)</b>						
moisture	---	E144	0.25	%	<0.25	---
<b>Metals (QCLot: 741331)</b>						
mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	---
<b>Metals (QCLot: 741332)</b>						
antimony	7440-36-0	E440	0.1	mg/kg	<0.10	---
arsenic	7440-38-2	E440	0.1	mg/kg	<0.10	---
barium	7440-39-3	E440	0.5	mg/kg	<0.50	---
beryllium	7440-41-7	E440	0.1	mg/kg	<0.10	---
boron	7440-42-8	E440	5	mg/kg	<5.0	---
cadmium	7440-43-9	E440	0.02	mg/kg	<0.020	---
chromium	7440-47-3	E440	0.5	mg/kg	<0.50	---
cobalt	7440-48-4	E440	0.1	mg/kg	<0.10	---
copper	7440-50-8	E440	0.5	mg/kg	<0.50	---
lead	7439-92-1	E440	0.5	mg/kg	<0.50	---
molybdenum	7439-98-7	E440	0.1	mg/kg	<0.10	---
nickel	7440-02-0	E440	0.5	mg/kg	<0.50	---
selenium	7782-49-2	E440	0.2	mg/kg	<0.20	---
silver	7440-22-4	E440	0.1	mg/kg	<0.10	---
thallium	7440-28-0	E440	0.05	mg/kg	<0.050	---
uranium	7440-61-1	E440	0.05	mg/kg	<0.050	---
vanadium	7440-62-2	E440	0.2	mg/kg	<0.20	---
zinc	7440-66-6	E440	2	mg/kg	<2.0	---
<b>Metals (QCLot: 741334)</b>						
boron, hot water soluble	7440-42-8	E487	0.1	mg/kg	<0.10	---
<b>Speciated Metals (QCLot: 744082)</b>						
chromium, hexavalent [Cr VI]	18540-29-9	E532	0.1	mg/kg	<0.10	---
<b>Volatile Organic Compounds (QCLot: 742038)</b>						
benzene	71-43-2	E611A	0.005	mg/kg	<0.0050	---
ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015	---
toluene	108-88-3	E611A	0.05	mg/kg	<0.050	---
xylene, m+p-	179601-23-1	E611A	0.03	mg/kg	<0.030	---
xylene, o-	95-47-6	E611A	0.03	mg/kg	<0.030	---



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 742974)</b>						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	----
benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	----
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	----
bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	----
bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	----
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	----
chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	----
chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	----
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	----
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	----
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	----
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	----
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	----
dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	----
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	----
ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	----
hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	----
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	----
styrene	100-42-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 742974) - continued</b>						
trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----
<b>Hydrocarbons (QCLot: 742039)</b>						
F1 (C6-C10)	----	E581.F1	5	mg/kg	<5.0	----
<b>Hydrocarbons (QCLot: 742975)</b>						
F1 (C6-C10)	----	E581.F1	5	mg/kg	<5.0	----
<b>Hydrocarbons (QCLot: 744687)</b>						
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 744686)</b>						
acenaphthene	83-32-9	E641A	0.05	mg/kg	<0.050	----
acenaphthylene	208-96-8	E641A	0.05	mg/kg	<0.050	----
anthracene	120-12-7	E641A	0.05	mg/kg	<0.050	----
benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	<0.050	----
benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	<0.050	----
benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	<0.050	----
benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	<0.050	----
benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	<0.050	----
chrysene	218-01-9	E641A	0.05	mg/kg	<0.050	----
dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	<0.050	----
fluoranthene	206-44-0	E641A	0.05	mg/kg	<0.050	----
fluorene	86-73-7	E641A	0.05	mg/kg	<0.050	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	<0.050	----
methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	<0.030	----
methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	<0.030	----
naphthalene	91-20-3	E641A	0.01	mg/kg	<0.010	----
phenanthrene	85-01-8	E641A	0.05	mg/kg	<0.050	----
pyrene	129-00-0	E641A	0.05	mg/kg	<0.050	----
<b>Polychlorinated Biphenyls (QCLot: 742887)</b>						
Aroclor 1016	12674-11-2	E687	0.01	mg/kg	<0.010	----
Aroclor 1221	11104-28-2	E687	0.01	mg/kg	<0.010	----





Sub-Matrix: **Soil/Solid**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
<b>Polychlorinated Biphenyls (QCLot: 742887) - continued</b>						
Aroclor 1232	11141-16-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1242	53469-21-9	E687	0.01	mg/kg	<0.010	----
Aroclor 1248	12672-29-6	E687	0.01	mg/kg	<0.010	----
Aroclor 1254	11097-69-1	E687	0.01	mg/kg	<0.010	----
Aroclor 1260	11096-82-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1262	37324-23-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1268	11100-14-4	E687	0.01	mg/kg	<0.010	----



## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Physical Tests (QCLot: 742876)</b>									
moisture	---	E144	0.25	%	50 %	100	90.0	110	---
<b>Metals (QCLot: 741331)</b>									
mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	99.5	80.0	120	---
<b>Metals (QCLot: 741332)</b>									
antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	102	80.0	120	---
arsenic	7440-38-2	E440	0.1	mg/kg	100 mg/kg	110	80.0	120	---
barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	106	80.0	120	---
beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	104	80.0	120	---
boron	7440-42-8	E440	5	mg/kg	100 mg/kg	102	80.0	120	---
cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	102	80.0	120	---
chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	103	80.0	120	---
cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	103	80.0	120	---
copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	101	80.0	120	---
lead	7439-92-1	E440	0.5	mg/kg	50 mg/kg	104	80.0	120	---
molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	102	80.0	120	---
nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	102	80.0	120	---
selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	102	80.0	120	---
silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	96.0	80.0	120	---
thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	102	80.0	120	---
uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	110	80.0	120	---
vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	106	80.0	120	---
zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	100	80.0	120	---
<b>Metals (QCLot: 741334)</b>									
boron, hot water soluble	7440-42-8	E487	0.1	mg/kg	1.33333 mg/kg	105	70.0	130	---
<b>Speciated Metals (QCLot: 744082)</b>									
chromium, hexavalent [Cr VI]	18540-29-9	E532	0.1	mg/kg	0.8 mg/kg	85.4	80.0	120	---
<b>Volatile Organic Compounds (QCLot: 742038)</b>									
benzene	71-43-2	E611A	0.005	mg/kg	3.475 mg/kg	111	70.0	130	---
ethylbenzene	100-41-4	E611A	0.015	mg/kg	3.475 mg/kg	101	70.0	130	---
toluene	108-88-3	E611A	0.05	mg/kg	3.475 mg/kg	102	70.0	130	---



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 742038) - continued</b>									
xylylene, m+p-	179601-23-1	E611A	0.03	mg/kg	6.95 mg/kg	96.8	70.0	130	----
xylylene, o-	95-47-6	E611A	0.03	mg/kg	3.475 mg/kg	102	70.0	130	----
<b>Volatile Organic Compounds (QCLot: 742974)</b>									
Acetone	67-64-1	E611D	0.5	mg/kg	3.475 mg/kg	79.3	60.0	140	----
benzene	71-43-2	E611D	0.005	mg/kg	3.475 mg/kg	91.6	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.475 mg/kg	92.0	50.0	140	----
bromoform	75-25-2	E611D	0.05	mg/kg	3.475 mg/kg	84.4	70.0	130	----
bromomethane	74-83-9	E611D	0.05	mg/kg	3.475 mg/kg	83.8	50.0	140	----
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.475 mg/kg	90.8	70.0	130	----
chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.475 mg/kg	98.2	70.0	130	----
chloroform	67-66-3	E611D	0.05	mg/kg	3.475 mg/kg	87.4	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.475 mg/kg	92.3	60.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.475 mg/kg	86.2	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.475 mg/kg	98.4	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.475 mg/kg	102	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.475 mg/kg	102	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.475 mg/kg	56.2	50.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.475 mg/kg	80.5	60.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.475 mg/kg	79.8	60.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.475 mg/kg	84.4	60.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.475 mg/kg	87.2	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.475 mg/kg	90.5	60.0	130	----
dichloromethane	75-09-2	E611D	0.045	mg/kg	3.475 mg/kg	84.5	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.475 mg/kg	91.4	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.475 mg/kg	87.5	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.475 mg/kg	88.7	70.0	130	----
ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.475 mg/kg	102	70.0	130	----
hexane, n-	110-54-3	E611D	0.05	mg/kg	3.475 mg/kg	88.5	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.475 mg/kg	80.0	60.0	140	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.475 mg/kg	74.9	60.0	140	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.475 mg/kg	93.7	70.0	130	----
styrene	100-42-5	E611D	0.05	mg/kg	3.475 mg/kg	101	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.475 mg/kg	95.7	60.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.475 mg/kg	85.5	60.0	130	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.475 mg/kg	101	60.0	130	----
toluene	108-88-3	E611D	0.05	mg/kg	3.475 mg/kg	99.0	70.0	130	----



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 742974) - continued</b>									
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.475 mg/kg	89.0	60.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.475 mg/kg	90.7	60.0	130	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.475 mg/kg	95.8	60.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.475 mg/kg	86.1	50.0	140	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.475 mg/kg	77.1	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	102	70.0	130	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	3.475 mg/kg	99.8	70.0	130	----
<b>Hydrocarbons (QCLot: 742039)</b>									
F1 (C6-C10)	----	E581.F1	5	mg/kg	69.1875 mg/kg	116	80.0	120	----
<b>Hydrocarbons (QCLot: 742975)</b>									
F1 (C6-C10)	----	E581.F1	5	mg/kg	69.1875 mg/kg	# 122	80.0	120	LCS-H
<b>Hydrocarbons (QCLot: 744687)</b>									
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	916.995 mg/kg	91.8	70.0	130	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	1190.25 mg/kg	96.8	70.0	130	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	879.735 mg/kg	82.8	70.0	130	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 744686)</b>									
acenaphthene	83-32-9	E641A	0.05	mg/kg	0.5 mg/kg	91.2	60.0	130	----
acenaphthylene	208-96-8	E641A	0.05	mg/kg	0.5 mg/kg	95.9	60.0	130	----
anthracene	120-12-7	E641A	0.05	mg/kg	0.5 mg/kg	89.3	60.0	130	----
benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	0.5 mg/kg	61.7	60.0	130	----
benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	0.5 mg/kg	63.3	60.0	130	----
benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	0.5 mg/kg	61.4	60.0	130	----
benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	0.5 mg/kg	90.7	60.0	130	----
benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	0.5 mg/kg	# 59.2	60.0	130	LCS-ND
chrysene	218-01-9	E641A	0.05	mg/kg	0.5 mg/kg	64.1	60.0	130	----
dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	0.5 mg/kg	82.6	60.0	130	----
fluoranthene	206-44-0	E641A	0.05	mg/kg	0.5 mg/kg	91.7	60.0	130	----
fluorene	86-73-7	E641A	0.05	mg/kg	0.5 mg/kg	92.0	60.0	130	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	0.5 mg/kg	83.2	60.0	130	----
methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	0.5 mg/kg	88.4	60.0	130	----
methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	0.5 mg/kg	86.8	60.0	130	----
naphthalene	91-20-3	E641A	0.01	mg/kg	0.5 mg/kg	87.8	60.0	130	----
phenanthrene	85-01-8	E641A	0.05	mg/kg	0.5 mg/kg	85.3	60.0	130	----
pyrene	129-00-0	E641A	0.05	mg/kg	0.5 mg/kg	90.7	60.0	130	----



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Polychlorinated Biphenyls (QCLot: 742887)</b>									
Aroclor 1016	12674-11-2	E687	0.01	mg/kg	0.01 mg/kg	99.6	60.0	140	----
Aroclor 1221	11104-28-2	E687	0.01	mg/kg	0.01 mg/kg	99.6	60.0	140	----
Aroclor 1232	11141-16-5	E687	0.01	mg/kg	0.01 mg/kg	99.6	60.0	140	----
Aroclor 1242	53469-21-9	E687	0.01	mg/kg	0.01 mg/kg	99.6	60.0	140	----
Aroclor 1248	12672-29-6	E687	0.01	mg/kg	0.01 mg/kg	84.1	60.0	140	----
Aroclor 1254	11097-69-1	E687	0.01	mg/kg	0.01 mg/kg	91.4	60.0	140	----
Aroclor 1260	11096-82-5	E687	0.01	mg/kg	0.01 mg/kg	111	60.0	140	----
Aroclor 1262	37324-23-5	E687	0.01	mg/kg	0.01 mg/kg	111	60.0	140	----
Aroclor 1268	11100-14-4	E687	0.01	mg/kg	0.01 mg/kg	111	60.0	140	----

**Qualifiers**

Qualifier	Description
LCS-H	Lab Control Sample recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.
LCS-ND	Lab Control Sample recovery was slightly outside ALS DQO. Reported non-detect results for associated samples were unaffected.



### Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 742038)</b>										
WT2221224-001	Anonymous	benzene	71-43-2	E611A	3.88 mg/kg	3.125 mg/kg	107	60.0	140	----
		ethylbenzene	100-41-4	E611A	3.64 mg/kg	3.125 mg/kg	100	60.0	140	----
		toluene	108-88-3	E611A	3.69 mg/kg	3.125 mg/kg	102	60.0	140	----
		xylene, m+p-	179601-23-1	E611A	6.91 mg/kg	6.25 mg/kg	95.3	60.0	140	----
		xylene, o-	95-47-6	E611A	3.67 mg/kg	3.125 mg/kg	101	60.0	140	----
<b>Volatile Organic Compounds (QCLot: 742974)</b>										
WT2221344-001	22-36 0-0.75	Acetone	67-64-1	E611D	1.96 mg/kg	3.125 mg/kg	79.6	50.0	140	----
		benzene	71-43-2	E611D	2.29 mg/kg	3.125 mg/kg	92.7	50.0	140	----
		bromodichloromethane	75-27-4	E611D	2.25 mg/kg	3.125 mg/kg	91.1	50.0	140	----
		bromoform	75-25-2	E611D	2.01 mg/kg	3.125 mg/kg	81.6	50.0	140	----
		bromomethane	74-83-9	E611D	2.30 mg/kg	3.125 mg/kg	93.1	50.0	140	----
		carbon tetrachloride	56-23-5	E611D	2.29 mg/kg	3.125 mg/kg	92.9	50.0	140	----
		chlorobenzene	108-90-7	E611D	2.41 mg/kg	3.125 mg/kg	97.8	50.0	140	----
		chloroform	67-66-3	E611D	2.17 mg/kg	3.125 mg/kg	87.8	50.0	140	----
		dibromochloromethane	124-48-1	E611D	2.25 mg/kg	3.125 mg/kg	91.2	50.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	2.11 mg/kg	3.125 mg/kg	85.5	50.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	2.40 mg/kg	3.125 mg/kg	97.3	50.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	2.53 mg/kg	3.125 mg/kg	102	50.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	2.52 mg/kg	3.125 mg/kg	102	50.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	1.98 mg/kg	3.125 mg/kg	80.4	50.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	2.03 mg/kg	3.125 mg/kg	82.2	50.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	1.96 mg/kg	3.125 mg/kg	79.5	50.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	2.22 mg/kg	3.125 mg/kg	90.1	50.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	2.16 mg/kg	3.125 mg/kg	87.7	50.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	2.27 mg/kg	3.125 mg/kg	92.2	50.0	140	----
		dichloromethane	75-09-2	E611D	2.11 mg/kg	3.125 mg/kg	85.7	50.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	2.24 mg/kg	3.125 mg/kg	90.8	50.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	2.14 mg/kg	3.125 mg/kg	86.7	50.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	2.19 mg/kg	3.125 mg/kg	88.9	50.0	140	----
		ethylbenzene	100-41-4	E611D	2.53 mg/kg	3.125 mg/kg	103	50.0	140	----
		hexane, n-	110-54-3	E611D	2.41 mg/kg	3.125 mg/kg	97.8	50.0	140	----



Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 742974) - continued</b>										
WT2221344-001	22-36 0-0.75	methyl ethyl ketone [MEK]	78-93-3	E611D	1.94 mg/kg	3.125 mg/kg	78.7	50.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	1.75 mg/kg	3.125 mg/kg	71.1	50.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.35 mg/kg	3.125 mg/kg	95.2	50.0	140	----
		styrene	100-42-5	E611D	2.46 mg/kg	3.125 mg/kg	99.9	50.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.35 mg/kg	3.125 mg/kg	95.3	50.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	2.00 mg/kg	3.125 mg/kg	80.9	50.0	140	----
		tetrachloroethylene	127-18-4	E611D	2.51 mg/kg	3.125 mg/kg	102	50.0	140	----
		toluene	108-88-3	E611D	2.47 mg/kg	3.125 mg/kg	100	50.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	2.24 mg/kg	3.125 mg/kg	90.8	50.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	2.21 mg/kg	3.125 mg/kg	89.7	50.0	140	----
		trichloroethylene	79-01-6	E611D	2.37 mg/kg	3.125 mg/kg	95.9	50.0	140	----
		trichlorofluoromethane	75-69-4	E611D	2.36 mg/kg	3.125 mg/kg	95.7	50.0	140	----
		vinyl chloride	75-01-4	E611D	2.20 mg/kg	3.125 mg/kg	89.1	50.0	140	----
		xylene, m+p-	179601-23-1	E611D	5.06 mg/kg	6.25 mg/kg	102	50.0	140	----
		xylene, o-	95-47-6	E611D	2.46 mg/kg	3.125 mg/kg	99.7	50.0	140	----
<b>Hydrocarbons (QCLot: 742039)</b>										
WT2221224-001	Anonymous	F1 (C6-C10)	----	E581.F1	63.6 mg/kg	62.5 mg/kg	87.8	60.0	140	----
<b>Hydrocarbons (QCLot: 742975)</b>										
WT2221344-001	22-36 0-0.75	F1 (C6-C10)	----	E581.F1	53.8 mg/kg	62.5 mg/kg	109	60.0	140	----
<b>Hydrocarbons (QCLot: 744687)</b>										
WT2221252-005	Anonymous	F2 (C10-C16)	----	E601.SG-L	704 mg/kg	916.995 mg/kg	88.9	60.0	140	----
		F3 (C16-C34)	----	E601.SG-L	1040 mg/kg	1190.25 mg/kg	101	60.0	140	----
		F4 (C34-C50)	----	E601.SG-L	687 mg/kg	879.735 mg/kg	90.6	60.0	140	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 744686)</b>										
WT2221252-005	Anonymous	acenaphthene	83-32-9	E641A	0.340 mg/kg	0.5 mg/kg	91.0	50.0	140	----
		acenaphthylene	208-96-8	E641A	0.362 mg/kg	0.5 mg/kg	97.0	50.0	140	----
		anthracene	120-12-7	E641A	0.374 mg/kg	0.5 mg/kg	100	50.0	140	----
		benz(a)anthracene	56-55-3	E641A	0.250 mg/kg	0.5 mg/kg	66.9	50.0	140	----
		benzo(a)pyrene	50-32-8	E641A	0.327 mg/kg	0.5 mg/kg	87.5	50.0	140	----
		benzo(b+j)fluoranthene	n/a	E641A	0.337 mg/kg	0.5 mg/kg	90.0	50.0	140	----
		benzo(g,h,i)perylene	191-24-2	E641A	0.355 mg/kg	0.5 mg/kg	94.9	50.0	140	----
		benzo(k)fluoranthene	207-08-9	E641A	0.266 mg/kg	0.5 mg/kg	71.1	50.0	140	----
		chrysene	218-01-9	E641A	0.272 mg/kg	0.5 mg/kg	72.8	50.0	140	----
		dibenz(a,h)anthracene	53-70-3	E641A	0.339 mg/kg	0.5 mg/kg	90.8	50.0	140	----



Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 744686) - continued</b>										
WT2221252-005	Anonymous	fluoranthene	206-44-0	E641A	0.352 mg/kg	0.5 mg/kg	94.1	50.0	140	----
		fluorene	86-73-7	E641A	0.347 mg/kg	0.5 mg/kg	92.7	50.0	140	----
		indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.376 mg/kg	0.5 mg/kg	100	50.0	140	----
		methylnaphthalene, 1-	90-12-0	E641A	0.327 mg/kg	0.5 mg/kg	87.5	50.0	140	----
		methylnaphthalene, 2-	91-57-6	E641A	0.323 mg/kg	0.5 mg/kg	86.4	50.0	140	----
		naphthalene	91-20-3	E641A	0.324 mg/kg	0.5 mg/kg	86.6	50.0	140	----
		phenanthrene	85-01-8	E641A	0.328 mg/kg	0.5 mg/kg	87.8	50.0	140	----
		pyrene	129-00-0	E641A	0.388 mg/kg	0.5 mg/kg	104	50.0	140	----
<b>Polychlorinated Biphenyls (QCLot: 742887)</b>										
WT2221353-025	Anonymous	Aroclor 1016	12674-11-2	E687	0.010 mg/kg	0.01 mg/kg	107	50.0	150	----
		Aroclor 1221	11104-28-2	E687	0.010 mg/kg	0.01 mg/kg	107	50.0	150	----
		Aroclor 1232	11141-16-5	E687	0.010 mg/kg	0.01 mg/kg	107	50.0	150	----
		Aroclor 1242	53469-21-9	E687	0.009 mg/kg	0.01 mg/kg	95.9	50.0	150	----
		Aroclor 1248	12672-29-6	E687	0.010 mg/kg	0.01 mg/kg	107	50.0	150	----
		Aroclor 1254	11097-69-1	E687	0.009 mg/kg	0.01 mg/kg	95.9	50.0	150	----
		Aroclor 1260	11096-82-5	E687	0.013 mg/kg	0.01 mg/kg	136	50.0	150	----
		Aroclor 1262	37324-23-5	E687	0.015 mg/kg	0.01 mg/kg	148	50.0	150	----
		Aroclor 1268	11100-14-4	E687	0.015 mg/kg	0.01 mg/kg	148	50.0	150	----





## Reference Material (RM) Report

A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
<b>Particle Size (QCLot: 745292)</b>									
	RM	passing (19 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (2.0 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (25.4 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (38.1 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (4.75 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (50.8 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (76.2 mm)	----	E181	100 %	100	90.0	110	----
	RM	passing (9.5 mm)	----	E181	100 %	100	90.0	110	----
<b>Particle Size (QCLot: 745293)</b>									
	RM	passing (0.05 mm)	----	E182	49.81 %	101	90.0	110	----
	RM	passing (0.063 mm)	----	E182	54.27 %	100	90.8	109	----
	RM	passing (0.075 mm)	----	E182	58.38 %	100	91.4	109	----
	RM	passing (0.125 mm)	----	E182	68.06 %	99.0	92.7	107	----
	RM	passing (0.149 mm)	----	E182	72.71 %	98.6	93.1	107	----
	RM	passing (0.250 mm)	----	E182	85.38 %	98.6	94.1	106	----
	RM	passing (0.420 mm)	----	E182	92.78 %	99.6	94.6	105	----
	RM	passing (0.50 mm)	----	E182	93.78 %	99.7	94.7	105	----
	RM	passing (0.841 mm)	----	E182	97.34 %	99.9	94.9	105	----
	RM	passing (1.0 mm)	----	E182	97.77 %	99.9	94.9	105	----
<b>Particle Size (QCLot: 745294)</b>									
	RM	passing (0.002 mm)	----	E183	21.14 %	94.3	76.0	124	----
	RM	passing (0.004 mm)	----	E183	24.64 %	95.3	80.0	120	----
	RM	passing (0.005 mm)	----	E183	25.91 %	97.6	82.0	118	----
	RM	passing (0.020 mm)	----	E183	37.12 %	98.9	87.0	113	----
	RM	passing (0.0312 mm)	----	E183	42.58 %	101	88.0	112	----
<b>Metals (QCLot: 741331)</b>									
	RM	mercury	7439-97-6	E510	0.0585 mg/kg	102	70.0	130	----
<b>Metals (QCLot: 741332)</b>									



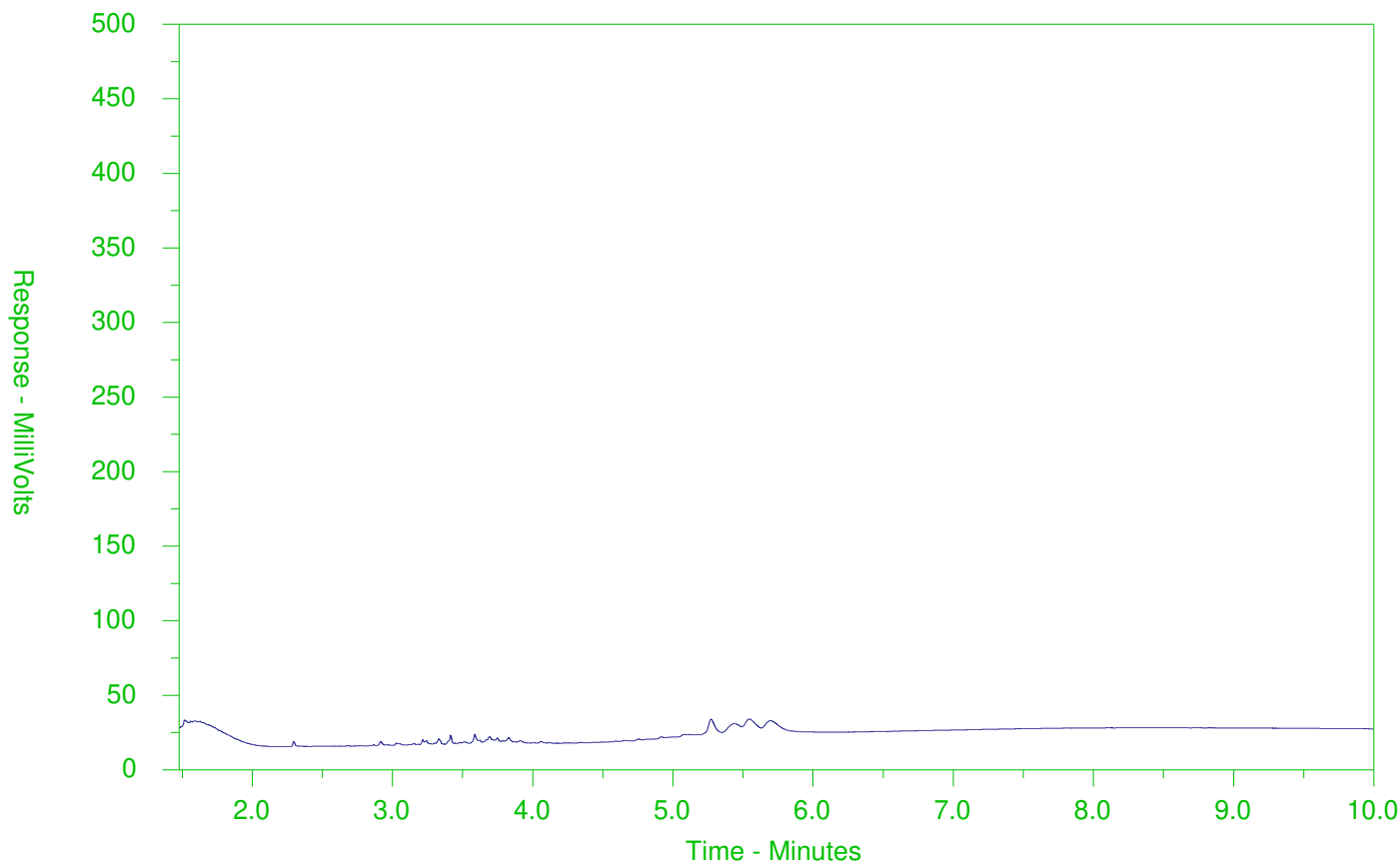
Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
<b>Metals (QCLot: 741332) - continued</b>									
	RM	antimony	7440-36-0	E440	3.99 mg/kg	98.2	70.0	130	----
	RM	arsenic	7440-38-2	E440	3.73 mg/kg	110	70.0	130	----
	RM	barium	7440-39-3	E440	105 mg/kg	112	70.0	130	----
	RM	beryllium	7440-41-7	E440	0.349 mg/kg	108	70.0	130	----
	RM	boron	7440-42-8	E440	8.5 mg/kg	124	40.0	160	----
	RM	cadmium	7440-43-9	E440	0.91 mg/kg	104	70.0	130	----
	RM	chromium	7440-47-3	E440	101 mg/kg	113	70.0	130	----
	RM	cobalt	7440-48-4	E440	6.9 mg/kg	108	70.0	130	----
	RM	copper	7440-50-8	E440	123 mg/kg	106	70.0	130	----
	RM	lead	7439-92-1	E440	267 mg/kg	102	70.0	130	----
	RM	molybdenum	7439-98-7	E440	1.03 mg/kg	102	70.0	130	----
	RM	nickel	7440-02-0	E440	26.7 mg/kg	107	70.0	130	----
	RM	silver	7440-22-4	E440	4.06 mg/kg	91.6	70.0	130	----
	RM	thallium	7440-28-0	E440	0.0786 mg/kg	109	40.0	160	----
	RM	uranium	7440-61-1	E440	0.52 mg/kg	106	70.0	130	----
	RM	vanadium	7440-62-2	E440	32.7 mg/kg	111	70.0	130	----
	RM	zinc	7440-66-6	E440	297 mg/kg	104	70.0	130	----
<b>Metals (QCLot: 741334)</b>									
	RM	boron, hot water soluble	7440-42-8	E487	1.4938 mg/kg	120	60.0	140	----
<b>Speciated Metals (QCLot: 744082)</b>									
	RM	chromium, hexavalent [Cr VI]	18540-29-9	E532	172 mg/kg	106	70.0	130	----

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2221344-001-E601.SG-L  
 Client Sample ID: 22-36 0-0.75



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

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

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

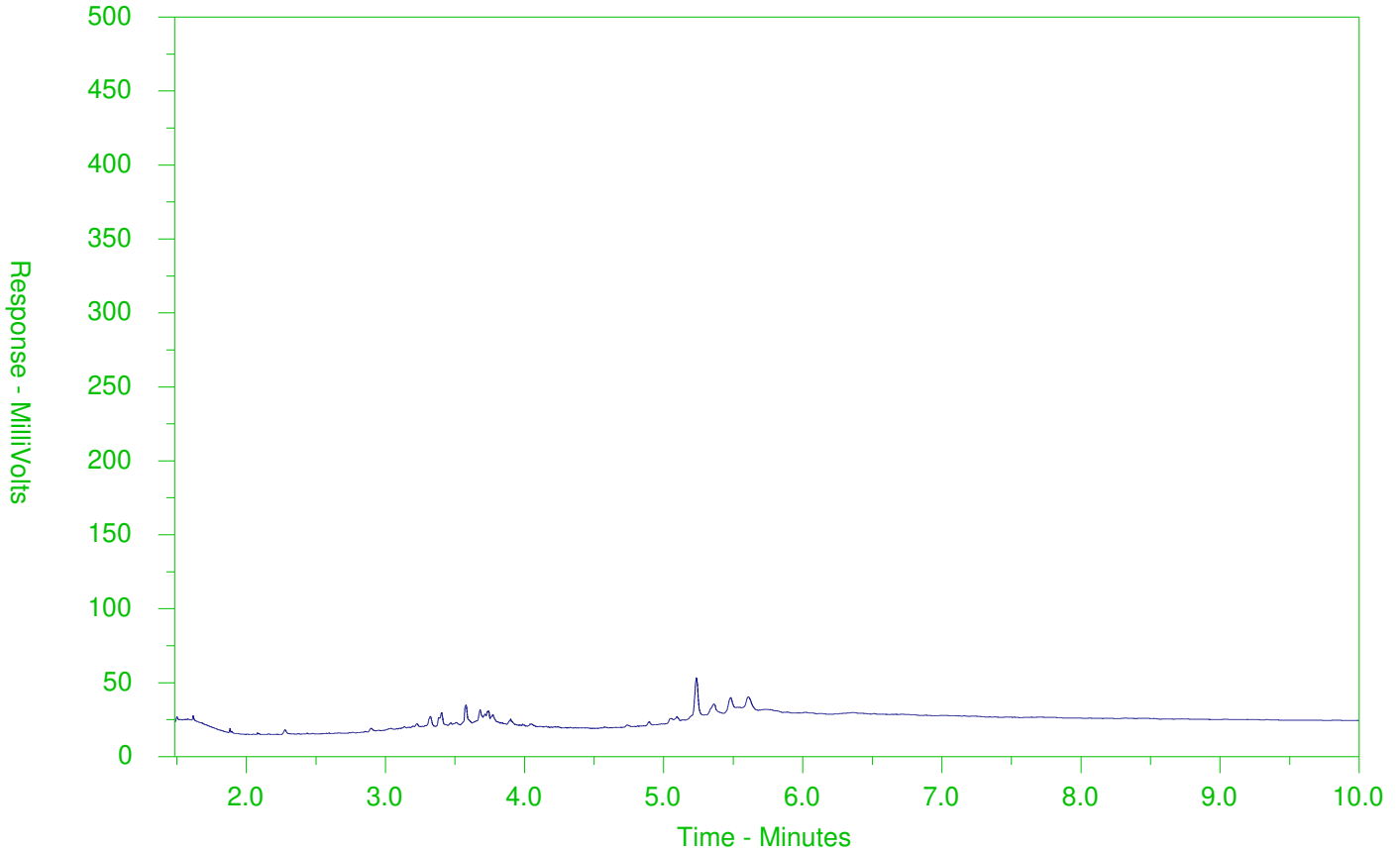
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2221344-006-E601.SG-L  
 Client Sample ID: 22-37 0-0.5



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

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

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

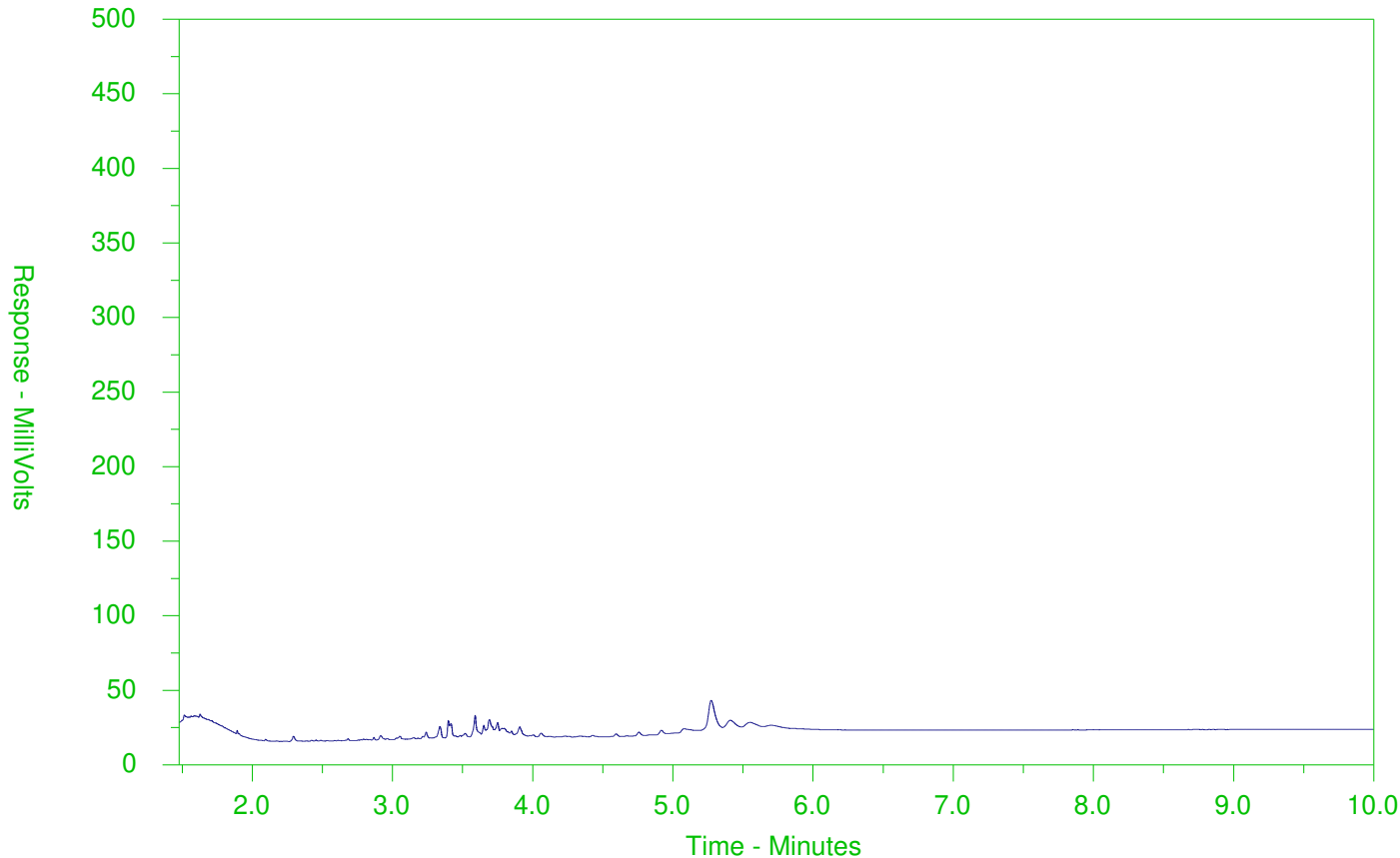
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2221344-007-E601.SG-L  
 Client Sample ID: 22-38 0-0.75



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

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

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

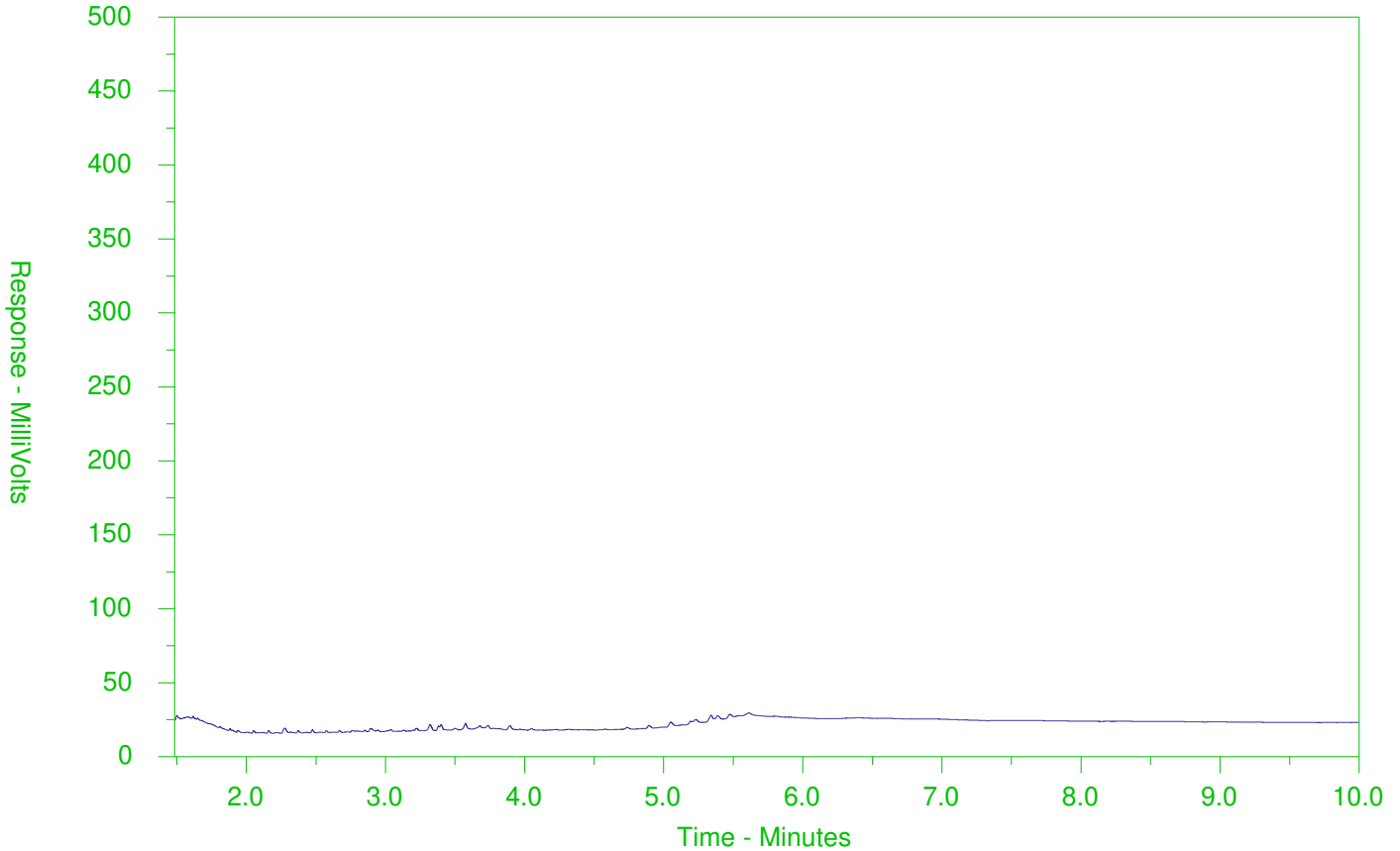
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2221344-008-E601.SG-L  
 Client Sample ID: 22-38 0.75-2



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

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

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

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

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



www.alsglobal.com

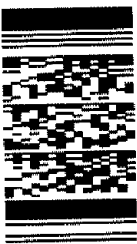
Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 688 9878

COC Number: 20-1009752

Page 1 of 1

Environmental Division  
Waterloo  
Work Order Reference  
WT2221344



Telephone: +1 519 888 6910

Report To: Contact and company name below will appear on the final report  
 Company: Omni-McLennan Inc.  
 Contact: Daniel Elliot  
 Phone: 613-653-1930  
 Street: 1955 Woodward Drive, Unit 200  
 City/Province: Ottawa, ON  
 Postal Code: K2Z 0P9  
 Invoice To: Same as Report To  YES  NO  
 Copy of Invoice with Report:  YES  NO  
 Company:  YES  NO  
 Project Information  
 ALS Account # / Quote #: Q40026  
 Job #: 0006-0103  
 PO / A/E: A.M.  
 LSD:   
 ALS Lab Work Order #: WT2221344  
 Sample Identification and/or Coordinates (This description will appear on the report)  
 ALS Sample # (ALS use only) | Date | Time | Sample Type | ALS Contact |

ALS Sample # (ALS use only)	Date	Time	Sample Type	ALS Contact
22-36	0-0-95			
22-20	2-4			
22-22	2.5-3			
22-23	1-2			
DADP4				
22-33	0-0.5			
22-38	0-0.45			
22-38	0.75-2			

Reports / Recipients: Selected Report Format:  PDF  EXCEL  ESD (DIGITAL) Merge Q/Q/Q/Q Reports with COA  YES  NO  N/A  
 Compare Results to Criteria on Report - provide details below if box checked  
 Selected Distribution:  EMAIL  MAIL  FAX  
 Email 1 or Fax: daniel@omni-mcclennan.com  
 Email 2: antonia@omni-mcclennan.com  
 Email 3: kristina@omni-mcclennan.com  
 Invoice Recipients:  EMAIL  MAIL  FAX  
 Selected Invoice Distribution:  EMAIL  MAIL  FAX  
 Email 1 or Fax: invoicing@omni-mcclennan.com  
 Email 2:   
 Oil and Gas Required Fields (client use)  
 A/E/Cost Center: PO#  
 Meter/Inlet Code: Rolling Code:  
 Requisitioner: Location:  
 Turnaround Time (TAT) Requested:  Routine (R) if received by 3pm M-F - no surcharges apply  
 4 day (4d) if received by 3pm M-F - 20% rush surcharge minimum  
 3 day (3d) if received by 3pm M-F - 25% rush surcharge minimum  
 2 day (2d) if received by 3pm M-F - 50% rush surcharge minimum  
 1 day (E) if received by 3pm M-F - 100% rush surcharge minimum  
 Same day (E) if received by 12pm M-F - 200% rush surcharge and non-may apply (rush requests on weekends, statutory holidays and non-regular hours)  
 Data and Time Required for all ESDs (ALS):  
 For all tests with non TATs requested, please indicate Filtered (F), Preserved (P) or Filled in Analysis R#

Drinking Water (DW) Samples (client use)  
 Are samples taken from a Regulated DW System?  YES  NO  
 Are samples for human consumption/ use?  YES  NO  
 Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)  
 O.Reg. 153/04 Table 7 For RSC

SHIPPING RELEASE (client use)  
 Released by: Antoinia Cass Date: 8-Nov-22 Time: 17:30  
 Recd by: [Signature] Date: 11/10/22 Time: 9:40  
 INITIAL SHIPMENT RECEPTION (ALS use only)  
 WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NUMBER OF CONTAINERS  

ALS Sample #	PHC	VOC	Metals	Cr 6	Hg	RSC Grain Size	PAH	BTEX	PCB
22-36	X	X	X	X	X	X	X	X	X
22-20	X	X	X	X	X	X	X	X	X
22-22	X	X	X	X	X	X	X	X	X
22-23	X	X	X	X	X	X	X	X	X
DADP4	X	X	X	X	X	X	X	X	X
22-33	X	X	X	X	X	X	X	X	X
22-38	X	X	X	X	X	X	X	X	X
22-38	X	X	X	X	X	X	X	X	X

 SAMPLE RECEIPT DETAILS (ALS use only)  
 Coding Method:  NONE  ICE  ICE PACKS  FOZIN  COOLING INITIATED  
 Submission Comments Identified on Sample Receipt Notification:  YES  NO  
 Cooler Custody Seals Intact:  YES  N/A Sample Custody Seals Intact:  YES  N/A  
 INITIAL COOLER TEMPERATURES °C: [ ] FINAL COOLER TEMPERATURES °C: [ ]  
 FINAL SHIPMENT RECEPTION (ALS use only)  
 Received by: [Signature] Date: 11/10/22 Time: 9:10

VS-082/083, SOL-564

## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

<p><b>Work Order</b> : <b>WT2221612</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 17-802170</p> <p><b>Sampler</b> : Antonia Cass</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 8</p> <p><b>No. of samples analysed</b> : 8</p>	<p><b>Page</b> : 1 of 24</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 11-Nov-2022 07:55</p> <p><b>Date Analysis Commenced</b> : 15-Nov-2022</p> <p><b>Issue Date</b> : 24-Nov-2022 18:42</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Inorganics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Metals, Waterloo, Ontario
Jeremy Gingras	Team Leader - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Organics, Waterloo, Ontario
Joseph Scharbach		Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Organics, Waterloo, Ontario



## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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. Guidelines 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.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	no units
%	percent
mg/kg	milligrams per kilogram
mg/L	milligrams per litre
pH units	pH units

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .

## Qualifiers

<i>Qualifier</i>	<i>Description</i>
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
RRV	Reported result verified by repeat analysis.



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04	ON153/04	ON153/04		
				22-06B 0.75-1.75	T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F		
Sub-Matrix: Soil (Matrix: Soil/Solid)				Sampling date/time						
				09-Nov-2022 00:00						
				WT2221612-001						
<b>Physical Tests</b>										
moisture	E144	0.25	%	18.2	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
benzene	E611A	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
ethylbenzene	E611A	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
toluene	E611A	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
xylene, m+p-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611A	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611A	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L	-	-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	73.0	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	105	--	--	--	--	--	--
bromofluorobenzene, 4-	E611A	0.10	%	101	--	--	--	--	--	--
difluorobenzene, 1,4-	E611A	0.10	%	110	--	--	--	--	--	--
<b>Polychlorinated Biphenyls</b>										
Aroclor 1016	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1221	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1232	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1242	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1248	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1254	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1260	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1262	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2221612-001 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polychlorinated Biphenyls - Continued</b>										
Aroclor 1268	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
polychlorinated biphenyls [PCBs], total	E687	0.030	mg/kg	<0.030	<b>1.1 mg/kg</b>	<b>1.1 mg/kg</b>	<b>0.35 mg/kg</b>	<b>0.35 mg/kg</b>	--	--
decachlorobiphenyl	E687	0.1	%	94.0	--	--	--	--	--	--
tetrachloro-m-xylene	E687	0.1	%	77.9	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T7-ICC-C	153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
T7-ICC-F	153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
T7-RPI-C	153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
T7-RPI-F	153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04	ON153/04	ON153/04		
				22-06B 2.5-3.25	T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F		
Sub-Matrix: Soil (Matrix: Soil/Solid)				Sampling date/time						
				09-Nov-2022 00:00						
				WT2221612-002						
<b>Physical Tests</b>										
moisture	E144	0.25	%	17.3	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2221612-002 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	62.1	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	109	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	0.10	%	104	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	115	--	--	--	--	--	--
<b>Polychlorinated Biphenyls</b>										
Aroclor 1016	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1221	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1232	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1242	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1248	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1254	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1260	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2221612-002 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polychlorinated Biphenyls - Continued</b>										
Aroclor 1262	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1268	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
polychlorinated biphenyls [PCBs], total	E687	0.030	mg/kg	<0.030	<b>1.1 mg/kg</b>	<b>1.1 mg/kg</b>	<b>0.35 mg/kg</b>	<b>0.35 mg/kg</b>	--	--
decachlorobiphenyl	E687	0.1	%	95.3	--	--	--	--	--	--
tetrachloro-m-xylene	E687	0.1	%	79.7	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- |          |  |
|----------|--|
| ON153/04 | Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011) |
| T7-ICC-C | 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)                 |
| T7-ICC-F | 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)                   |
| T7-RPI-C | 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)                 |
| T7-RPI-F | 153 T7-Soil-Res/Park/Inst. Property Use (Fine)                   |



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	DUP5					
				Sampling date/time	09-Nov-2022 00:00	WT2221612-003	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F
<b>Physical Tests</b>										
moisture	E144	0.25	%	18.0	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
benzene	E611A	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
ethylbenzene	E611A	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
toluene	E611A	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
xylene, m+p-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611A	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611A	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611A	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L	-	-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	75.6	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	106	--	--	--	--	--	--
bromofluorobenzene, 4-	E611A	0.10	%	98.8	--	--	--	--	--	--
difluorobenzene, 1,4-	E611A	0.10	%	106	--	--	--	--	--	--
<b>Polychlorinated Biphenyls</b>										
Aroclor 1016	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1221	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1232	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1242	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1248	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1254	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1260	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
Aroclor 1262	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2221612-003 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polychlorinated Biphenyls - Continued</b>										
Aroclor 1268	E687	0.010	mg/kg	<0.010	--	--	--	--	--	--
polychlorinated biphenyls [PCBs], total	E687	0.030	mg/kg	<0.030	<b>1.1 mg/kg</b>	<b>1.1 mg/kg</b>	<b>0.35 mg/kg</b>	<b>0.35 mg/kg</b>	--	--
decachlorobiphenyl	E687	0.1	%	92.5	--	--	--	--	--	--
tetrachloro-m-xylene	E687	0.1	%	77.1	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)





## Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)		Client sample ID		22-01C 0.25-2		Sampling date/time		09-Nov-2022 00:00		WT2221612-004		ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
Analyte	Method	LOR	Unit														
<b>Physical Tests</b>																	
moisture	E144	0.25	%	5.11								--	--	--	--	--	--
<b>Metals</b>																	
antimony	E440	0.10	mg/kg	0.20		40 mg/kg		50 mg/kg		7.5 mg/kg		7.5 mg/kg		--	--	--	--
arsenic	E440	0.10	mg/kg	1.60		18 mg/kg		18 mg/kg		18 mg/kg		18 mg/kg		--	--	--	--
barium	E440	0.50	mg/kg	200		670 mg/kg		670 mg/kg		390 mg/kg		390 mg/kg		--	--	--	--
beryllium	E440	0.10	mg/kg	0.27		8 mg/kg		10 mg/kg		4 mg/kg		5 mg/kg		--	--	--	--
boron, hot water soluble	E487	0.10	mg/kg	0.15		2 mg/kg		2 mg/kg		1.5 mg/kg		1.5 mg/kg		--	--	--	--
boron	E440	5.0	mg/kg	8.6		120 mg/kg		120 mg/kg		120 mg/kg		120 mg/kg		--	--	--	--
cadmium	E440	0.020	mg/kg	0.151		1.9 mg/kg		1.9 mg/kg		1.2 mg/kg		1.2 mg/kg		--	--	--	--
chromium	E440	0.50	mg/kg	14.6		160 mg/kg		160 mg/kg		160 mg/kg		160 mg/kg		--	--	--	--
cobalt	E440	0.10	mg/kg	4.55		80 mg/kg		100 mg/kg		22 mg/kg		22 mg/kg		--	--	--	--
copper	E440	0.50	mg/kg	11.5		230 mg/kg		300 mg/kg		140 mg/kg		180 mg/kg		--	--	--	--
lead	E440	0.50	mg/kg	11.6		120 mg/kg		120 mg/kg		120 mg/kg		120 mg/kg		--	--	--	--
mercury	E510	0.0050	mg/kg	0.0119		3.9 mg/kg		20 mg/kg		0.27 mg/kg		1.8 mg/kg		--	--	--	--
molybdenum	E440	0.10	mg/kg	1.06		40 mg/kg		40 mg/kg		6.9 mg/kg		6.9 mg/kg		--	--	--	--
nickel	E440	0.50	mg/kg	10.1		270 mg/kg		340 mg/kg		100 mg/kg		130 mg/kg		--	--	--	--
selenium	E440	0.20	mg/kg	<0.20		5.5 mg/kg		5.5 mg/kg		2.4 mg/kg		2.4 mg/kg		--	--	--	--
silver	E440	0.10	mg/kg	<0.10		40 mg/kg		50 mg/kg		20 mg/kg		25 mg/kg		--	--	--	--
thallium	E440	0.050	mg/kg	0.176		3.3 mg/kg		3.3 mg/kg		1 mg/kg		1 mg/kg		--	--	--	--
uranium	E440	0.050	mg/kg	0.440		33 mg/kg		33 mg/kg		23 mg/kg		23 mg/kg		--	--	--	--
vanadium	E440	0.20	mg/kg	19.5		86 mg/kg		86 mg/kg		86 mg/kg		86 mg/kg		--	--	--	--
zinc	E440	2.0	mg/kg	21.7		340 mg/kg		340 mg/kg		340 mg/kg		340 mg/kg		--	--	--	--
<b>Speciated Metals</b>																	
chromium, hexavalent [Cr VI]	E532	0.10	mg/kg	<0.10		8 mg/kg		10 mg/kg		8 mg/kg		10 mg/kg		--	--	--	--
<b>Volatile Organic Compounds</b>																	
benzene	E611A	0.0050	mg/kg	<0.0050		0.32 mg/kg		0.4 mg/kg		0.21 mg/kg		0.17 mg/kg		--	--	--	--
ethylbenzene	E611A	0.015	mg/kg	<0.015		9.5 mg/kg		19 mg/kg		2 mg/kg		15 mg/kg		--	--	--	--
toluene	E611A	0.050	mg/kg	<0.050		68 mg/kg		78 mg/kg		2.3 mg/kg		6 mg/kg		--	--	--	--
xylene, m+p-	E611A	0.030	mg/kg	<0.030		--		--		--		--		--	--	--	--
xylene, o-	E611A	0.030	mg/kg	<0.030		--		--		--		--		--	--	--	--
xylenes, total	E611A	0.050	mg/kg	<0.050		26 mg/kg		30 mg/kg		3.1 mg/kg		25 mg/kg		--	--	--	--



Analyte	Method	LOR	Unit	WT2221612-004 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
BTEX, total	E611A	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	317	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	714	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F4G-sg	E601.F4G-L	250	mg/kg	2420	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2-naphthalene	EC600	25	mg/kg	<25	--	--	--	--	--	--
F3-PAH	EC600	50	mg/kg	317	--	--	--	--	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	1030	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L		-	NO	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	73.0	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	96.8	--	--	--	--	--	--
bromofluorobenzene, 4-	E611A	0.10	%	101	--	--	--	--	--	--
difluorobenzene, 1,4-	E611A	0.10	%	110	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	7.9 mg/kg	58 mg/kg	--	--
acenaphthylene	E641A	0.050	mg/kg	<0.050	0.15 mg/kg	0.17 mg/kg	0.15 mg/kg	0.17 mg/kg	--	--
anthracene	E641A	0.050	mg/kg	<0.050	0.67 mg/kg	0.74 mg/kg	0.67 mg/kg	0.74 mg/kg	--	--
benz(a)anthracene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.5 mg/kg	0.63 mg/kg	--	--
benzo(a)pyrene	E641A	0.050	mg/kg	<0.050	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	--	--
benzo(b+j)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
benzo(g,h,i)perylene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	6.6 mg/kg	7.8 mg/kg	--	--
benzo(k)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
chrysene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	7 mg/kg	7.8 mg/kg	--	--
dibenz(a,h)anthracene	E641A	0.050	mg/kg	<0.050	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	--	--
fluoranthene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	0.69 mg/kg	0.69 mg/kg	--	--
fluorene	E641A	0.050	mg/kg	<0.050	62 mg/kg	69 mg/kg	62 mg/kg	69 mg/kg	--	--
indeno(1,2,3-c,d)pyrene	E641A	0.050	mg/kg	<0.050	0.76 mg/kg	0.95 mg/kg	0.38 mg/kg	0.48 mg/kg	--	--
methylnaphthalene, 1+2-	E641A	0.050	mg/kg	<0.050	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 1-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 2-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
naphthalene	E641A	0.010	mg/kg	<0.010	9.6 mg/kg	28 mg/kg	0.6 mg/kg	0.75 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2221612-004 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
phenanthrene	E641A	0.050	mg/kg	<0.050	12 mg/kg	16 mg/kg	6.2 mg/kg	7.8 mg/kg	--	--
pyrene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	78 mg/kg	78 mg/kg	--	--
acridine-d9	E641A	0.1	%	91.4	--	--	--	--	--	--
chrysene-d12	E641A	0.1	%	69.8	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	88.0	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	91.8	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
22-01C 0.25-2	Soil/Solid	F3 (C16-C34)		ON153/04	T7-RPI-C	317 mg/kg	300 mg/kg

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Comm. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Comm. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04	ON153/04	ON153/04		
				Sampling date/time	T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F		
				22-01C 2.5-3						
Sub-Matrix: Soil (Matrix: Soil/Solid)				09-Nov-2022 00:00						
				WT2221612-005						
<b>Physical Tests</b>										
moisture	E144	0.25	%	5.28	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	0.079	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2221612-005 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	0.011	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	0.10	%	102	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	114	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- |          |  |
|----------|--|
| ON153/04 | Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011) |
| T7-ICC-C | 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)                 |
| T7-ICC-F | 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)                   |
| T7-RPI-C | 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)                 |
| T7-RPI-F | 153 T7-Soil-Res/Park/Inst. Property Use (Fine)                   |



## Analytical Results

Sub-Matrix: Soil (Matrix: Soil/Solid)		Client sample ID	22-13B 0-2							
		Sampling date/time	10-Nov-2022 00:00							
Analyte	Method	LOR	Unit	WT2221612-006	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Physical Tests</b>										
moisture	E144	0.25	%	3.91	--	--	--	--	--	--
pH (1:2 soil:CaCl2-aq)	E108A	0.10	pH units	8.14	--	--	--	--	--	--
<b>Metals</b>										
antimony	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	7.5 mg/kg	7.5 mg/kg	--	--
arsenic	E440	0.10	mg/kg	1.16	18 mg/kg	18 mg/kg	18 mg/kg	18 mg/kg	--	--
barium	E440	0.50	mg/kg	66.5	670 mg/kg	670 mg/kg	390 mg/kg	390 mg/kg	--	--
beryllium	E440	0.10	mg/kg	0.18	8 mg/kg	10 mg/kg	4 mg/kg	5 mg/kg	--	--
boron, hot water soluble	E487	0.10	mg/kg	0.23	2 mg/kg	2 mg/kg	1.5 mg/kg	1.5 mg/kg	--	--
boron	E440	5.0	mg/kg	8.7	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--
cadmium	E440	0.020	mg/kg	0.030	1.9 mg/kg	1.9 mg/kg	1.2 mg/kg	1.2 mg/kg	--	--
calcium, soluble ion content	E484	0.50	mg/L	12.2	--	--	--	--	--	--
chromium	E440	0.50	mg/kg	9.91	160 mg/kg	160 mg/kg	160 mg/kg	160 mg/kg	--	--
cobalt	E440	0.10	mg/kg	2.77	80 mg/kg	100 mg/kg	22 mg/kg	22 mg/kg	--	--
copper	E440	0.50	mg/kg	9.25	230 mg/kg	300 mg/kg	140 mg/kg	180 mg/kg	--	--
lead	E440	0.50	mg/kg	7.69	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--
magnesium, soluble ion content	E484	0.50	mg/L	1.13	--	--	--	--	--	--
mercury	E510	0.0050	mg/kg	0.0073	3.9 mg/kg	20 mg/kg	0.27 mg/kg	1.8 mg/kg	--	--
molybdenum	E440	0.10	mg/kg	0.63	40 mg/kg	40 mg/kg	6.9 mg/kg	6.9 mg/kg	--	--
nickel	E440	0.50	mg/kg	7.69	270 mg/kg	340 mg/kg	100 mg/kg	130 mg/kg	--	--
selenium	E440	0.20	mg/kg	<0.20	5.5 mg/kg	5.5 mg/kg	2.4 mg/kg	2.4 mg/kg	--	--
silver	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	20 mg/kg	25 mg/kg	--	--
sodium, soluble ion content	E484	0.50	mg/L	111	--	--	--	--	--	--
thallium	E440	0.050	mg/kg	0.099	3.3 mg/kg	3.3 mg/kg	1 mg/kg	1 mg/kg	--	--
uranium	E440	0.050	mg/kg	0.293	33 mg/kg	33 mg/kg	23 mg/kg	23 mg/kg	--	--
vanadium	E440	0.20	mg/kg	16.4	86 mg/kg	86 mg/kg	86 mg/kg	86 mg/kg	--	--
zinc	E440	2.0	mg/kg	19.6	340 mg/kg	340 mg/kg	340 mg/kg	340 mg/kg	--	--
sodium adsorption ratio [SAR]	E484	0.10	-	8.15	12 -	12 -	5 -	5 -	--	--
<b>Speciated Metals</b>										
chromium, hexavalent [Cr VI]	E532	0.10	mg/kg	<0.10	8 mg/kg	10 mg/kg	8 mg/kg	10 mg/kg	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2221612-006 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2221612-006 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	15	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F2-naphthalene	EC600	25	mg/kg	<25	--	--	--	--	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	1230	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F3-PAH	EC600	50	mg/kg	1230	--	--	--	--	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	2450	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F4G-sg	E601.F4G-L	250	mg/kg	7130	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	3700	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L		-	NO	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	77.3	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	89.0	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	0.10	%	103	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	116	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	7.9 mg/kg	58 mg/kg	--	--
acenaphthylene	E641A	0.050	mg/kg	<0.050	0.15 mg/kg	0.17 mg/kg	0.15 mg/kg	0.17 mg/kg	--	--
anthracene	E641A	0.050	mg/kg	<0.050	0.67 mg/kg	0.74 mg/kg	0.67 mg/kg	0.74 mg/kg	--	--
benz(a)anthracene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.5 mg/kg	0.63 mg/kg	--	--
benzo(a)pyrene	E641A	0.050	mg/kg	<0.050	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	--	--
benzo(b+j)fluoranthene	E641A	0.050	mg/kg	0.056	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
benzo(g,h,i)perylene	E641A	0.050	mg/kg	0.080	9.6 mg/kg	9.6 mg/kg	6.6 mg/kg	7.8 mg/kg	--	--
benzo(k)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
chrysene	E641A	0.050	mg/kg	<0.103	9.6 mg/kg	9.6 mg/kg	7 mg/kg	7.8 mg/kg	--	--
dibenz(a,h)anthracene	E641A	0.050	mg/kg	<0.050	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	--	--
fluoranthene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	0.69 mg/kg	0.69 mg/kg	--	--





Analyte	Method	LOR	Unit	WT2221612-006 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
fluorene	E641A	0.050	mg/kg	<0.050	62 mg/kg	69 mg/kg	62 mg/kg	69 mg/kg	--	--
indeno(1,2,3-c,d)pyrene	E641A	0.050	mg/kg	<0.050	0.76 mg/kg	0.95 mg/kg	0.38 mg/kg	0.48 mg/kg	--	--
methylnaphthalene, 1+2-	E641A	0.050	mg/kg	<0.050	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 1-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 2-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
naphthalene	E641A	0.010	mg/kg	<0.010	9.6 mg/kg	28 mg/kg	0.6 mg/kg	0.75 mg/kg	--	--
phenanthrene	E641A	0.050	mg/kg	<0.050	12 mg/kg	16 mg/kg	6.2 mg/kg	7.8 mg/kg	--	--
pyrene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	78 mg/kg	78 mg/kg	--	--
acridine-d9	E641A	0.1	%	103	--	--	--	--	--	--
chrysene-d12	E641A	0.1	%	92.2	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	86.6	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	97.3	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
22-13B 0-2	Soil/Solid	F4G-sg		ON153/04	T7-ICC-C	7130 mg/kg	3,300 mg/kg
	Soil/Solid	F4G-sg		ON153/04	T7-ICC-F	7130 mg/kg	6,600 mg/kg
	Soil/Solid	sodium adsorption ratio [SAR]		ON153/04	T7-RPI-C	8.15 -	5 -
	Soil/Solid	F3 (C16-C34)		ON153/04	T7-RPI-C	1230 mg/kg	300 mg/kg
	Soil/Solid	F4G-sg		ON153/04	T7-RPI-C	7130 mg/kg	2,800 mg/kg
	Soil/Solid	sodium adsorption ratio [SAR]		ON153/04	T7-RPI-F	8.15 -	5 -
	Soil/Solid	F4G-sg		ON153/04	T7-RPI-F	7130 mg/kg	5,600 mg/kg

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID						
				DUP6						
Sub-Matrix: Soil (Matrix: Soil/Solid)				Sampling date/time	10-Nov-2022 00:00					
				WT2221612-007	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Physical Tests</b>										
moisture	E144	0.25	%	4.45	--	--	--	--	--	--
pH (1:2 soil:CaCl2-aq)	E108A	0.10	pH units	8.13	--	--	--	--	--	--
<b>Metals</b>										
antimony	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	7.5 mg/kg	7.5 mg/kg	--	--
arsenic	E440	0.10	mg/kg	1.10	18 mg/kg	18 mg/kg	18 mg/kg	18 mg/kg	--	--
barium	E440	0.50	mg/kg	67.7	670 mg/kg	670 mg/kg	390 mg/kg	390 mg/kg	--	--
beryllium	E440	0.10	mg/kg	0.16	8 mg/kg	10 mg/kg	4 mg/kg	5 mg/kg	--	--
boron, hot water soluble	E487	0.10	mg/kg	0.27	2 mg/kg	2 mg/kg	1.5 mg/kg	1.5 mg/kg	--	--
boron	E440	5.0	mg/kg	6.6	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--
cadmium	E440	0.020	mg/kg	0.030	1.9 mg/kg	1.9 mg/kg	1.2 mg/kg	1.2 mg/kg	--	--
calcium, soluble ion content	E484	0.50	mg/L	8.14	--	--	--	--	--	--
chromium	E440	0.50	mg/kg	7.30	160 mg/kg	160 mg/kg	160 mg/kg	160 mg/kg	--	--
cobalt	E440	0.10	mg/kg	2.52	80 mg/kg	100 mg/kg	22 mg/kg	22 mg/kg	--	--
copper	E440	0.50	mg/kg	6.13	230 mg/kg	300 mg/kg	140 mg/kg	180 mg/kg	--	--
lead	E440	0.50	mg/kg	7.60	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--
magnesium, soluble ion content	E484	0.50	mg/L	0.77	--	--	--	--	--	--
mercury	E510	0.0050	mg/kg	0.0074	3.9 mg/kg	20 mg/kg	0.27 mg/kg	1.8 mg/kg	--	--
molybdenum	E440	0.10	mg/kg	0.56	40 mg/kg	40 mg/kg	6.9 mg/kg	6.9 mg/kg	--	--
nickel	E440	0.50	mg/kg	6.88	270 mg/kg	340 mg/kg	100 mg/kg	130 mg/kg	--	--
selenium	E440	0.20	mg/kg	<0.20	5.5 mg/kg	5.5 mg/kg	2.4 mg/kg	2.4 mg/kg	--	--
silver	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	20 mg/kg	25 mg/kg	--	--
sodium, soluble ion content	E484	0.50	mg/L	105	--	--	--	--	--	--
thallium	E440	0.050	mg/kg	0.096	3.3 mg/kg	3.3 mg/kg	1 mg/kg	1 mg/kg	--	--
uranium	E440	0.050	mg/kg	0.250	33 mg/kg	33 mg/kg	23 mg/kg	23 mg/kg	--	--
vanadium	E440	0.20	mg/kg	14.7	86 mg/kg	86 mg/kg	86 mg/kg	86 mg/kg	--	--
zinc	E440	2.0	mg/kg	16.7	340 mg/kg	340 mg/kg	340 mg/kg	340 mg/kg	--	--
sodium adsorption ratio [SAR]	E484	0.10	-	9.43	12 -	12 -	5 -	5 -	--	--
<b>Speciated Metals</b>										
chromium, hexavalent [Cr VI]	E532	0.10	mg/kg	<0.10	8 mg/kg	10 mg/kg	8 mg/kg	10 mg/kg	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2221612-007 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	0.350	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2221612-007 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	0.062	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	0.062	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	19.5	RRV	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<12	DLM	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--
F2-naphthalene	EC600	25	mg/kg	<25		--	--	--	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	1090		1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--
F3-PAH	EC600	50	mg/kg	1090		--	--	--	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	2360		3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--
F4G-sg	E601.F4G-L	250	mg/kg	7740		3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--
F1-BTEX	EC580	5.0	mg/kg	19.5		55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	3470		--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L		-	NO		--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	88.1		--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	99.8		--	--	--	--	--
bromofluorobenzene, 4-	E611D	0.10	%	104		--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	117		--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.050	mg/kg	<0.050		96 mg/kg	96 mg/kg	7.9 mg/kg	58 mg/kg	--
acenaphthylene	E641A	0.050	mg/kg	<0.050		0.15 mg/kg	0.17 mg/kg	0.15 mg/kg	0.17 mg/kg	--
anthracene	E641A	0.050	mg/kg	<0.050		0.67 mg/kg	0.74 mg/kg	0.67 mg/kg	0.74 mg/kg	--
benz(a)anthracene	E641A	0.050	mg/kg	<0.050		0.96 mg/kg	0.96 mg/kg	0.5 mg/kg	0.63 mg/kg	--
benzo(a)pyrene	E641A	0.050	mg/kg	<0.050		0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	--
benzo(b+j)fluoranthene	E641A	0.050	mg/kg	0.053		0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--
benzo(g,h,i)perylene	E641A	0.050	mg/kg	0.057		9.6 mg/kg	9.6 mg/kg	6.6 mg/kg	7.8 mg/kg	--
benzo(k)fluoranthene	E641A	0.050	mg/kg	<0.050		0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--
chrysene	E641A	0.050	mg/kg	<0.050		9.6 mg/kg	9.6 mg/kg	7 mg/kg	7.8 mg/kg	--
dibenz(a,h)anthracene	E641A	0.050	mg/kg	<0.050		0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	--
fluoranthene	E641A	0.050	mg/kg	<0.050		9.6 mg/kg	9.6 mg/kg	0.69 mg/kg	0.69 mg/kg	--



Analyte	Method	LOR	Unit	WT2221612-007 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
fluorene	E641A	0.050	mg/kg	<0.050	62 mg/kg	69 mg/kg	62 mg/kg	69 mg/kg	--	--
indeno(1,2,3-c,d)pyrene	E641A	0.050	mg/kg	<0.050	0.76 mg/kg	0.95 mg/kg	0.38 mg/kg	0.48 mg/kg	--	--
methylnaphthalene, 1+2-	E641A	0.050	mg/kg	<0.050	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 1-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
methylnaphthalene, 2-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
naphthalene	E641A	0.010	mg/kg	<0.010	9.6 mg/kg	28 mg/kg	0.6 mg/kg	0.75 mg/kg	--	--
phenanthrene	E641A	0.050	mg/kg	<0.050	12 mg/kg	16 mg/kg	6.2 mg/kg	7.8 mg/kg	--	--
pyrene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	78 mg/kg	78 mg/kg	--	--
acridine-d9	E641A	0.1	%	99.0	--	--	--	--	--	--
chrysene-d12	E641A	0.1	%	97.4	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	76.3	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	91.5	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
DUP6	Soil/Solid	F4G-sg		ON153/04	T7-ICC-C	7740 mg/kg	3,300 mg/kg
	Soil/Solid	F4G-sg		ON153/04	T7-ICC-F	7740 mg/kg	6,600 mg/kg
	Soil/Solid	sodium adsorption ratio [SAR]		ON153/04	T7-RPI-C	9.43 -	5 -
	Soil/Solid	F3 (C16-C34)		ON153/04	T7-RPI-C	1090 mg/kg	300 mg/kg
	Soil/Solid	F4G-sg		ON153/04	T7-RPI-C	7740 mg/kg	2,800 mg/kg
	Soil/Solid	sodium adsorption ratio [SAR]		ON153/04	T7-RPI-F	9.43 -	5 -
	Soil/Solid	F4G-sg		ON153/04	T7-RPI-F	7740 mg/kg	5,600 mg/kg

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04	ON153/04	ON153/04		
				22-05C 0-1	T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F		
Sub-Matrix: Soil (Matrix: Soil/Solid)				Sampling date/time						
				10-Nov-2022 00:00						
				WT2221612-008						
<b>Physical Tests</b>										
moisture	E144	0.25	%	19.2	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2221612-008 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	0.10	%	98.1	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	110	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

## No Breaches Found

**Key:**

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T7-ICC-C	153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
T7-ICC-F	153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
T7-RPI-C	153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
T7-RPI-F	153 T7-Soil-Res/Park/Inst. Property Use (Fine)

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>WT2221612</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 17-802170</p> <p><b>Sampler</b> : Antonia Cass</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 8</p> <p><b>No. of samples analysed</b> : 8</p>	<p><b>Page</b> : 1 of 16</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 11-Nov-2022 07:55</p> <p><b>Issue Date</b> : 24-Nov-2022 18:41</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

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### ***Workorder Comments***

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Matrix Spike outliers occur.
- Method Blank value outliers occur - please see following pages for full details.
- Duplicate outliers occur - please see following pages for full details.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.



***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



**Outliers : Quality Control Samples**

*Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes*

Matrix: **Soil/Solid**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Method Blank (MB) Values</b>								
Hydrocarbons	QC-MRG2-7447490 01	----	F2 (C10-C16)	----	E601.SG-L	23 mg/kg <sup>MB-LOR</sup>	10 mg/kg	Blank result exceeds permitted value

**Result Qualifiers**

Qualifier	Description
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.

<b>Duplicate (DUP) RPDs</b>								
Metals	Anonymous	Anonymous	cadmium	7440-43-9	E440	40.6 % <sup>DUP-H</sup>	30%	Duplicate RPD does not meet the DQO for this test.
Metals	Anonymous	Anonymous	calcium, soluble ion content	7440-70-2	E484	38.0 % <sup>DUP-H</sup>	30%	Duplicate RPD does not meet the DQO for this test.
Metals	Anonymous	Anonymous	magnesium, soluble ion content	7439-95-4	E484	2.54 % <sup>DUP-H</sup>	Diff <2x LOR	Low Level DUP DQO exceeded (difference > 2 LOR).
Polycyclic Aromatic Hydrocarbons	Anonymous	Anonymous	anthracene	120-12-7	E641A	57.9 % <sup>DUP-H</sup>	50%	Duplicate RPD does not meet the DQO for this test.
Polycyclic Aromatic Hydrocarbons	Anonymous	Anonymous	benz(a)anthracene	56-55-3	E641A	57.4 % <sup>DUP-H</sup>	50%	Duplicate RPD does not meet the DQO for this test.
Polycyclic Aromatic Hydrocarbons	Anonymous	Anonymous	chrysene	218-01-9	E641A	51.7 % <sup>DUP-H</sup>	50%	Duplicate RPD does not meet the DQO for this test.
Polycyclic Aromatic Hydrocarbons	Anonymous	Anonymous	naphthalene	91-20-3	E641A	75.4 % <sup>DUP-H</sup>	50%	Duplicate RPD does not meet the DQO for this test.
Polycyclic Aromatic Hydrocarbons	Anonymous	Anonymous	phenanthrene	85-01-8	E641A	64.9 % <sup>DUP-H</sup>	50%	Duplicate RPD does not meet the DQO for this test.

**Result Qualifiers**

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.

<b>Laboratory Control Sample (LCS) Recoveries</b>								
Volatile Organic Compounds	QC-745670-002	----	dichlorodifluoromethane	75-71-8	E611D	48.9 % <sup>MES</sup>	50.0-140%	Recovery less than lower control limit
Hydrocarbons	QC-745669-002	----	F1 (C6-C10)	----	E581.F1	122 % <sup>LCS-H</sup>	80.0-120%	Recovery greater than upper control limit



Matrix: **Soil/Solid**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
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**Result Qualifiers**

<i>Qualifier</i>	<i>Description</i>
LCS-H	<i>Lab Control Sample recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.</i>
MES	<i>Data Quality Objective was marginally exceeded (by &lt; 10% absolute) for &lt; 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE &amp; CCME).</i>



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-01C 0.25-2	E581.F1	09-Nov-2022	16-Nov-2022	14 days	7 days	✓	16-Nov-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-06B 0.75-1.75	E581.F1	09-Nov-2022	16-Nov-2022	14 days	7 days	✓	16-Nov-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] DUP5	E581.F1	09-Nov-2022	16-Nov-2022	14 days	7 days	✓	16-Nov-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-13B 0-2	E581.F1	10-Nov-2022	16-Nov-2022	14 days	7 days	✓	18-Nov-2022	40 days	2 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] DUP6	E581.F1	10-Nov-2022	16-Nov-2022	14 days	7 days	✓	18-Nov-2022	40 days	2 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-06B 2.5-3.25	E581.F1	09-Nov-2022	16-Nov-2022	14 days	8 days	✓	18-Nov-2022	40 days	2 days	✓	
<b>Hydrocarbons : CCME PHCs - F4G by Gravimetry (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-13B 0-2	E601.F4G-L	10-Nov-2022	16-Nov-2022	14 days	7 days	✓	24-Nov-2022	40 days	8 days	✓	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHCs - F4G by Gravimetry (Low Level)</b>											
Glass soil jar/Teflon lined cap DUP6	E601.F4G-L	10-Nov-2022	17-Nov-2022	14 days	8 days	✔	17-Nov-2022	40 days	0 days	✔	
<b>Hydrocarbons : CCME PHCs - F4G by Gravimetry (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-01C 0.25-2	E601.F4G-L	09-Nov-2022	16-Nov-2022	14 days	8 days	✔	24-Nov-2022	40 days	8 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap DUP6	E601.SG-L	10-Nov-2022	16-Nov-2022	14 days	6 days	✔	17-Nov-2022	40 days	1 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-13B 0-2	E601.SG-L	10-Nov-2022	16-Nov-2022	14 days	6 days	✔	23-Nov-2022	40 days	8 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-01C 0.25-2	E601.SG-L	09-Nov-2022	16-Nov-2022	14 days	7 days	✔	23-Nov-2022	40 days	8 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-06B 0.75-1.75	E601.SG-L	09-Nov-2022	16-Nov-2022	14 days	7 days	✔	23-Nov-2022	40 days	8 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-06B 2.5-3.25	E601.SG-L	09-Nov-2022	16-Nov-2022	14 days	7 days	✔	23-Nov-2022	40 days	8 days	✔	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap DUP5	E601.SG-L	09-Nov-2022	16-Nov-2022	14 days	7 days	✔	23-Nov-2022	40 days	8 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-13B 0-2	E487	10-Nov-2022	24-Nov-2022	180 days	14 days	✔	24-Nov-2022	180 days	0 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap DUP6	E487	10-Nov-2022	24-Nov-2022	180 days	14 days	✔	24-Nov-2022	180 days	0 days	✔	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-01C 0.25-2	E487	09-Nov-2022	24-Nov-2022	180 days	15 days	✔	24-Nov-2022	180 days	0 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-13B 0-2	E510	10-Nov-2022	23-Nov-2022	----	----		24-Nov-2022	28 days	14 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap DUP6	E510	10-Nov-2022	23-Nov-2022	----	----		24-Nov-2022	28 days	14 days	✔	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-01C 0.25-2	E510	09-Nov-2022	23-Nov-2022	----	----		24-Nov-2022	28 days	15 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-13B 0-2	E440	10-Nov-2022	23-Nov-2022	----	----		24-Nov-2022	180 days	14 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap DUP6	E440	10-Nov-2022	23-Nov-2022	----	----		24-Nov-2022	180 days	14 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-01C 0.25-2	E440	09-Nov-2022	23-Nov-2022	----	----		24-Nov-2022	180 days	15 days	✔	
<b>Metals : Sodium Adsorption Ratio (SAR) - 1:2 Soil:Water (Dry)</b>											
Glass soil jar/Teflon lined cap 22-13B 0-2	E484	10-Nov-2022	24-Nov-2022	180 days	14 days	✔	24-Nov-2022	180 days	0 days	✔	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Metals : Sodium Adsorption Ratio (SAR) - 1:2 Soil:Water (Dry)</b>											
Glass soil jar/Teflon lined cap DUP6	E484	10-Nov-2022	24-Nov-2022	180 days	14 days	✔	24-Nov-2022	180 days	0 days	✔	
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-01C 0.25-2	E144	09-Nov-2022	----	----	----		15-Nov-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-01C 2.5-3	E144	09-Nov-2022	----	----	----		15-Nov-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-05C 0-1	E144	10-Nov-2022	----	----	----		15-Nov-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-06B 0.75-1.75	E144	09-Nov-2022	----	----	----		15-Nov-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-06B 2.5-3.25	E144	09-Nov-2022	----	----	----		15-Nov-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-13B 0-2	E144	10-Nov-2022	----	----	----		15-Nov-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap DUP5	E144	09-Nov-2022	----	----	----		15-Nov-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap DUP6	E144	10-Nov-2022	----	----	----		15-Nov-2022	----	----		



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Physical Tests : pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received</b>										
Glass soil jar/Teflon lined cap 22-13B 0-2	E108A	10-Nov-2022	15-Nov-2022	----	----		17-Nov-2022	30 days	8 days	✔
<b>Physical Tests : pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received</b>										
Glass soil jar/Teflon lined cap DUP6	E108A	10-Nov-2022	15-Nov-2022	----	----		17-Nov-2022	30 days	8 days	✔
<b>Polychlorinated Biphenyls : PCB Aroclors by GC-MS</b>										
Glass soil jar/Teflon lined cap 22-06B 0.75-1.75	E687	09-Nov-2022	16-Nov-2022	----	----		17-Nov-2022	40 days	1 days	✔
<b>Polychlorinated Biphenyls : PCB Aroclors by GC-MS</b>										
Glass soil jar/Teflon lined cap 22-06B 2.5-3.25	E687	09-Nov-2022	16-Nov-2022	----	----		17-Nov-2022	40 days	1 days	✔
<b>Polychlorinated Biphenyls : PCB Aroclors by GC-MS</b>										
Glass soil jar/Teflon lined cap DUP5	E687	09-Nov-2022	16-Nov-2022	----	----		17-Nov-2022	40 days	1 days	✔
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS</b>										
Glass soil jar/Teflon lined cap 22-13B 0-2	E641A	10-Nov-2022	16-Nov-2022	14 days	6 days	✔	18-Nov-2022	40 days	3 days	✔
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS</b>										
Glass soil jar/Teflon lined cap DUP6	E641A	10-Nov-2022	16-Nov-2022	14 days	6 days	✔	18-Nov-2022	40 days	3 days	✔
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS</b>										
Glass soil jar/Teflon lined cap 22-01C 0.25-2	E641A	09-Nov-2022	16-Nov-2022	14 days	7 days	✔	18-Nov-2022	40 days	3 days	✔
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>										
Glass soil jar/Teflon lined cap 22-13B 0-2	E532	10-Nov-2022	15-Nov-2022	30 days	6 days	✔	21-Nov-2022	7 days	6 days	✔





Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap DUP6	E532	10-Nov-2022	15-Nov-2022	30 days	6 days	✔	21-Nov-2022	7 days	6 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-01C 0.25-2	E532	09-Nov-2022	15-Nov-2022	30 days	7 days	✔	21-Nov-2022	7 days	6 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-01C 0.25-2	E611A	09-Nov-2022	16-Nov-2022	14 days	7 days	✔	16-Nov-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-06B 0.75-1.75	E611A	09-Nov-2022	16-Nov-2022	14 days	7 days	✔	16-Nov-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : BTEX by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] DUP5	E611A	09-Nov-2022	16-Nov-2022	14 days	7 days	✔	16-Nov-2022	40 days	0 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-05C 0-1	E611D	10-Nov-2022	16-Nov-2022	14 days	7 days	✔	18-Nov-2022	40 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-13B 0-2	E611D	10-Nov-2022	16-Nov-2022	14 days	7 days	✔	18-Nov-2022	40 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] DUP6	E611D	10-Nov-2022	16-Nov-2022	14 days	7 days	✔	18-Nov-2022	40 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-01C 2.5-3	E611D	09-Nov-2022	16-Nov-2022	14 days	8 days	✔	18-Nov-2022	40 days	2 days	✔	



Matrix: **Soil/Solid**

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>										
<b>Glass soil methanol vial [ON MECP]</b> 22-06B 2.5-3.25	E611D	09-Nov-2022	16-Nov-2022	14 days	8 days	✔	18-Nov-2022	40 days	2 days	✔

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: \* = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		Evaluation
			QC	Regular	Actual	Expected	
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Boron-Hot Water Extractable by ICPOES	E487	743815	1	6	16.6	5.0	✓
BTEX by Headspace GC-MS	E611A	744774	1	16	6.2	5.0	✓
CCME PHC - F1 by Headspace GC-FID	E581.F1	744775	2	38	5.2	5.0	✓
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	747466	1	6	16.6	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	744709	2	35	5.7	5.0	✓
Hexavalent Chromium (Cr VI) by IC	E532	744126	1	15	6.6	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	743810	1	10	10.0	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	743809	1	16	6.2	5.0	✓
Moisture Content by Gravimetry	E144	744093	1	20	5.0	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	744710	2	11	18.1	5.0	✓
PCB Aroclors by GC-MS	E687	744727	1	19	5.2	5.0	✓
pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received	E108A	743868	1	19	5.2	5.0	✓
Sodium Adsorption Ratio (SAR) - 1:2 Soil:Water (Dry)	E484	743812	1	5	20.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	745670	1	20	5.0	5.0	✓
<b>Laboratory Control Samples (LCS)</b>							
Boron-Hot Water Extractable by ICPOES	E487	743815	2	6	33.3	10.0	✓
BTEX by Headspace GC-MS	E611A	744774	1	16	6.2	5.0	✓
CCME PHC - F1 by Headspace GC-FID	E581.F1	744775	2	38	5.2	5.0	✓
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	747466	2	6	33.3	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	744709	2	35	5.7	5.0	✓
Hexavalent Chromium (Cr VI) by IC	E532	744126	2	15	13.3	10.0	✓
Mercury in Soil/Solid by CVAAS	E510	743810	2	10	20.0	10.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	743809	2	16	12.5	10.0	✓
Moisture Content by Gravimetry	E144	744093	1	20	5.0	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	744710	2	11	18.1	5.0	✓
PCB Aroclors by GC-MS	E687	744727	1	19	5.2	5.0	✓
pH by Meter (1:2 Soil:0.01M CaCl2 Extraction) - As Received	E108A	743868	1	19	5.2	5.0	✓
Sodium Adsorption Ratio (SAR) - 1:2 Soil:Water (Dry)	E484	743812	2	5	40.0	10.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	745670	1	20	5.0	5.0	✓
<b>Method Blanks (MB)</b>							
Boron-Hot Water Extractable by ICPOES	E487	743815	1	6	16.6	5.0	✓
BTEX by Headspace GC-MS	E611A	744774	1	16	6.2	5.0	✓
CCME PHC - F1 by Headspace GC-FID	E581.F1	744775	2	38	5.2	5.0	✓
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	747466	2	6	33.3	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	744709	2	35	5.7	5.0	✓



Matrix: **Soil/Solid**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Method Blanks (MB) - Continued</b>							
Hexavalent Chromium (Cr VI) by IC	E532	744126	1	15	6.6	5.0	✔
Mercury in Soil/Solid by CVAAS	E510	743810	1	10	10.0	5.0	✔
Metals in Soil/Solid by CRC ICPMS	E440	743809	1	16	6.2	5.0	✔
Moisture Content by Gravimetry	E144	744093	1	20	5.0	5.0	✔
PAHs by Hex:Ace GC-MS	E641A	744710	2	11	18.1	5.0	✔
PCB Aroclors by GC-MS	E687	744727	1	19	5.2	5.0	✔
Sodium Adsorption Ratio (SAR) - 1:2 Soil:Water (Dry)	E484	743812	1	5	20.0	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	745670	1	20	5.0	5.0	✔
<b>Matrix Spikes (MS)</b>							
BTEX by Headspace GC-MS	E611A	744774	1	16	6.2	5.0	✔
CCME PHC - F1 by Headspace GC-FID	E581.F1	744775	2	38	5.2	5.0	✔
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	747466	1	6	16.6	5.0	✔
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	744709	2	35	5.7	5.0	✔
PAHs by Hex:Ace GC-MS	E641A	744710	2	11	18.1	5.0	✔
PCB Aroclors by GC-MS	E687	744727	1	19	5.2	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	745670	1	20	5.0	5.0	✔



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
pH by Meter (1:2 Soil:0.01M CaCl <sub>2</sub> Extraction) - As Received	E108A  Waterloo - Environmental	Soil/Solid	MOEE E3137A	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C) and is carried out in accordance with procedures described in the Analytical Protocol (prescriptive method). A minimum 10g portion of the sample, as received, is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil by centrifuging, settling, or decanting and then analyzed using a pH meter and electrode.
Moisture Content by Gravimetry	E144  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Metals in Soil/Solid by CRC ICPMS	E440  Waterloo - Environmental	Soil/Solid	EPA 6020B (mod)	This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 2 mm sieve, and digested with HNO <sub>3</sub> and HCl.  Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines.  Analysis is by Collision/Reaction Cell ICPMS.
Sodium Adsorption Ratio (SAR) - 1:2 Soil:Water (Dry)	E484  Waterloo - Environmental	Soil/Solid	SW846 6010C	A dried, disaggregated solid sample is extracted with deionized water, the aqueous extract is separated from the solid, acidified and then analyzed using a ICP/OES. The concentrations of Na, Ca and Mg are reported as per CALA requirements for calculated parameters. These individual parameters are not for comparison to any guideline.
Boron-Hot Water Extractable by ICPOES	E487  Waterloo - Environmental	Soil/Solid	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).
Mercury in Soil/Solid by CVAAS	E510  Waterloo - Environmental	Soil/Solid	EPA 200.2/1631 Appendix (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO <sub>3</sub> and HCl, followed by CVAAS analysis.
Hexavalent Chromium (Cr VI) by IC	E532  Waterloo - Environmental	Soil/Solid	APHA 3500-CR C	Instrumental analysis is performed by ion chromatography with UV detection.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHC - F1 by Headspace GC-FID	E581.F1  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	A portion of the silica gel treated sample extract is filtered and dried at 105°C and the mass of the residual gravimetric heavy hydrocarbons (F4G) is determined gravimetrically.
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4).
BTEX by Headspace GC-MS	E611A  Waterloo - Environmental	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D  Waterloo - Environmental	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs by Hex: Ace GC-MS	E641A  Waterloo - Environmental	Soil/Solid	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are extracted with hexane/acetone and analyzed by GC-MS. If reported, IACR (index of additive cancer risk, unitless) and B(a)P toxic potency equivalent (in soil concentration units) are calculated as per CCME PAH Soil Quality Guidelines fact sheet (2010) or ABT1.
PCB Aroclors by GC-MS	E687  Waterloo - Environmental	Soil/Solid	EPA 8270E (mod)	PCB Aroclors are analyzed by GC-MS
F1-BTEX	EC580  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.
F2 to F3 minus PAH	EC600  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	F2-PAH = CCME Fraction 2 (C10-C16) minus Naphthalene F3-PAH = CCME Fraction 3 (C16-C34) minus select Polycyclic Aromatic Hydrocarbons (PAH) as per CCME Soil Tier 1

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
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Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Leach 1:2 Soil:Water for pH/EC	EP108 Waterloo - Environmental	Soil/Solid	BC WLAP METHOD: PH, ELECTROMETRIC, SOIL	The procedure involves mixing the dried (at <60°C) and sieved (No. 10 / 2mm) sample with deionized/distilled water at a 1:2 ratio of sediment to water.
Leach 1:2 Soil : 0.01CaCl2 - As Received for pH	EP108A Waterloo - Environmental	Soil/Solid	MOEE E3137A	A minimum 10g portion of the sample, as received, is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil by centrifuging, settling or decanting and then analyzed using a pH meter and electrode.
Digestion for Metals and Mercury	EP440 Waterloo - Environmental	Soil/Solid	EPA 200.2 (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO3 and HCl. This method is intended to liberate metals that may be environmentally available.
Boron-Hot Water Extractable	EP487 Waterloo - Environmental	Soil/Solid	HW EXTR, EPA 6010B	A dried solid sample is extracted with weak 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)
Preparation of Hexavalent Chromium (Cr VI) for IC	EP532 Waterloo - Environmental	Soil/Solid	EPA 3060A	Field moist samples are digested with a sodium hydroxide/sodium carbonate solution as described in EPA 3060A.
VOCs Methanol Extraction for Headspace Analysis	EP581 Waterloo - Environmental	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PHCs and PAHs Hexane-Acetone Tumbler Extraction	EP601 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1 (mod)	Samples are subsampled and Petroleum Hydrocarbons (PHC) and PAHs are extracted with 1:1 hexane:acetone using a rotary extractor.
Pesticides, PCB, PAH, and Neutral Extractable Chlorinated Hydrocarbons Extraction	EP660 Waterloo - Environmental	Soil/Solid	EPA 3570 (mod)	A homogenized subsample is extracted with organic solvents using a mechanical shaker.

## QUALITY CONTROL REPORT

**Work Order** : **WT2221612**  
**Client** : Omni-McCann Inc.  
**Contact** : Daniel Elliot  
**Address** : 1755 Woodward Dr. Suite 200  
 Ottawa ON Canada K2C 0P9  
**Telephone** :  
**Project** : 0006-0103  
**PO** : ----  
**C-O-C number** : 17-802170  
**Sampler** : Antonia Cass 705 243 5828  
**Site** : ----  
**Quote number** : Project 0006-0103  
**No. of samples received** : 8  
**No. of samples analysed** : 8

**Page** : 1 of 23  
**Laboratory** : Waterloo - Environmental  
**Account Manager** : Emily Smith  
**Address** : 60 Northland Road, Unit 1  
 Waterloo, Ontario Canada N2V 2B8  
**Telephone** : +1 519 886 6910  
**Date Samples Received** : 11-Nov-2022 07:55  
**Date Analysis Commenced** : 15-Nov-2022  
**Issue Date** : 24-Nov-2022 18:42

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
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Jeremy Gingras	Team Leader - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
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Joseph Scharbach		Waterloo Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Waterloo Organics, Waterloo, Ontario



Page : 2 of 23  
Work Order : WT2221612  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

### Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

## Workorder Comments

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Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Soil/Solid

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Physical Tests (QC Lot: 743868)</b>											
WT2221489-019	Anonymous	pH (1:2 soil:CaCl2-aq)	----	E108A	0.10	pH units	7.79	7.74	0.644%	5%	----
<b>Physical Tests (QC Lot: 744093)</b>											
KS2204290-001	Anonymous	moisture	----	E144	0.25	%	6.09	5.92	2.88%	20%	----
<b>Metals (QC Lot: 743809)</b>											
WT2221522-001	Anonymous	antimony	7440-36-0	E440	2.00	mg/kg	51.2	42.2	19.1%	30%	----
		arsenic	7440-38-2	E440	2.00	mg/kg	11.5	10.1	1.43	Diff <2x LOR	----
		barium	7440-39-3	E440	10.0	mg/kg	437	368	17.1%	40%	----
		beryllium	7440-41-7	E440	2.00	mg/kg	<2.00	<2.00	0	Diff <2x LOR	----
		boron	7440-42-8	E440	100	mg/kg	108	104	4.3	Diff <2x LOR	----
		cadmium	7440-43-9	E440	0.400	mg/kg	9.32	6.17	40.6%	30%	DUP-H
		chromium	7440-47-3	E440	10.0	mg/kg	69.4	63.1	6.27	Diff <2x LOR	----
		cobalt	7440-48-4	E440	2.00	mg/kg	121	91.8	27.7%	30%	----
		copper	7440-50-8	E440	10.0	mg/kg	1980	1600	20.7%	30%	----
		lead	7439-92-1	E440	10.0	mg/kg	471	427	9.90%	40%	----
		molybdenum	7439-98-7	E440	2.00	mg/kg	6.73	5.91	0.82	Diff <2x LOR	----
		nickel	7440-02-0	E440	10.0	mg/kg	76.5	73.1	4.44%	30%	----
		selenium	7782-49-2	E440	4.00	mg/kg	<4.00	<4.00	0	Diff <2x LOR	----
		silver	7440-22-4	E440	2.00	mg/kg	2.73	3.44	0.71	Diff <2x LOR	----
		thallium	7440-28-0	E440	1.00	mg/kg	<1.00	<1.00	0	Diff <2x LOR	----
uranium	7440-61-1	E440	1.00	mg/kg	1.44	1.22	0.212	Diff <2x LOR	----		
vanadium	7440-62-2	E440	4.00	mg/kg	17.2	15.1	2.12	Diff <2x LOR	----		
zinc	7440-66-6	E440	40.0	mg/kg	2920	2400	19.5%	30%	----		
<b>Metals (QC Lot: 743810)</b>											
WT2221522-001	Anonymous	mercury	7439-97-6	E510	0.0050	mg/kg	0.0054	<0.0050	0.0004	Diff <2x LOR	----
<b>Metals (QC Lot: 743812)</b>											
WT2221731-001	Anonymous	calcium, soluble ion content	7440-70-2	E484	0.50	mg/L	9.33	6.35	38.0%	30%	DUP-H
		magnesium, soluble ion content	7439-95-4	E484	0.50	mg/L	4.38	# 1.84	2.54	Diff <2x LOR	DUP-H
		sodium, soluble ion content	17341-25-2	E484	0.50	mg/L	726	724	0.276%	30%	----
<b>Metals (QC Lot: 743815)</b>											
WT2221731-003	Anonymous	boron, hot water soluble	7440-42-8	E487	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Speciated Metals (QC Lot: 744126)</b>											
WT2221489-002	Anonymous	chromium, hexavalent [Cr VI]	18540-29-9	E532	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 744774)</b>											
WT2221849-002	Anonymous	benzene	71-43-2	E611A	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----
		toluene	108-88-3	E611A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 745670)</b>											
WT2221591-001	Anonymous	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	<0.045	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----		
hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----		
methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----		



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 745670) - continued</b>											
WT2221591-001	Anonymous	methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040	<0.040	0	Diff <2x LOR	----
		styrene	100-42-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----		
xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----		
<b>Hydrocarbons (QC Lot: 744709)</b>											
WT2221489-024	Anonymous	F2 (C10-C16)	----	E601.SG-L	10	mg/kg	17	30	12	Diff <2x LOR	----
		F3 (C16-C34)	----	E601.SG-L	50	mg/kg	55	113	58	Diff <2x LOR	----
		F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	<50	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 744749)</b>											
WT2221612-007	DUP6	F2 (C10-C16)	----	E601.SG-L	12	mg/kg	<12	<12	0.03	Diff <2x LOR	----
		F3 (C16-C34)	----	E601.SG-L	50	mg/kg	1090	1280	15.6%	40%	----
		F4 (C34-C50)	----	E601.SG-L	50	mg/kg	2360	2760	15.4%	40%	----
<b>Hydrocarbons (QC Lot: 744775)</b>											
WT2221849-002	Anonymous	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 745669)</b>											
WT2221591-001	Anonymous	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 747466)</b>											
WT2221612-007	DUP6	F4G-sg	----	E601.F4G-L	250	mg/kg	7740	9450	19.9%	40%	----
<b>Polycyclic Aromatic Hydrocarbons (QC Lot: 744710)</b>											
WT2221489-024	Anonymous	acenaphthene	83-32-9	E641A	0.050	mg/kg	4.06	4.08	0.565%	50%	J
		acenaphthylene	208-96-8	E641A	0.050	mg/kg	0.066	0.090	0.024	Diff <2x LOR	J
		anthracene	120-12-7	E641A	0.050	mg/kg	0.170	0.308	57.9%	50%	DUP-H
		benz(a)anthracene	56-55-3	E641A	0.050	mg/kg	0.187	0.337	57.4%	50%	DUP-H
		benzo(a)pyrene	50-32-8	E641A	0.050	mg/kg	0.174	0.282	47.6%	50%	----



Sub-Matrix: Soil/Solid

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Polycyclic Aromatic Hydrocarbons (QC Lot: 744710) - continued</b>											
WT2221489-024	Anonymous	benzo(b+j)fluoranthene	n/a	E641A	0.050	mg/kg	0.146	0.245	0.099	Diff <2x LOR	J
		benzo(g,h,i)perylene	191-24-2	E641A	0.050	mg/kg	0.118	0.172	0.054	Diff <2x LOR	J
		benzo(k)fluoranthene	207-08-9	E641A	0.050	mg/kg	0.056	0.103	0.048	Diff <2x LOR	J
		chrysene	218-01-9	E641A	0.050	mg/kg	0.211	0.358	51.7%	50%	DUP-H
		dibenz(a,h)anthracene	53-70-3	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		fluoranthene	206-44-0	E641A	0.050	mg/kg	1.06	1.66	43.8%	50%	----
		fluorene	86-73-7	E641A	0.050	mg/kg	1.41	1.76	22.5%	50%	----
		indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.050	mg/kg	0.108	0.158	0.050	Diff <2x LOR	J
		methylnaphthalene, 1-	90-12-0	E641A	0.030	mg/kg	0.491	0.455	7.52%	50%	----
		methylnaphthalene, 2-	91-57-6	E641A	0.030	mg/kg	0.039	0.090	0.051	Diff <2x LOR	J
		naphthalene	91-20-3	E641A	0.010	mg/kg	0.103	0.229	75.4%	50%	DUP-H
		phenanthrene	85-01-8	E641A	0.050	mg/kg	0.206	0.404	64.9%	50%	DUP-H
		pyrene	129-00-0	E641A	0.050	mg/kg	1.39	2.17	43.4%	50%	----
<b>Polycyclic Aromatic Hydrocarbons (QC Lot: 744750)</b>											
WT2221612-007	DUP6	acenaphthene	83-32-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		acenaphthylene	208-96-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		anthracene	120-12-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		benz(a)anthracene	56-55-3	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		benzo(a)pyrene	50-32-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		benzo(b+j)fluoranthene	n/a	E641A	0.050	mg/kg	0.053	0.061	0.007	Diff <2x LOR	J
		benzo(g,h,i)perylene	191-24-2	E641A	0.050	mg/kg	0.057	0.065	0.008	Diff <2x LOR	J
		benzo(k)fluoranthene	207-08-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chrysene	218-01-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibenz(a,h)anthracene	53-70-3	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		fluoranthene	206-44-0	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		fluorene	86-73-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		methylnaphthalene, 1-	90-12-0	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		methylnaphthalene, 2-	91-57-6	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		naphthalene	91-20-3	E641A	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		phenanthrene	85-01-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
pyrene	129-00-0	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----		
<b>Polychlorinated Biphenyls (QC Lot: 744727)</b>											
WT2221612-001	22-06B 0.75-1.75	Aroclor 1016	12674-11-2	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Polychlorinated Biphenyls (QC Lot: 744727) - continued</b>											
WT2221612-001	22-06B 0.75-1.75	Aroclor 1221	11104-28-2	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1232	11141-16-5	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1242	53469-21-9	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1248	12672-29-6	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1254	11097-69-1	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1260	11096-82-5	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1262	37324-23-5	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Aroclor 1268	11100-14-4	E687	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----

**Qualifiers**

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
J	Duplicate results and limits are expressed in terms of absolute difference.



## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 744093)</b>						
moisture	---	E144	0.25	%	<0.25	---
<b>Metals (QCLot: 743809)</b>						
antimony	7440-36-0	E440	0.1	mg/kg	<0.10	---
arsenic	7440-38-2	E440	0.1	mg/kg	<0.10	---
barium	7440-39-3	E440	0.5	mg/kg	<0.50	---
beryllium	7440-41-7	E440	0.1	mg/kg	<0.10	---
boron	7440-42-8	E440	5	mg/kg	<5.0	---
cadmium	7440-43-9	E440	0.02	mg/kg	<0.020	---
chromium	7440-47-3	E440	0.5	mg/kg	<0.50	---
cobalt	7440-48-4	E440	0.1	mg/kg	<0.10	---
copper	7440-50-8	E440	0.5	mg/kg	<0.50	---
lead	7439-92-1	E440	0.5	mg/kg	<0.50	---
molybdenum	7439-98-7	E440	0.1	mg/kg	<0.10	---
nickel	7440-02-0	E440	0.5	mg/kg	<0.50	---
selenium	7782-49-2	E440	0.2	mg/kg	<0.20	---
silver	7440-22-4	E440	0.1	mg/kg	<0.10	---
thallium	7440-28-0	E440	0.05	mg/kg	<0.050	---
uranium	7440-61-1	E440	0.05	mg/kg	<0.050	---
vanadium	7440-62-2	E440	0.2	mg/kg	<0.20	---
zinc	7440-66-6	E440	2	mg/kg	<2.0	---
<b>Metals (QCLot: 743810)</b>						
mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	---
<b>Metals (QCLot: 743812)</b>						
calcium, soluble ion content	7440-70-2	E484	0.5	mg/L	<0.50	---
magnesium, soluble ion content	7439-95-4	E484	0.5	mg/L	<0.50	---
sodium, soluble ion content	17341-25-2	E484	0.5	mg/L	<0.50	---
<b>Metals (QCLot: 743815)</b>						
boron, hot water soluble	7440-42-8	E487	0.1	mg/kg	<0.10	---
<b>Speciated Metals (QCLot: 744126)</b>						
chromium, hexavalent [Cr VI]	18540-29-9	E532	0.1	mg/kg	<0.10	---
<b>Volatile Organic Compounds (QCLot: 744774)</b>						
benzene	71-43-2	E611A	0.005	mg/kg	<0.0050	---



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 744774) - continued</b>						
ethylbenzene	100-41-4	E611A	0.015	mg/kg	<0.015	----
toluene	108-88-3	E611A	0.05	mg/kg	<0.050	----
xylene, m+p-	179601-23-1	E611A	0.03	mg/kg	<0.030	----
xylene, o-	95-47-6	E611A	0.03	mg/kg	<0.030	----
<b>Volatile Organic Compounds (QCLot: 745670)</b>						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	----
benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	----
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	----
bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	----
bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	----
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	----
chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	----
chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	----
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	----
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	----
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	----
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	----
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	----
dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	----
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	----
ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	----
hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	----
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	----
styrene	100-42-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	----





Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 745670) - continued</b>						
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----
<b>Hydrocarbons (QCLot: 744709)</b>						
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	----
<b>Hydrocarbons (QCLot: 744749)</b>						
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	# 23	MB-LOR
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	----
<b>Hydrocarbons (QCLot: 744775)</b>						
F1 (C6-C10)	----	E581.F1	5	mg/kg	<5.0	----
<b>Hydrocarbons (QCLot: 745669)</b>						
F1 (C6-C10)	----	E581.F1	5	mg/kg	<5.0	----
<b>Hydrocarbons (QCLot: 747466)</b>						
F4G-sg	----	E601.F4G-L	250	mg/kg	<250	----
<b>Hydrocarbons (QCLot: 755171)</b>						
F4G-sg	----	E601.F4G-L	250	mg/kg	<250	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 744710)</b>						
acenaphthene	83-32-9	E641A	0.05	mg/kg	<0.050	----
acenaphthylene	208-96-8	E641A	0.05	mg/kg	<0.050	----
anthracene	120-12-7	E641A	0.05	mg/kg	<0.050	----
benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	<0.050	----
benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	<0.050	----
benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	<0.050	----
benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	<0.050	----
benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	<0.050	----



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 744710) - continued</b>						
chrysene	218-01-9	E641A	0.05	mg/kg	<0.050	----
dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	<0.050	----
fluoranthene	206-44-0	E641A	0.05	mg/kg	<0.050	----
fluorene	86-73-7	E641A	0.05	mg/kg	<0.050	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	<0.050	----
methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	<0.030	----
methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	<0.030	----
naphthalene	91-20-3	E641A	0.01	mg/kg	<0.010	----
phenanthrene	85-01-8	E641A	0.05	mg/kg	<0.050	----
pyrene	129-00-0	E641A	0.05	mg/kg	<0.050	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 744750)</b>						
acenaphthene	83-32-9	E641A	0.05	mg/kg	<0.050	----
acenaphthylene	208-96-8	E641A	0.05	mg/kg	<0.050	----
anthracene	120-12-7	E641A	0.05	mg/kg	<0.050	----
benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	<0.050	----
benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	<0.050	----
benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	<0.050	----
benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	<0.050	----
benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	<0.050	----
chrysene	218-01-9	E641A	0.05	mg/kg	<0.050	----
dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	<0.050	----
fluoranthene	206-44-0	E641A	0.05	mg/kg	<0.050	----
fluorene	86-73-7	E641A	0.05	mg/kg	<0.050	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	<0.050	----
methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	<0.030	----
methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	<0.030	----
naphthalene	91-20-3	E641A	0.01	mg/kg	<0.010	----
phenanthrene	85-01-8	E641A	0.05	mg/kg	<0.050	----
pyrene	129-00-0	E641A	0.05	mg/kg	<0.050	----
<b>Polychlorinated Biphenyls (QCLot: 744727)</b>						
Aroclor 1016	12674-11-2	E687	0.01	mg/kg	<0.010	----
Aroclor 1221	11104-28-2	E687	0.01	mg/kg	<0.010	----
Aroclor 1232	11141-16-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1242	53469-21-9	E687	0.01	mg/kg	<0.010	----
Aroclor 1248	12672-29-6	E687	0.01	mg/kg	<0.010	----



Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Polychlorinated Biphenyls (QCLot: 744727) - continued</b>						
Aroclor 1254	11097-69-1	E687	0.01	mg/kg	<0.010	----
Aroclor 1260	11096-82-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1262	37324-23-5	E687	0.01	mg/kg	<0.010	----
Aroclor 1268	11100-14-4	E687	0.01	mg/kg	<0.010	----

**Qualifiers**

Qualifier	Description
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.



## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Physical Tests (QCLot: 743868)</b>									
pH (1:2 soil:CaCl2-aq)	----	E108A	----	pH units	7 pH units	101	98.0	102	----
<b>Physical Tests (QCLot: 744093)</b>									
moisture	----	E144	0.25	%	50 %	101	90.0	110	----
<b>Metals (QCLot: 743809)</b>									
antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	102	80.0	120	----
arsenic	7440-38-2	E440	0.1	mg/kg	100 mg/kg	105	80.0	120	----
barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	101	80.0	120	----
beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	95.8	80.0	120	----
boron	7440-42-8	E440	5	mg/kg	100 mg/kg	93.6	80.0	120	----
cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	97.7	80.0	120	----
chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	98.6	80.0	120	----
cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	98.1	80.0	120	----
copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	96.2	80.0	120	----
lead	7439-92-1	E440	0.5	mg/kg	50 mg/kg	99.9	80.0	120	----
molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	100	80.0	120	----
nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	97.8	80.0	120	----
selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	102	80.0	120	----
silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	92.7	80.0	120	----
thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	96.7	80.0	120	----
uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	95.2	80.0	120	----
vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	102	80.0	120	----
zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	95.6	80.0	120	----
<b>Metals (QCLot: 743810)</b>									
mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	99.5	80.0	120	----
<b>Metals (QCLot: 743812)</b>									
calcium, soluble ion content	7440-70-2	E484	0.5	mg/L	300 mg/L	106	80.0	120	----
magnesium, soluble ion content	7439-95-4	E484	0.5	mg/L	50 mg/L	101	80.0	120	----
sodium, soluble ion content	17341-25-2	E484	0.5	mg/L	50 mg/L	99.6	80.0	120	----
<b>Metals (QCLot: 743815)</b>									
boron, hot water soluble	7440-42-8	E487	0.1	mg/kg	1.33333 mg/kg	103	70.0	130	----
<b>Speciated Metals (QCLot: 744126)</b>									



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Speciated Metals (QCLot: 744126) - continued</b>									
chromium, hexavalent [Cr VI]	18540-29-9	E532	0.1	mg/kg	0.8 mg/kg	85.6	80.0	120	----
<b>Volatile Organic Compounds (QCLot: 744774)</b>									
benzene	71-43-2	E611A	0.005	mg/kg	3.475 mg/kg	98.1	70.0	130	----
ethylbenzene	100-41-4	E611A	0.015	mg/kg	3.475 mg/kg	96.3	70.0	130	----
toluene	108-88-3	E611A	0.05	mg/kg	3.475 mg/kg	95.4	70.0	130	----
xylene, m+p-	179601-23-1	E611A	0.03	mg/kg	6.95 mg/kg	93.8	70.0	130	----
xylene, o-	95-47-6	E611A	0.03	mg/kg	3.475 mg/kg	96.0	70.0	130	----
<b>Volatile Organic Compounds (QCLot: 745670)</b>									
Acetone	67-64-1	E611D	0.5	mg/kg	3.475 mg/kg	101	60.0	140	----
benzene	71-43-2	E611D	0.005	mg/kg	3.475 mg/kg	95.4	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.475 mg/kg	102	50.0	140	----
bromoform	75-25-2	E611D	0.05	mg/kg	3.475 mg/kg	103	70.0	130	----
bromomethane	74-83-9	E611D	0.05	mg/kg	3.475 mg/kg	90.8	50.0	140	----
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.475 mg/kg	87.1	70.0	130	----
chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.475 mg/kg	101	70.0	130	----
chloroform	67-66-3	E611D	0.05	mg/kg	3.475 mg/kg	91.6	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.475 mg/kg	105	60.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.475 mg/kg	105	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.475 mg/kg	100	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.475 mg/kg	101	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.475 mg/kg	102	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.475 mg/kg	# 48.9	50.0	140	MES
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.475 mg/kg	80.3	60.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.475 mg/kg	92.8	60.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.475 mg/kg	80.3	60.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.475 mg/kg	93.8	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.475 mg/kg	90.9	60.0	130	----
dichloromethane	75-09-2	E611D	0.045	mg/kg	3.475 mg/kg	93.4	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.475 mg/kg	100	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.475 mg/kg	107	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.475 mg/kg	110	70.0	130	----
ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.475 mg/kg	98.3	70.0	130	----
hexane, n-	110-54-3	E611D	0.05	mg/kg	3.475 mg/kg	82.0	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.475 mg/kg	116	60.0	140	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.475 mg/kg	103	60.0	140	----



Sub-Matrix: Soil/Solid

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
<b>Volatile Organic Compounds (QCLot: 745670) - continued</b>									
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.475 mg/kg	97.4	70.0	130	----
styrene	100-42-5	E611D	0.05	mg/kg	3.475 mg/kg	105	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.475 mg/kg	99.8	60.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.475 mg/kg	97.8	60.0	130	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.475 mg/kg	96.8	60.0	130	----
toluene	108-88-3	E611D	0.05	mg/kg	3.475 mg/kg	96.5	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.475 mg/kg	86.7	60.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.475 mg/kg	105	60.0	130	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.475 mg/kg	97.5	60.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.475 mg/kg	80.4	50.0	140	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.475 mg/kg	74.8	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	99.2	70.0	130	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	3.475 mg/kg	98.5	70.0	130	----
<b>Hydrocarbons (QCLot: 744709)</b>									
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	916.995 mg/kg	83.3	70.0	130	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	1190.25 mg/kg	94.7	70.0	130	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	879.735 mg/kg	93.5	70.0	130	----
<b>Hydrocarbons (QCLot: 744749)</b>									
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	916.995 mg/kg	86.4	70.0	130	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	1190.25 mg/kg	93.0	70.0	130	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	879.735 mg/kg	81.1	70.0	130	----
<b>Hydrocarbons (QCLot: 744775)</b>									
F1 (C6-C10)	----	E581.F1	5	mg/kg	69.1875 mg/kg	106	80.0	120	----
<b>Hydrocarbons (QCLot: 745669)</b>									
F1 (C6-C10)	----	E581.F1	5	mg/kg	69.1875 mg/kg	# 122	80.0	120	LCS-H
<b>Hydrocarbons (QCLot: 747466)</b>									
F4G-sg	----	E601.F4G-L	250	mg/kg	1298.6 mg/kg	96.2	70.0	130	----
<b>Hydrocarbons (QCLot: 755171)</b>									
F4G-sg	----	E601.F4G-L	250	mg/kg	1298.6 mg/kg	80.2	70.0	130	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 744710)</b>									
acenaphthene	83-32-9	E641A	0.05	mg/kg	0.5 mg/kg	89.6	60.0	130	----
acenaphthylene	208-96-8	E641A	0.05	mg/kg	0.5 mg/kg	94.7	60.0	130	----
anthracene	120-12-7	E641A	0.05	mg/kg	0.5 mg/kg	98.7	60.0	130	----
benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	0.5 mg/kg	60.2	60.0	130	----



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 744710) - continued</b>									
benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	0.5 mg/kg	66.9	60.0	130	----
benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	0.5 mg/kg	63.8	60.0	130	----
benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	0.5 mg/kg	68.1	60.0	130	----
benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	0.5 mg/kg	63.3	60.0	130	----
chrysene	218-01-9	E641A	0.05	mg/kg	0.5 mg/kg	61.2	60.0	130	----
dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	0.5 mg/kg	83.4	60.0	130	----
fluoranthene	206-44-0	E641A	0.05	mg/kg	0.5 mg/kg	92.8	60.0	130	----
fluorene	86-73-7	E641A	0.05	mg/kg	0.5 mg/kg	91.6	60.0	130	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	0.5 mg/kg	69.0	60.0	130	----
methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	0.5 mg/kg	86.1	60.0	130	----
methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	0.5 mg/kg	84.0	60.0	130	----
naphthalene	91-20-3	E641A	0.01	mg/kg	0.5 mg/kg	78.5	60.0	130	----
phenanthrene	85-01-8	E641A	0.05	mg/kg	0.5 mg/kg	91.4	60.0	130	----
pyrene	129-00-0	E641A	0.05	mg/kg	0.5 mg/kg	92.8	60.0	130	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 744750)</b>									
acenaphthene	83-32-9	E641A	0.05	mg/kg	0.5 mg/kg	87.8	60.0	130	----
acenaphthylene	208-96-8	E641A	0.05	mg/kg	0.5 mg/kg	93.2	60.0	130	----
anthracene	120-12-7	E641A	0.05	mg/kg	0.5 mg/kg	100	60.0	130	----
benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	0.5 mg/kg	101	60.0	130	----
benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	0.5 mg/kg	93.9	60.0	130	----
benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	0.5 mg/kg	105	60.0	130	----
benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	0.5 mg/kg	72.1	60.0	130	----
benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	0.5 mg/kg	92.8	60.0	130	----
chrysene	218-01-9	E641A	0.05	mg/kg	0.5 mg/kg	91.1	60.0	130	----
dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	0.5 mg/kg	86.2	60.0	130	----
fluoranthene	206-44-0	E641A	0.05	mg/kg	0.5 mg/kg	88.3	60.0	130	----
fluorene	86-73-7	E641A	0.05	mg/kg	0.5 mg/kg	90.7	60.0	130	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	0.5 mg/kg	79.2	60.0	130	----
methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	0.5 mg/kg	86.4	60.0	130	----
methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	0.5 mg/kg	84.2	60.0	130	----
naphthalene	91-20-3	E641A	0.01	mg/kg	0.5 mg/kg	72.7	60.0	130	----
phenanthrene	85-01-8	E641A	0.05	mg/kg	0.5 mg/kg	91.0	60.0	130	----
pyrene	129-00-0	E641A	0.05	mg/kg	0.5 mg/kg	89.0	60.0	130	----
<b>Polychlorinated Biphenyls (QCLot: 744727)</b>									
Aroclor 1016	12674-11-2	E687	0.01	mg/kg	0.01 mg/kg	94.0	60.0	140	----



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Polychlorinated Biphenyls (QCLot: 744727) - continued</b>									
Aroclor 1221	11104-28-2	E687	0.01	mg/kg	0.01 mg/kg	94.0	60.0	140	----
Aroclor 1232	11141-16-5	E687	0.01	mg/kg	0.01 mg/kg	94.0	60.0	140	----
Aroclor 1242	53469-21-9	E687	0.01	mg/kg	0.01 mg/kg	94.0	60.0	140	----
Aroclor 1248	12672-29-6	E687	0.01	mg/kg	0.01 mg/kg	75.0	60.0	140	----
Aroclor 1254	11097-69-1	E687	0.01	mg/kg	0.01 mg/kg	89.8	60.0	140	----
Aroclor 1260	11096-82-5	E687	0.01	mg/kg	0.01 mg/kg	90.7	60.0	140	----
Aroclor 1262	37324-23-5	E687	0.01	mg/kg	0.01 mg/kg	90.7	60.0	140	----
Aroclor 1268	11100-14-4	E687	0.01	mg/kg	0.01 mg/kg	90.7	60.0	140	----

### Qualifiers

Qualifier	Description
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).





### Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 744774)</b>										
WT2221849-002	Anonymous	benzene	71-43-2	E611A	2.08 mg/kg	3.125 mg/kg	93.0	60.0	140	----
		ethylbenzene	100-41-4	E611A	2.03 mg/kg	3.125 mg/kg	90.8	60.0	140	----
		toluene	108-88-3	E611A	2.02 mg/kg	3.125 mg/kg	90.4	60.0	140	----
		xylene, m+p-	179601-23-1	E611A	3.96 mg/kg	6.25 mg/kg	88.5	60.0	140	----
		xylene, o-	95-47-6	E611A	2.06 mg/kg	3.125 mg/kg	92.0	60.0	140	----
<b>Volatile Organic Compounds (QCLot: 745670)</b>										
WT2221591-001	Anonymous	Acetone	67-64-1	E611D	2.31 mg/kg	3.125 mg/kg	100	50.0	140	----
		benzene	71-43-2	E611D	2.18 mg/kg	3.125 mg/kg	94.9	50.0	140	----
		bromodichloromethane	75-27-4	E611D	2.30 mg/kg	3.125 mg/kg	100	50.0	140	----
		bromoform	75-25-2	E611D	2.33 mg/kg	3.125 mg/kg	101	50.0	140	----
		bromomethane	74-83-9	E611D	2.11 mg/kg	3.125 mg/kg	92.0	50.0	140	----
		carbon tetrachloride	56-23-5	E611D	2.00 mg/kg	3.125 mg/kg	87.3	50.0	140	----
		chlorobenzene	108-90-7	E611D	2.28 mg/kg	3.125 mg/kg	99.5	50.0	140	----
		chloroform	67-66-3	E611D	2.08 mg/kg	3.125 mg/kg	90.8	50.0	140	----
		dibromochloromethane	124-48-1	E611D	2.37 mg/kg	3.125 mg/kg	103	50.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	2.37 mg/kg	3.125 mg/kg	103	50.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	2.25 mg/kg	3.125 mg/kg	98.0	50.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	2.24 mg/kg	3.125 mg/kg	97.4	50.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	2.27 mg/kg	3.125 mg/kg	99.1	50.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	1.42 mg/kg	3.125 mg/kg	62.0	50.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	1.85 mg/kg	3.125 mg/kg	80.6	50.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	2.11 mg/kg	3.125 mg/kg	92.0	50.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	1.89 mg/kg	3.125 mg/kg	82.4	50.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	2.14 mg/kg	3.125 mg/kg	93.2	50.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	2.09 mg/kg	3.125 mg/kg	91.0	50.0	140	----
		dichloromethane	75-09-2	E611D	2.16 mg/kg	3.125 mg/kg	94.3	50.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	2.27 mg/kg	3.125 mg/kg	99.0	50.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	2.37 mg/kg	3.125 mg/kg	103	50.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	2.41 mg/kg	3.125 mg/kg	105	50.0	140	----
		ethylbenzene	100-41-4	E611D	2.23 mg/kg	3.125 mg/kg	97.0	50.0	140	----
		hexane, n-	110-54-3	E611D	1.98 mg/kg	3.125 mg/kg	86.5	50.0	140	----



Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 745670) - continued</b>										
WT2221591-001	Anonymous	methyl ethyl ketone [MEK]	78-93-3	E611D	2.62 mg/kg	3.125 mg/kg	114	50.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	2.30 mg/kg	3.125 mg/kg	100	50.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.24 mg/kg	3.125 mg/kg	97.4	50.0	140	----
		styrene	100-42-5	E611D	2.36 mg/kg	3.125 mg/kg	103	50.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.26 mg/kg	3.125 mg/kg	98.6	50.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	2.26 mg/kg	3.125 mg/kg	98.6	50.0	140	----
		tetrachloroethylene	127-18-4	E611D	2.19 mg/kg	3.125 mg/kg	95.5	50.0	140	----
		toluene	108-88-3	E611D	2.20 mg/kg	3.125 mg/kg	95.7	50.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	1.99 mg/kg	3.125 mg/kg	86.8	50.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	2.39 mg/kg	3.125 mg/kg	104	50.0	140	----
		trichloroethylene	79-01-6	E611D	2.22 mg/kg	3.125 mg/kg	96.5	50.0	140	----
		trichlorofluoromethane	75-69-4	E611D	1.95 mg/kg	3.125 mg/kg	84.9	50.0	140	----
		vinyl chloride	75-01-4	E611D	1.77 mg/kg	3.125 mg/kg	77.3	50.0	140	----
		xylene, m+p-	179601-23-1	E611D	4.48 mg/kg	6.25 mg/kg	97.7	50.0	140	----
		xylene, o-	95-47-6	E611D	2.23 mg/kg	3.125 mg/kg	97.0	50.0	140	----
<b>Hydrocarbons (QCLot: 744709)</b>										
WT2221489-024	Anonymous	F2 (C10-C16)	----	E601.SG-L	730 mg/kg	916.995 mg/kg	100	60.0	140	----
		F3 (C16-C34)	----	E601.SG-L	1120 mg/kg	1190.25 mg/kg	118	60.0	140	----
		F4 (C34-C50)	----	E601.SG-L	687 mg/kg	879.735 mg/kg	98.4	60.0	140	----
<b>Hydrocarbons (QCLot: 744749)</b>										
WT2221612-007	DUP6	F2 (C10-C16)	----	E601.SG-L	689 mg/kg	916.995 mg/kg	90.9	60.0	140	----
		F3 (C16-C34)	----	E601.SG-L	ND mg/kg	1190.25 mg/kg	ND	60.0	140	----
		F4 (C34-C50)	----	E601.SG-L	ND mg/kg	879.735 mg/kg	ND	60.0	140	----
<b>Hydrocarbons (QCLot: 744775)</b>										
WT2221849-002	Anonymous	F1 (C6-C10)	----	E581.F1	43.0 mg/kg	62.5 mg/kg	96.0	60.0	140	----
<b>Hydrocarbons (QCLot: 745669)</b>										
WT2221591-001	Anonymous	F1 (C6-C10)	----	E581.F1	47.7 mg/kg	62.5 mg/kg	104	60.0	140	----
<b>Hydrocarbons (QCLot: 747466)</b>										
WT2221612-007	DUP6	F4G-sg	----	E601.F4G-L	ND mg/kg	1298.6 mg/kg	ND	60.0	140	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 744710)</b>										
WT2221489-024	Anonymous	acenaphthene	83-32-9	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		acenaphthylene	208-96-8	E641A	0.406 mg/kg	0.5 mg/kg	102	50.0	140	----
		anthracene	120-12-7	E641A	0.416 mg/kg	0.5 mg/kg	105	50.0	140	----



Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 744710) - continued</b>										
WT2221489-024	Anonymous	benz(a)anthracene	56-55-3	E641A	0.268 mg/kg	0.5 mg/kg	67.6	50.0	140	----
		benzo(a)pyrene	50-32-8	E641A	0.402 mg/kg	0.5 mg/kg	102	50.0	140	----
		benzo(b+j)fluoranthene	n/a	E641A	0.323 mg/kg	0.5 mg/kg	81.6	50.0	140	----
		benzo(g,h,i)perylene	191-24-2	E641A	0.380 mg/kg	0.5 mg/kg	95.7	50.0	140	----
		benzo(k)fluoranthene	207-08-9	E641A	0.309 mg/kg	0.5 mg/kg	77.9	50.0	140	----
		chrysene	218-01-9	E641A	0.263 mg/kg	0.5 mg/kg	66.3	50.0	140	----
		dibenz(a,h)anthracene	53-70-3	E641A	0.416 mg/kg	0.5 mg/kg	105	50.0	140	----
		fluoranthene	206-44-0	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		fluorene	86-73-7	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.384 mg/kg	0.5 mg/kg	96.8	50.0	140	----
		methylnaphthalene, 1-	90-12-0	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
		methylnaphthalene, 2-	91-57-6	E641A	0.385 mg/kg	0.5 mg/kg	97.1	50.0	140	----
		naphthalene	91-20-3	E641A	0.388 mg/kg	0.5 mg/kg	98.0	50.0	140	----
		phenanthrene	85-01-8	E641A	0.415 mg/kg	0.5 mg/kg	105	50.0	140	----
		pyrene	129-00-0	E641A	ND mg/kg	0.5 mg/kg	ND	50.0	140	MS-B
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 744750)</b>										
WT2221612-007	DUP6	acenaphthene	83-32-9	E641A	0.353 mg/kg	0.5 mg/kg	90.0	50.0	140	----
		acenaphthylene	208-96-8	E641A	0.371 mg/kg	0.5 mg/kg	94.7	50.0	140	----
		anthracene	120-12-7	E641A	0.422 mg/kg	0.5 mg/kg	108	50.0	140	----
		benz(a)anthracene	56-55-3	E641A	0.440 mg/kg	0.5 mg/kg	112	50.0	140	----
		benzo(a)pyrene	50-32-8	E641A	0.381 mg/kg	0.5 mg/kg	97.1	50.0	140	----
		benzo(b+j)fluoranthene	n/a	E641A	0.441 mg/kg	0.5 mg/kg	112	50.0	140	----
		benzo(g,h,i)perylene	191-24-2	E641A	0.265 mg/kg	0.5 mg/kg	67.6	50.0	140	----
		benzo(k)fluoranthene	207-08-9	E641A	0.401 mg/kg	0.5 mg/kg	102	50.0	140	----
		chrysene	218-01-9	E641A	0.451 mg/kg	0.5 mg/kg	115	50.0	140	----
		dibenz(a,h)anthracene	53-70-3	E641A	0.349 mg/kg	0.5 mg/kg	89.0	50.0	140	----
		fluoranthene	206-44-0	E641A	0.348 mg/kg	0.5 mg/kg	88.8	50.0	140	----
		fluorene	86-73-7	E641A	0.361 mg/kg	0.5 mg/kg	92.0	50.0	140	----
		indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.278 mg/kg	0.5 mg/kg	70.9	50.0	140	----
		methylnaphthalene, 1-	90-12-0	E641A	0.352 mg/kg	0.5 mg/kg	89.7	50.0	140	----
		methylnaphthalene, 2-	91-57-6	E641A	0.344 mg/kg	0.5 mg/kg	87.8	50.0	140	----
		naphthalene	91-20-3	E641A	0.319 mg/kg	0.5 mg/kg	81.4	50.0	140	----
		phenanthrene	85-01-8	E641A	0.372 mg/kg	0.5 mg/kg	94.8	50.0	140	----
		pyrene	129-00-0	E641A	0.358 mg/kg	0.5 mg/kg	91.3	50.0	140	----
<b>Polychlorinated Biphenyls (QCLot: 744727)</b>										



Sub-Matrix: **Soil/Solid**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Polychlorinated Biphenyls (QCLot: 744727) - continued</b>										
WT2221612-001	22-06B 0.75-1.75	Aroclor 1016	12674-11-2	E687	0.009 mg/kg	0.01 mg/kg	93.1	50.0	150	----
		Aroclor 1221	11104-28-2	E687	0.009 mg/kg	0.01 mg/kg	93.1	50.0	150	----
		Aroclor 1232	11141-16-5	E687	0.009 mg/kg	0.01 mg/kg	93.1	50.0	150	----
		Aroclor 1242	53469-21-9	E687	0.009 mg/kg	0.01 mg/kg	91.5	50.0	150	----
		Aroclor 1248	12672-29-6	E687	0.009 mg/kg	0.01 mg/kg	93.1	50.0	150	----
		Aroclor 1254	11097-69-1	E687	0.009 mg/kg	0.01 mg/kg	90.7	50.0	150	----
		Aroclor 1260	11096-82-5	E687	0.009 mg/kg	0.01 mg/kg	90.6	50.0	150	----
		Aroclor 1262	37324-23-5	E687	0.009 mg/kg	0.01 mg/kg	93.5	50.0	150	----
		Aroclor 1268	11100-14-4	E687	0.009 mg/kg	0.01 mg/kg	93.5	50.0	150	----

**Qualifiers**

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.



## Reference Material (RM) Report

A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
<b>Metals (QCLot: 743809)</b>									
	RM	antimony	7440-36-0	E440	3.99 mg/kg	104	70.0	130	----
	RM	arsenic	7440-38-2	E440	3.73 mg/kg	106	70.0	130	----
	RM	barium	7440-39-3	E440	105 mg/kg	112	70.0	130	----
	RM	beryllium	7440-41-7	E440	0.349 mg/kg	107	70.0	130	----
	RM	boron	7440-42-8	E440	8.5 mg/kg	115	40.0	160	----
	RM	cadmium	7440-43-9	E440	0.91 mg/kg	112	70.0	130	----
	RM	chromium	7440-47-3	E440	101 mg/kg	106	70.0	130	----
	RM	cobalt	7440-48-4	E440	6.9 mg/kg	103	70.0	130	----
	RM	copper	7440-50-8	E440	123 mg/kg	105	70.0	130	----
	RM	lead	7439-92-1	E440	267 mg/kg	105	70.0	130	----
	RM	molybdenum	7439-98-7	E440	1.03 mg/kg	109	70.0	130	----
	RM	nickel	7440-02-0	E440	26.7 mg/kg	104	70.0	130	----
	RM	silver	7440-22-4	E440	4.06 mg/kg	99.2	70.0	130	----
	RM	thallium	7440-28-0	E440	0.0786 mg/kg	104	40.0	160	----
	RM	uranium	7440-61-1	E440	0.52 mg/kg	104	70.0	130	----
	RM	vanadium	7440-62-2	E440	32.7 mg/kg	106	70.0	130	----
	RM	zinc	7440-66-6	E440	297 mg/kg	102	70.0	130	----
<b>Metals (QCLot: 743810)</b>									
	RM	mercury	7439-97-6	E510	0.0585 mg/kg	107	70.0	130	----
<b>Metals (QCLot: 743812)</b>									
	RM	calcium, soluble ion content	7440-70-2	E484	86.59 mg/L	97.7	70.0	130	----
	RM	magnesium, soluble ion content	7439-95-4	E484	25.74 mg/L	99.4	70.0	130	----
	RM	sodium, soluble ion content	17341-25-2	E484	30.05 mg/L	100	70.0	130	----
<b>Metals (QCLot: 743815)</b>									
	RM	boron, hot water soluble	7440-42-8	E487	1.4938 mg/kg	100	60.0	140	----
<b>Speciated Metals (QCLot: 744126)</b>									
	RM	chromium, hexavalent [Cr VI]	18540-29-9	E532	172 mg/kg	95.1	70.0	130	----

Page : 23 of 23  
Work Order : WT2221612  
Client : Omni-McCann Inc.  
Project : 0006-0103

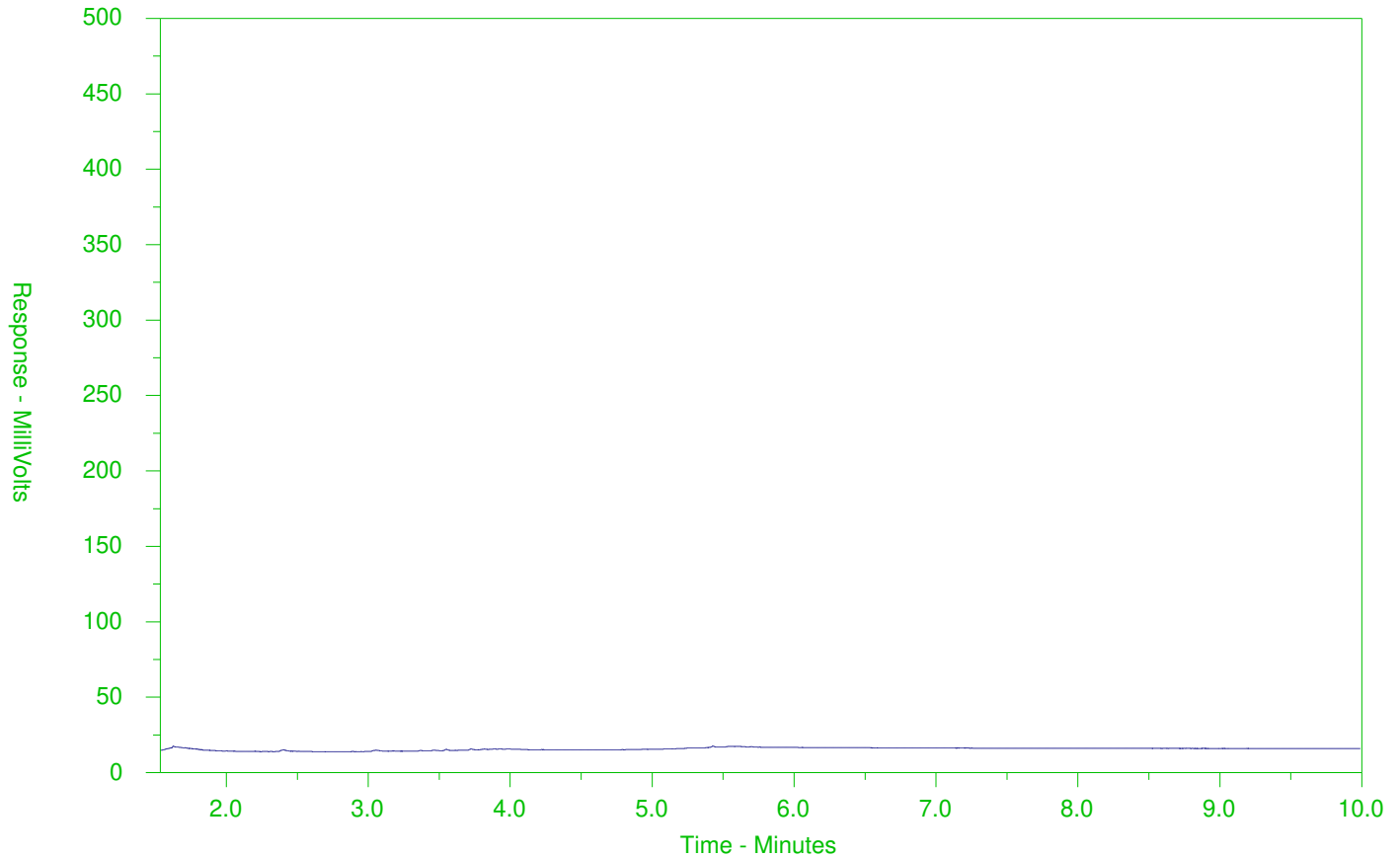
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# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2221612-001-E601.SG-L  
 Client Sample ID: 22-06B 0.75-1.75



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

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

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

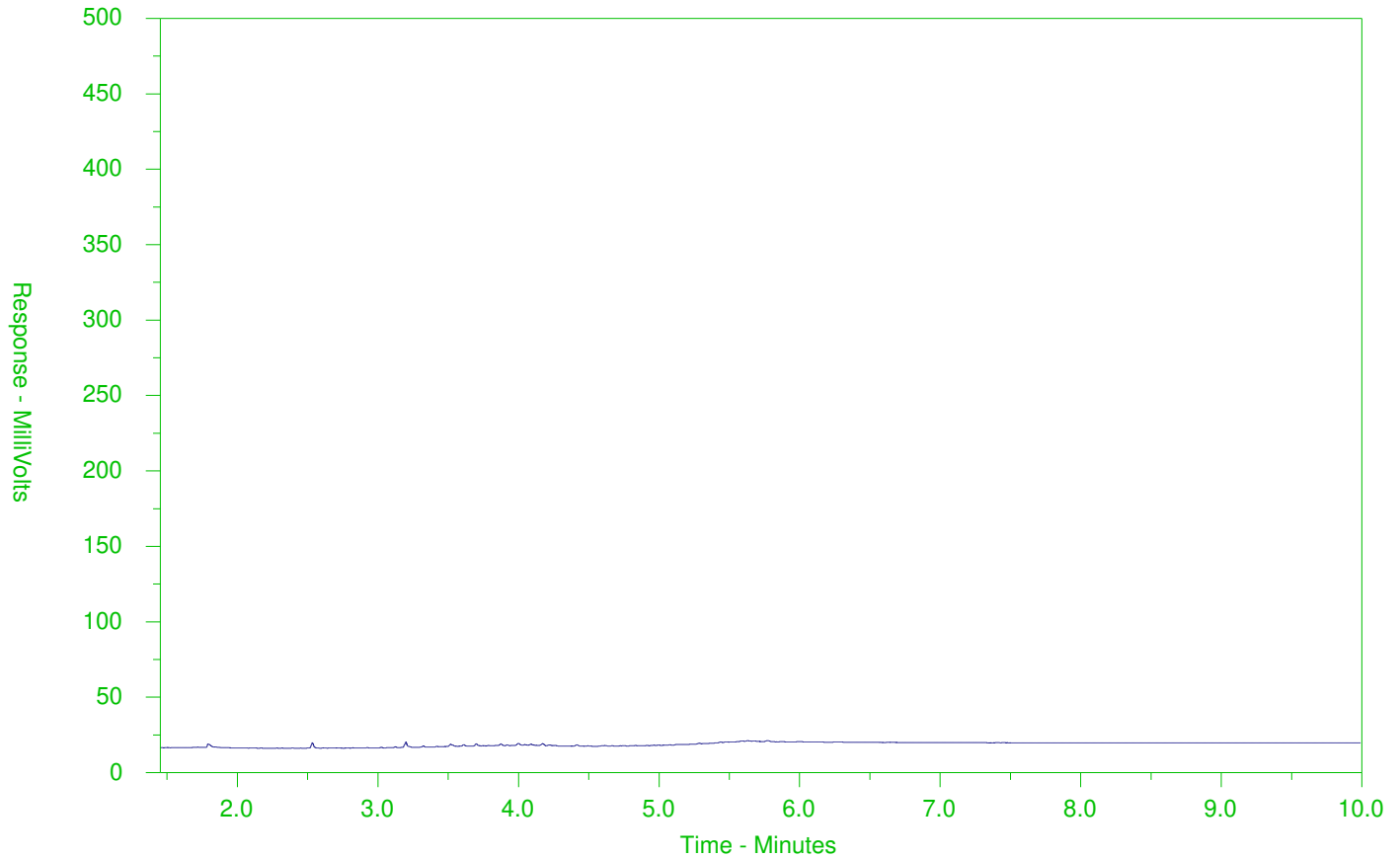
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2221612-002-E601.SG-L  
 Client Sample ID: 22-06B 2.5-3.25



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

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

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

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

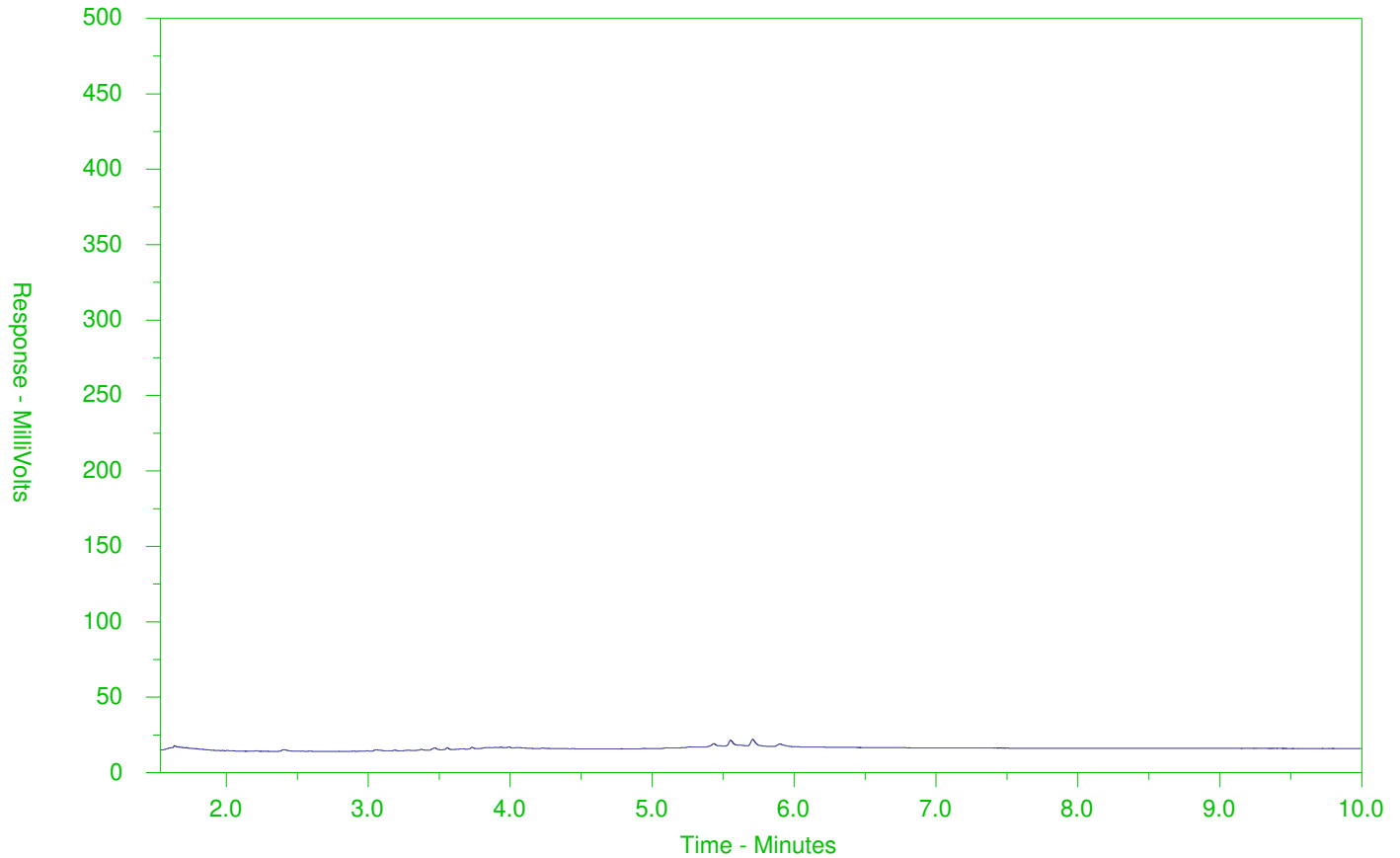
Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).



# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2221612-003-E601.SG-L  
 Client Sample ID: DUP5



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

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

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

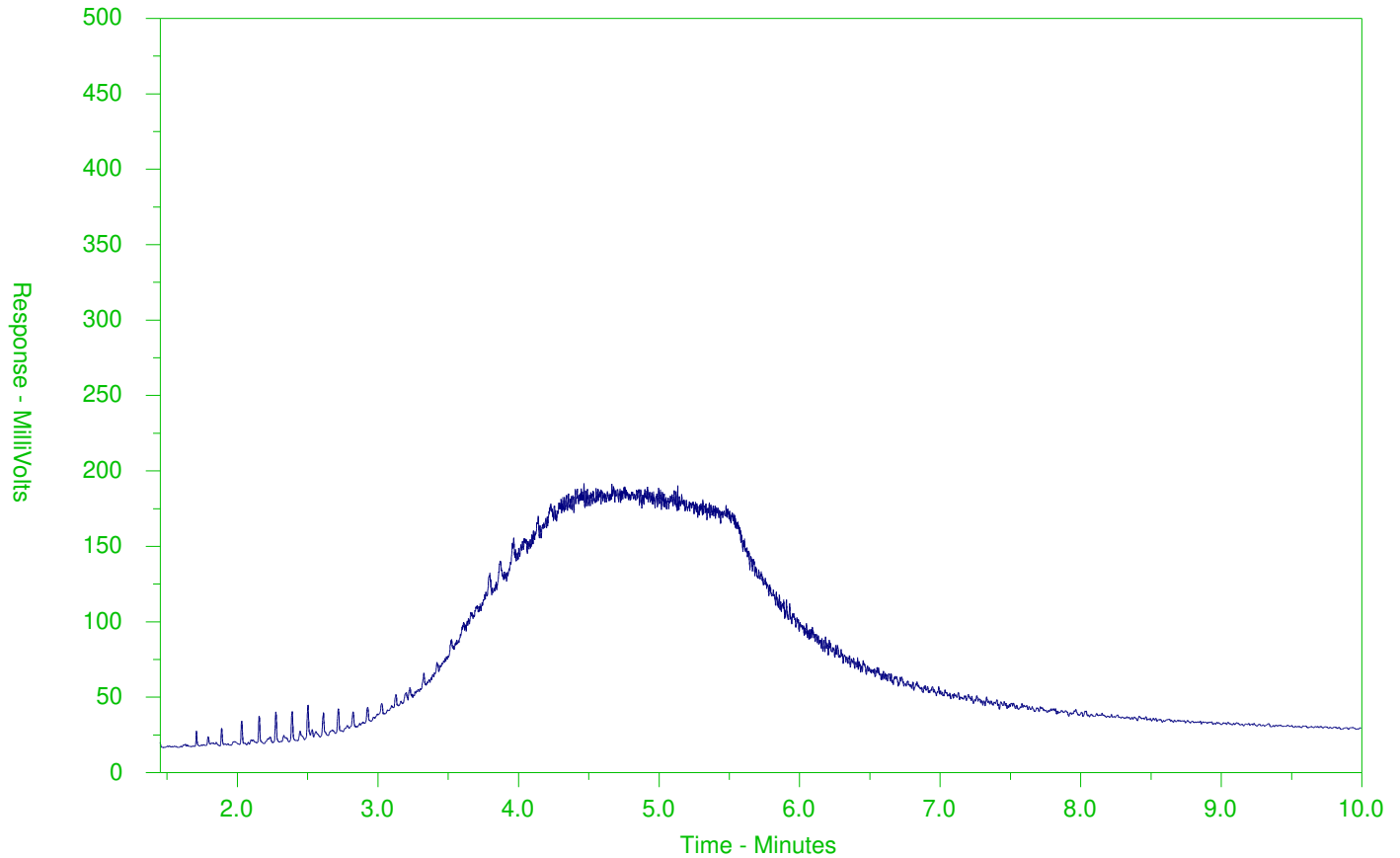
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2221612-004-E601.SG-L  
 Client Sample ID: 22-01C 0.25-2



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

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

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

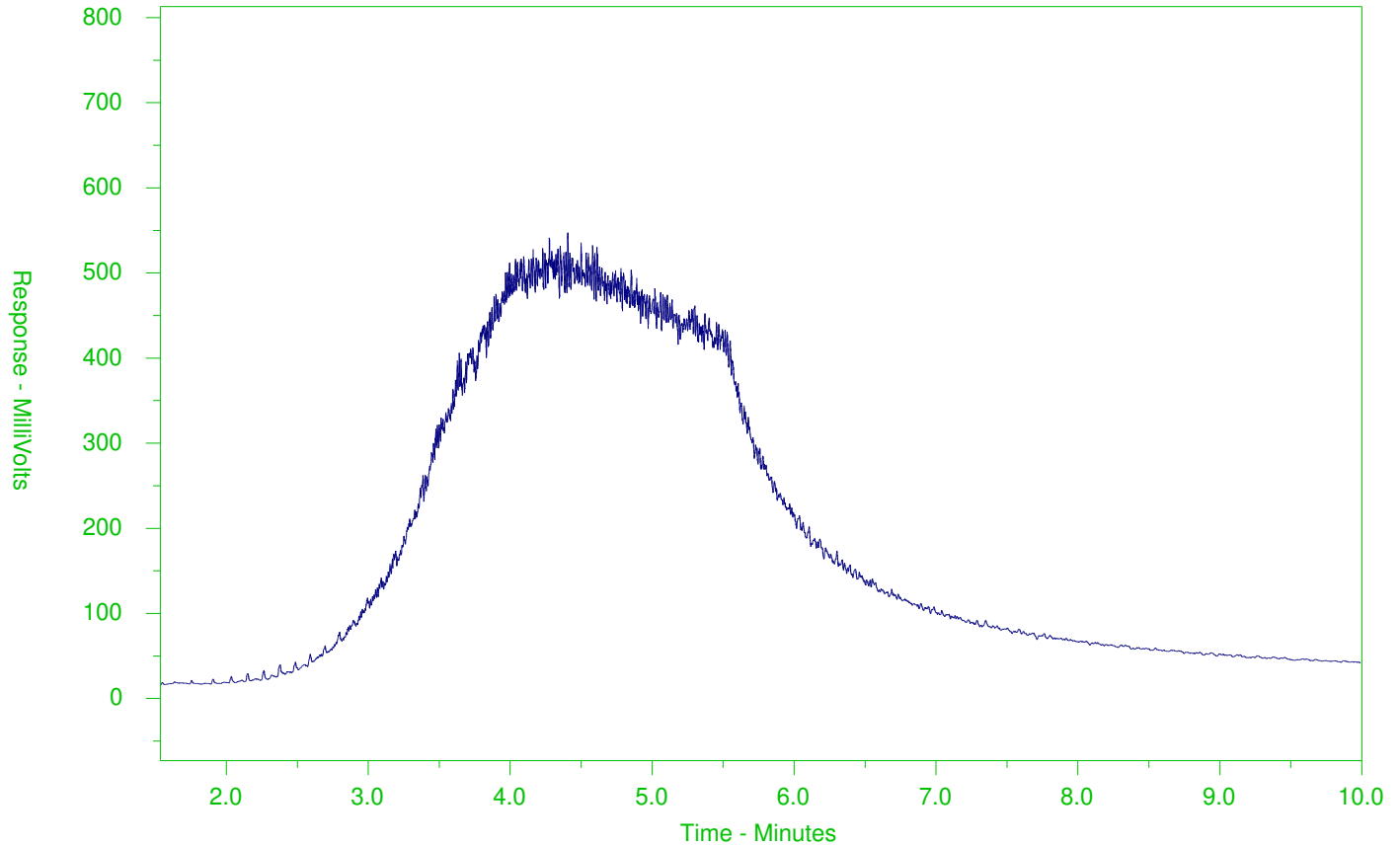
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2221612-006-E601.SG-L  
 Client Sample ID: 22-13B 0-2



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

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

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

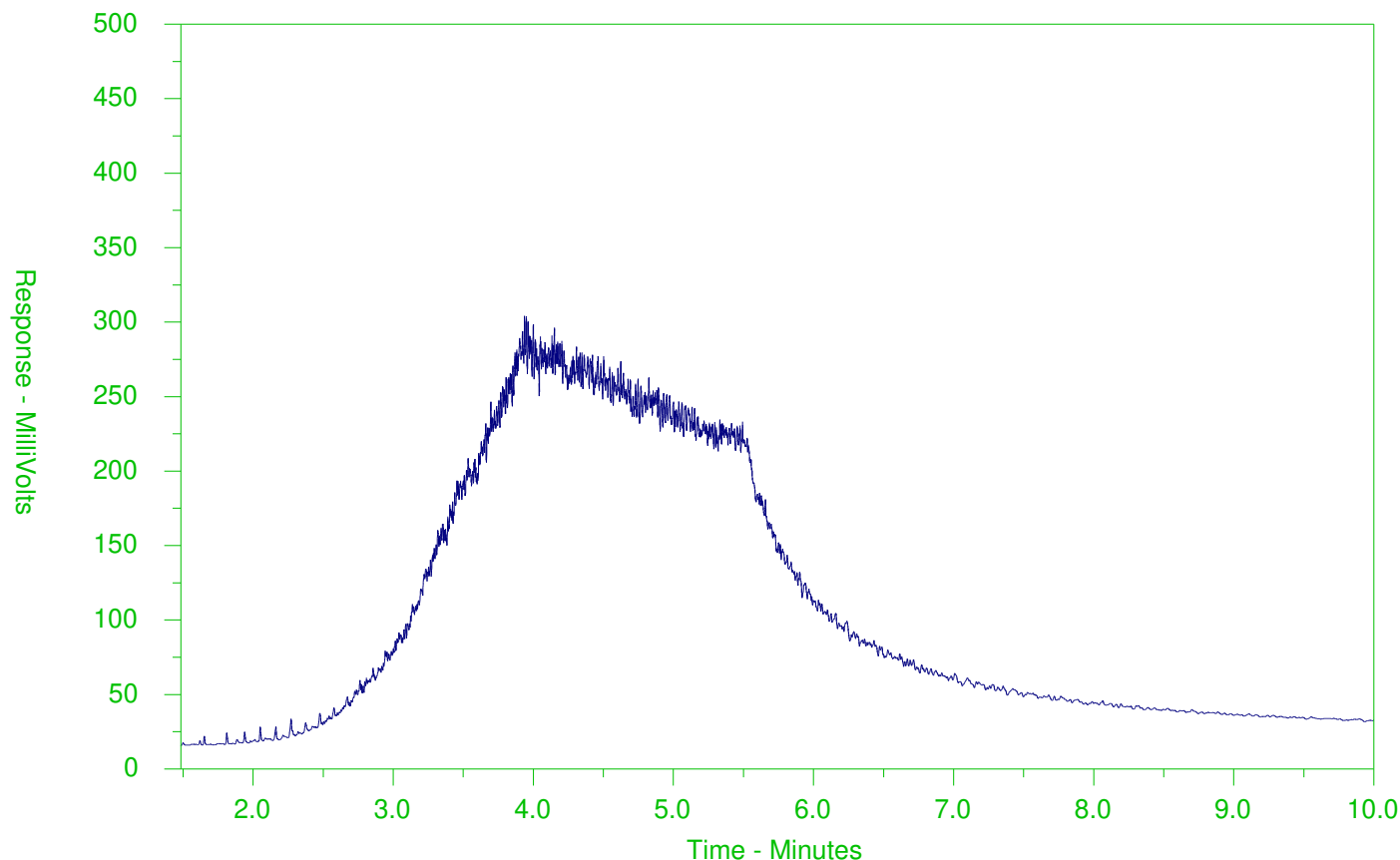
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2221612-007-E601.SG-L  
 Client Sample ID: DUP6



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

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

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

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

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

Affix ALS barcode label here  
(lab use only)

COC Number:

Pa:

Environmental Division  
Waterloo  
Work Order Reference  
WT2221612

Telephone: +1 519 886 8970



Report To: Contact and company name below will appear on the final report

Report Format / Distribution

Select Service Level Below - Contact your A&T

Regular [R]  Standard [ST]  Same Day [S]  Emergency [E]

4 day [P4-20%]  3 day [P3-25%]  2 day [P2-50%]

Emergency (Laborator) 1 Business Same Day

For tests that can not be performed according to the service level selected.

Analysis Request

Indicate Filled (F), Preserved (P) or Filtered and Preserved (FP) below

Company: **Doni-McLennan Inc.**  
 Contact: **Doni Elliott**  
 Phone: **43-857-4936**  
 Street: **1755 Woodward Drive, Unit 200**  
 City/Province: **Chatham, ON**  
 Postal Code: **K2C 0P4**  
 Invoice To: **Same as Report To**  YES  NO  
 Copy of Invoice with Report  YES  NO  
 Company:   
 Contact:   
 ALS Account # / Quote #: **90029**  
 Job #: **0006-0103**  
 PO / AFE:   
 LSD:   
 Project Information:   
 Email 1 or Fax: **invoicing@donimc.com**  
 Email 2:   
 Select Invoice Distribution:  EMAIL  MAIL  FAX  
 Select Report Format:  PDF  EXCEL  EDD (SIGNAL)  
 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

ALS Lab Work Order # (lab use only):   
 Sample Identification and/or Coordinates (This description will appear on the report)  
 ALS Sample # (lab use only):   
 Date (dd-mm-yy):   
 Time (hh:mm):   
 Sample Type:   
 ALS Contact: **Eric**  
 Date (dd-mm-yy):   
 Time (hh:mm):   
 Sample Type:   
 Receiver: **Antonia Cass**  
 Date: **10-Nov-22**  
 Time: **17:10**

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS
22-06B	0.75-1.75	09-Nov-22		Soil	PHC BTEX PCB VOC PAH Metals Cr6 Hg pH SAR
22-06B	2.5-3.25	09-Nov-22		Soil	PHC BTEX PCB VOC PAH Metals Cr6 Hg pH SAR
D-85		09-Nov-22			PHC BTEX PCB VOC PAH Metals Cr6 Hg pH SAR
22-01C	0.25-2	09-Nov-22			PHC BTEX PCB VOC PAH Metals Cr6 Hg pH SAR
22-61C	2.5-3	09-Nov-22			PHC BTEX PCB VOC PAH Metals Cr6 Hg pH SAR
22-13B	0-2	10-Nov-22			PHC BTEX PCB VOC PAH Metals Cr6 Hg pH SAR
D-86		10-Nov-22			PHC BTEX PCB VOC PAH Metals Cr6 Hg pH SAR
22-05C	0-1	10-Nov-22			PHC BTEX PCB VOC PAH Metals Cr6 Hg pH SAR

Drinking Water (DW) Samples (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)  
**0. Reg. 153/04 Table 7 For RSC**

SAMPLE CONDITIONS RECEIVED (lab use only)  
 Frozen  Ice Packs  Ice Cubes  Custody seal intact  Cooling Initiated   
 SIF Observations Yes  No   
 INITIAL COOLER TEMPERATURES °C: **60**  
 FINAL SHIPMENT RECEPTION (lab use only)  
 Received by: **FH**  
 Date: **NOV 17 2022**  
 Time: **11AM**




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## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

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<p><b>Work Order</b> : <b>WT2222268</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : Antonia Cass</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 3</p> <p><b>No. of samples analysed</b> : 3</p>	<p><b>Page</b> : 1 of 8</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 17-Nov-2022 07:35</p> <p><b>Date Analysis Commenced</b> : 18-Nov-2022</p> <p><b>Issue Date</b> : 24-Nov-2022 18:18</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).**

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### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Niral Patel		Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Organics, Waterloo, Ontario

## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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. Guidelines 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.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
%	percent
mg/kg	milligrams per kilogram

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .



## Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)	Method	LOR	Unit	Client sample ID						
				22-39 0.5-1	14-Nov-2022 00:00	WT2222268-001	ON153/04 T7-RPI-C			
<b>Physical Tests</b>										
moisture	E144	0.25	%	17.0	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	--	--	--	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.21 mg/kg	--	--	--	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	--	--	--	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.27 mg/kg	--	--	--	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	--	--	--	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	9.4 mg/kg	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	3.4 mg/kg	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	4.8 mg/kg	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.083 mg/kg	--	--	--	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	3.5 mg/kg	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	3.4 mg/kg	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	0.084 mg/kg	--	--	--	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	0.1 mg/kg	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	2 mg/kg	--	--	--	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	2.8 mg/kg	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	16 mg/kg	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	1.7 mg/kg	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	0.75 mg/kg	--	--	--	--	--





Analyte	Method	LOR	Unit	WT2222268-001 (Continued)	ON153/04 T7-RPI-C					
<b>Volatile Organic Compounds - Continued</b>										
styrene	E611D	0.050	mg/kg	<0.050	0.7 mg/kg	--	--	--	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.058 mg/kg	--	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	0.28 mg/kg	--	--	--	--	--
toluene	E611D	0.050	mg/kg	<0.050	2.3 mg/kg	--	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	0.38 mg/kg	--	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.061 mg/kg	--	--	--	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	--	--	--	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.02 mg/kg	--	--	--	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	3.1 mg/kg	--	--	--	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	0.10	%	92.8	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	101	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)  
 T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)



## Analytical Results

				Client sample ID							
				Sampling date/time							
				22-39 2.5-3.5							
				14-Nov-2022							
				00:00							
Analyte	Method	LOR	Unit	WT2222268-002	ON153/04						
					T7-RPI-C						
<b>Physical Tests</b>											
moisture	E144	0.25	%	14.3	--	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>											
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	--	--	--	--	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.21 mg/kg	--	--	--	--	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	--	--	--	--	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.27 mg/kg	--	--	--	--	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	--	--	--	--	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	9.4 mg/kg	--	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	3.4 mg/kg	--	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	4.8 mg/kg	--	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.083 mg/kg	--	--	--	--	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	--	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	3.5 mg/kg	--	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	3.4 mg/kg	--	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	0.084 mg/kg	--	--	--	--	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	0.1 mg/kg	--	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	2 mg/kg	--	--	--	--	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	2.8 mg/kg	--	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	16 mg/kg	--	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	1.7 mg/kg	--	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	0.75 mg/kg	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2222268-002 (Continued)	ON153/04 T7-RPI-C					
<b>Volatile Organic Compounds - Continued</b>										
styrene	E611D	0.050	mg/kg	<0.050	0.7 mg/kg	--	--	--	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.058 mg/kg	--	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	0.28 mg/kg	--	--	--	--	--
toluene	E611D	0.050	mg/kg	<0.050	2.3 mg/kg	--	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	0.38 mg/kg	--	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.061 mg/kg	--	--	--	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	--	--	--	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.02 mg/kg	--	--	--	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	3.1 mg/kg	--	--	--	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	0.10	%	86.8	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	95.2	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)  
 T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID							
				DUP7							
Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)				Sampling date/time							
				14-Nov-2022 00:00							
				WT2222268-003	ON153/04 T7-RPI-C						
<b>Physical Tests</b>											
moisture	E144	0.25	%	17.1	--	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>											
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	--	--	--	--	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.21 mg/kg	--	--	--	--	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	--	--	--	--	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.27 mg/kg	--	--	--	--	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	--	--	--	--	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	9.4 mg/kg	--	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	3.4 mg/kg	--	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	4.8 mg/kg	--	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.083 mg/kg	--	--	--	--	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	--	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	3.5 mg/kg	--	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	3.4 mg/kg	--	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	0.084 mg/kg	--	--	--	--	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	0.1 mg/kg	--	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	2 mg/kg	--	--	--	--	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	2.8 mg/kg	--	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	16 mg/kg	--	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	1.7 mg/kg	--	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	0.75 mg/kg	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2222268-003 (Continued)	ON153/04 T7-RPI-C					
<b>Volatile Organic Compounds - Continued</b>										
styrene	E611D	0.050	mg/kg	<0.050	0.7 mg/kg	--	--	--	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.058 mg/kg	--	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	0.28 mg/kg	--	--	--	--	--
toluene	E611D	0.050	mg/kg	<0.050	2.3 mg/kg	--	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	0.38 mg/kg	--	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	--	--	--	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.061 mg/kg	--	--	--	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	--	--	--	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.02 mg/kg	--	--	--	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	3.1 mg/kg	--	--	--	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	0.10	%	105	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	111	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)  
 T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>WT2222268</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : Antonia Cass</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 3</p> <p><b>No. of samples analysed</b> : 3</p>	<p><b>Page</b> : 1 of 6</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 17-Nov-2022 07:35</p> <p><b>Issue Date</b> : 24-Nov-2022 18:19</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

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### ***Workorder Comments***

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



**Outliers : Quality Control Samples**

*Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes*

Matrix: **Soil/Solid**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Matrix Spike (MS) Recoveries</b>								
Volatile Organic Compounds	Anonymous	Anonymous	dichlorodifluoromethane	75-71-8	E611D	48.2 % <sup>MES</sup>	50.0-140%	Recovery less than lower data quality objective

**Result Qualifiers**

Qualifier	Description
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).





## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-39 0.5-1	E144	14-Nov-2022	----	----	----		21-Nov-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-39 2.5-3.5	E144	14-Nov-2022	----	----	----		21-Nov-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap DUP7	E144	14-Nov-2022	----	----	----		21-Nov-2022	----	----		
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-39 0.5-1	E611D	14-Nov-2022	18-Nov-2022	14 days	5 days	✓	20-Nov-2022	40 days	2 days	✓	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-39 2.5-3.5	E611D	14-Nov-2022	18-Nov-2022	14 days	5 days	✓	20-Nov-2022	40 days	2 days	✓	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] DUP7	E611D	14-Nov-2022	18-Nov-2022	14 days	5 days	✓	20-Nov-2022	40 days	2 days	✓	

### Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Moisture Content by Gravimetry	E144	751884	1	19	5.2	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	749374	1	17	5.8	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
Moisture Content by Gravimetry	E144	751884	1	19	5.2	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	749374	1	17	5.8	5.0	✔
<b>Method Blanks (MB)</b>							
Moisture Content by Gravimetry	E144	751884	1	19	5.2	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	749374	1	17	5.8	5.0	✔
<b>Matrix Spikes (MS)</b>							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	749374	1	17	5.8	5.0	✔



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

<i>Analytical Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
Moisture Content by Gravimetry	E144 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D Waterloo - Environmental	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
VOCs Methanol Extraction for Headspace Analysis	EP581 Waterloo - Environmental	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.

## QUALITY CONTROL REPORT

<p><b>Work Order</b> : <b>WT2222268</b></p> <p>Client : Omni-McCann Inc.</p> <p>Contact : Daniel Elliot</p> <p>Address : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p>Telephone :</p> <p>Project : 0006-0103</p> <p>PO : ----</p> <p>C-O-C number : ----</p> <p>Sampler : Antonia Cass 705 243 5828</p> <p>Site : ----</p> <p>Quote number : Project 0006-0103</p> <p>No. of samples received : 3</p> <p>No. of samples analysed : 3</p>	<p>Page : 1 of 10</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Emily Smith</p> <p>Address : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 17-Nov-2022 07:35</p> <p>Date Analysis Commenced : 18-Nov-2022</p> <p>Issue Date : 24-Nov-2022 18:18</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Niral Patel		Waterloo Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Waterloo Organics, Waterloo, Ontario

Page : 2 of 10  
Work Order : WT2222268  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

### Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

## Workorder Comments

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Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Soil/Solid

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Physical Tests (QC Lot: 751884)</b>											
SK2206759-001	Anonymous	moisture	----	E144	0.25	%	14.8	14.2	4.28%	20%	----
<b>Volatile Organic Compounds (QC Lot: 749374)</b>											
WT2222297-001	Anonymous	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.0050	mg/kg	0.411	0.415	0.930%	40%	----
		bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	<0.045	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040	<0.040	0	Diff <2x LOR	----



Sub-Matrix: **Soil/Solid**

*Laboratory Duplicate (DUP) Report*

<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Original Result</i>	<i>Duplicate Result</i>	<i>RPD(%) or Difference</i>	<i>Duplicate Limits</i>	<i>Qualifier</i>
<b>Volatile Organic Compounds (QC Lot: 749374) - continued</b>											
WT2222297-001	Anonymous	styrene	100-42-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.050	mg/kg	0.061	0.062	0.0006	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----



## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 751884)</b>						
moisture	---	E144	0.25	%	<0.25	---
<b>Volatile Organic Compounds (QCLot: 749374)</b>						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	---
benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	---
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	---
bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	---
bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	---
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	---
chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	---
chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	---
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	---
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	---
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	---
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	---
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	---
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	---
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	---
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	---
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	---
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	---
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	---
dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	---
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	---
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	---
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	---
ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	---
hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	---
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	---
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	---
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	---
styrene	100-42-5	E611D	0.05	mg/kg	<0.050	---
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	---





Sub-Matrix: **Soil/Solid**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
<b>Volatile Organic Compounds (QCLot: 749374) - continued</b>						
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----



## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Physical Tests (QCLot: 751884)</b>									
moisture	---	E144	0.25	%	50 %	99.0	90.0	110	---
<b>Volatile Organic Compounds (QCLot: 749374)</b>									
Acetone	67-64-1	E611D	0.5	mg/kg	3.475 mg/kg	102	60.0	140	---
benzene	71-43-2	E611D	0.005	mg/kg	3.475 mg/kg	102	70.0	130	---
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.475 mg/kg	99.4	50.0	140	---
bromoform	75-25-2	E611D	0.05	mg/kg	3.475 mg/kg	93.8	70.0	130	---
bromomethane	74-83-9	E611D	0.05	mg/kg	3.475 mg/kg	85.0	50.0	140	---
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.475 mg/kg	98.7	70.0	130	---
chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.475 mg/kg	95.8	70.0	130	---
chloroform	67-66-3	E611D	0.05	mg/kg	3.475 mg/kg	97.3	70.0	130	---
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.475 mg/kg	98.7	60.0	130	---
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.475 mg/kg	94.2	70.0	130	---
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.475 mg/kg	99.4	70.0	130	---
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.475 mg/kg	99.8	70.0	130	---
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.475 mg/kg	100.0	70.0	130	---
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.475 mg/kg	67.5	50.0	140	---
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.475 mg/kg	95.9	60.0	130	---
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.475 mg/kg	95.8	60.0	130	---
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.475 mg/kg	90.2	60.0	130	---
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.475 mg/kg	98.0	70.0	130	---
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.475 mg/kg	95.7	60.0	130	---
dichloromethane	75-09-2	E611D	0.045	mg/kg	3.475 mg/kg	94.7	70.0	130	---
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.475 mg/kg	97.8	70.0	130	---
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.475 mg/kg	93.7	70.0	130	---
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.475 mg/kg	91.3	70.0	130	---
ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.475 mg/kg	98.8	70.0	130	---
hexane, n-	110-54-3	E611D	0.05	mg/kg	3.475 mg/kg	92.0	70.0	130	---
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.475 mg/kg	99.0	60.0	140	---
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.475 mg/kg	96.3	60.0	140	---
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.475 mg/kg	100	70.0	130	---
styrene	100-42-5	E611D	0.05	mg/kg	3.475 mg/kg	98.6	70.0	130	---
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.475 mg/kg	98.4	60.0	130	---



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 749374) - continued</b>									
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.475 mg/kg	98.7	60.0	130	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.475 mg/kg	95.8	60.0	130	----
toluene	108-88-3	E611D	0.05	mg/kg	3.475 mg/kg	98.1	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.475 mg/kg	98.3	60.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.475 mg/kg	92.6	60.0	130	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.475 mg/kg	97.8	60.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.475 mg/kg	89.3	50.0	140	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.475 mg/kg	75.1	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	98.9	70.0	130	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	3.475 mg/kg	98.3	70.0	130	----



### Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 749374)</b>										
WT2222297-001	Anonymous	Acetone	67-64-1	E611D	2.48 mg/kg	4.6875 mg/kg	107	50.0	140	----
		benzene	71-43-2	E611D	2.04 mg/kg	4.6875 mg/kg	88.5	50.0	140	----
		bromodichloromethane	75-27-4	E611D	2.13 mg/kg	4.6875 mg/kg	92.2	50.0	140	----
		bromoform	75-25-2	E611D	2.17 mg/kg	4.6875 mg/kg	94.0	50.0	140	----
		bromomethane	74-83-9	E611D	1.65 mg/kg	4.6875 mg/kg	71.5	50.0	140	----
		carbon tetrachloride	56-23-5	E611D	1.92 mg/kg	4.6875 mg/kg	83.2	50.0	140	----
		chlorobenzene	108-90-7	E611D	1.98 mg/kg	4.6875 mg/kg	85.7	50.0	140	----
		chloroform	67-66-3	E611D	2.00 mg/kg	4.6875 mg/kg	86.7	50.0	140	----
		dibromochloromethane	124-48-1	E611D	2.20 mg/kg	4.6875 mg/kg	95.5	50.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	2.14 mg/kg	4.6875 mg/kg	92.8	50.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	2.13 mg/kg	4.6875 mg/kg	92.4	50.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	2.06 mg/kg	4.6875 mg/kg	89.2	50.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	2.09 mg/kg	4.6875 mg/kg	90.4	50.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	1.11 mg/kg	4.6875 mg/kg	48.2	50.0	140	MES
		dichloroethane, 1,1-	75-34-3	E611D	1.96 mg/kg	4.6875 mg/kg	84.7	50.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	2.18 mg/kg	4.6875 mg/kg	94.2	50.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	1.74 mg/kg	4.6875 mg/kg	75.5	50.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	2.00 mg/kg	4.6875 mg/kg	86.6	50.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	1.88 mg/kg	4.6875 mg/kg	81.2	50.0	140	----
		dichloromethane	75-09-2	E611D	2.00 mg/kg	4.6875 mg/kg	86.4	50.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	2.07 mg/kg	4.6875 mg/kg	89.8	50.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	1.99 mg/kg	4.6875 mg/kg	86.3	50.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	2.01 mg/kg	4.6875 mg/kg	87.0	50.0	140	----
		ethylbenzene	100-41-4	E611D	1.97 mg/kg	4.6875 mg/kg	85.2	50.0	140	----
		hexane, n-	110-54-3	E611D	1.75 mg/kg	4.6875 mg/kg	75.6	50.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	2.40 mg/kg	4.6875 mg/kg	104	50.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	2.30 mg/kg	4.6875 mg/kg	99.4	50.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.14 mg/kg	4.6875 mg/kg	92.8	50.0	140	----
		styrene	100-42-5	E611D	2.04 mg/kg	4.6875 mg/kg	88.4	50.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.07 mg/kg	4.6875 mg/kg	89.7	50.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	2.25 mg/kg	4.6875 mg/kg	97.4	50.0	140	----



Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
<b>Volatile Organic Compounds (QCLot: 749374) - continued</b>										
WT2222297-001	Anonymous	tetrachloroethylene	127-18-4	E611D	1.84 mg/kg	4.6875 mg/kg	79.8	50.0	140	----
		toluene	108-88-3	E611D	1.97 mg/kg	4.6875 mg/kg	85.4	50.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	1.93 mg/kg	4.6875 mg/kg	83.5	50.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	2.07 mg/kg	4.6875 mg/kg	89.8	50.0	140	----
		trichloroethylene	79-01-6	E611D	1.92 mg/kg	4.6875 mg/kg	83.0	50.0	140	----
		trichlorofluoromethane	75-69-4	E611D	1.70 mg/kg	4.6875 mg/kg	73.6	50.0	140	----
		vinyl chloride	75-01-4	E611D	1.37 mg/kg	4.6875 mg/kg	59.2	50.0	140	----
		xylene, m+p-	179601-23-1	E611D	3.94 mg/kg	9.375 mg/kg	85.4	50.0	140	----
		xylene, o-	95-47-6	E611D	2.00 mg/kg	4.6875 mg/kg	86.5	50.0	140	----

## Qualifiers

### Qualifier

### Description

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).



ALS Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Chain of Custody (COC) / Analytical Request Form

AMIX ALS Barcode Label Here (lab use only)

COC Num: Environmental Division Waterloo

WT2222268



Telephone: +1 519 886 6970

Report Format / Distribution

Select Report Format: PDF [X] EXCEL [ ] EPO (DISTAL) [ ] Quality Control (QC) Report with Report [X] YES [ ] NO Compare Results to Criteria on Report - provide details below if box checked Select Distribution: EMAIL [X] MAIL [ ] FAX

Email 1 or Fax: dan@omni-mcainn.com Email 2: kristina@omni-mcainn.com Email 3: antonia@omni-mcainn.com Invoice Distribution: Select Invoice Distribution: [X] EMAIL [ ] MAIL [ ] FAX Email 1 or Fax: invoice@omni-mcainn.com Email 2

Oil and Gas Required Fields (client use) AFE/Coal Center: PO# Major/Minor Code: Routing Code: Requisitioner: Location:

ALS Contact: Eric Sampler: Antonia Cass

Report To: Contact and company name below will appear on the final report Company: Omni-McCainn Inc. Contact: Daniel Elliot Home: 613-853-4936 Company address below will appear on the final report Street: 1735 Weckwerd Drive, Unit 200 City/Province: Chatham, ON Postal Code: K2C 0P4 Invoice To: Same as Report To [X] YES [ ] NO Copy of Invoice with Report [ ] YES [X] NO Project Information: ALS Account # / Quote #: Q40626 Job #: COC-0103 O/AFE: SD: ALS Lab Work Order # (lab use only):

ALS Sample # (lab use only) Sample Identification and/or Coordinates (This description will appear on the report)

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type
22-39	0.5-1	14-NOV-22		
22-39	2.5-3.5	14-NOV-22		
	DUP	14-NOV-22		

NUMBER OF CONTAINERS

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS
22-39	0.5-1	14-NOV-22			3
22-39	2.5-3.5	14-NOV-22			3
	DUP	14-NOV-22			3

SAMPLES ON HOLD

SUSPECTED HAZARD (see Special Instructions)

Drinking Water (DW) Samples (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)

O.R.G. 153/04 Table 7 FOR RSC

SAMPLE CONDITION AS RECEIVED (lab use only) Frozen [ ] Ice Packs [ ] Ice Cubes [ ] Custody seal intact [ ] Cooling Initiated [ ]

INITIAL COOLER TEMPERATURES °C: HI FINAL COOLER TEMPERATURES °C: HI

SHIPMENT RELEASE (client use) Released by: Antonia Cass Date: 14-NOV-22 Time: 7:14

INITIAL SHIPMENT RECEPTION (lab use only) Date: 11/17/22

Time: 7:35

FINAL SHIPMENT RECEPTION (lab use only) Date: 18-NOV-22

Time: 9:15

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

MA VS-124 Sol-574 677

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

AMS 2018 F100N




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## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

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<p><b>Work Order</b> : <b>WT2222790</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : Daniel Elliot</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 2</p> <p><b>No. of samples analysed</b> : 2</p>	<p><b>Page</b> : 1 of 6</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 21-Nov-2022 16:25</p> <p><b>Date Analysis Commenced</b> : 23-Nov-2022</p> <p><b>Issue Date</b> : 28-Nov-2022 12:19</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).**

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### *Signatories*

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Amanda Ganouri-Lumsden	Department Manager - Microbiology and Prep	Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Organics, Waterloo, Ontario

## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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. Guidelines 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.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
%	percent
mg/kg	milligrams per kilogram

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .

## Workorder Comments

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





## Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)	Method	LOR	Unit	Client sample ID						
				22-40 0-1.5						
Analyte				Sampling date/time	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
				17-Nov-2022 00:00	WT2222790-001					
<b>Physical Tests</b>										
moisture	E144	0.25	%	17.6	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2222790-001 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	0.10	%	82.8	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	97.1	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04	ON153/04	ON153/04		
				Sampling date/time	T7-ICC-C	T7-ICC-F	T7-RPI-C	T7-RPI-F		
Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)				22-40 2-3 17-Nov-2022 00:00	WT2222790-002					
<b>Physical Tests</b>										
moisture	E144	0.25	%	12.0	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2222790-002 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	0.10	%	90.9	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	103	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>WT2222790</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : Daniel Elliot</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 2</p> <p><b>No. of samples analysed</b> : 2</p>	<p><b>Page</b> : 1 of 6</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 21-Nov-2022 16:25</p> <p><b>Issue Date</b> : 28-Nov-2022 12:19</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

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### ***Workorder Comments***

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



**Outliers : Quality Control Samples**

*Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes*

Matrix: **Soil/Solid**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Matrix Spike (MS) Recoveries</b>								
Volatile Organic Compounds	Anonymous	Anonymous	Acetone	67-64-1	E611D	152 % <sup>RRQC</sup>	50.0-140%	Recovery greater than upper data quality objective
Volatile Organic Compounds	Anonymous	Anonymous	carbon tetrachloride	56-23-5	E611D	146 % <sup>MES</sup>	50.0-140%	Recovery greater than upper data quality objective
Volatile Organic Compounds	Anonymous	Anonymous	dichloroethylene, trans-1,2-	156-60-5	E611D	141 % <sup>MES</sup>	50.0-140%	Recovery greater than upper data quality objective
Volatile Organic Compounds	Anonymous	Anonymous	trichloroethane, 1,1,1-	71-55-6	E611D	144 % <sup>MES</sup>	50.0-140%	Recovery greater than upper data quality objective

**Result Qualifiers**

Qualifier	Description
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).
RRQC	Refer to report comments for information regarding this QC result.



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-40 0-1.5	E144	17-Nov-2022	----	----	----		23-Nov-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-40 2-3	E144	17-Nov-2022	----	----	----		23-Nov-2022	----	----		
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-40 0-1.5	E611D	17-Nov-2022	23-Nov-2022	14 days	7 days	✓	24-Nov-2022	40 days	0 days	✓	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-40 2-3	E611D	17-Nov-2022	23-Nov-2022	14 days	7 days	✓	24-Nov-2022	40 days	0 days	✓	

### Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).





## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Moisture Content by Gravimetry	E144	755009	1	20	5.0	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	755433	1	20	5.0	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
Moisture Content by Gravimetry	E144	755009	1	20	5.0	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	755433	1	20	5.0	5.0	✔
<b>Method Blanks (MB)</b>							
Moisture Content by Gravimetry	E144	755009	1	20	5.0	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	755433	1	20	5.0	5.0	✔
<b>Matrix Spikes (MS)</b>							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	755433	1	20	5.0	5.0	✔



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

<i>Analytical Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
Moisture Content by Gravimetry	E144  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D  Waterloo - Environmental	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
VOCs Methanol Extraction for Headspace Analysis	EP581  Waterloo - Environmental	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.

## QUALITY CONTROL REPORT

<p><b>Work Order</b> : <b>WT2222790</b></p> <p>Client : Omni-McCann Inc.</p> <p>Contact : Daniel Elliot</p> <p>Address : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p>Telephone :</p> <p>Project : 0006-0103</p> <p>PO : ----</p> <p>C-O-C number : ----</p> <p>Sampler : Daniel Elliot 705 243 5828</p> <p>Site : ----</p> <p>Quote number : Project 0006-0103</p> <p>No. of samples received : 2</p> <p>No. of samples analysed : 2</p>	<p>Page : 1 of 10</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Emily Smith</p> <p>Address : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 21-Nov-2022 16:25</p> <p>Date Analysis Commenced : 23-Nov-2022</p> <p>Issue Date : 28-Nov-2022 12:19</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Amanda Ganouri-Lumsden	Department Manager - Microbiology and Prep	Waterloo Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Waterloo Organics, Waterloo, Ontario

Page : 2 of 10  
Work Order : WT2222790  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

### Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

## Workorder Comments

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Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Soil/Solid

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Physical Tests (QC Lot: 755009)</b>											
WT2222774-001	Anonymous	moisture	----	E144	0.25	%	17.2	17.0	0.934%	20%	----
<b>Volatile Organic Compounds (QC Lot: 755433)</b>											
WT2222774-002	Anonymous	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	<0.045	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040	<0.040	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 755433) - continued</b>											
WT2222774-002	Anonymous	styrene	100-42-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----



## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 755009)</b>						
moisture	---	E144	0.25	%	<0.25	---
<b>Volatile Organic Compounds (QCLot: 755433)</b>						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	---
benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	---
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	---
bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	---
bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	---
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	---
chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	---
chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	---
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	---
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	---
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	---
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	---
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	---
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	---
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	---
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	---
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	---
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	---
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	---
dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	---
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	---
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	---
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	---
ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	---
hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	---
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	---
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	---
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	---
styrene	100-42-5	E611D	0.05	mg/kg	<0.050	---
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	---



Sub-Matrix: **Soil/Solid**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
<b>Volatile Organic Compounds (QCLot: 755433) - continued</b>						
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----





## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Physical Tests (QCLot: 755009)</b>									
moisture	---	E144	0.25	%	50 %	100	90.0	110	---
<b>Volatile Organic Compounds (QCLot: 755433)</b>									
Acetone	67-64-1	E611D	0.5	mg/kg	3.475 mg/kg	97.2	60.0	140	---
benzene	71-43-2	E611D	0.005	mg/kg	3.475 mg/kg	103	70.0	130	---
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.475 mg/kg	96.6	50.0	140	---
bromoform	75-25-2	E611D	0.05	mg/kg	3.475 mg/kg	93.0	70.0	130	---
bromomethane	74-83-9	E611D	0.05	mg/kg	3.475 mg/kg	84.6	50.0	140	---
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.475 mg/kg	98.2	70.0	130	---
chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.475 mg/kg	95.3	70.0	130	---
chloroform	67-66-3	E611D	0.05	mg/kg	3.475 mg/kg	95.5	70.0	130	---
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.475 mg/kg	96.3	60.0	130	---
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.475 mg/kg	88.0	70.0	130	---
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.475 mg/kg	101	70.0	130	---
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.475 mg/kg	102	70.0	130	---
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.475 mg/kg	102	70.0	130	---
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.475 mg/kg	92.9	50.0	140	---
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.475 mg/kg	122	60.0	130	---
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.475 mg/kg	94.3	60.0	130	---
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.475 mg/kg	92.2	60.0	130	---
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.475 mg/kg	94.1	70.0	130	---
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.475 mg/kg	97.4	60.0	130	---
dichloromethane	75-09-2	E611D	0.045	mg/kg	3.475 mg/kg	93.0	70.0	130	---
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.475 mg/kg	97.5	70.0	130	---
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.475 mg/kg	93.9	70.0	130	---
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.475 mg/kg	92.2	70.0	130	---
ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.475 mg/kg	100	70.0	130	---
hexane, n-	110-54-3	E611D	0.05	mg/kg	3.475 mg/kg	92.9	70.0	130	---
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.475 mg/kg	92.0	60.0	140	---
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.475 mg/kg	89.6	60.0	140	---
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.475 mg/kg	101	70.0	130	---
styrene	100-42-5	E611D	0.05	mg/kg	3.475 mg/kg	97.2	70.0	130	---
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.475 mg/kg	96.3	60.0	130	---



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 755433) - continued</b>									
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.475 mg/kg	97.8	60.0	130	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.475 mg/kg	96.2	60.0	130	----
toluene	108-88-3	E611D	0.05	mg/kg	3.475 mg/kg	99.5	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.475 mg/kg	97.1	60.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.475 mg/kg	88.3	60.0	130	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.475 mg/kg	94.3	60.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.475 mg/kg	88.4	50.0	140	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.475 mg/kg	76.8	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	101	70.0	130	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	3.475 mg/kg	98.8	70.0	130	----



### Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 755433)</b>										
WT2222774-002	Anonymous	Acetone	67-64-1	E611D	3.66 mg/kg	3.125 mg/kg	152	50.0	140	RRQC
		benzene	71-43-2	E611D	2.45 mg/kg	3.125 mg/kg	101	50.0	140	----
		bromodichloromethane	75-27-4	E611D	2.29 mg/kg	3.125 mg/kg	94.7	50.0	140	----
		bromoform	75-25-2	E611D	2.19 mg/kg	3.125 mg/kg	90.8	50.0	140	----
		bromomethane	74-83-9	E611D	2.91 mg/kg	3.125 mg/kg	120	50.0	140	----
		carbon tetrachloride	56-23-5	E611D	3.52 mg/kg	3.125 mg/kg	146	50.0	140	MES
		chlorobenzene	108-90-7	E611D	2.25 mg/kg	3.125 mg/kg	93.2	50.0	140	----
		chloroform	67-66-3	E611D	3.25 mg/kg	3.125 mg/kg	135	50.0	140	----
		dibromochloromethane	124-48-1	E611D	2.29 mg/kg	3.125 mg/kg	94.7	50.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	2.11 mg/kg	3.125 mg/kg	87.5	50.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	2.38 mg/kg	3.125 mg/kg	98.6	50.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	2.40 mg/kg	3.125 mg/kg	99.3	50.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	2.42 mg/kg	3.125 mg/kg	100	50.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	2.82 mg/kg	3.125 mg/kg	117	50.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	3.35 mg/kg	3.125 mg/kg	139	50.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	2.24 mg/kg	3.125 mg/kg	92.6	50.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	3.13 mg/kg	3.125 mg/kg	130	50.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	3.14 mg/kg	3.125 mg/kg	130	50.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	3.40 mg/kg	3.125 mg/kg	141	50.0	140	MES
		dichloromethane	75-09-2	E611D	3.36 mg/kg	3.125 mg/kg	139	50.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	2.31 mg/kg	3.125 mg/kg	95.8	50.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	2.14 mg/kg	3.125 mg/kg	88.8	50.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	2.11 mg/kg	3.125 mg/kg	87.6	50.0	140	----
		ethylbenzene	100-41-4	E611D	2.36 mg/kg	3.125 mg/kg	97.5	50.0	140	----
		hexane, n-	110-54-3	E611D	3.31 mg/kg	3.125 mg/kg	137	50.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	2.73 mg/kg	3.125 mg/kg	113	50.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	2.13 mg/kg	3.125 mg/kg	88.2	50.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.38 mg/kg	3.125 mg/kg	98.4	50.0	140	----
		styrene	100-42-5	E611D	2.30 mg/kg	3.125 mg/kg	95.2	50.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.28 mg/kg	3.125 mg/kg	94.5	50.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	2.31 mg/kg	3.125 mg/kg	95.8	50.0	140	----



Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
<b>Volatile Organic Compounds (QCLot: 755433) - continued</b>										
WT2222774-002	Anonymous	tetrachloroethylene	127-18-4	E611D	2.25 mg/kg	3.125 mg/kg	93.3	50.0	140	----
		toluene	108-88-3	E611D	2.34 mg/kg	3.125 mg/kg	97.1	50.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	3.47 mg/kg	3.125 mg/kg	144	50.0	140	MES
		trichloroethane, 1,1,2-	79-00-5	E611D	2.11 mg/kg	3.125 mg/kg	87.5	50.0	140	----
		trichloroethylene	79-01-6	E611D	2.24 mg/kg	3.125 mg/kg	92.7	50.0	140	----
		trichlorofluoromethane	75-69-4	E611D	3.34 mg/kg	3.125 mg/kg	138	50.0	140	----
		vinyl chloride	75-01-4	E611D	2.58 mg/kg	3.125 mg/kg	107	50.0	140	----
		xylene, m+p-	179601-23-1	E611D	4.74 mg/kg	6.25 mg/kg	98.1	50.0	140	----
		xylene, o-	95-47-6	E611D	2.33 mg/kg	3.125 mg/kg	96.3	50.0	140	----

### Qualifiers

Qualifier	Description
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).
RRQC	Refer to report comments for information regarding this QC result.



Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

COC Number: 17 - 802171  
Page | of |

Affix ALS barcode label here  
(lab use only)

Report To: **Omni-McCann Inc.**  
 Company: **Omni-McCann Inc.**  
 Contact: **Daniel Elliot**  
 Phone: **613-857-4936**  
 Street: **1755 Woodward Dr. Unit 206**  
 City/Province: **Ottawa, ON**  
 Postal Code: **K2C 0P4**  
 Invoiced To:  YES  NO  
 Copy of Invoice with Report:  YES  NO  
 Company:   
 Contact:   
**Project Information**  
 ALS Account # / Quote #: **40036**  
 Job #: **0006-0103**  
 PO/APE:   
 LSD:   
 ALS Lab Work Order # (lab use only): **WT2222790**  
 Sample Identification and/or Coordinates (This description will appear on the report):  
**22-40 0-1.5**  
**22-40 2-3**  
 Drinking Water (DW) Samples (client use)  
 YES  NO  
 YES  NO  
 Are samples taken from a Regulated DW System?  
 YES  NO  
 YES  NO  
 Are samples for human consumption/ use?  
 YES  NO  
 Released by: **Antonia Cuss** Date: **21-Nov-22** Time: **16:25**  
 Received by: **Gustaf F** Date: **11/21/22** Time: **16:25**  
 Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)  
**O.Reg. 153/04 Table 7**  
**For RSC**  
 Shipping and Sampling Information  
 SHIPMENT RELEASE (client use)  
 Date: **21-Nov-22** Time: **16:25**  
 RECEIVED (lab use only)  
 Date: **11/23/22** Time: **16:00**  
 FINAL SHIPMENT RECEPTION (lab use only)  
 Date: **11/23/22** Time: **16:00**  
 INITIAL SHIPMENT RECEPTION (lab use only)  
 Date: **11/21/22** Time: **16:25**  
 WHITE - LABORATORY COPY YELLOW - CLIENT COPY

Select Service Level Below - Contact your A/c to apply

Regular (R)  Standard (S)  Emergency (EMERG)

4 day (P4-20%)   
 3 day (P3-25%)   
 2 day (P2-50%)

Date and Time Required for all ESP TATS  
 For tests that can not be performed according to the aen

Environmental Division  
 Waterloo  
 Work Order Reference  
**WT2222790**

Telephone: +1 519 886 6910

**NUMBER OF CONTAINERS**

Container No	Volume
1	3 X VOC
2	3 X
3	3 X
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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: **dhearn@omni-mcann.com**  
 Email 2: **kristina@omni-mcann.com**  
 Email 3: **antonia@omni-mcann.com**

Select Invoice Distribution:  EMAIL  MAIL  FAX

Email 1 or Fax: **invalding@omni-mcann.com**  
 Email 2: **invalding@omni-mcann.com**

Oil and Gas Required Fields (client use)  
 APE/Coast Center:   
 Major/Minor Code:   
 Requisitioner:   
 Location:   
 ALS Contact: **Eric** Sampler: **Daniel Elliot**  
 Date (dd-mm-yy): **17-Nov-22** Time (hh:mm):   
**17-Nov-22**  
 Sample Type:   
**3 X VOC**

**SAMPLE CONDITION AS RECEIVED (lab use only)**  
 Frozen  SIF Observations Yes  No   
 Ice Packs  Custody seal intact Yes  No   
 Cooling Initiated

INITIAL COOLER TEMPERATURES °C: **11.3**  
 FINAL COOLER TEMPERATURES °C: **8.6**

**SUSPECTED HAZARD (see Special Instructions)**  
**SAMPLES ON**

may apply

100%

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



## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

<p><b>Work Order</b> : <b>WT2223434</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : Daniel Elliot</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 3</p> <p><b>No. of samples analysed</b> : 3</p>	<p><b>Page</b> : 1 of 5</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 25-Nov-2022 15:30</p> <p><b>Date Analysis Commenced</b> : 29-Nov-2022</p> <p><b>Issue Date</b> : 02-Dec-2022 17:02</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Niral Patel		Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Organics, Waterloo, Ontario

## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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. Guidelines 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.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
%	percent
mg/kg	milligrams per kilogram

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .



## Analytical Results

				Client sample ID						
				22-41 4-4.5						
				Sampling date/time						
				23-Nov-2022 00:00						
Analyte	Method	LOR	Unit	WT2223434-001	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Physical Tests</b>										
moisture	E144	0.25	%	13.5	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--
benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--
bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--
bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--
bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--
chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--





Analyte	Method	LOR	Unit	WT2223434-001 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
xylenes, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	0.10	%	91.3	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	0.10	%	100	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

## No Breaches Found

**Key:**

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T7-ICC-C	153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
T7-ICC-F	153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
T7-RPI-C	153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
T7-RPI-F	153 T7-Soil-Res/Park/Inst. Property Use (Fine)

Page : 5 of 5  
Work Order : WT2223434  
Client : Omni-McCann Inc.  
Project : 0006-0103

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>WT2300985</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 20-1009849</p> <p><b>Sampler</b> : Daniel Elliot</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 2</p> <p><b>No. of samples analysed</b> : 2</p>	<p><b>Page</b> : 1 of 9</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 13-Jan-2023 11:40</p> <p><b>Issue Date</b> : 17-Jan-2023 14:31</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

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### ***Workorder Comments***

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Matrix Spike outliers occur.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



**Outliers : Quality Control Samples**

*Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes*

Matrix: **Soil/Solid**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Laboratory Control Sample (LCS) Recoveries</b>								
Volatile Organic Compounds	QC-803669-002	----	Dichlorodifluoromethane	75-71-8	E611D	35.2 % <sup>LCS-L</sup>	50.0-140%	Recovery less than lower control limit

**Result Qualifiers**

Qualifier	Description
LCS-L	Lab Control Sample recovery was below ALS DQO. Reference Material and/or Matrix Spike results were acceptable. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] 22-24-0-1.25	E581.F1	13-Jan-2023	16-Jan-2023	14 days	3 days	✓	16-Jan-2023	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] DUP9	E581.F1	13-Jan-2023	16-Jan-2023	14 days	3 days	✓	16-Jan-2023	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap 22-24-0-1.25	E601.SG-L	13-Jan-2023	16-Jan-2023	14 days	4 days	✓	17-Jan-2023	40 days	1 days	✓	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap DUP9	E601.SG-L	13-Jan-2023	16-Jan-2023	14 days	4 days	✓	17-Jan-2023	40 days	1 days	✓	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap 22-24-0-1.25	E487	13-Jan-2023	17-Jan-2023	180 days	4 days	✓	17-Jan-2023	180 days	0 days	✓	
<b>Metals : Boron-Hot Water Extractable by ICPOES</b>											
Glass soil jar/Teflon lined cap DUP9	E487	13-Jan-2023	17-Jan-2023	180 days	4 days	✓	17-Jan-2023	180 days	0 days	✓	
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap 22-24-0-1.25	E510	13-Jan-2023	17-Jan-2023	----	----		17-Jan-2023	28 days	4 days	✓	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Metals : Mercury in Soil/Solid by CVAAS</b>											
Glass soil jar/Teflon lined cap DUP9	E510	13-Jan-2023	17-Jan-2023	----	----		17-Jan-2023	28 days	4 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap 22-24-0-1.25	E440	13-Jan-2023	17-Jan-2023	----	----		17-Jan-2023	180 days	4 days	✔	
<b>Metals : Metals in Soil/Solid by CRC ICPMS</b>											
Glass soil jar/Teflon lined cap DUP9	E440	13-Jan-2023	17-Jan-2023	----	----		17-Jan-2023	180 days	4 days	✔	
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-24-0-1.25	E144	13-Jan-2023	----	----	----		16-Jan-2023	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap DUP9	E144	13-Jan-2023	----	----	----		16-Jan-2023	----	----		
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS</b>											
Glass soil jar/Teflon lined cap 22-24-0-1.25	E641A	13-Jan-2023	16-Jan-2023	14 days	4 days	✔	17-Jan-2023	40 days	1 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hex:Ace GC-MS</b>											
Glass soil jar/Teflon lined cap DUP9	E641A	13-Jan-2023	16-Jan-2023	14 days	4 days	✔	17-Jan-2023	40 days	1 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap 22-24-0-1.25	E532	13-Jan-2023	16-Jan-2023	30 days	4 days	✔	17-Jan-2023	7 days	1 days	✔	
<b>Speciated Metals : Hexavalent Chromium (Cr VI) by IC</b>											
Glass soil jar/Teflon lined cap DUP9	E532	13-Jan-2023	16-Jan-2023	30 days	4 days	✔	17-Jan-2023	7 days	1 days	✔	



Matrix: **Soil/Solid**

Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>										
<b>Glass soil methanol vial [ON MECP]</b> 22-24-0-1.25	E611D	13-Jan-2023	16-Jan-2023	14 days	3 days	✓	16-Jan-2023	40 days	0 days	✓
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>										
<b>Glass soil methanol vial [ON MECP]</b> DUP9	E611D	13-Jan-2023	16-Jan-2023	14 days	3 days	✓	16-Jan-2023	40 days	0 days	✓

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).





## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: \* = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Boron-Hot Water Extractable by ICPOES	E487	804528	1	2	50.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID	E581.F1	803670	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	803666	1	6	16.6	5.0	✓
Hexavalent Chromium (Cr VI) by IC	E532	803746	1	14	7.1	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	804527	1	2	50.0	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	804526	1	8	12.5	5.0	✓
Moisture Content by Gravimetry	E144	803828	1	19	5.2	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	803668	1	2	50.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	803669	1	20	5.0	5.0	✓
<b>Laboratory Control Samples (LCS)</b>							
Boron-Hot Water Extractable by ICPOES	E487	804528	2	2	100.0	10.0	✓
CCME PHC - F1 by Headspace GC-FID	E581.F1	803670	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	803666	1	6	16.6	5.0	✓
Hexavalent Chromium (Cr VI) by IC	E532	803746	2	14	14.2	10.0	✓
Mercury in Soil/Solid by CVAAS	E510	804527	2	2	100.0	10.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	804526	2	8	25.0	10.0	✓
Moisture Content by Gravimetry	E144	803828	1	19	5.2	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	803668	1	2	50.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	803669	1	20	5.0	5.0	✓
<b>Method Blanks (MB)</b>							
Boron-Hot Water Extractable by ICPOES	E487	804528	1	2	50.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID	E581.F1	803670	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	803666	1	6	16.6	5.0	✓
Hexavalent Chromium (Cr VI) by IC	E532	803746	1	14	7.1	5.0	✓
Mercury in Soil/Solid by CVAAS	E510	804527	1	2	50.0	5.0	✓
Metals in Soil/Solid by CRC ICPMS	E440	804526	1	8	12.5	5.0	✓
Moisture Content by Gravimetry	E144	803828	1	19	5.2	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	803668	1	2	50.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	803669	1	20	5.0	5.0	✓
<b>Matrix Spikes (MS)</b>							
CCME PHC - F1 by Headspace GC-FID	E581.F1	803670	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	803666	1	6	16.6	5.0	✓
PAHs by Hex:Ace GC-MS	E641A	803668	1	2	50.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	803669	1	20	5.0	5.0	✓



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Moisture Content by Gravimetry	E144 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Metals in Soil/Solid by CRC ICPMS	E440 Waterloo - Environmental	Soil/Solid	EPA 6020B (mod)	This method is intended to liberate metals that may be environmentally available. Samples are dried, then sieved through a 2 mm sieve, and digested with HNO <sub>3</sub> and HCl.  Dependent on sample matrix, some metals may be only partially recovered, including Al, Ba, Be, Cr, Sr, Ti, Tl, V, W, and Zr. Silicate minerals are not solubilized. Volatile forms of sulfur (including sulfide) may not be captured, as they may be lost during sampling, storage, or digestion. This method does not adequately recover elemental sulfur, and is unsuitable for assessment of elemental sulfur standards or guidelines.  Analysis is by Collision/Reaction Cell ICPMS.
Boron-Hot Water Extractable by ICPOES	E487 Waterloo - Environmental	Soil/Solid	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).
Mercury in Soil/Solid by CVAAS	E510 Waterloo - Environmental	Soil/Solid	EPA 200.2/1631 Appendix (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO <sub>3</sub> and HCl, followed by CVAAS analysis.
Hexavalent Chromium (Cr VI) by IC	E532 Waterloo - Environmental	Soil/Solid	APHA 3500-CR C	Instrumental analysis is performed by ion chromatography with UV detection.
CCME PHC - F1 by Headspace GC-FID	E581.F1 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4).
VOCs (Eastern Canada List) by Headspace GC-MS	E611D Waterloo - Environmental	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
PAHs by Hex:Ace GC-MS	E641A Waterloo - Environmental	Soil/Solid	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are extracted with hexane/acetone and analyzed by GC-MS. If reported, IACR (index of additive cancer risk, unitless) and B(a)P toxic potency equivalent (in soil concentration units) are calculated as per CCME PAH Soil Quality Guidelines fact sheet (2010) or ABT1.
F1-BTEX	EC580 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.
F2 to F3 minus PAH	EC600 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	F2-PAH = CCME Fraction 2 (C10-C16) minus Naphthalene F3-PAH = CCME Fraction 3 (C16-C34) minus select Polycyclic Aromatic Hydrocarbons (PAH) as per CCME Soil Tier 1

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for Metals and Mercury	EP440 Waterloo - Environmental	Soil/Solid	EPA 200.2 (mod)	Samples are dried, then sieved through a 2 mm sieve, and digested with HNO <sub>3</sub> and HCl. This method is intended to liberate metals that may be environmentally available.
Boron-Hot Water Extractable	EP487 Waterloo - Environmental	Soil/Solid	HW EXTR, EPA 6010B	A dried solid sample is extracted with weak 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)
Preparation of Hexavalent Chromium (Cr VI) for IC	EP532 Waterloo - Environmental	Soil/Solid	EPA 3060A	Field moist samples are digested with a sodium hydroxide/sodium carbonate solution as described in EPA 3060A.
VOCs Methanol Extraction for Headspace Analysis	EP581 Waterloo - Environmental	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PHCs and PAHs Hexane-Acetone Tumbler Extraction	EP601 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1 (mod)	Samples are subsampled and Petroleum Hydrocarbons (PHC) and PAHs are extracted with 1:1 hexane:acetone using a rotary extractor.

## QUALITY CONTROL REPORT

<p><b>Work Order</b> : <b>WT2300985</b></p> <p>Client : Omni-McCann Inc.</p> <p>Contact : Daniel Elliot</p> <p>Address : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p>Telephone :</p> <p>Project : 0006-0103</p> <p>PO : ----</p> <p>C-O-C number : 20-1009849</p> <p>Sampler : Daniel Elliot 705 243 5828</p> <p>Site : ----</p> <p>Quote number : Project 0006-0103</p> <p>No. of samples received : 2</p> <p>No. of samples analysed : 2</p>	<p>Page : 1 of 14</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Emily Smith</p> <p>Address : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 13-Jan-2023 11:40</p> <p>Date Analysis Commenced : 16-Jan-2023</p> <p>Issue Date : 17-Jan-2023 14:31</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Amanda Ganouri-Lumsden	Department Manager - Microbiology and Prep	Waterloo Centralized Prep, Waterloo, Ontario
Jeremy Gingras	Team Leader - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
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Page : 2 of 14  
Work Order : WT2300985  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

## Workorder Comments

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Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Soil/Solid

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Physical Tests (QC Lot: 803828)</b>											
HA2300010-001	Anonymous	Moisture	----	E144	0.25	%	11.7	12.4	5.97%	20%	----
<b>Metals (QC Lot: 804526)</b>											
WT2300985-001	22-24-0-1.25	Antimony	7440-36-0	E440	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		Arsenic	7440-38-2	E440	0.10	mg/kg	1.62	1.73	6.88%	30%	----
		Barium	7440-39-3	E440	0.50	mg/kg	261	268	2.36%	40%	----
		Beryllium	7440-41-7	E440	0.10	mg/kg	0.65	0.67	0.02	Diff <2x LOR	----
		Boron	7440-42-8	E440	5.0	mg/kg	<5.0	5.2	0.2	Diff <2x LOR	----
		Cadmium	7440-43-9	E440	0.020	mg/kg	0.177	0.178	0.874%	30%	----
		Chromium	7440-47-3	E440	0.50	mg/kg	48.7	50.8	4.26%	30%	----
		Cobalt	7440-48-4	E440	0.10	mg/kg	12.5	13.3	5.59%	30%	----
		Copper	7440-50-8	E440	0.50	mg/kg	17.4	18.0	2.92%	30%	----
		Lead	7439-92-1	E440	0.50	mg/kg	7.38	7.77	5.08%	40%	----
		Molybdenum	7439-98-7	E440	0.10	mg/kg	0.30	0.32	0.02	Diff <2x LOR	----
		Nickel	7440-02-0	E440	0.50	mg/kg	25.1	26.2	4.49%	30%	----
		Selenium	7782-49-2	E440	0.20	mg/kg	<0.20	0.20	0.003	Diff <2x LOR	----
		Silver	7440-22-4	E440	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
		Thallium	7440-28-0	E440	0.050	mg/kg	0.224	0.236	0.012	Diff <2x LOR	----
		Uranium	7440-61-1	E440	0.050	mg/kg	0.670	0.743	10.2%	30%	----
		Vanadium	7440-62-2	E440	0.20	mg/kg	63.7	66.3	4.13%	30%	----
		Zinc	7440-66-6	E440	2.0	mg/kg	72.4	75.1	3.62%	30%	----
<b>Metals (QC Lot: 804527)</b>											
WT2300985-001	22-24-0-1.25	Mercury	7439-97-6	E510	0.0050	mg/kg	0.0246	0.0264	6.99%	40%	----
<b>Metals (QC Lot: 804528)</b>											
WT2300985-001	22-24-0-1.25	Boron, hot water soluble	7440-42-8	E487	0.10	mg/kg	<0.10	<0.10	0	Diff <2x LOR	----
<b>Speciated Metals (QC Lot: 803746)</b>											
WT2300983-021	Anonymous	Chromium, hexavalent [Cr VI]	18540-29-9	E532	0.10	mg/kg	<0.10 µg/g	<0.10	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 803669)</b>											
HA2300010-001	Anonymous	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 803669) - continued</b>											
HA2300010-001	Anonymous	Bromoform	75-25-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	<0.045	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040	<0.040	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 803669) - continued</b>											
HA2300010-001	Anonymous	Vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 803666)</b>											
HA2300010-001	Anonymous	F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	<10	0	Diff <2x LOR	----
		F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	<50	0	Diff <2x LOR	----
		F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	<50	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 803670)</b>											
HA2300010-001	Anonymous	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0	<5.0	0	Diff <2x LOR	----
<b>Polycyclic Aromatic Hydrocarbons (QC Lot: 803668)</b>											
WT2300985-001	22-24-0-1.25	Acenaphthene	83-32-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Acenaphthylene	208-96-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Anthracene	120-12-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benz(a)anthracene	56-55-3	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benzo(a)pyrene	50-32-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benzo(b+j)fluoranthene	n/a	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benzo(g,h,i)perylene	191-24-2	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Benzo(k)fluoranthene	207-08-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Chrysene	218-01-9	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Dibenz(a,h)anthracene	53-70-3	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Fluoranthene	206-44-0	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Fluorene	86-73-7	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		Methylnaphthalene, 1-	90-12-0	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Methylnaphthalene, 2-	91-57-6	E641A	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		Naphthalene	91-20-3	E641A	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
Phenanthrene	85-01-8	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----		
Pyrene	129-00-0	E641A	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----		





## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 803828)</b>						
Moisture	---	E144	0.25	%	<0.25	---
<b>Metals (QCLot: 804526)</b>						
Antimony	7440-36-0	E440	0.1	mg/kg	<0.10	---
Arsenic	7440-38-2	E440	0.1	mg/kg	<0.10	---
Barium	7440-39-3	E440	0.5	mg/kg	<0.50	---
Beryllium	7440-41-7	E440	0.1	mg/kg	<0.10	---
Boron	7440-42-8	E440	5	mg/kg	<5.0	---
Cadmium	7440-43-9	E440	0.02	mg/kg	<0.020	---
Chromium	7440-47-3	E440	0.5	mg/kg	<0.50	---
Cobalt	7440-48-4	E440	0.1	mg/kg	<0.10	---
Copper	7440-50-8	E440	0.5	mg/kg	<0.50	---
Lead	7439-92-1	E440	0.5	mg/kg	<0.50	---
Molybdenum	7439-98-7	E440	0.1	mg/kg	<0.10	---
Nickel	7440-02-0	E440	0.5	mg/kg	<0.50	---
Selenium	7782-49-2	E440	0.2	mg/kg	<0.20	---
Silver	7440-22-4	E440	0.1	mg/kg	<0.10	---
Thallium	7440-28-0	E440	0.05	mg/kg	<0.050	---
Uranium	7440-61-1	E440	0.05	mg/kg	<0.050	---
Vanadium	7440-62-2	E440	0.2	mg/kg	<0.20	---
Zinc	7440-66-6	E440	2	mg/kg	<2.0	---
<b>Metals (QCLot: 804527)</b>						
Mercury	7439-97-6	E510	0.005	mg/kg	<0.0050	---
<b>Metals (QCLot: 804528)</b>						
Boron, hot water soluble	7440-42-8	E487	0.1	mg/kg	<0.10	---
<b>Speciated Metals (QCLot: 803746)</b>						
Chromium, hexavalent [Cr VI]	18540-29-9	E532	0.1	mg/kg	<0.10	---
<b>Volatile Organic Compounds (QCLot: 803669)</b>						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	---
Benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	---
Bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	---
Bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	---
Bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	---



Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 803669) - continued</b>						
Carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	----
Chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	----
Chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	----
Dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	----
Dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	----
Dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	----
Dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	----
Dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	----
Dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	----
Dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	----
Ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	----
Hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	----
Styrene	100-42-5	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
Tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
Toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----
Trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
Trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
Vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----
Xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
Xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----



Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Hydrocarbons (QCLot: 803666)</b>						
F2 (C10-C16)	---	E601.SG-L	10	mg/kg	<10	---
F3 (C16-C34)	---	E601.SG-L	50	mg/kg	<50	---
F4 (C34-C50)	---	E601.SG-L	50	mg/kg	<50	---
<b>Hydrocarbons (QCLot: 803670)</b>						
F1 (C6-C10)	---	E581.F1	5	mg/kg	<5.0	---
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 803668)</b>						
Acenaphthene	83-32-9	E641A	0.05	mg/kg	<0.050	---
Acenaphthylene	208-96-8	E641A	0.05	mg/kg	<0.050	---
Anthracene	120-12-7	E641A	0.05	mg/kg	<0.050	---
Benzo(a)anthracene	56-55-3	E641A	0.05	mg/kg	<0.050	---
Benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	<0.050	---
Benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	<0.050	---
Benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	<0.050	---
Benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	<0.050	---
Chrysene	218-01-9	E641A	0.05	mg/kg	<0.050	---
Dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	<0.050	---
Fluoranthene	206-44-0	E641A	0.05	mg/kg	<0.050	---
Fluorene	86-73-7	E641A	0.05	mg/kg	<0.050	---
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	<0.050	---
Methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	<0.030	---
Methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	<0.030	---
Naphthalene	91-20-3	E641A	0.01	mg/kg	<0.010	---
Phenanthrene	85-01-8	E641A	0.05	mg/kg	<0.050	---
Pyrene	129-00-0	E641A	0.05	mg/kg	<0.050	---



## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Physical Tests (QCLot: 803828)</b>									
Moisture	----	E144	0.25	%	50 %	99.9	90.0	110	----
<b>Metals (QCLot: 804526)</b>									
Antimony	7440-36-0	E440	0.1	mg/kg	100 mg/kg	104	80.0	120	----
Arsenic	7440-38-2	E440	0.1	mg/kg	100 mg/kg	102	80.0	120	----
Barium	7440-39-3	E440	0.5	mg/kg	25 mg/kg	96.3	80.0	120	----
Beryllium	7440-41-7	E440	0.1	mg/kg	10 mg/kg	88.7	80.0	120	----
Boron	7440-42-8	E440	5	mg/kg	100 mg/kg	84.4	80.0	120	----
Cadmium	7440-43-9	E440	0.02	mg/kg	10 mg/kg	94.6	80.0	120	----
Chromium	7440-47-3	E440	0.5	mg/kg	25 mg/kg	97.4	80.0	120	----
Cobalt	7440-48-4	E440	0.1	mg/kg	25 mg/kg	96.3	80.0	120	----
Copper	7440-50-8	E440	0.5	mg/kg	25 mg/kg	93.1	80.0	120	----
Lead	7439-92-1	E440	0.5	mg/kg	50 mg/kg	100	80.0	120	----
Molybdenum	7439-98-7	E440	0.1	mg/kg	25 mg/kg	97.9	80.0	120	----
Nickel	7440-02-0	E440	0.5	mg/kg	50 mg/kg	94.9	80.0	120	----
Selenium	7782-49-2	E440	0.2	mg/kg	100 mg/kg	97.0	80.0	120	----
Silver	7440-22-4	E440	0.1	mg/kg	10 mg/kg	83.5	80.0	120	----
Thallium	7440-28-0	E440	0.05	mg/kg	100 mg/kg	92.6	80.0	120	----
Uranium	7440-61-1	E440	0.05	mg/kg	0.5 mg/kg	89.3	80.0	120	----
Vanadium	7440-62-2	E440	0.2	mg/kg	50 mg/kg	98.9	80.0	120	----
Zinc	7440-66-6	E440	2	mg/kg	50 mg/kg	90.0	80.0	120	----
<b>Metals (QCLot: 804527)</b>									
Mercury	7439-97-6	E510	0.005	mg/kg	0.1 mg/kg	110	80.0	120	----
<b>Metals (QCLot: 804528)</b>									
Boron, hot water soluble	7440-42-8	E487	0.1	mg/kg	1.33333 mg/kg	103	70.0	130	----
<b>Speciated Metals (QCLot: 803746)</b>									
Chromium, hexavalent [Cr VI]	18540-29-9	E532	0.1	mg/kg	0.8 mg/kg	92.5	80.0	120	----
<b>Volatile Organic Compounds (QCLot: 803669)</b>									
Acetone	67-64-1	E611D	0.5	mg/kg	3.475 mg/kg	89.7	60.0	140	----
Benzene	71-43-2	E611D	0.005	mg/kg	3.475 mg/kg	79.0	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.475 mg/kg	77.4	50.0	140	----



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 803669) - continued</b>									
Bromoform	75-25-2	E611D	0.05	mg/kg	3.475 mg/kg	85.3	70.0	130	----
Bromomethane	74-83-9	E611D	0.05	mg/kg	3.475 mg/kg	77.0	50.0	140	----
Carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.475 mg/kg	79.0	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.475 mg/kg	88.0	70.0	130	----
Chloroform	67-66-3	E611D	0.05	mg/kg	3.475 mg/kg	78.0	70.0	130	----
Dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.475 mg/kg	85.0	60.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.475 mg/kg	83.5	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.475 mg/kg	89.3	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.475 mg/kg	90.8	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.475 mg/kg	84.8	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.475 mg/kg	# 35.2	50.0	140	LCS-L
Dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.475 mg/kg	86.9	60.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.475 mg/kg	77.8	60.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.475 mg/kg	80.1	60.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.475 mg/kg	76.6	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.475 mg/kg	84.3	60.0	130	----
Dichloromethane	75-09-2	E611D	0.045	mg/kg	3.475 mg/kg	83.3	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.475 mg/kg	77.6	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.475 mg/kg	85.8	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.475 mg/kg	88.3	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.475 mg/kg	87.8	70.0	130	----
Hexane, n-	110-54-3	E611D	0.05	mg/kg	3.475 mg/kg	79.7	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.475 mg/kg	83.5	60.0	140	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.475 mg/kg	93.2	60.0	140	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.475 mg/kg	92.3	70.0	130	----
Styrene	100-42-5	E611D	0.05	mg/kg	3.475 mg/kg	89.4	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.475 mg/kg	88.4	60.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.475 mg/kg	86.4	60.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.475 mg/kg	90.9	60.0	130	----
Toluene	108-88-3	E611D	0.05	mg/kg	3.475 mg/kg	78.8	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.475 mg/kg	92.0	60.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.475 mg/kg	86.1	60.0	130	----
Trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.475 mg/kg	80.4	60.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.475 mg/kg	76.1	50.0	140	----
Vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.475 mg/kg	64.4	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	89.7	70.0	130	----



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 803669) - continued</b>									
Xylene, o-	95-47-6	E611D	0.03	mg/kg	3.475 mg/kg	87.9	70.0	130	----
<b>Hydrocarbons (QCLot: 803666)</b>									
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	883.825 mg/kg	85.0	70.0	130	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	1385.22 mg/kg	79.4	70.0	130	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	797.55 mg/kg	77.9	70.0	130	----
<b>Hydrocarbons (QCLot: 803670)</b>									
F1 (C6-C10)	----	E581.F1	5	mg/kg	69.1875 mg/kg	105	80.0	120	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 803668)</b>									
Acenaphthene	83-32-9	E641A	0.05	mg/kg	0.5 mg/kg	98.3	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.05	mg/kg	0.5 mg/kg	106	60.0	130	----
Anthracene	120-12-7	E641A	0.05	mg/kg	0.5 mg/kg	109	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.05	mg/kg	0.5 mg/kg	101	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.05	mg/kg	0.5 mg/kg	113	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.05	mg/kg	0.5 mg/kg	103	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.05	mg/kg	0.5 mg/kg	97.2	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.05	mg/kg	0.5 mg/kg	104	60.0	130	----
Chrysene	218-01-9	E641A	0.05	mg/kg	0.5 mg/kg	99.8	60.0	130	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.05	mg/kg	0.5 mg/kg	98.6	60.0	130	----
Fluoranthene	206-44-0	E641A	0.05	mg/kg	0.5 mg/kg	102	60.0	130	----
Fluorene	86-73-7	E641A	0.05	mg/kg	0.5 mg/kg	102	60.0	130	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.05	mg/kg	0.5 mg/kg	95.8	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.03	mg/kg	0.5 mg/kg	97.8	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.03	mg/kg	0.5 mg/kg	93.7	60.0	130	----
Naphthalene	91-20-3	E641A	0.01	mg/kg	0.5 mg/kg	93.0	60.0	130	----
Phenanthrene	85-01-8	E641A	0.05	mg/kg	0.5 mg/kg	99.5	60.0	130	----
Pyrene	129-00-0	E641A	0.05	mg/kg	0.5 mg/kg	101	60.0	130	----

**Qualifiers**

Qualifier	Description
LCS-L	Lab Control Sample recovery was below ALS DQO. Reference Material and/or Matrix Spike results were acceptable. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.



## Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 803669)</b>										
HA2300010-001	Anonymous	Acetone	67-64-1	E611D	2.12 mg/kg	3.125 mg/kg	92.2	50.0	140	----
		Benzene	71-43-2	E611D	1.89 mg/kg	3.125 mg/kg	82.0	50.0	140	----
		Bromodichloromethane	75-27-4	E611D	1.84 mg/kg	3.125 mg/kg	79.7	50.0	140	----
		Bromoform	75-25-2	E611D	2.00 mg/kg	3.125 mg/kg	86.7	50.0	140	----
		Bromomethane	74-83-9	E611D	2.10 mg/kg	3.125 mg/kg	91.3	50.0	140	----
		Carbon tetrachloride	56-23-5	E611D	1.88 mg/kg	3.125 mg/kg	81.7	50.0	140	----
		Chlorobenzene	108-90-7	E611D	2.09 mg/kg	3.125 mg/kg	90.6	50.0	140	----
		Chloroform	67-66-3	E611D	1.86 mg/kg	3.125 mg/kg	80.8	50.0	140	----
		Dibromochloromethane	124-48-1	E611D	2.02 mg/kg	3.125 mg/kg	87.6	50.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	2.02 mg/kg	3.125 mg/kg	87.7	50.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	2.10 mg/kg	3.125 mg/kg	91.0	50.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	2.14 mg/kg	3.125 mg/kg	93.1	50.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	2.00 mg/kg	3.125 mg/kg	86.7	50.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	1.56 mg/kg	3.125 mg/kg	67.6	50.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	2.10 mg/kg	3.125 mg/kg	91.2	50.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	1.88 mg/kg	3.125 mg/kg	81.5	50.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	2.02 mg/kg	3.125 mg/kg	87.7	50.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	1.85 mg/kg	3.125 mg/kg	80.2	50.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	2.05 mg/kg	3.125 mg/kg	89.0	50.0	140	----
		Dichloromethane	75-09-2	E611D	2.04 mg/kg	3.125 mg/kg	88.4	50.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	1.86 mg/kg	3.125 mg/kg	80.7	50.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	2.02 mg/kg	3.125 mg/kg	87.8	50.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	2.10 mg/kg	3.125 mg/kg	91.4	50.0	140	----
		Ethylbenzene	100-41-4	E611D	2.08 mg/kg	3.125 mg/kg	90.5	50.0	140	----
		Hexane, n-	110-54-3	E611D	2.05 mg/kg	3.125 mg/kg	88.9	50.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	2.03 mg/kg	3.125 mg/kg	88.0	50.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	2.20 mg/kg	3.125 mg/kg	95.6	50.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.16 mg/kg	3.125 mg/kg	94.0	50.0	140	----
		Styrene	100-42-5	E611D	2.10 mg/kg	3.125 mg/kg	91.1	50.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.09 mg/kg	3.125 mg/kg	90.6	50.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	2.02 mg/kg	3.125 mg/kg	87.9	50.0	140	----



Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
<b>Volatile Organic Compounds (QCLot: 803669) - continued</b>										
HA2300010-001	Anonymous	Tetrachloroethylene	127-18-4	E611D	2.14 mg/kg	3.125 mg/kg	93.1	50.0	140	----
		Toluene	108-88-3	E611D	1.89 mg/kg	3.125 mg/kg	82.0	50.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	2.19 mg/kg	3.125 mg/kg	95.0	50.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	2.07 mg/kg	3.125 mg/kg	89.9	50.0	140	----
		Trichloroethylene	79-01-6	E611D	1.90 mg/kg	3.125 mg/kg	82.5	50.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	2.02 mg/kg	3.125 mg/kg	87.6	50.0	140	----
		Vinyl chloride	75-01-4	E611D	1.89 mg/kg	3.125 mg/kg	82.1	50.0	140	----
		Xylene, m+p-	179601-23-1	E611D	4.25 mg/kg	6.25 mg/kg	92.2	50.0	140	----
		Xylene, o-	95-47-6	E611D	2.08 mg/kg	3.125 mg/kg	90.1	50.0	140	----
<b>Hydrocarbons (QCLot: 803666)</b>										
HA2300010-001	Anonymous	F2 (C10-C16)	----	E601.SG-L	566 mg/kg	883.825 mg/kg	81.6	60.0	140	----
		F3 (C16-C34)	----	E601.SG-L	843 mg/kg	1385.22 mg/kg	77.5	60.0	140	----
		F4 (C34-C50)	----	E601.SG-L	499 mg/kg	797.55 mg/kg	79.7	60.0	140	----
<b>Hydrocarbons (QCLot: 803670)</b>										
HA2300010-001	Anonymous	F1 (C6-C10)	----	E581.F1	44.3 mg/kg	62.5 mg/kg	96.1	60.0	140	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 803668)</b>										
WT2300985-001	22-24-0-1.25	Acenaphthene	83-32-9	E641A	0.386 mg/kg	0.5 mg/kg	96.7	50.0	140	----
		Acenaphthylene	208-96-8	E641A	0.427 mg/kg	0.5 mg/kg	107	50.0	140	----
		Anthracene	120-12-7	E641A	0.449 mg/kg	0.5 mg/kg	112	50.0	140	----
		Benz(a)anthracene	56-55-3	E641A	0.379 mg/kg	0.5 mg/kg	95.0	50.0	140	----
		Benzo(a)pyrene	50-32-8	E641A	0.456 mg/kg	0.5 mg/kg	114	50.0	140	----
		Benzo(b+j)fluoranthene	n/a	E641A	0.402 mg/kg	0.5 mg/kg	101	50.0	140	----
		Benzo(g,h,i)perylene	191-24-2	E641A	0.356 mg/kg	0.5 mg/kg	89.2	50.0	140	----
		Benzo(k)fluoranthene	207-08-9	E641A	0.404 mg/kg	0.5 mg/kg	101	50.0	140	----
		Chrysene	218-01-9	E641A	0.356 mg/kg	0.5 mg/kg	89.1	50.0	140	----
		Dibenz(a,h)anthracene	53-70-3	E641A	0.386 mg/kg	0.5 mg/kg	96.7	50.0	140	----
		Fluoranthene	206-44-0	E641A	0.404 mg/kg	0.5 mg/kg	101	50.0	140	----
		Fluorene	86-73-7	E641A	0.408 mg/kg	0.5 mg/kg	102	50.0	140	----
		indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.372 mg/kg	0.5 mg/kg	93.1	50.0	140	----
		Methylnaphthalene, 1-	90-12-0	E641A	0.388 mg/kg	0.5 mg/kg	97.3	50.0	140	----
		Methylnaphthalene, 2-	91-57-6	E641A	0.374 mg/kg	0.5 mg/kg	93.6	50.0	140	----
		Naphthalene	91-20-3	E641A	0.376 mg/kg	0.5 mg/kg	94.3	50.0	140	----
		Phenanthrene	85-01-8	E641A	0.401 mg/kg	0.5 mg/kg	100	50.0	140	----
		Pyrene	129-00-0	E641A	0.405 mg/kg	0.5 mg/kg	102	50.0	140	----





## Reference Material (RM) Report

A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

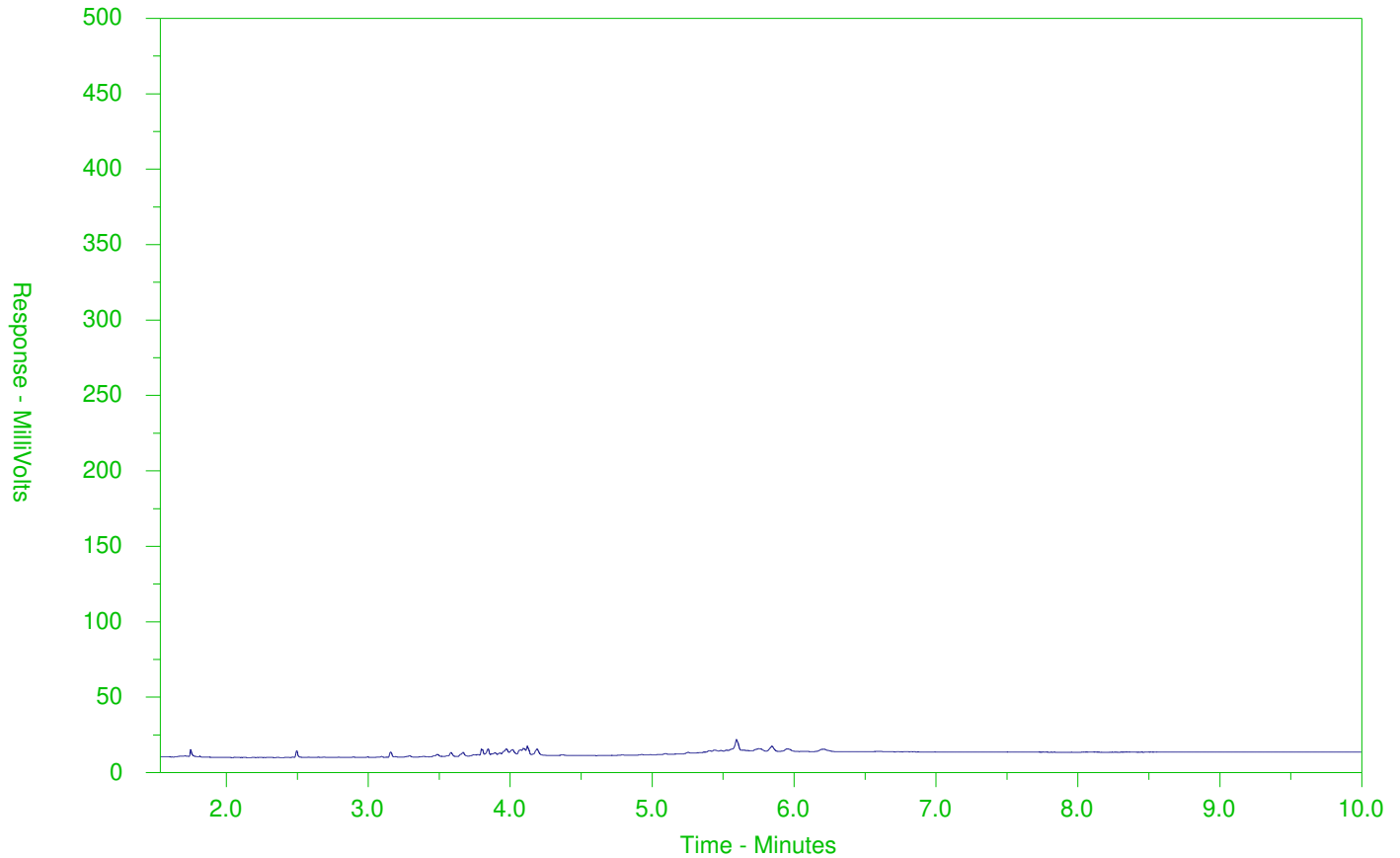
Sub-Matrix:

Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Reference Material (RM) Report				
					RM Target Concentration	Recovery (%) RM	Recovery Limits (%)		Qualifier
							Low	High	
<b>Metals (QCLot: 804526)</b>									
	RM	Antimony	7440-36-0	E440	3.99 mg/kg	92.5	70.0	130	----
	RM	Arsenic	7440-38-2	E440	3.73 mg/kg	94.3	70.0	130	----
	RM	Barium	7440-39-3	E440	105 mg/kg	99.6	70.0	130	----
	RM	Beryllium	7440-41-7	E440	0.349 mg/kg	108	70.0	130	----
	RM	Boron	7440-42-8	E440	8.5 mg/kg	101	40.0	160	----
	RM	Cadmium	7440-43-9	E440	0.91 mg/kg	93.2	70.0	130	----
	RM	Chromium	7440-47-3	E440	101 mg/kg	97.0	70.0	130	----
	RM	Cobalt	7440-48-4	E440	6.9 mg/kg	95.9	70.0	130	----
	RM	Copper	7440-50-8	E440	123 mg/kg	96.6	70.0	130	----
	RM	Lead	7439-92-1	E440	267 mg/kg	102	70.0	130	----
	RM	Molybdenum	7439-98-7	E440	1.03 mg/kg	92.7	70.0	130	----
	RM	Nickel	7440-02-0	E440	26.7 mg/kg	96.7	70.0	130	----
	RM	Silver	7440-22-4	E440	4.06 mg/kg	95.6	70.0	130	----
	RM	Thallium	7440-28-0	E440	0.0786 mg/kg	93.8	40.0	160	----
	RM	Uranium	7440-61-1	E440	0.52 mg/kg	86.1	70.0	130	----
	RM	Vanadium	7440-62-2	E440	32.7 mg/kg	97.1	70.0	130	----
	RM	Zinc	7440-66-6	E440	297 mg/kg	91.4	70.0	130	----
<b>Metals (QCLot: 804527)</b>									
	RM	Mercury	7439-97-6	E510	0.0585 mg/kg	105	70.0	130	----
<b>Metals (QCLot: 804528)</b>									
	RM	Boron, hot water soluble	7440-42-8	E487	1.4938 mg/kg	80.8	60.0	140	----
<b>Speciated Metals (QCLot: 803746)</b>									
	RM	Chromium, hexavalent [Cr VI]	18540-29-9	E532	172 mg/kg	118	70.0	130	----

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2300985-001-E601.SG-L  
 Client Sample ID: 22-24-0-1.25



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

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

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

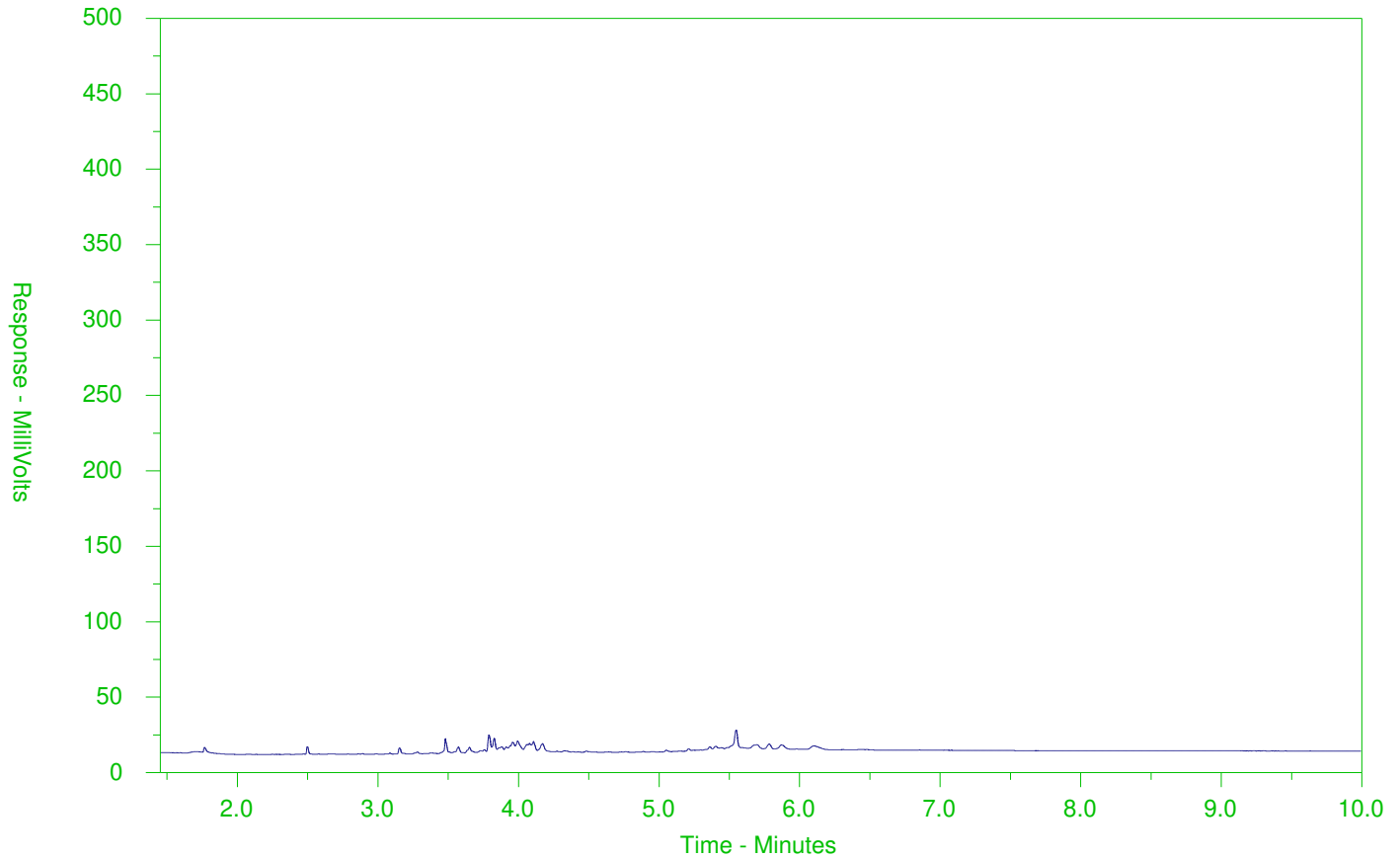
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2300985-002-E601.SG-L  
 Client Sample ID: DUP9



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

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

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

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

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



www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20 - 1009849

Page

Environmental Division  
Waterloo

Work Order Reference  
WT2300985



Telephone: +1 519 866 6910

**Report To** Contact and company name below will appear on the final report

Company: *Ormai - McLean Inc.*

Contact: *Daniel Elliot*

Phone: *613-857-4936*

Company address below will appear on the final report

Street: *200-1755 Goodwood Dr.*

City/Province: *Chatham ON*

Postal Code: *K2C 0P9*

Invoice To:  YES  NO

Copy of Invoice with Report:  YES  NO

Company: *ALS*

Contact: *WT2300985*

Project Information

ALS Account # / Quote #: *Q90026*

Job #: *0006-2103*

PO / AFE:

LSD:

ALS Lab Work Order # (ALS use only): *WT2300985*

ALS Sample # (ALS use only): *22-24-0-1.25*

Sample Identification and/or Coordinates (This description will appear on the report): *SUP9*

**Reports / Recipients**

Select Report Format:  PDF  EXCEL  BDD (DIGITAL)

Merge QC/QCI Reports with COA:  YES  NO  N/A

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

Select Distribution:  EMAIL  MAIL  FAX

Email 1 or Fax: *Daniel Elliot*

Email 2: *Bertina @ ormai.com*

Email 3:

**Invoice Recipients**

Select Invoice Distribution:  EMAIL  MAIL  FAX

Email 1 or Fax: *invoicing@ormai.com*

Email 2:

Oil and Gas Required Fields (client use)

AFE/Cost Center:

Major/Minor Code:

Requisitioner:

Location:

ALS Contact:

**NUMBER OF CONTAINERS**

Sample Type	Time (hh:mm)	Date (dd-mm-yy)	Sampler:
Soil		13-Jan-23	
Soil		13-Jan-23	

**Turnaround Time (TAT) Requested**

Routine [R] If received by 3pm M-F - no surcharges apply

4 day [P4] If received by 3pm M-F - 20% rush surcharge apply

3 day [P3] If received by 3pm M-F - 25% rush surcharge apply

2 day [P2] If received by 3pm M-F - 50% rush surcharge apply

1 day [E] If received by 3pm M-F - 100% rush surcharge apply

Same day [E2] If received by 10am M-S - 200% rush surcharge. P may apply to rush requests on weekends, statutory holidays and no

Date and Time Required by all TATs:

For all tests with rush TATs requested, please indicate Filtered (F), Preserved (P) or Filtered.

Sample Type	Time (hh:mm)	Date (dd-mm-yy)	Sampler:	Analysis
PIC F-1-4	X			
VOC	X			
PAH	X			
Mdls	X			
H <sub>2</sub> Cd VI	X			
HMS Boron	X			

**Drinking Water (DW) Samples (client use)**

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Are samples taken from a Regulated DW System?  YES  NO

Are samples for human consumption/ use?  YES  NO

**SHIPPING RELEASE (client use)**

Released by: *Daniel Elliot* Date: *13-Jan-23* Time: *11:50*

**INITIAL SHIPMENT RECEPTION (ALS use only)**

Received by: *[Signature]* Date: *01/13/23* Time: *13:43*

**FINAL SHIPMENT RECEPTION (ALS use only)**

Received by: *[Signature]* Date: *Jan 16, 23* Time: *1:09*

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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.

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

SOL440, VSO40

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>WT2223434</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : Daniel Elliot</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 3</p> <p><b>No. of samples analysed</b> : 3</p>	<p><b>Page</b> : 1 of 5</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 25-Nov-2022 15:30</p> <p><b>Issue Date</b> : 02-Dec-2022 17:02</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

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### ***Workorder Comments***

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-41 2.75-4	E144	23-Nov-2022	----	----	----		29-Nov-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap 22-41 4-4.5	E144	23-Nov-2022	----	----	----		29-Nov-2022	----	----		
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap DUP 8	E144	23-Nov-2022	----	----	----		29-Nov-2022	----	----		
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-41 2.75-4	E611D	23-Nov-2022	29-Nov-2022	14 days	7 days	✓	30-Nov-2022	40 days	1 days	✓	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] 22-41 4-4.5	E611D	23-Nov-2022	29-Nov-2022	14 days	7 days	✓	30-Nov-2022	40 days	1 days	✓	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass soil methanol vial [ON MECP] DUP 8	E611D	23-Nov-2022	29-Nov-2022	14 days	7 days	✓	30-Nov-2022	40 days	1 days	✓	

### Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Moisture Content by Gravimetry	E144	761876	1	20	5.0	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	762173	1	20	5.0	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
Moisture Content by Gravimetry	E144	761876	1	20	5.0	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	762173	1	20	5.0	5.0	✔
<b>Method Blanks (MB)</b>							
Moisture Content by Gravimetry	E144	761876	1	20	5.0	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	762173	1	20	5.0	5.0	✔
<b>Matrix Spikes (MS)</b>							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	762173	1	20	5.0	5.0	✔





## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

<i>Analytical Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
Moisture Content by Gravimetry	E144 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D Waterloo - Environmental	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
VOCs Methanol Extraction for Headspace Analysis	EP581 Waterloo - Environmental	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.

## QUALITY CONTROL REPORT

<p><b>Work Order</b> : <b>WT2223434</b></p> <p>Client : Omni-McCann Inc.</p> <p>Contact : Daniel Elliot</p> <p>Address : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p>Telephone :</p> <p>Project : 0006-0103</p> <p>PO : ----</p> <p>C-O-C number : ----</p> <p>Sampler : Daniel Elliot 705 243 5828</p> <p>Site : ----</p> <p>Quote number : Project 0006-0103</p> <p>No. of samples received : 3</p> <p>No. of samples analysed : 3</p>	<p>Page : 1 of 10</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Emily Smith</p> <p>Address : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 25-Nov-2022 15:30</p> <p>Date Analysis Commenced : 29-Nov-2022</p> <p>Issue Date : 02-Dec-2022 17:03</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Niral Patel		Waterloo Centralized Prep, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Waterloo Organics, Waterloo, Ontario

Page : 2 of 10  
Work Order : WT2223434  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

## Workorder Comments

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Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Soil/Solid

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Physical Tests (QC Lot: 761876)</b>											
WT2223419-001	Anonymous	moisture	----	E144	0.25	%	13.7	14.1	2.57%	20%	----
<b>Volatile Organic Compounds (QC Lot: 762173)</b>											
WT2223432-001	Anonymous	Acetone	67-64-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.0050	mg/kg	<0.0050	<0.0050	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	<0.045	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	<0.015	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.50	mg/kg	<0.50	<0.50	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.040	mg/kg	<0.040	<0.040	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 762173) - continued</b>											
WT2223432-001	Anonymous	styrene	100-42-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.050	mg/kg	<0.050	<0.050	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.030	mg/kg	<0.030	<0.030	0	Diff <2x LOR	----



## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 761876)</b>						
moisture	---	E144	0.25	%	<0.25	---
<b>Volatile Organic Compounds (QCLot: 762173)</b>						
Acetone	67-64-1	E611D	0.5	mg/kg	<0.50	---
benzene	71-43-2	E611D	0.005	mg/kg	<0.0050	---
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	<0.050	---
bromoform	75-25-2	E611D	0.05	mg/kg	<0.050	---
bromomethane	74-83-9	E611D	0.05	mg/kg	<0.050	---
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	<0.050	---
chlorobenzene	108-90-7	E611D	0.05	mg/kg	<0.050	---
chloroform	67-66-3	E611D	0.05	mg/kg	<0.050	---
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	<0.050	---
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	<0.050	---
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	<0.050	---
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	<0.050	---
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	<0.050	---
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	<0.050	---
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	<0.050	---
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	<0.050	---
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	<0.050	---
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	<0.050	---
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	<0.050	---
dichloromethane	75-09-2	E611D	0.045	mg/kg	<0.045	---
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	<0.050	---
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	<0.030	---
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	<0.030	---
ethylbenzene	100-41-4	E611D	0.015	mg/kg	<0.015	---
hexane, n-	110-54-3	E611D	0.05	mg/kg	<0.050	---
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	<0.50	---
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	<0.50	---
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	<0.040	---
styrene	100-42-5	E611D	0.05	mg/kg	<0.050	---
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	<0.050	---



Sub-Matrix: **Soil/Solid**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
<b>Volatile Organic Compounds (QCLot: 762173) - continued</b>						
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	<0.050	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	<0.050	----
toluene	108-88-3	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	<0.050	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	<0.050	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	<0.010	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	<0.050	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	<0.020	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	<0.030	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	<0.030	----



## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Physical Tests (QCLot: 761876)</b>									
moisture	---	E144	0.25	%	50 %	100	90.0	110	---
<b>Volatile Organic Compounds (QCLot: 762173)</b>									
Acetone	67-64-1	E611D	0.5	mg/kg	3.475 mg/kg	135	60.0	140	---
benzene	71-43-2	E611D	0.005	mg/kg	3.475 mg/kg	101	70.0	130	---
bromodichloromethane	75-27-4	E611D	0.05	mg/kg	3.475 mg/kg	97.8	50.0	140	---
bromoform	75-25-2	E611D	0.05	mg/kg	3.475 mg/kg	99.4	70.0	130	---
bromomethane	74-83-9	E611D	0.05	mg/kg	3.475 mg/kg	99.6	50.0	140	---
carbon tetrachloride	56-23-5	E611D	0.05	mg/kg	3.475 mg/kg	99.4	70.0	130	---
chlorobenzene	108-90-7	E611D	0.05	mg/kg	3.475 mg/kg	98.7	70.0	130	---
chloroform	67-66-3	E611D	0.05	mg/kg	3.475 mg/kg	96.6	70.0	130	---
dibromochloromethane	124-48-1	E611D	0.05	mg/kg	3.475 mg/kg	101	60.0	130	---
dibromoethane, 1,2-	106-93-4	E611D	0.05	mg/kg	3.475 mg/kg	94.6	70.0	130	---
dichlorobenzene, 1,2-	95-50-1	E611D	0.05	mg/kg	3.475 mg/kg	99.3	70.0	130	---
dichlorobenzene, 1,3-	541-73-1	E611D	0.05	mg/kg	3.475 mg/kg	102	70.0	130	---
dichlorobenzene, 1,4-	106-46-7	E611D	0.05	mg/kg	3.475 mg/kg	103	70.0	130	---
dichlorodifluoromethane	75-71-8	E611D	0.05	mg/kg	3.475 mg/kg	64.8	50.0	140	---
dichloroethane, 1,1-	75-34-3	E611D	0.05	mg/kg	3.475 mg/kg	98.4	60.0	130	---
dichloroethane, 1,2-	107-06-2	E611D	0.05	mg/kg	3.475 mg/kg	99.8	60.0	130	---
dichloroethylene, 1,1-	75-35-4	E611D	0.05	mg/kg	3.475 mg/kg	119	60.0	130	---
dichloroethylene, cis-1,2-	156-59-2	E611D	0.05	mg/kg	3.475 mg/kg	96.1	70.0	130	---
dichloroethylene, trans-1,2-	156-60-5	E611D	0.05	mg/kg	3.475 mg/kg	120	60.0	130	---
dichloromethane	75-09-2	E611D	0.045	mg/kg	3.475 mg/kg	114	70.0	130	---
dichloropropane, 1,2-	78-87-5	E611D	0.05	mg/kg	3.475 mg/kg	93.3	70.0	130	---
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.03	mg/kg	3.475 mg/kg	98.3	70.0	130	---
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.03	mg/kg	3.475 mg/kg	95.4	70.0	130	---
ethylbenzene	100-41-4	E611D	0.015	mg/kg	3.475 mg/kg	95.2	70.0	130	---
hexane, n-	110-54-3	E611D	0.05	mg/kg	3.475 mg/kg	106	70.0	130	---
methyl ethyl ketone [MEK]	78-93-3	E611D	0.5	mg/kg	3.475 mg/kg	108	60.0	140	---
methyl isobutyl ketone [MIBK]	108-10-1	E611D	0.5	mg/kg	3.475 mg/kg	90.1	60.0	140	---
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.04	mg/kg	3.475 mg/kg	96.7	70.0	130	---
styrene	100-42-5	E611D	0.05	mg/kg	3.475 mg/kg	98.8	70.0	130	---
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.05	mg/kg	3.475 mg/kg	98.9	60.0	130	---





Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 762173) - continued</b>									
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.05	mg/kg	3.475 mg/kg	95.3	60.0	130	----
tetrachloroethylene	127-18-4	E611D	0.05	mg/kg	3.475 mg/kg	101	60.0	130	----
toluene	108-88-3	E611D	0.05	mg/kg	3.475 mg/kg	96.0	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.05	mg/kg	3.475 mg/kg	93.6	60.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.05	mg/kg	3.475 mg/kg	96.9	60.0	130	----
trichloroethylene	79-01-6	E611D	0.01	mg/kg	3.475 mg/kg	98.5	60.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.05	mg/kg	3.475 mg/kg	119	50.0	140	----
vinyl chloride	75-01-4	E611D	0.02	mg/kg	3.475 mg/kg	84.7	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.03	mg/kg	6.95 mg/kg	100	70.0	130	----
xylene, o-	95-47-6	E611D	0.03	mg/kg	3.475 mg/kg	96.8	70.0	130	----



### Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 762173)</b>										
WT2223432-001	Anonymous	Acetone	67-64-1	E611D	3.45 mg/kg	4.6875 mg/kg	125	50.0	140	----
		benzene	71-43-2	E611D	2.84 mg/kg	4.6875 mg/kg	103	50.0	140	----
		bromodichloromethane	75-27-4	E611D	2.90 mg/kg	4.6875 mg/kg	105	50.0	140	----
		bromoform	75-25-2	E611D	2.89 mg/kg	4.6875 mg/kg	104	50.0	140	----
		bromomethane	74-83-9	E611D	2.49 mg/kg	4.6875 mg/kg	90.0	50.0	140	----
		carbon tetrachloride	56-23-5	E611D	2.74 mg/kg	4.6875 mg/kg	99.1	50.0	140	----
		chlorobenzene	108-90-7	E611D	2.75 mg/kg	4.6875 mg/kg	99.6	50.0	140	----
		chloroform	67-66-3	E611D	2.80 mg/kg	4.6875 mg/kg	101	50.0	140	----
		dibromochloromethane	124-48-1	E611D	2.90 mg/kg	4.6875 mg/kg	105	50.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	2.79 mg/kg	4.6875 mg/kg	101	50.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	2.78 mg/kg	4.6875 mg/kg	100	50.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	2.78 mg/kg	4.6875 mg/kg	100	50.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	2.81 mg/kg	4.6875 mg/kg	101	50.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	2.06 mg/kg	4.6875 mg/kg	74.3	50.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	2.77 mg/kg	4.6875 mg/kg	100	50.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	3.05 mg/kg	4.6875 mg/kg	110	50.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	2.61 mg/kg	4.6875 mg/kg	94.2	50.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	2.77 mg/kg	4.6875 mg/kg	100	50.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	2.73 mg/kg	4.6875 mg/kg	98.8	50.0	140	----
		dichloromethane	75-09-2	E611D	2.81 mg/kg	4.6875 mg/kg	102	50.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	2.73 mg/kg	4.6875 mg/kg	98.6	50.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	2.63 mg/kg	4.6875 mg/kg	95.0	50.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	2.44 mg/kg	4.6875 mg/kg	88.4	50.0	140	----
		ethylbenzene	100-41-4	E611D	2.54 mg/kg	4.6875 mg/kg	92.0	50.0	140	----
		hexane, n-	110-54-3	E611D	2.52 mg/kg	4.6875 mg/kg	91.1	50.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	3.29 mg/kg	4.6875 mg/kg	119	50.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	2.78 mg/kg	4.6875 mg/kg	101	50.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	2.71 mg/kg	4.6875 mg/kg	98.1	50.0	140	----
		styrene	100-42-5	E611D	2.72 mg/kg	4.6875 mg/kg	98.2	50.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	2.78 mg/kg	4.6875 mg/kg	100	50.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	2.86 mg/kg	4.6875 mg/kg	103	50.0	140	----



Sub-Matrix: **Soil/Solid**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 762173) - continued</b>										
WT2223432-001	Anonymous	tetrachloroethylene	127-18-4	E611D	2.62 mg/kg	4.6875 mg/kg	94.8	50.0	140	----
		toluene	108-88-3	E611D	2.62 mg/kg	4.6875 mg/kg	94.7	50.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	2.64 mg/kg	4.6875 mg/kg	95.4	50.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	2.90 mg/kg	4.6875 mg/kg	105	50.0	140	----
		trichloroethylene	79-01-6	E611D	2.65 mg/kg	4.6875 mg/kg	95.8	50.0	140	----
		trichlorofluoromethane	75-69-4	E611D	2.60 mg/kg	4.6875 mg/kg	94.0	50.0	140	----
		vinyl chloride	75-01-4	E611D	2.19 mg/kg	4.6875 mg/kg	79.1	50.0	140	----
		xylene, m+p-	179601-23-1	E611D	5.40 mg/kg	9.375 mg/kg	97.5	50.0	140	----
		xylene, o-	95-47-6	E611D	2.62 mg/kg	4.6875 mg/kg	94.6	50.0	140	----



Telephone : +1 519 886 6910

<b>Report To</b> Contact and company name below will appear on the final report		<b>Report Format / Distribution</b>		<b>Select Service Level Below - Contact your AM to confir</b>	
Company: <u>Omni-McCann Inc.</u>		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)		Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - busin	
Contact: <u>Daniel Elliot</u>		Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		4 day [P4-20%] <input type="checkbox"/>	
Phone: <u>613-957-4936</u>		<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked		3 day [P3-25%] <input type="checkbox"/>	
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		2 day [P2-50%] <input type="checkbox"/>	
Street: <u>1755 Woodward Drive, unit 20c</u>		Email 1 or Fax <u>dan@omnimccann.com</u>		EMERGENCY <input type="checkbox"/> 1 Business day [I	
City/Province: <u>Ottawa/ON</u>		Email 2 <u>Kristina@omnimccann.com</u>		Same Day, Weeke (Laboratory openi	
Postal Code: <u>K2C 0P9</u>		Email 3 <u>anton@omnimccann.com</u>		Date and Time Required for all E&P TATs:	
Invoice To: Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		<b>Invoice Distribution</b>		For tests that can not be performed according to the service level selected, you will	
Copy of Invoice with Report <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		<b>Analysis Request</b>	
Company: <u></u>		Email 1 or Fax <u>invoicing@omnimccann.com</u>		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (FP) below	
Contact: <u></u>		Email 2 <u></u>		NUMBER OF CONTAINERS	
<b>Project Information</b>		<b>Oil and Gas Required Fields (client use)</b>		SAMPLES ON HOLD	
ALS Account # / Quote #: <u>90026</u>		AFE/Cost Center: <u></u> PO#: <u></u>		SUSPECTED HAZARD (see Special Instructions)	
Job #: <u>0006-0103</u>		Major/Minor Code: <u></u> Routing Code: <u></u>			
PO / AFE: <u></u>		Requisitioner: <u></u>			
LSD: <u></u>		Location: <u></u>			
ALS Lab Work Order # (lab use only): <u>WT2223434</u>		ALS Contact: <u>Eric</u>			
		Sampler: <u>Daniel Elliot</u>			
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	
	<u>22-41 4-4.5</u>	<u>23-Nov-22</u>		<u>VOC</u>	
	<u>DUP8</u>	<u>23-Nov-22</u>			
	<u>22-41 2.75-4</u>	<u>23-Nov-22</u>			
<b>Drinking Water (DW) Samples (client use)</b>		<b>Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)</b>		<b>SAMPLE CONDITION AS RECEIVED (lab use only)</b>	
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		<u>O. Reg. 153/04 Table 17</u>		Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>	
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO		<u>For RSC</u>		Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>	
				Cooling Initiated <input type="checkbox"/>	
				INITIAL COOLER TEMPERATURES °C: <u>11.6</u>	
				FINAL COOLER TEMPERATURES °C: <u>2.7</u>	
<b>SHIPMENT RELEASE (client use)</b>		<b>INITIAL SHIPMENT RECEPTION (lab use only)</b>		<b>FINAL SHIPMENT RECEPTION (lab use only)</b>	
Released by: <u>Antonia Cass</u>	Date: <u>25-Nov-22</u>	Time: <u>15:30</u>	Received by: <u>[Signature]</u>	Date: <u>11/29/22</u>	Time: <u>10:00</u>

15-164: CN O&G



## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

<p><b>Work Order</b> : <b>WT2300985</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 20-1009849</p> <p><b>Sampler</b> : Daniel Elliot</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 2</p> <p><b>No. of samples analysed</b> : 2</p>	<p><b>Page</b> : 1 of 10</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 13-Jan-2023 11:40</p> <p><b>Date Analysis Commenced</b> : 16-Jan-2023</p> <p><b>Issue Date</b> : 17-Jan-2023 14:31</p>
---	--

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Amanda Ganouri-Lumsden	Department Manager - Microbiology and Prep	Centralized Prep, Waterloo, Ontario
Jeremy Gingras	Team Leader - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Jon Fisher	Department Manager - Inorganics	Metals, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Organics, Waterloo, Ontario

## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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. Guidelines 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.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	no units
%	percent
mg/kg	milligrams per kilogram

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .



## Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)		Client sample ID		22-24-0-1.25		Sampling date/time		13-Jan-2023 00:00			
Analyte	Method	LOR	Unit	WT2300985-001	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F			
<b>Physical Tests</b>											
Moisture	E144	0.25	%	23.0	--	--	--	--	--	--	
<b>Metals</b>											
Antimony	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	7.5 mg/kg	7.5 mg/kg	--	--	
Arsenic	E440	0.10	mg/kg	1.62	18 mg/kg	18 mg/kg	18 mg/kg	18 mg/kg	--	--	
Barium	E440	0.50	mg/kg	261	670 mg/kg	670 mg/kg	390 mg/kg	390 mg/kg	--	--	
Beryllium	E440	0.10	mg/kg	0.65	8 mg/kg	10 mg/kg	4 mg/kg	5 mg/kg	--	--	
Boron, hot water soluble	E487	0.10	mg/kg	<0.10	2 mg/kg	2 mg/kg	1.5 mg/kg	1.5 mg/kg	--	--	
Boron	E440	5.0	mg/kg	<5.0	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--	
Cadmium	E440	0.020	mg/kg	0.177	1.9 mg/kg	1.9 mg/kg	1.2 mg/kg	1.2 mg/kg	--	--	
Chromium	E440	0.50	mg/kg	48.7	160 mg/kg	160 mg/kg	160 mg/kg	160 mg/kg	--	--	
Cobalt	E440	0.10	mg/kg	12.5	80 mg/kg	100 mg/kg	22 mg/kg	22 mg/kg	--	--	
Copper	E440	0.50	mg/kg	17.4	230 mg/kg	300 mg/kg	140 mg/kg	180 mg/kg	--	--	
Lead	E440	0.50	mg/kg	7.38	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--	
Mercury	E510	0.0050	mg/kg	0.0246	3.9 mg/kg	20 mg/kg	0.27 mg/kg	1.8 mg/kg	--	--	
Molybdenum	E440	0.10	mg/kg	0.30	40 mg/kg	40 mg/kg	6.9 mg/kg	6.9 mg/kg	--	--	
Nickel	E440	0.50	mg/kg	25.1	270 mg/kg	340 mg/kg	100 mg/kg	130 mg/kg	--	--	
Selenium	E440	0.20	mg/kg	<0.20	5.5 mg/kg	5.5 mg/kg	2.4 mg/kg	2.4 mg/kg	--	--	
Silver	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	20 mg/kg	25 mg/kg	--	--	
Thallium	E440	0.050	mg/kg	0.224	3.3 mg/kg	3.3 mg/kg	1 mg/kg	1 mg/kg	--	--	
Uranium	E440	0.050	mg/kg	0.670	33 mg/kg	33 mg/kg	23 mg/kg	23 mg/kg	--	--	
Vanadium	E440	0.20	mg/kg	63.7	86 mg/kg	86 mg/kg	86 mg/kg	86 mg/kg	--	--	
Zinc	E440	2.0	mg/kg	72.4	340 mg/kg	340 mg/kg	340 mg/kg	340 mg/kg	--	--	
<b>Speciated Metals</b>											
Chromium, hexavalent [Cr VI]	E532	0.10	mg/kg	0.30	8 mg/kg	10 mg/kg	8 mg/kg	10 mg/kg	--	--	
<b>Volatile Organic Compounds</b>											
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--	
Benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--	
Bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--	
Bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--	
Bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--	
Carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--	



Analyte	Method	LOR	Unit	WT2300985-001 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
Chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
Chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
Dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
Dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
Dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
Dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
Dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
Dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
Dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
Dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
Dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
Dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
Dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
Dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
Dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
Dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
Dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
Ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
Hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
Methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
Methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
Methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--
Styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
Tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
Tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
Tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
Toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
Trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
Trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
Trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
Trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
Vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
Xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
Xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--





Analyte	Method	LOR	Unit	WT2300985-001 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
Xylenes, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F2-Naphthalene	EC600	25	mg/kg	<25	--	--	--	--	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F3-PAH	EC600	50	mg/kg	<50	--	--	--	--	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
Hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
Chromatogram to baseline at nC50	E601.SG-L	-	-	YES	--	--	--	--	--	--
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	E601.SG-L	1.0	%	84.8	--	--	--	--	--	--
Dichlorotoluene, 3,4-	E581.F1	1.0	%	89.7	--	--	--	--	--	--
Bromofluorobenzene, 4-	E611D	0.10	%	95.0	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D	0.10	%	102	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
Acenaphthene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	7.9 mg/kg	58 mg/kg	--	--
Acenaphthylene	E641A	0.050	mg/kg	<0.050	0.15 mg/kg	0.17 mg/kg	0.15 mg/kg	0.17 mg/kg	--	--
Anthracene	E641A	0.050	mg/kg	<0.050	0.67 mg/kg	0.74 mg/kg	0.67 mg/kg	0.74 mg/kg	--	--
Benz(a)anthracene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.5 mg/kg	0.63 mg/kg	--	--
Benzo(a)pyrene	E641A	0.050	mg/kg	<0.050	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	--	--
Benzo(b+j)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
Benzo(g,h,i)perylene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	6.6 mg/kg	7.8 mg/kg	--	--
Benzo(k)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
Chrysene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	7 mg/kg	7.8 mg/kg	--	--
Dibenz(a,h)anthracene	E641A	0.050	mg/kg	<0.050	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	--	--
Fluoranthene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	0.69 mg/kg	0.69 mg/kg	--	--
Fluorene	E641A	0.050	mg/kg	<0.050	62 mg/kg	69 mg/kg	62 mg/kg	69 mg/kg	--	--
indeno(1,2,3-c,d)pyrene	E641A	0.050	mg/kg	<0.050	0.76 mg/kg	0.95 mg/kg	0.38 mg/kg	0.48 mg/kg	--	--
Methylnaphthalene, 1+2-	E641A	0.050	mg/kg	<0.050	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
Methylnaphthalene, 1-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
Methylnaphthalene, 2-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
Naphthalene	E641A	0.010	mg/kg	<0.010	9.6 mg/kg	28 mg/kg	0.6 mg/kg	0.75 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2300985-001 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
Phenanthrene	E641A	0.050	mg/kg	<0.050	12 mg/kg	16 mg/kg	6.2 mg/kg	7.8 mg/kg	--	--
Pyrene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	78 mg/kg	78 mg/kg	--	--
Acridine-d9	E641A	0.1	%	95.8	--	--	--	--	--	--
Chrysene-d12	E641A	0.1	%	95.4	--	--	--	--	--	--
Naphthalene-d8	E641A	0.1	%	92.4	--	--	--	--	--	--
Phenanthrene-d10	E641A	0.1	%	99.1	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- |          |  |
|----------|--|
| ON153/04 | Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011) |
| T7-ICC-C | 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)                 |
| T7-ICC-F | 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)                   |
| T7-RPI-C | 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)                 |
| T7-RPI-F | 153 T7-Soil-Res/Park/Inst. Property Use (Fine)                   |



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID							
				DUP9							
Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)				Sampling date/time							
				13-Jan-2023 00:00	WT2300985-002	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Physical Tests</b>											
Moisture	E144	0.25	%	25.6	--	--	--	--	--	--	
<b>Metals</b>											
Antimony	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	7.5 mg/kg	7.5 mg/kg	--	--	
Arsenic	E440	0.10	mg/kg	1.86	18 mg/kg	18 mg/kg	18 mg/kg	18 mg/kg	--	--	
Barium	E440	0.50	mg/kg	327	670 mg/kg	670 mg/kg	390 mg/kg	390 mg/kg	--	--	
Beryllium	E440	0.10	mg/kg	0.78	8 mg/kg	10 mg/kg	4 mg/kg	5 mg/kg	--	--	
Boron, hot water soluble	E487	0.10	mg/kg	<0.10	2 mg/kg	2 mg/kg	1.5 mg/kg	1.5 mg/kg	--	--	
Boron	E440	5.0	mg/kg	5.2	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--	
Cadmium	E440	0.020	mg/kg	0.182	1.9 mg/kg	1.9 mg/kg	1.2 mg/kg	1.2 mg/kg	--	--	
Chromium	E440	0.50	mg/kg	60.4	160 mg/kg	160 mg/kg	160 mg/kg	160 mg/kg	--	--	
Cobalt	E440	0.10	mg/kg	14.7	80 mg/kg	100 mg/kg	22 mg/kg	22 mg/kg	--	--	
Copper	E440	0.50	mg/kg	20.8	230 mg/kg	300 mg/kg	140 mg/kg	180 mg/kg	--	--	
Lead	E440	0.50	mg/kg	8.45	120 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	--	--	
Mercury	E510	0.0050	mg/kg	0.0259	3.9 mg/kg	20 mg/kg	0.27 mg/kg	1.8 mg/kg	--	--	
Molybdenum	E440	0.10	mg/kg	0.35	40 mg/kg	40 mg/kg	6.9 mg/kg	6.9 mg/kg	--	--	
Nickel	E440	0.50	mg/kg	31.3	270 mg/kg	340 mg/kg	100 mg/kg	130 mg/kg	--	--	
Selenium	E440	0.20	mg/kg	0.24	5.5 mg/kg	5.5 mg/kg	2.4 mg/kg	2.4 mg/kg	--	--	
Silver	E440	0.10	mg/kg	<0.10	40 mg/kg	50 mg/kg	20 mg/kg	25 mg/kg	--	--	
Thallium	E440	0.050	mg/kg	0.285	3.3 mg/kg	3.3 mg/kg	1 mg/kg	1 mg/kg	--	--	
Uranium	E440	0.050	mg/kg	0.808	33 mg/kg	33 mg/kg	23 mg/kg	23 mg/kg	--	--	
Vanadium	E440	0.20	mg/kg	78.2	86 mg/kg	86 mg/kg	86 mg/kg	86 mg/kg	--	--	
Zinc	E440	2.0	mg/kg	88.1	340 mg/kg	340 mg/kg	340 mg/kg	340 mg/kg	--	--	
<b>Speciated Metals</b>											
Chromium, hexavalent [Cr VI]	E532	0.10	mg/kg	0.41	8 mg/kg	10 mg/kg	8 mg/kg	10 mg/kg	--	--	
<b>Volatile Organic Compounds</b>											
Acetone	E611D	0.50	mg/kg	<0.50	16 mg/kg	28 mg/kg	16 mg/kg	28 mg/kg	--	--	
Benzene	E611D	0.0050	mg/kg	<0.0050	0.32 mg/kg	0.4 mg/kg	0.21 mg/kg	0.17 mg/kg	--	--	
Bromodichloromethane	E611D	0.050	mg/kg	<0.050	18 mg/kg	18 mg/kg	13 mg/kg	13 mg/kg	--	--	
Bromoform	E611D	0.050	mg/kg	<0.050	0.61 mg/kg	1.7 mg/kg	0.27 mg/kg	0.26 mg/kg	--	--	
Bromomethane	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--	
Carbon tetrachloride	E611D	0.050	mg/kg	<0.050	0.21 mg/kg	1.5 mg/kg	0.05 mg/kg	0.12 mg/kg	--	--	



Analyte	Method	LOR	Unit	WT2300985-002 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
Chlorobenzene	E611D	0.050	mg/kg	<0.050	2.4 mg/kg	2.7 mg/kg	2.4 mg/kg	2.7 mg/kg	--	--
Chloroform	E611D	0.050	mg/kg	<0.050	0.47 mg/kg	0.18 mg/kg	0.05 mg/kg	0.17 mg/kg	--	--
Dibromochloromethane	E611D	0.050	mg/kg	<0.050	13 mg/kg	13 mg/kg	9.4 mg/kg	9.4 mg/kg	--	--
Dibromoethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
Dichlorobenzene, 1,2-	E611D	0.050	mg/kg	<0.050	6.8 mg/kg	8.5 mg/kg	3.4 mg/kg	4.3 mg/kg	--	--
Dichlorobenzene, 1,3-	E611D	0.050	mg/kg	<0.050	9.6 mg/kg	12 mg/kg	4.8 mg/kg	6 mg/kg	--	--
Dichlorobenzene, 1,4-	E611D	0.050	mg/kg	<0.050	0.2 mg/kg	0.84 mg/kg	0.083 mg/kg	0.097 mg/kg	--	--
Dichlorodifluoromethane	E611D	0.050	mg/kg	<0.050	16 mg/kg	25 mg/kg	16 mg/kg	25 mg/kg	--	--
Dichloroethane, 1,1-	E611D	0.050	mg/kg	<0.050	17 mg/kg	21 mg/kg	3.5 mg/kg	11 mg/kg	--	--
Dichloroethane, 1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
Dichloroethylene, 1,1-	E611D	0.050	mg/kg	<0.050	0.064 mg/kg	0.48 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
Dichloroethylene, cis-1,2-	E611D	0.050	mg/kg	<0.050	55 mg/kg	37 mg/kg	3.4 mg/kg	30 mg/kg	--	--
Dichloroethylene, trans-1,2-	E611D	0.050	mg/kg	<0.050	1.3 mg/kg	9.3 mg/kg	0.084 mg/kg	0.75 mg/kg	--	--
Dichloromethane	E611D	0.045	mg/kg	<0.045	1.6 mg/kg	2 mg/kg	0.1 mg/kg	0.96 mg/kg	--	--
Dichloropropane, 1,2-	E611D	0.050	mg/kg	<0.050	0.16 mg/kg	0.68 mg/kg	0.05 mg/kg	0.085 mg/kg	--	--
Dichloropropylene, cis+trans-1,3-	E611D	0.050	mg/kg	<0.050	0.18 mg/kg	0.21 mg/kg	0.05 mg/kg	0.083 mg/kg	--	--
Dichloropropylene, cis-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
Dichloropropylene, trans-1,3-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
Ethylbenzene	E611D	0.015	mg/kg	<0.015	9.5 mg/kg	19 mg/kg	2 mg/kg	15 mg/kg	--	--
Hexane, n-	E611D	0.050	mg/kg	<0.050	46 mg/kg	88 mg/kg	2.8 mg/kg	34 mg/kg	--	--
Methyl ethyl ketone [MEK]	E611D	0.50	mg/kg	<0.50	70 mg/kg	88 mg/kg	16 mg/kg	44 mg/kg	--	--
Methyl isobutyl ketone [MIBK]	E611D	0.50	mg/kg	<0.50	31 mg/kg	210 mg/kg	1.7 mg/kg	4.3 mg/kg	--	--
Methyl-tert-butyl ether [MTBE]	E611D	0.040	mg/kg	<0.040	11 mg/kg	3.2 mg/kg	0.75 mg/kg	1.4 mg/kg	--	--
Styrene	E611D	0.050	mg/kg	<0.050	34 mg/kg	43 mg/kg	0.7 mg/kg	2.2 mg/kg	--	--
Tetrachloroethane, 1,1,1,2-	E611D	0.050	mg/kg	<0.050	0.087 mg/kg	0.11 mg/kg	0.058 mg/kg	0.05 mg/kg	--	--
Tetrachloroethane, 1,1,2,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.094 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
Tetrachloroethylene	E611D	0.050	mg/kg	<0.050	4.5 mg/kg	21 mg/kg	0.28 mg/kg	2.3 mg/kg	--	--
Toluene	E611D	0.050	mg/kg	<0.050	68 mg/kg	78 mg/kg	2.3 mg/kg	6 mg/kg	--	--
Trichloroethane, 1,1,1-	E611D	0.050	mg/kg	<0.050	6.1 mg/kg	12 mg/kg	0.38 mg/kg	3.4 mg/kg	--	--
Trichloroethane, 1,1,2-	E611D	0.050	mg/kg	<0.050	0.05 mg/kg	0.11 mg/kg	0.05 mg/kg	0.05 mg/kg	--	--
Trichloroethylene	E611D	0.010	mg/kg	<0.010	0.91 mg/kg	0.61 mg/kg	0.061 mg/kg	0.52 mg/kg	--	--
Trichlorofluoromethane	E611D	0.050	mg/kg	<0.050	4 mg/kg	5.8 mg/kg	4 mg/kg	5.8 mg/kg	--	--
Vinyl chloride	E611D	0.020	mg/kg	<0.020	0.032 mg/kg	0.25 mg/kg	0.02 mg/kg	0.022 mg/kg	--	--
Xylene, m+p-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--
Xylene, o-	E611D	0.030	mg/kg	<0.030	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2300985-002 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Volatile Organic Compounds - Continued</b>										
Xylenes, total	E611D	0.050	mg/kg	<0.050	26 mg/kg	30 mg/kg	3.1 mg/kg	25 mg/kg	--	--
BTEX, total	E611D	0.10	mg/kg	<0.10	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	230 mg/kg	250 mg/kg	98 mg/kg	150 mg/kg	--	--
F2-Naphthalene	EC600	25	mg/kg	<25	--	--	--	--	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	<50	1700 mg/kg	2500 mg/kg	300 mg/kg	1300 mg/kg	--	--
F3-PAH	EC600	50	mg/kg	<50	--	--	--	--	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	<50	3300 mg/kg	6600 mg/kg	2800 mg/kg	5600 mg/kg	--	--
F1-BTEX	EC580	5.0	mg/kg	<5.0	55 mg/kg	65 mg/kg	55 mg/kg	65 mg/kg	--	--
Hydrocarbons, total (C6-C50)	EC581	80	mg/kg	<80	--	--	--	--	--	--
Chromatogram to baseline at nC50	E601.SG-L	-	-	YES	--	--	--	--	--	--
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	E601.SG-L	1.0	%	84.3	--	--	--	--	--	--
Dichlorotoluene, 3,4-	E581.F1	1.0	%	87.3	--	--	--	--	--	--
Bromofluorobenzene, 4-	E611D	0.10	%	95.1	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611D	0.10	%	103	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
Acenaphthene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	7.9 mg/kg	58 mg/kg	--	--
Acenaphthylene	E641A	0.050	mg/kg	<0.050	0.15 mg/kg	0.17 mg/kg	0.15 mg/kg	0.17 mg/kg	--	--
Anthracene	E641A	0.050	mg/kg	<0.050	0.67 mg/kg	0.74 mg/kg	0.67 mg/kg	0.74 mg/kg	--	--
Benz(a)anthracene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.5 mg/kg	0.63 mg/kg	--	--
Benzo(a)pyrene	E641A	0.050	mg/kg	<0.050	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	0.3 mg/kg	--	--
Benzo(b+j)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
Benzo(g,h,i)perylene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	6.6 mg/kg	7.8 mg/kg	--	--
Benzo(k)fluoranthene	E641A	0.050	mg/kg	<0.050	0.96 mg/kg	0.96 mg/kg	0.78 mg/kg	0.78 mg/kg	--	--
Chrysene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	7 mg/kg	7.8 mg/kg	--	--
Dibenz(a,h)anthracene	E641A	0.050	mg/kg	<0.050	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	0.1 mg/kg	--	--
Fluoranthene	E641A	0.050	mg/kg	<0.050	9.6 mg/kg	9.6 mg/kg	0.69 mg/kg	0.69 mg/kg	--	--
Fluorene	E641A	0.050	mg/kg	<0.050	62 mg/kg	69 mg/kg	62 mg/kg	69 mg/kg	--	--
indeno(1,2,3-c,d)pyrene	E641A	0.050	mg/kg	<0.050	0.76 mg/kg	0.95 mg/kg	0.38 mg/kg	0.48 mg/kg	--	--
Methylnaphthalene, 1+2-	E641A	0.050	mg/kg	<0.050	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
Methylnaphthalene, 1-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
Methylnaphthalene, 2-	E641A	0.030	mg/kg	<0.030	76 mg/kg	85 mg/kg	0.99 mg/kg	3.4 mg/kg	--	--
Naphthalene	E641A	0.010	mg/kg	<0.010	9.6 mg/kg	28 mg/kg	0.6 mg/kg	0.75 mg/kg	--	--



Analyte	Method	LOR	Unit	WT2300985-002 (Continued)	ON153/04 T7-ICC-C	ON153/04 T7-ICC-F	ON153/04 T7-RPI-C	ON153/04 T7-RPI-F		
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
Phenanthrene	E641A	0.050	mg/kg	<0.050	12 mg/kg	16 mg/kg	6.2 mg/kg	7.8 mg/kg	--	--
Pyrene	E641A	0.050	mg/kg	<0.050	96 mg/kg	96 mg/kg	78 mg/kg	78 mg/kg	--	--
Acridine-d9	E641A	0.1	%	108	--	--	--	--	--	--
Chrysene-d12	E641A	0.1	%	93.6	--	--	--	--	--	--
Naphthalene-d8	E641A	0.1	%	96.2	--	--	--	--	--	--
Phenanthrene-d10	E641A	0.1	%	107	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-ICC-C 153 T7-Soil-Ind/Com/Commu. Property Use (Coarse)
- T7-ICC-F 153 T7-Soil-Ind/Com/Commu. Property Use (Fine)
- T7-RPI-C 153 T7-Soil-Res/Park/Inst. Property Use (Coarse)
- T7-RPI-F 153 T7-Soil-Res/Park/Inst. Property Use (Fine)



## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

<p><b>Work Order</b> : <b>WT2224015</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 20-1009805</p> <p><b>Sampler</b> : AC</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 15</p> <p><b>No. of samples analysed</b> : 15</p>	<p><b>Page</b> : 1 of 44</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 01-Dec-2022 17:00</p> <p><b>Date Analysis Commenced</b> : 05-Dec-2022</p> <p><b>Issue Date</b> : 09-Dec-2022 15:45</p>
--	--

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Metals, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Organics, Waterloo, Ontario

## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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. Guidelines 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.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	no units
µg/L	micrograms per litre

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .

## Workorder Comments

RRQC: Matrix spike recovery was above ALS DQO for Methyl Ethyl Ketone (MEK) non detect sample results were considered reliable. Other results if reported were qualified.

## Qualifiers

<i>Qualifier</i>	<i>Description</i>
DLHC	<i>Detection Limit Raised: Dilution required due to high concentration of test analyte(s).</i>
OWP	<i>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.</i>
RRV	<i>Reported result verified by repeat analysis.</i>





## Analytical Results

				Client sample ID						
				22-18-01DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224015-001	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-001 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	93.0	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	95.4	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID	22-20-01DEC22						
				Sampling date/time	01-Dec-2022 09:00						
Analyte	Method	LOR	Unit	WT2224015-002		ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Dissolved Metals</b>											
antimony, dissolved	E421	0.10	µg/L	3.73	DLHC	16000 µg/L	16000 µg/L	--	--	--	--
arsenic, dissolved	E421	0.10	µg/L	3.46	DLHC	1500 µg/L	1500 µg/L	--	--	--	--
barium, dissolved	E421	0.10	µg/L	123	DLHC	23000 µg/L	23000 µg/L	--	--	--	--
beryllium, dissolved	E421	0.020	µg/L	<0.200	DLHC	53 µg/L	53 µg/L	--	--	--	--
boron, dissolved	E421	10	µg/L	<100	DLHC	36000 µg/L	36000 µg/L	--	--	--	--
cadmium, dissolved	E421	0.0050	µg/L	<0.0500	DLHC	2.1 µg/L	2.1 µg/L	--	--	--	--
chromium, dissolved	E421	0.50	µg/L	<5.00	DLHC	640 µg/L	640 µg/L	--	--	--	--
cobalt, dissolved	E421	0.10	µg/L	45.4	DLHC	52 µg/L	52 µg/L	--	--	--	--
copper, dissolved	E421	0.20	µg/L	<2.00	DLHC	69 µg/L	69 µg/L	--	--	--	--
lead, dissolved	E421	0.050	µg/L	<0.500	DLHC	20 µg/L	20 µg/L	--	--	--	--
mercury, dissolved	E509	0.0050	µg/L	<0.0050		0.1 µg/L	0.1 µg/L	--	--	--	--
molybdenum, dissolved	E421	0.050	µg/L	16.4	DLHC	7300 µg/L	7300 µg/L	--	--	--	--
nickel, dissolved	E421	0.50	µg/L	71.9	DLHC	390 µg/L	390 µg/L	--	--	--	--
selenium, dissolved	E421	0.050	µg/L	4.58	DLHC	50 µg/L	50 µg/L	--	--	--	--
silver, dissolved	E421	0.010	µg/L	<0.100	DLHC	1.2 µg/L	1.2 µg/L	--	--	--	--
sodium, dissolved	E421	50	µg/L	324000	DLHC	1800000 µg/L	1800000 µg/L	--	--	--	--
thallium, dissolved	E421	0.010	µg/L	0.556	DLHC	400 µg/L	400 µg/L	--	--	--	--
uranium, dissolved	E421	0.010	µg/L	46.8	DLHC	330 µg/L	330 µg/L	--	--	--	--
vanadium, dissolved	E421	0.50	µg/L	<5.00	DLHC	200 µg/L	200 µg/L	--	--	--	--
zinc, dissolved	E421	1.0	µg/L	<10.0	DLHC	890 µg/L	890 µg/L	--	--	--	--
dissolved mercury filtration location	EP509		-	Field		--	--	--	--	--	--
dissolved metals filtration location	EP421		-	Field		--	--	--	--	--	--
<b>Speciated Metals</b>											
chromium, hexavalent [Cr VI], dissolved	E532A	0.50	µg/L	<0.50		--	--	--	--	--	--
<b>Volatile Organic Compounds</b>											
Acetone	E611D	20	µg/L	<20		100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50		0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50		67000 µg/L	67000 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-002 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-002 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylene, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F2-naphthalene	EC600SG	100	µg/L	<100	--	--	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F3-PAH	EC600SG	250	µg/L	<250	--	--	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2-(F2-F4 surr)	E601.SG	1.0	%	81.0	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	105	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	93.6	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	98.8	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.010	µg/L	<0.010	17 µg/L	17 µg/L	--	--	--	--
acenaphthylene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
anthracene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
benz(a)anthracene	E641A	0.010	µg/L	<0.010	1.8 µg/L	1.8 µg/L	--	--	--	--
benzo(a)pyrene	E641A	0.0050	µg/L	<0.0050	0.81 µg/L	0.81 µg/L	--	--	--	--
benzo(b+j)fluoranthene	E641A	0.010	µg/L	<0.010	0.75 µg/L	0.75 µg/L	--	--	--	--
benzo(g,h,i)perylene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
benzo(k)fluoranthene	E641A	0.010	µg/L	<0.010	0.4 µg/L	0.4 µg/L	--	--	--	--
chrysene	E641A	0.010	µg/L	<0.010	0.7 µg/L	0.7 µg/L	--	--	--	--
dibenz(a,h)anthracene	E641A	0.0050	µg/L	<0.0050	0.4 µg/L	0.4 µg/L	--	--	--	--
fluoranthene	E641A	0.010	µg/L	<0.010	44 µg/L	44 µg/L	--	--	--	--
fluorene	E641A	0.010	µg/L	<0.010	290 µg/L	290 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-002 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
indeno(1,2,3-c,d)pyrene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
methylnaphthalene, 1+2-	E641A	0.015	µg/L	<0.015	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 1-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 2-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
naphthalene	E641A	0.050	µg/L	<0.050	7 µg/L	7 µg/L	--	--	--	--
phenanthrene	E641A	0.020	µg/L	<0.020	380 µg/L	380 µg/L	--	--	--	--
pyrene	E641A	0.010	µg/L	<0.010	5.7 µg/L	5.7 µg/L	--	--	--	--
chrysene-d12	E641A	0.1	%	78.9	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	78.2	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	92.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				22-21-01DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224015-003	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-003 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	93.5	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	95.2	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)





## Analytical Results

				Client sample ID	22-22-01DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time	01-Dec-2022 11:15						
Analyte	Method	LOR	Unit	WT2224015-004		ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Dissolved Metals</b>											
antimony, dissolved	E421	0.10	µg/L	<1.00	DLHC	16000 µg/L	16000 µg/L	--	--	--	--
arsenic, dissolved	E421	0.10	µg/L	<1.00	DLHC	1500 µg/L	1500 µg/L	--	--	--	--
barium, dissolved	E421	0.10	µg/L	278	DLHC	23000 µg/L	23000 µg/L	--	--	--	--
beryllium, dissolved	E421	0.020	µg/L	<0.200	DLHC	53 µg/L	53 µg/L	--	--	--	--
boron, dissolved	E421	10	µg/L	<100	DLHC	36000 µg/L	36000 µg/L	--	--	--	--
cadmium, dissolved	E421	0.0050	µg/L	<0.0500	DLHC	2.1 µg/L	2.1 µg/L	--	--	--	--
chromium, dissolved	E421	0.50	µg/L	<5.00	DLHC	640 µg/L	640 µg/L	--	--	--	--
cobalt, dissolved	E421	0.10	µg/L	4.53	DLHC	52 µg/L	52 µg/L	--	--	--	--
copper, dissolved	E421	0.20	µg/L	16.5	DLHC	69 µg/L	69 µg/L	--	--	--	--
lead, dissolved	E421	0.050	µg/L	<0.500	DLHC	20 µg/L	20 µg/L	--	--	--	--
mercury, dissolved	E509	0.0050	µg/L	<0.0050		0.1 µg/L	0.1 µg/L	--	--	--	--
molybdenum, dissolved	E421	0.050	µg/L	6.70	DLHC	7300 µg/L	7300 µg/L	--	--	--	--
nickel, dissolved	E421	0.50	µg/L	9.45	DLHC	390 µg/L	390 µg/L	--	--	--	--
selenium, dissolved	E421	0.050	µg/L	0.950	DLHC	50 µg/L	50 µg/L	--	--	--	--
silver, dissolved	E421	0.010	µg/L	<0.100	DLHC	1.2 µg/L	1.2 µg/L	--	--	--	--
sodium, dissolved	E421	50	µg/L	514000	DLHC	1800000 µg/L	1800000 µg/L	--	--	--	--
thallium, dissolved	E421	0.010	µg/L	0.106	DLHC	400 µg/L	400 µg/L	--	--	--	--
uranium, dissolved	E421	0.010	µg/L	13.8	DLHC	330 µg/L	330 µg/L	--	--	--	--
vanadium, dissolved	E421	0.50	µg/L	<5.00	DLHC	200 µg/L	200 µg/L	--	--	--	--
zinc, dissolved	E421	1.0	µg/L	<10.0	DLHC	890 µg/L	890 µg/L	--	--	--	--
dissolved mercury filtration location	EP509		-	Field		--	--	--	--	--	--
dissolved metals filtration location	EP421		-	Field		--	--	--	--	--	--
<b>Speciated Metals</b>											
chromium, hexavalent [Cr VI], dissolved	E532A	0.50	µg/L	<0.50		--	--	--	--	--	--
<b>Volatile Organic Compounds</b>											
Acetone	E611D	20	µg/L	<20		100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50		0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50		67000 µg/L	67000 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-004 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-004 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylene, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F2-naphthalene	EC600SG	100	µg/L	<100	--	--	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F3-PAH	EC600SG	250	µg/L	<250	--	--	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	92.1	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	95.7	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	92.3	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	99.1	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.010	µg/L	<0.010	17 µg/L	17 µg/L	--	--	--	--
acenaphthylene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
anthracene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
benz(a)anthracene	E641A	0.010	µg/L	<0.010	1.8 µg/L	1.8 µg/L	--	--	--	--
benzo(a)pyrene	E641A	0.0050	µg/L	<0.0050	0.81 µg/L	0.81 µg/L	--	--	--	--
benzo(b+j)fluoranthene	E641A	0.010	µg/L	<0.010	0.75 µg/L	0.75 µg/L	--	--	--	--
benzo(g,h,i)perylene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
benzo(k)fluoranthene	E641A	0.010	µg/L	<0.010	0.4 µg/L	0.4 µg/L	--	--	--	--
chrysene	E641A	0.010	µg/L	<0.010	0.7 µg/L	0.7 µg/L	--	--	--	--
dibenz(a,h)anthracene	E641A	0.0050	µg/L	<0.0050	0.4 µg/L	0.4 µg/L	--	--	--	--
fluoranthene	E641A	0.010	µg/L	<0.010	44 µg/L	44 µg/L	--	--	--	--
fluorene	E641A	0.010	µg/L	<0.010	290 µg/L	290 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-004 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
indeno(1,2,3-c,d)pyrene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
methylnaphthalene, 1+2-	E641A	0.015	µg/L	<0.015	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 1-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 2-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
naphthalene	E641A	0.050	µg/L	<0.050	7 µg/L	7 µg/L	--	--	--	--
phenanthrene	E641A	0.020	µg/L	<0.020	380 µg/L	380 µg/L	--	--	--	--
pyrene	E641A	0.010	µg/L	<0.010	5.7 µg/L	5.7 µg/L	--	--	--	--
chrysene-d12	E641A	0.1	%	85.7	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	86.2	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	101	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Sub-Matrix: Water (Matrix: Water)	Method	LOR	Unit	Client sample ID	22-23-01DEC22		ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
				Sampling date/time	01-Dec-2022 12:15	WT2224015-005						
<b>Volatile Organic Compounds</b>												
Acetone	E611D	20	µg/L	<20	OWP	100000 µg/L	100000 µg/L	--	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	OWP	67000 µg/L	67000 µg/L	--	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	OWP	5 µg/L	5 µg/L	--	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	OWP	0.89 µg/L	0.89 µg/L	--	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	OWP	0.2 µg/L	0.2 µg/L	--	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	OWP	140 µg/L	140 µg/L	--	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	OWP	2 µg/L	2 µg/L	--	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	OWP	65000 µg/L	65000 µg/L	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	OWP	0.2 µg/L	0.2 µg/L	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	OWP	150 µg/L	150 µg/L	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	OWP	7600 µg/L	7600 µg/L	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	0.71	OWP	3500 µg/L	3500 µg/L	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	OWP	11 µg/L	11 µg/L	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	OWP	1.6 µg/L	1.6 µg/L	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	OWP	1.6 µg/L	1.6 µg/L	--	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	OWP	26 µg/L	26 µg/L	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	OWP	0.58 µg/L	0.58 µg/L	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	OWP	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	OWP	--	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	OWP	54 µg/L	54 µg/L	--	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	OWP	5 µg/L	5 µg/L	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	OWP	21000 µg/L	21000 µg/L	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	OWP	5200 µg/L	5200 µg/L	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	OWP	15 µg/L	15 µg/L	--	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	OWP	43 µg/L	43 µg/L	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-005 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	OWP	1.1 µg/L	1.1 µg/L	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--
toluene	E611D	0.50	µg/L	<0.50	OWP	320 µg/L	320 µg/L	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	OWP	23 µg/L	23 µg/L	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	OWP	2000 µg/L	2000 µg/L	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	OWP	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	OWP	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50		72 µg/L	72 µg/L	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0		--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	95.8		--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	94.7		--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				22-24-01DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224015-006	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-006 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	97.0	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	94.1	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)





## Analytical Results

				Client sample ID						
				22-26-01DEC22						
				01-Dec-2022						
				13:30						
				WT2224015-007	ON153/04	ON153/04				
Analyte	Method	LOR	Unit		T7-NPGW-C-AI	T7-NPGW-F-AII				
<b>Dissolved Metals</b>										
antimony, dissolved	E421	0.10	µg/L	<0.10	16000 µg/L	16000 µg/L	--	--	--	--
arsenic, dissolved	E421	0.10	µg/L	0.12	1500 µg/L	1500 µg/L	--	--	--	--
barium, dissolved	E421	0.10	µg/L	87.5	23000 µg/L	23000 µg/L	--	--	--	--
beryllium, dissolved	E421	0.020	µg/L	<0.020	53 µg/L	53 µg/L	--	--	--	--
boron, dissolved	E421	10	µg/L	15	36000 µg/L	36000 µg/L	--	--	--	--
cadmium, dissolved	E421	0.0050	µg/L	<0.0050	2.1 µg/L	2.1 µg/L	--	--	--	--
chromium, dissolved	E421	0.50	µg/L	<0.50	640 µg/L	640 µg/L	--	--	--	--
cobalt, dissolved	E421	0.10	µg/L	0.30	52 µg/L	52 µg/L	--	--	--	--
copper, dissolved	E421	0.20	µg/L	4.63	69 µg/L	69 µg/L	--	--	--	--
lead, dissolved	E421	0.050	µg/L	<0.050	20 µg/L	20 µg/L	--	--	--	--
mercury, dissolved	E509	0.0050	µg/L	<0.0050	0.1 µg/L	0.1 µg/L	--	--	--	--
molybdenum, dissolved	E421	0.050	µg/L	0.701	7300 µg/L	7300 µg/L	--	--	--	--
nickel, dissolved	E421	0.50	µg/L	1.05	390 µg/L	390 µg/L	--	--	--	--
selenium, dissolved	E421	0.050	µg/L	0.254	50 µg/L	50 µg/L	--	--	--	--
silver, dissolved	E421	0.010	µg/L	0.011	1.2 µg/L	1.2 µg/L	--	--	--	--
sodium, dissolved	E421	50	µg/L	147000	DLHC 1800000 µg/L	1800000 µg/L	--	--	--	--
thallium, dissolved	E421	0.010	µg/L	0.076	400 µg/L	400 µg/L	--	--	--	--
uranium, dissolved	E421	0.010	µg/L	1.48	330 µg/L	330 µg/L	--	--	--	--
vanadium, dissolved	E421	0.50	µg/L	<0.50	200 µg/L	200 µg/L	--	--	--	--
zinc, dissolved	E421	1.0	µg/L	<1.0	890 µg/L	890 µg/L	--	--	--	--
dissolved mercury filtration location	EP509		-	Field	--	--	--	--	--	--
dissolved metals filtration location	EP421		-	Field	--	--	--	--	--	--
<b>Speciated Metals</b>										
chromium, hexavalent [Cr VI], dissolved	E532A	0.50	µg/L	<0.50	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-007 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-007 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F2-naphthalene	EC600SG	100	µg/L	<100	--	--	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F3-PAH	EC600SG	250	µg/L	<250	--	--	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	86.1	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	103	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	93.4	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	98.6	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.010	µg/L	<0.010	17 µg/L	17 µg/L	--	--	--	--
acenaphthylene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
anthracene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
benz(a)anthracene	E641A	0.010	µg/L	<0.010	1.8 µg/L	1.8 µg/L	--	--	--	--
benzo(a)pyrene	E641A	0.0050	µg/L	<0.0050	0.81 µg/L	0.81 µg/L	--	--	--	--
benzo(b+j)fluoranthene	E641A	0.010	µg/L	<0.010	0.75 µg/L	0.75 µg/L	--	--	--	--
benzo(g,h,i)perylene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
benzo(k)fluoranthene	E641A	0.010	µg/L	<0.010	0.4 µg/L	0.4 µg/L	--	--	--	--
chrysene	E641A	0.010	µg/L	<0.010	0.7 µg/L	0.7 µg/L	--	--	--	--
dibenz(a,h)anthracene	E641A	0.0050	µg/L	<0.0050	0.4 µg/L	0.4 µg/L	--	--	--	--
fluoranthene	E641A	0.010	µg/L	<0.010	44 µg/L	44 µg/L	--	--	--	--
fluorene	E641A	0.010	µg/L	<0.010	290 µg/L	290 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-007 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
indeno(1,2,3-c,d)pyrene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
methylnaphthalene, 1+2-	E641A	0.015	µg/L	<0.015	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 1-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 2-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
naphthalene	E641A	0.050	µg/L	<0.050	7 µg/L	7 µg/L	--	--	--	--
phenanthrene	E641A	0.020	µg/L	<0.020	380 µg/L	380 µg/L	--	--	--	--
pyrene	E641A	0.010	µg/L	<0.010	5.7 µg/L	5.7 µg/L	--	--	--	--
chrysene-d12	E641A	0.1	%	72.1	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	81.2	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	93.1	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID	22-27-01DEC22					
Sub-Matrix: Water (Matrix: Water)				Sampling date/time	01-Dec-2022 14:45					
Analyte	Method	LOR	Unit	WT2224015-008	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Dissolved Metals</b>										
antimony, dissolved	E421	0.10	µg/L	0.12	16000 µg/L	16000 µg/L	--	--	--	--
arsenic, dissolved	E421	0.10	µg/L	0.16	1500 µg/L	1500 µg/L	--	--	--	--
barium, dissolved	E421	0.10	µg/L	62.8	23000 µg/L	23000 µg/L	--	--	--	--
beryllium, dissolved	E421	0.020	µg/L	<0.020	53 µg/L	53 µg/L	--	--	--	--
boron, dissolved	E421	10	µg/L	11	36000 µg/L	36000 µg/L	--	--	--	--
cadmium, dissolved	E421	0.0050	µg/L	0.0189	2.1 µg/L	2.1 µg/L	--	--	--	--
chromium, dissolved	E421	0.50	µg/L	0.57	640 µg/L	640 µg/L	--	--	--	--
cobalt, dissolved	E421	0.10	µg/L	0.31	52 µg/L	52 µg/L	--	--	--	--
copper, dissolved	E421	0.20	µg/L	7.03	69 µg/L	69 µg/L	--	--	--	--
lead, dissolved	E421	0.050	µg/L	0.633	20 µg/L	20 µg/L	--	--	--	--
mercury, dissolved	E509	0.0050	µg/L	<0.0050	0.1 µg/L	0.1 µg/L	--	--	--	--
molybdenum, dissolved	E421	0.050	µg/L	1.24	7300 µg/L	7300 µg/L	--	--	--	--
nickel, dissolved	E421	0.50	µg/L	0.96	390 µg/L	390 µg/L	--	--	--	--
selenium, dissolved	E421	0.050	µg/L	0.581	50 µg/L	50 µg/L	--	--	--	--
silver, dissolved	E421	0.010	µg/L	<0.010	1.2 µg/L	1.2 µg/L	--	--	--	--
sodium, dissolved	E421	50	µg/L	194000	DLHC 1800000 µg/L	1800000 µg/L	--	--	--	--
thallium, dissolved	E421	0.010	µg/L	0.053	400 µg/L	400 µg/L	--	--	--	--
uranium, dissolved	E421	0.010	µg/L	1.88	330 µg/L	330 µg/L	--	--	--	--
vanadium, dissolved	E421	0.50	µg/L	<0.50	200 µg/L	200 µg/L	--	--	--	--
zinc, dissolved	E421	1.0	µg/L	1.7	890 µg/L	890 µg/L	--	--	--	--
dissolved mercury filtration location	EP509		-	Field	--	--	--	--	--	--
dissolved metals filtration location	EP421		-	Field	--	--	--	--	--	--
<b>Speciated Metals</b>										
chromium, hexavalent [Cr VI], dissolved	E532A	0.50	µg/L	<0.50	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-008 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	0.99	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-008 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F2-naphthalene	EC600SG	100	µg/L	<100	--	--	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F3-PAH	EC600SG	250	µg/L	<250	--	--	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	95.9	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	95.0	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	93.2	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	98.6	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.010	µg/L	<0.010	17 µg/L	17 µg/L	--	--	--	--
acenaphthylene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
anthracene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
benz(a)anthracene	E641A	0.010	µg/L	<0.010	1.8 µg/L	1.8 µg/L	--	--	--	--
benzo(a)pyrene	E641A	0.0050	µg/L	<0.0050	0.81 µg/L	0.81 µg/L	--	--	--	--
benzo(b+j)fluoranthene	E641A	0.010	µg/L	<0.010	0.75 µg/L	0.75 µg/L	--	--	--	--
benzo(g,h,i)perylene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
benzo(k)fluoranthene	E641A	0.010	µg/L	<0.010	0.4 µg/L	0.4 µg/L	--	--	--	--
chrysene	E641A	0.010	µg/L	<0.010	0.7 µg/L	0.7 µg/L	--	--	--	--
dibenz(a,h)anthracene	E641A	0.0050	µg/L	<0.0050	0.4 µg/L	0.4 µg/L	--	--	--	--
fluoranthene	E641A	0.010	µg/L	<0.010	44 µg/L	44 µg/L	--	--	--	--
fluorene	E641A	0.010	µg/L	<0.010	290 µg/L	290 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-008 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
indeno(1,2,3-c,d)pyrene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
methylnaphthalene, 1+2-	E641A	0.015	µg/L	<0.015	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 1-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 2-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
naphthalene	E641A	0.050	µg/L	<0.050	7 µg/L	7 µg/L	--	--	--	--
phenanthrene	E641A	0.020	µg/L	<0.020	380 µg/L	380 µg/L	--	--	--	--
pyrene	E641A	0.010	µg/L	<0.010	5.7 µg/L	5.7 µg/L	--	--	--	--
chrysene-d12	E641A	0.1	%	84.4	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	84.3	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	89.7	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)





## Analytical Results

				Client sample ID						
				22-32-01DEC22						
				01-Dec-2022						
				14:10						
				WT2224015-009	ON153/04	ON153/04				
Analyte	Method	LOR	Unit		T7-NPGW-C-AI	T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	0.64	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-009 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	96.9	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	93.7	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				22-33-01DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224015-010	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	2.41	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-010 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	97.3	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	93.6	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
22-33-01DEC22	Water	chloroform		ON153/04	T7-NPGW-C-All	2.41 µg/L	2 µg/L
	Water	chloroform		ON153/04	T7-NPGW-F-All	2.41 µg/L	2 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				22-36-01DEC22						
				01-Dec-2022						
				15:30						
				WT2224015-011	ON153/04	ON153/04				
Analyte	Method	LOR	Unit		T7-NPGW-C-AI	T7-NPGW-F-AII				
<b>Dissolved Metals</b>										
antimony, dissolved	E421	0.10	µg/L	0.14	16000 µg/L	16000 µg/L	--	--	--	--
arsenic, dissolved	E421	0.10	µg/L	0.18	1500 µg/L	1500 µg/L	--	--	--	--
barium, dissolved	E421	0.10	µg/L	92.8	23000 µg/L	23000 µg/L	--	--	--	--
beryllium, dissolved	E421	0.020	µg/L	<0.020	53 µg/L	53 µg/L	--	--	--	--
boron, dissolved	E421	10	µg/L	11	36000 µg/L	36000 µg/L	--	--	--	--
cadmium, dissolved	E421	0.0050	µg/L	0.0666	2.1 µg/L	2.1 µg/L	--	--	--	--
chromium, dissolved	E421	0.50	µg/L	<0.50	640 µg/L	640 µg/L	--	--	--	--
cobalt, dissolved	E421	0.10	µg/L	1.82	52 µg/L	52 µg/L	--	--	--	--
copper, dissolved	E421	0.20	µg/L	20.5	69 µg/L	69 µg/L	--	--	--	--
lead, dissolved	E421	0.050	µg/L	0.880	20 µg/L	20 µg/L	--	--	--	--
mercury, dissolved	E509	0.0050	µg/L	<0.0050	0.1 µg/L	0.1 µg/L	--	--	--	--
molybdenum, dissolved	E421	0.050	µg/L	1.58	7300 µg/L	7300 µg/L	--	--	--	--
nickel, dissolved	E421	0.50	µg/L	5.43	390 µg/L	390 µg/L	--	--	--	--
selenium, dissolved	E421	0.050	µg/L	0.403	50 µg/L	50 µg/L	--	--	--	--
silver, dissolved	E421	0.010	µg/L	<0.010	1.2 µg/L	1.2 µg/L	--	--	--	--
sodium, dissolved	E421	50	µg/L	68400	1800000 µg/L	1800000 µg/L	--	--	--	--
thallium, dissolved	E421	0.010	µg/L	0.094	400 µg/L	400 µg/L	--	--	--	--
uranium, dissolved	E421	0.010	µg/L	5.66	330 µg/L	330 µg/L	--	--	--	--
vanadium, dissolved	E421	0.50	µg/L	<0.50	200 µg/L	200 µg/L	--	--	--	--
zinc, dissolved	E421	1.0	µg/L	3.5	890 µg/L	890 µg/L	--	--	--	--
dissolved mercury filtration location	EP509		-	Field	--	--	--	--	--	--
dissolved metals filtration location	EP421		-	Field	--	--	--	--	--	--
<b>Speciated Metals</b>										
chromium, hexavalent [Cr VI], dissolved	E532A	0.50	µg/L	<0.50	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-011 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	3.69	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-011 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F2-naphthalene	EC600SG	100	µg/L	<100	--	--	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F3-PAH	EC600SG	250	µg/L	<250	--	--	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG	-	-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	83.9	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	98.9	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	102	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	108	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.010	µg/L	<0.010	17 µg/L	17 µg/L	--	--	--	--
acenaphthylene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
anthracene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
benz(a)anthracene	E641A	0.010	µg/L	<0.010	1.8 µg/L	1.8 µg/L	--	--	--	--
benzo(a)pyrene	E641A	0.0050	µg/L	<0.0050	0.81 µg/L	0.81 µg/L	--	--	--	--
benzo(b+j)fluoranthene	E641A	0.010	µg/L	<0.010	0.75 µg/L	0.75 µg/L	--	--	--	--
benzo(g,h,i)perylene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
benzo(k)fluoranthene	E641A	0.010	µg/L	<0.010	0.4 µg/L	0.4 µg/L	--	--	--	--
chrysene	E641A	0.010	µg/L	<0.010	0.7 µg/L	0.7 µg/L	--	--	--	--
dibenz(a,h)anthracene	E641A	0.0050	µg/L	<0.0050	0.4 µg/L	0.4 µg/L	--	--	--	--
fluoranthene	E641A	0.010	µg/L	<0.010	44 µg/L	44 µg/L	--	--	--	--
fluorene	E641A	0.010	µg/L	<0.010	290 µg/L	290 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-011 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
indeno(1,2,3-c,d)pyrene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
methylnaphthalene, 1+2-	E641A	0.015	µg/L	<0.015	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 1-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 2-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
naphthalene	E641A	0.050	µg/L	<0.050	7 µg/L	7 µg/L	--	--	--	--
phenanthrene	E641A	0.020	µg/L	<0.020	380 µg/L	380 µg/L	--	--	--	--
pyrene	E641A	0.010	µg/L	<0.010	5.7 µg/L	5.7 µg/L	--	--	--	--
chrysene-d12	E641A	0.1	%	81.6	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	87.0	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	98.4	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
22-36-01DEC22	Water	chloroform		ON153/04	T7-NPGW-C-All	3.69 µg/L	2 µg/L
	Water	chloroform		ON153/04	T7-NPGW-F-All	3.69 µg/L	2 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)





## Analytical Results

				Client sample ID						
				DUP1-01DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224015-012	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-012 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	98.4	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	93.1	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				DUP2-01DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224015-013	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Dissolved Metals</b>										
antimony, dissolved	E421	0.10	µg/L	<0.10	16000 µg/L	16000 µg/L	--	--	--	--
arsenic, dissolved	E421	0.10	µg/L	0.12	1500 µg/L	1500 µg/L	--	--	--	--
barium, dissolved	E421	0.10	µg/L	87.6	23000 µg/L	23000 µg/L	--	--	--	--
beryllium, dissolved	E421	0.020	µg/L	<0.020	53 µg/L	53 µg/L	--	--	--	--
boron, dissolved	E421	10	µg/L	15	36000 µg/L	36000 µg/L	--	--	--	--
cadmium, dissolved	E421	0.0050	µg/L	<0.0050	2.1 µg/L	2.1 µg/L	--	--	--	--
chromium, dissolved	E421	0.50	µg/L	<0.50	640 µg/L	640 µg/L	--	--	--	--
cobalt, dissolved	E421	0.10	µg/L	0.30	52 µg/L	52 µg/L	--	--	--	--
copper, dissolved	E421	0.20	µg/L	4.57	69 µg/L	69 µg/L	--	--	--	--
lead, dissolved	E421	0.050	µg/L	<0.050	20 µg/L	20 µg/L	--	--	--	--
mercury, dissolved	E509	0.0050	µg/L	<0.0050	0.1 µg/L	0.1 µg/L	--	--	--	--
molybdenum, dissolved	E421	0.050	µg/L	0.682	7300 µg/L	7300 µg/L	--	--	--	--
nickel, dissolved	E421	0.50	µg/L	1.07	390 µg/L	390 µg/L	--	--	--	--
selenium, dissolved	E421	0.050	µg/L	0.261	50 µg/L	50 µg/L	--	--	--	--
silver, dissolved	E421	0.010	µg/L	<0.010	1.2 µg/L	1.2 µg/L	--	--	--	--
sodium, dissolved	E421	50	µg/L	144000	DLHC 1800000 µg/L	1800000 µg/L	--	--	--	--
thallium, dissolved	E421	0.010	µg/L	0.075	400 µg/L	400 µg/L	--	--	--	--
uranium, dissolved	E421	0.010	µg/L	1.50	330 µg/L	330 µg/L	--	--	--	--
vanadium, dissolved	E421	0.50	µg/L	<0.50	200 µg/L	200 µg/L	--	--	--	--
zinc, dissolved	E421	1.0	µg/L	<1.0	890 µg/L	890 µg/L	--	--	--	--
dissolved mercury filtration location	EP509		-	Field	--	--	--	--	--	--
dissolved metals filtration location	EP421		-	Field	--	--	--	--	--	--
<b>Speciated Metals</b>										
chromium, hexavalent [Cr VI], dissolved	E532A	0.50	µg/L	<0.50	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-013 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-013 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylene, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F2-naphthalene	EC600SG	100	µg/L	<100	--	--	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F3-PAH	EC600SG	250	µg/L	<250	--	--	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG	-	-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	102	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	107	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	102	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	108	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.010	µg/L	<0.010	17 µg/L	17 µg/L	--	--	--	--
acenaphthylene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
anthracene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
benz(a)anthracene	E641A	0.010	µg/L	<0.010	1.8 µg/L	1.8 µg/L	--	--	--	--
benzo(a)pyrene	E641A	0.0050	µg/L	<0.0050	0.81 µg/L	0.81 µg/L	--	--	--	--
benzo(b+j)fluoranthene	E641A	0.010	µg/L	<0.010	0.75 µg/L	0.75 µg/L	--	--	--	--
benzo(g,h,i)perylene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
benzo(k)fluoranthene	E641A	0.010	µg/L	<0.010	0.4 µg/L	0.4 µg/L	--	--	--	--
chrysene	E641A	0.010	µg/L	<0.010	0.7 µg/L	0.7 µg/L	--	--	--	--
dibenz(a,h)anthracene	E641A	0.0050	µg/L	<0.0050	0.4 µg/L	0.4 µg/L	--	--	--	--
fluoranthene	E641A	0.010	µg/L	<0.010	44 µg/L	44 µg/L	--	--	--	--
fluorene	E641A	0.010	µg/L	<0.010	290 µg/L	290 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-013 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
indeno(1,2,3-c,d)pyrene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
methylnaphthalene, 1+2-	E641A	0.015	µg/L	<0.015	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 1-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 2-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
naphthalene	E641A	0.050	µg/L	<0.050	7 µg/L	7 µg/L	--	--	--	--
phenanthrene	E641A	0.020	µg/L	<0.020	380 µg/L	380 µg/L	--	--	--	--
pyrene	E641A	0.010	µg/L	<0.010	5.7 µg/L	5.7 µg/L	--	--	--	--
chrysene-d12	E641A	0.1	%	83.4	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	87.8	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	98.2	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				TB1-1DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224015-014	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	2.2	RRV 26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-014 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	92.2	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	103	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	98.7	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	107	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- |               |  |
|---------------|--|
| ON153/04      | Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)   |
| T7-NPGW-C-AII | 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse |
| T7-NPGW-F-AII | 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)  |





## Analytical Results

				Client sample ID						
				FB1-1DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224015-015	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224015-015 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	97.4	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	93.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>WT2224015</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 20-1009805</p> <p><b>Sampler</b> : AC</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 15</p> <p><b>No. of samples analysed</b> : 15</p>	<p><b>Page</b> : 1 of 14</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 01-Dec-2022 17:00</p> <p><b>Issue Date</b> : 09-Dec-2022 15:45</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

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### ***Workorder Comments***

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



**Outliers : Quality Control Samples**

*Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes*

Matrix: Water

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Laboratory Control Sample (LCS) Recoveries</b>								
Volatile Organic Compounds	QC-769388-002	----	Acetone	67-64-1	E611D	142 % MES	70.0-130%	Recovery greater than upper control limit
Volatile Organic Compounds	QC-769647-002	----	Acetone	67-64-1	E611D	137 % LCS-H	70.0-130%	Recovery greater than upper control limit
Volatile Organic Compounds	QC-769647-002	----	bromoform	75-25-2	E611D	133 % LCS-H	70.0-130%	Recovery greater than upper control limit
Volatile Organic Compounds	QC-769647-002	----	dichlorodifluoromethane	75-71-8	E611D	54.8 % LCS-L	60.0-140%	Recovery less than lower control limit
Volatile Organic Compounds	QC-769388-002	----	dichloroethylene, trans-1,2-	156-60-5	E611D	133 % MES	70.0-130%	Recovery greater than upper control limit
Volatile Organic Compounds	QC-769388-002	----	hexane, n-	110-54-3	E611D	135 % MES	70.0-130%	Recovery greater than upper control limit
Volatile Organic Compounds	QC-769647-002	----	methyl ethyl ketone [MEK]	78-93-3	E611D	152 % LCS-H	70.0-130%	Recovery greater than upper control limit
Hydrocarbons	QC-768205-002	----	F1 (C6-C10)	----	E581.F1-L	127 % LCS-H	80.0-120%	Recovery greater than upper control limit

**Result Qualifiers**

Qualifier	Description
LCS-H	Lab Control Sample recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.
LCS-L	Lab Control Sample recovery was below ALS DQO. Reference Material and/or Matrix Spike results were acceptable. 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).

<b>Matrix Spike (MS) Recoveries</b>								
Volatile Organic Compounds	Anonymous	Anonymous	dichlorodifluoromethane	75-71-8	E611D	51.7 % MES	60.0-140%	Recovery less than lower data quality objective
Volatile Organic Compounds	Anonymous	Anonymous	dichlorodifluoromethane	75-71-8	E611D	51.3 % MES	60.0-140%	Recovery less than lower data quality objective
Volatile Organic Compounds	Anonymous	Anonymous	methyl ethyl ketone [MEK]	78-93-3	E611D	152 % RRQC	60.0-140%	Recovery greater than upper data quality objective



Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
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**Result Qualifiers**

Qualifier	Description
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).
RRQC	Refer to report comments for information regarding this QC result.



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>											
Glass vial dissolved (hydrochloric acid) 22-20-01DEC22	E509	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	28 days	5 days	✓	
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>											
Glass vial dissolved (hydrochloric acid) 22-22-01DEC22	E509	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	28 days	5 days	✓	
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>											
Glass vial dissolved (hydrochloric acid) 22-26-01DEC22	E509	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	28 days	5 days	✓	
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>											
Glass vial dissolved (hydrochloric acid) 22-27-01DEC22	E509	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	28 days	5 days	✓	
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>											
Glass vial dissolved (hydrochloric acid) 22-36-01DEC22	E509	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	28 days	5 days	✓	
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>											
Glass vial dissolved (hydrochloric acid) DUP2-01DEC22	E509	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	28 days	5 days	✓	
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>											
HDPE - dissolved (lab preserved) 22-20-01DEC22	E421	01-Dec-2022	05-Dec-2022	----	----		05-Dec-2022	180 days	4 days	✓	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>											
HDPE - dissolved (lab preserved) 22-22-01DEC22	E421	01-Dec-2022	05-Dec-2022	----	----		05-Dec-2022	180 days	4 days	✔	
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>											
HDPE - dissolved (lab preserved) 22-26-01DEC22	E421	01-Dec-2022	05-Dec-2022	----	----		05-Dec-2022	180 days	4 days	✔	
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>											
HDPE - dissolved (lab preserved) 22-27-01DEC22	E421	01-Dec-2022	05-Dec-2022	----	----		05-Dec-2022	180 days	4 days	✔	
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>											
HDPE - dissolved (lab preserved) 22-36-01DEC22	E421	01-Dec-2022	05-Dec-2022	----	----		05-Dec-2022	180 days	4 days	✔	
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>											
HDPE - dissolved (lab preserved) DUP2-01DEC22	E421	01-Dec-2022	05-Dec-2022	----	----		05-Dec-2022	180 days	4 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) 22-22-01DEC22	E581.F1-L	01-Dec-2022	05-Dec-2022	----	----		05-Dec-2022	14 days	4 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) 22-26-01DEC22	E581.F1-L	01-Dec-2022	05-Dec-2022	----	----		05-Dec-2022	14 days	4 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) 22-27-01DEC22	E581.F1-L	01-Dec-2022	05-Dec-2022	----	----		05-Dec-2022	14 days	4 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) 22-20-01DEC22	E581.F1-L	01-Dec-2022	05-Dec-2022	----	----		05-Dec-2022	14 days	5 days	✔	





Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) 22-36-01DEC22	E581.F1-L	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	5 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) DUP2-01DEC22	E581.F1-L	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	5 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) TB1-1DEC22	E581.F1-L	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	6 days	✔	
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) 22-20-01DEC22	E601.SG	01-Dec-2022	05-Dec-2022	14 days	4 days	✔	08-Dec-2022	40 days	3 days	✔	
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) 22-22-01DEC22	E601.SG	01-Dec-2022	05-Dec-2022	14 days	4 days	✔	08-Dec-2022	40 days	3 days	✔	
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) 22-26-01DEC22	E601.SG	01-Dec-2022	05-Dec-2022	14 days	4 days	✔	08-Dec-2022	40 days	3 days	✔	
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) 22-27-01DEC22	E601.SG	01-Dec-2022	05-Dec-2022	14 days	4 days	✔	08-Dec-2022	40 days	3 days	✔	
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) 22-36-01DEC22	E601.SG	01-Dec-2022	05-Dec-2022	14 days	4 days	✔	08-Dec-2022	40 days	3 days	✔	
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) DUP2-01DEC22	E601.SG	01-Dec-2022	05-Dec-2022	14 days	4 days	✔	08-Dec-2022	40 days	3 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) TB1-1DEC22	E601.SG	01-Dec-2022	06-Dec-2022	14 days	6 days	✔	08-Dec-2022	40 days	2 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS</b>											
Amber glass/Teflon lined cap (sodium bisulfate) 22-20-01DEC22	E641A	01-Dec-2022	05-Dec-2022	14 days	4 days	✔	06-Dec-2022	40 days	1 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS</b>											
Amber glass/Teflon lined cap (sodium bisulfate) 22-22-01DEC22	E641A	01-Dec-2022	05-Dec-2022	14 days	4 days	✔	06-Dec-2022	40 days	1 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS</b>											
Amber glass/Teflon lined cap (sodium bisulfate) 22-26-01DEC22	E641A	01-Dec-2022	05-Dec-2022	14 days	4 days	✔	06-Dec-2022	40 days	1 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS</b>											
Amber glass/Teflon lined cap (sodium bisulfate) 22-27-01DEC22	E641A	01-Dec-2022	05-Dec-2022	14 days	4 days	✔	06-Dec-2022	40 days	1 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS</b>											
Amber glass/Teflon lined cap (sodium bisulfate) 22-36-01DEC22	E641A	01-Dec-2022	05-Dec-2022	14 days	4 days	✔	06-Dec-2022	40 days	1 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS</b>											
Amber glass/Teflon lined cap (sodium bisulfate) DUP2-01DEC22	E641A	01-Dec-2022	05-Dec-2022	14 days	4 days	✔	06-Dec-2022	40 days	1 days	✔	
<b>Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC</b>											
HDPE - dissolved (NaOH+Buf) [ON MECP] 22-20-01DEC22	E532A	01-Dec-2022	----	----	----		06-Dec-2022	28 days	5 days	✔	
<b>Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC</b>											
HDPE - dissolved (NaOH+Buf) [ON MECP] 22-22-01DEC22	E532A	01-Dec-2022	----	----	----		06-Dec-2022	28 days	5 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC</b>											
HDPE - dissolved (NaOH+Buf) [ON MECP] 22-26-01DEC22	E532A	01-Dec-2022	----	----	----		06-Dec-2022	28 days	5 days	✔	
<b>Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC</b>											
HDPE - dissolved (NaOH+Buf) [ON MECP] 22-27-01DEC22	E532A	01-Dec-2022	----	----	----		06-Dec-2022	28 days	5 days	✔	
<b>Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC</b>											
HDPE - dissolved (NaOH+Buf) [ON MECP] 22-36-01DEC22	E532A	01-Dec-2022	----	----	----		06-Dec-2022	28 days	5 days	✔	
<b>Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC</b>											
HDPE - dissolved (NaOH+Buf) [ON MECP] DUP2-01DEC22	E532A	01-Dec-2022	----	----	----		06-Dec-2022	28 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) 22-22-01DEC22	E611D	01-Dec-2022	05-Dec-2022	----	----		05-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) 22-26-01DEC22	E611D	01-Dec-2022	05-Dec-2022	----	----		05-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) 22-27-01DEC22	E611D	01-Dec-2022	05-Dec-2022	----	----		05-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) 22-18-01DEC22	E611D	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) 22-20-01DEC22	E611D	01-Dec-2022	05-Dec-2022	----	----		05-Dec-2022	14 days	5 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) 22-21-01DEC22	E611D	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) 22-23-01DEC22	E611D	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) 22-24-01DEC22	E611D	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) 22-32-01DEC22	E611D	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) 22-33-01DEC22	E611D	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) 22-36-01DEC22	E611D	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) DUP1-01DEC22	E611D	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) DUP2-01DEC22	E611D	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) FB1-1DEC22	E611D	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	5 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>										
<b>Glass vial (sodium bisulfate)</b> TB1-1DEC22	E611D	01-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	6 days	✔

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	768205	3	46	6.5	5.0	✔
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	768510	1	8	12.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	768412	1	18	5.5	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	767601	1	20	5.0	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	768204	4	72	5.5	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	768205	3	46	6.5	5.0	✔
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	768510	1	8	12.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	768412	1	18	5.5	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	767601	1	20	5.0	5.0	✔
PAHs by Hexane LVI GC-MS	E641A	768011	1	15	6.6	5.0	✔
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG	768010	2	35	5.7	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	768204	4	72	5.5	5.0	✔
<b>Method Blanks (MB)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	768205	3	46	6.5	5.0	✔
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	768510	1	8	12.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	768412	1	18	5.5	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	767601	1	20	5.0	5.0	✔
PAHs by Hexane LVI GC-MS	E641A	768011	1	15	6.6	5.0	✔
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG	768010	2	35	5.7	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	768204	4	72	5.5	5.0	✔
<b>Matrix Spikes (MS)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	768205	3	46	6.5	5.0	✔
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	768510	1	8	12.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	768412	1	18	5.5	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	767601	1	20	5.0	5.0	✔
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	768204	4	72	5.5	5.0	✔



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals in Water by CRC ICPMS	E421 Waterloo - Environmental	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS.  Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Mercury in Water by CVAAS	E509 Waterloo - Environmental	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A Waterloo - Environmental	Water	APHA 3500-Cr C (Ion Chromatography)	Hexavalent Chromium is measured by Ion chromatography-Post column reaction and UV detection.  sample pretreatment involved field or lab filtration following by sample preservation.
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4).
VOCs (Eastern Canada List) by Headspace GC-MS	E611D Waterloo - Environmental	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs by Hexane LVI GC-MS	E641A Waterloo - Environmental	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
F1-BTEX	EC580 Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
SUM F1 to F4 where F2-F4 is SG treated	EC581SG Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fraction F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50), where F2-F4 have been treated with silica gel. F4G-sg is not used within this calculation due to overlap with other fractions.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
F2-F4 (sg) minus PAH	EC600SG  Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	F2-F4 (sg) minus PAH is calculated as follows: F2-F4 minus PAH = Sum of CCME Fraction 2 (C10-C16), CCME Fraction 3 (C16-C34), and CCME Fraction 4 (C34-C50), minus select Polycyclic Aromatic Hydrocarbons (PAH).

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals Water Filtration	EP421  Waterloo - Environmental	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509  Waterloo - Environmental	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581  Waterloo - Environmental	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into the GC/MS-FID system.
PHCs and PAHs Hexane Extraction	EP601  Waterloo - Environmental	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.



## QUALITY CONTROL REPORT

<p><b>Work Order</b> : <b>WT2224015</b></p> <p>Client : Omni-McCann Inc.</p> <p>Contact : Daniel Elliot</p> <p>Address : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p>Telephone :</p> <p>Project : 0006-0103</p> <p>PO : ----</p> <p>C-O-C number : 20-1009805</p> <p>Sampler : AC 705 243 5828</p> <p>Site : ----</p> <p>Quote number : Project 0006-0103</p> <p>No. of samples received : 15</p> <p>No. of samples analysed : 15</p>	<p>Page : 1 of 28</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Emily Smith</p> <p>Address : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 01-Dec-2022 17:00</p> <p>Date Analysis Commenced : 05-Dec-2022</p> <p>Issue Date : 09-Dec-2022 15:45</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Waterloo Organics, Waterloo, Ontario

Page : 2 of 28  
Work Order : WT2224015  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

### Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

## Workorder Comments

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Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Dissolved Metals (QC Lot: 767601)</b>											
WT2222378-001	Anonymous	antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00021	0.00021	0.000002	Diff <2x LOR	----
		arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00042	0.00038	0.00004	Diff <2x LOR	----
		barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.104	0.105	0.696%	20%	----
		beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		boron, dissolved	7440-42-8	E421	0.010	mg/L	0.244	0.247	1.30%	20%	----
		cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000093	0.0000102	0.0000009	Diff <2x LOR	----
		chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	0.00053	0.00003	Diff <2x LOR	----
		cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00076	0.00074	0.00001	Diff <2x LOR	----
		lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000406	0.000417	0.000011	Diff <2x LOR	----
		nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000066	0.000071	0.000005	Diff <2x LOR	----
		silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		sodium, dissolved	7440-23-5	E421	0.050	mg/L	104	104	0.0310%	20%	----
		thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000593	0.000589	0.778%	20%	----
		vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0032	0.0030	0.0002	Diff <2x LOR	----
<b>Dissolved Metals (QC Lot: 768412)</b>											
TY2204630-001	Anonymous	mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
<b>Speciated Metals (QC Lot: 768510)</b>											
WT2224015-002	22-20-01DEC22	chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.00050	mg/L	<0.50 µg/L	<0.00050	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 768204)</b>											
WT2223843-002	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----



Sub-Matrix: Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 768204) - continued</b>											
WT2223843-002	Anonymous	chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.50	µg/L	1.57	1.56	0.01	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----



Sub-Matrix: Water

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 768336)</b>											
WT2223910-001	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.50	µg/L	0.76	0.74	0.02	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.50	µg/L	0.73	0.65	0.08	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.50	µg/L	0.89	0.90	0.01	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 768336) - continued</b>											
WT2223910-001	Anonymous	trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	0.40	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.30	µg/L	0.41	0.40	0.01	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 769388)</b>											
WT2224015-001	22-18-01DEC22	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----



Sub-Matrix: **Water**

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 769388) - continued</b>											
WT2224015-001	22-18-01DEC22	methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 769647)</b>											
WT2223969-001	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 769647) - continued</b>											
WT2223969-001	Anonymous	dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 768205)</b>											
WT2223843-002	Anonymous	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 768337)</b>											
WT2223910-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 769648)</b>											
WT2223969-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----





## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Dissolved Metals (QCLot: 767601)</b>						
antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
<b>Dissolved Metals (QCLot: 768412)</b>						
mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
<b>Speciated Metals (QCLot: 768510)</b>						
chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.0005	mg/L	<0.00050	----
<b>Volatile Organic Compounds (QCLot: 768204)</b>						
Acetone	67-64-1	E611D	20	µg/L	<20	----
benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 768204) - continued</b>						
dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
<b>Volatile Organic Compounds (QCLot: 768336)</b>						
Acetone	67-64-1	E611D	20	µg/L	<20	----
benzene	71-43-2	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 768336) - continued</b>						
bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 768336) - continued</b>						
vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
<b>Volatile Organic Compounds (QCLot: 769388)</b>						
Acetone	67-64-1	E611D	20	µg/L	<20	----
benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatil Organic Compounds (QCLot: 769388) - continued</b>						
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
<b>Volatil Organic Compounds (QCLot: 769647)</b>						
Acetone	67-64-1	E611D	20	µg/L	<20	----
benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 769647) - continued</b>						
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
<b>Hydrocarbons (QCLot: 768010)</b>						
F2 (C10-C16)	----	E601.SG	100	µg/L	<100	----
F3 (C16-C34)	----	E601.SG	250	µg/L	<250	----
F4 (C34-C50)	----	E601.SG	250	µg/L	<250	----
<b>Hydrocarbons (QCLot: 768205)</b>						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
<b>Hydrocarbons (QCLot: 768337)</b>						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
<b>Hydrocarbons (QCLot: 769293)</b>						
F2 (C10-C16)	----	E601.SG	100	µg/L	<100	----
F3 (C16-C34)	----	E601.SG	250	µg/L	<250	----
F4 (C34-C50)	----	E601.SG	250	µg/L	<250	----
<b>Hydrocarbons (QCLot: 769648)</b>						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 768011)</b>						
acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 768011) - continued</b>						
benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----
naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----



## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Dissolved Metals (QCLot: 767601)</b>									
antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	106	80.0	120	----
arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	111	80.0	120	----
barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.0125 mg/L	110	80.0	120	----
beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	105	80.0	120	----
boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	95.4	80.0	120	----
cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	106	80.0	120	----
chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.0125 mg/L	105	80.0	120	----
cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.0125 mg/L	106	80.0	120	----
copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.0125 mg/L	104	80.0	120	----
lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	104	80.0	120	----
molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.0125 mg/L	107	80.0	120	----
nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	106	80.0	120	----
selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	102	80.0	120	----
silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	100.0	80.0	120	----
sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	109	80.0	120	----
thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	104	80.0	120	----
uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.00025 mg/L	103	80.0	120	----
vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	108	80.0	120	----
zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	104	80.0	120	----
mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0.0001 mg/L	89.7	80.0	120	----
<b>Speciated Metals (QCLot: 768510)</b>									
chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.0005	mg/L	0.025 mg/L	101	80.0	120	----
<b>Volatile Organic Compounds (QCLot: 768204)</b>									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	87.2	70.0	130	----
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	96.3	70.0	130	----
bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	103	60.0	140	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	96.7	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	95.5	70.0	130	----





Sub-Matrix: Water

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
<b>Volatile Organic Compounds (QCLot: 768204) - continued</b>									
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	95.1	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	82.5	60.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	86.0	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	88.7	70.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	93.1	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	96.6	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	97.7	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	99.0	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	102	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	99.0	70.0	130	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	99.4	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	96.7	70.0	130	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	81.9	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	99.9	70.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	98.7	70.0	130	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	98.8	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	94.3	70.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	98.1	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	97.7	60.0	140	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	92.8	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	103	70.0	130	----
xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	98.2	70.0	130	----
<b>Volatile Organic Compounds (QCLot: 768336)</b>									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	114	70.0	130	----
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	96.6	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 768336) - continued</b>									
bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	89.7	60.0	140	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	112	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	111	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	98.9	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	64.1	60.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	98.1	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	99.6	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	104	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	93.5	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	96.5	70.0	130	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	113	70.0	130	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	107	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	97.0	70.0	130	----
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
tetrachloroethane, 1,1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	112	70.0	130	----
toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	109	60.0	140	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	73.5	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	102	70.0	130	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 768336) - continued</b>									
xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	108	70.0	130	----
<b>Volatile Organic Compounds (QCLot: 769388)</b>									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	# 142	70.0	130	MES
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	125	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	126	70.0	130	----
bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	94.8	60.0	140	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	124	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	119	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	114	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	89.4	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	83.5	60.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	114	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	121	70.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	115	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	98.2	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	# 133	70.0	130	MES
dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	127	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	116	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	110	70.0	130	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	# 135	70.0	130	MES
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	115	70.0	130	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	118	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	112	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	115	70.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	111	70.0	130	----
toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----



Sub-Matrix: Water

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
<b>Volatile Organic Compounds (QCLot: 769388) - continued</b>									
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	99.4	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	118	70.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	136	60.0	140	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	90.2	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	114	70.0	130	----
xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	112	70.0	130	----
<b>Volatile Organic Compounds (QCLot: 769647)</b>									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	# 137	70.0	130	LCS-H
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	98.1	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	116	70.0	130	----
bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	# 133	70.0	130	LCS-H
bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	82.9	60.0	140	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	121	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	111	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	128	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	114	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	# 54.8	60.0	140	LCS-L
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	122	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	118	70.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	97.5	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----
dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	120	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	101	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	109	70.0	130	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	89.5	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	# 152	70.0	130	LCS-H
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	128	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	98.4	70.0	130	----
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----



Sub-Matrix: **Water**

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
<b>Volatile Organic Compounds (QCLot: 769647) - continued</b>									
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	113	70.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	123	70.0	130	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	120	70.0	130	----
toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	114	70.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	120	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	95.4	60.0	140	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	62.6	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	109	70.0	130	----
xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	112	70.0	130	----
<b>Hydrocarbons (QCLot: 768010)</b>									
F2 (C10-C16)	----	E601.SG	100	µg/L	5843.789 µg/L	79.7	70.0	130	----
F3 (C16-C34)	----	E601.SG	250	µg/L	10010.02 µg/L	72.6	70.0	130	----
F4 (C34-C50)	----	E601.SG	250	µg/L	4503.074 µg/L	82.0	70.0	130	----
<b>Hydrocarbons (QCLot: 768205)</b>									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	# 127	80.0	120	LCS-H
<b>Hydrocarbons (QCLot: 768337)</b>									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	109	80.0	120	----
<b>Hydrocarbons (QCLot: 769293)</b>									
F2 (C10-C16)	----	E601.SG	100	µg/L	4961.825 µg/L	91.8	70.0	130	----
F3 (C16-C34)	----	E601.SG	250	µg/L	7776.674 µg/L	98.4	70.0	130	----
F4 (C34-C50)	----	E601.SG	250	µg/L	4477.474 µg/L	108	70.0	130	----
<b>Hydrocarbons (QCLot: 769648)</b>									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	115	80.0	120	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 768011)</b>									
acenaphthene	83-32-9	E641A	0.01	µg/L	0.5263 µg/L	109	50.0	140	----
acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5263 µg/L	105	50.0	140	----
anthracene	120-12-7	E641A	0.01	µg/L	0.5263 µg/L	94.3	50.0	140	----
benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5263 µg/L	117	50.0	140	----
benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5263 µg/L	119	50.0	140	----
benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5263 µg/L	97.8	50.0	140	----
benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5263 µg/L	128	50.0	140	----
benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5263 µg/L	128	50.0	140	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 768011) - continued</b>									
chrysene	218-01-9	E641A	0.01	µg/L	0.5263 µg/L	127	50.0	140	----
dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5263 µg/L	116	50.0	140	----
fluoranthene	206-44-0	E641A	0.01	µg/L	0.5263 µg/L	127	50.0	140	----
fluorene	86-73-7	E641A	0.01	µg/L	0.5263 µg/L	119	50.0	140	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5263 µg/L	128	50.0	140	----
methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5263 µg/L	103	50.0	140	----
methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5263 µg/L	99.8	50.0	140	----
naphthalene	91-20-3	E641A	0.05	µg/L	0.5263 µg/L	100	50.0	140	----
phenanthrene	85-01-8	E641A	0.02	µg/L	0.5263 µg/L	113	50.0	140	----
pyrene	129-00-0	E641A	0.01	µg/L	0.5263 µg/L	124	50.0	140	----

**Qualifiers**

Qualifier	Description
LCS-H	Lab Control Sample recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.
LCS-L	Lab Control Sample recovery was below ALS DQO. Reference Material and/or Matrix Spike results were acceptable. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.



### Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Dissolved Metals (QCLot: 767601)</b>										
WT2222378-002	Anonymous	antimony, dissolved	7440-36-0	E421	0.0533 mg/L	0.05 mg/L	107	70.0	130	----
		arsenic, dissolved	7440-38-2	E421	0.0592 mg/L	0.05 mg/L	118	70.0	130	----
		barium, dissolved	7440-39-3	E421	ND mg/L	0.0125 mg/L	ND	70.0	130	----
		beryllium, dissolved	7440-41-7	E421	0.00562 mg/L	0.005 mg/L	112	70.0	130	----
		boron, dissolved	7440-42-8	E421	ND mg/L	0.05 mg/L	ND	70.0	130	----
		cadmium, dissolved	7440-43-9	E421	0.00507 mg/L	0.005 mg/L	101	70.0	130	----
		chromium, dissolved	7440-47-3	E421	0.0137 mg/L	0.0125 mg/L	110	70.0	130	----
		cobalt, dissolved	7440-48-4	E421	0.0131 mg/L	0.0125 mg/L	105	70.0	130	----
		copper, dissolved	7440-50-8	E421	0.0123 mg/L	0.0125 mg/L	98.4	70.0	130	----
		lead, dissolved	7439-92-1	E421	0.0239 mg/L	0.025 mg/L	95.7	70.0	130	----
		molybdenum, dissolved	7439-98-7	E421	0.0139 mg/L	0.0125 mg/L	112	70.0	130	----
		nickel, dissolved	7440-02-0	E421	0.0253 mg/L	0.025 mg/L	101	70.0	130	----
		selenium, dissolved	7782-49-2	E421	0.0572 mg/L	0.05 mg/L	114	70.0	130	----
		silver, dissolved	7440-22-4	E421	0.00471 mg/L	0.005 mg/L	94.3	70.0	130	----
		sodium, dissolved	7440-23-5	E421	ND mg/L	2.5 mg/L	ND	70.0	130	----
		thallium, dissolved	7440-28-0	E421	0.0482 mg/L	0.05 mg/L	96.4	70.0	130	----
		uranium, dissolved	7440-61-1	E421	ND mg/L	0.00025 mg/L	ND	70.0	130	----
		vanadium, dissolved	7440-62-2	E421	0.0285 mg/L	0.025 mg/L	114	70.0	130	----
		zinc, dissolved	7440-66-6	E421	0.0250 mg/L	0.025 mg/L	99.8	70.0	130	----
<b>Dissolved Metals (QCLot: 768412)</b>										
WT2223910-002	Anonymous	mercury, dissolved	7439-97-6	E509	0.0000842 mg/L	0.0001 mg/L	84.2	70.0	130	----
<b>Speciated Metals (QCLot: 768510)</b>										
WT2224015-002	22-20-01DEC22	chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.0402 mg/L	0.04 mg/L	100	70.0	130	----
<b>Volatile Organic Compounds (QCLot: 768204)</b>										
WT2223843-002	Anonymous	Acetone	67-64-1	E611D	99 µg/L	100 µg/L	99.4	60.0	140	----
		benzene	71-43-2	E611D	99.9 µg/L	100 µg/L	99.9	60.0	140	----
		bromodichloromethane	75-27-4	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		bromoform	75-25-2	E611D	95.2 µg/L	100 µg/L	95.2	60.0	140	----
		bromomethane	74-83-9	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	94.9 µg/L	100 µg/L	94.9	60.0	140	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 768204) - continued</b>										
WT2223843-002	Anonymous	chlorobenzene	108-90-7	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		chloroform	67-66-3	E611D	95.5 µg/L	100 µg/L	95.5	60.0	140	----
		dibromochloromethane	124-48-1	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	97.4 µg/L	100 µg/L	97.4	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	70.7 µg/L	100 µg/L	70.7	60.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	85.5 µg/L	100 µg/L	85.5	60.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	90.8 µg/L	100 µg/L	90.8	60.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	89.9 µg/L	100 µg/L	89.9	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	97.0 µg/L	100 µg/L	97.0	60.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	98.8 µg/L	100 µg/L	98.8	60.0	140	----
		dichloromethane	75-09-2	E611D	99.8 µg/L	100 µg/L	99.8	60.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	99.4 µg/L	100 µg/L	99.4	60.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	98.9 µg/L	100 µg/L	98.9	60.0	140	----
		ethylbenzene	100-41-4	E611D	97.4 µg/L	100 µg/L	97.4	60.0	140	----
		hexane, n-	110-54-3	E611D	93.7 µg/L	100 µg/L	93.7	60.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	82 µg/L	100 µg/L	81.7	60.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		styrene	100-42-5	E611D	98.4 µg/L	100 µg/L	98.4	60.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	98.8 µg/L	100 µg/L	98.8	60.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	96.2 µg/L	100 µg/L	96.2	60.0	140	----
		tetrachloroethylene	127-18-4	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		toluene	108-88-3	E611D	97.7 µg/L	100 µg/L	97.7	60.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	93.4 µg/L	100 µg/L	93.4	60.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	99.9 µg/L	100 µg/L	99.9	60.0	140	----
		trichloroethylene	79-01-6	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	92.9 µg/L	100 µg/L	92.9	60.0	140	----
		vinyl chloride	75-01-4	E611D	86.2 µg/L	100 µg/L	86.2	60.0	140	----
		xylene, m+p-	179601-23-1	E611D	201 µg/L	200 µg/L	100	60.0	140	----
		xylene, o-	95-47-6	E611D	95.4 µg/L	100 µg/L	95.4	60.0	140	----
<b>Volatile Organic Compounds (QCLot: 768336)</b>										





Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 768336) - continued</b>										
WT2223910-001	Anonymous	Acetone	67-64-1	E611D	140 µg/L	100 µg/L	140	60.0	140	----
		benzene	71-43-2	E611D	95.4 µg/L	100 µg/L	95.4	60.0	140	----
		bromodichloromethane	75-27-4	E611D	115 µg/L	100 µg/L	115	60.0	140	----
		bromoform	75-25-2	E611D	119 µg/L	100 µg/L	119	60.0	140	----
		bromomethane	74-83-9	E611D	84.8 µg/L	100 µg/L	84.8	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		chlorobenzene	108-90-7	E611D	95.9 µg/L	100 µg/L	95.9	60.0	140	----
		chloroform	67-66-3	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		dibromochloromethane	124-48-1	E611D	115 µg/L	100 µg/L	115	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	97.8 µg/L	100 µg/L	97.8	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	96.8 µg/L	100 µg/L	96.8	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	99.1 µg/L	100 µg/L	99.1	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	51.7 µg/L	100 µg/L	51.7	60.0	140	MES
		dichloroethane, 1,1-	75-34-3	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	115 µg/L	100 µg/L	115	60.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	90.2 µg/L	100 µg/L	90.2	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		dichloromethane	75-09-2	E611D	109 µg/L	100 µg/L	109	60.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	97.4 µg/L	100 µg/L	97.4	60.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	97.4 µg/L	100 µg/L	97.4	60.0	140	----
		ethylbenzene	100-41-4	E611D	99.6 µg/L	100 µg/L	99.6	60.0	140	----
		hexane, n-	110-54-3	E611D	89.7 µg/L	100 µg/L	89.7	60.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	136 µg/L	100 µg/L	136	60.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	131 µg/L	100 µg/L	131	60.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	95.1 µg/L	100 µg/L	95.1	60.0	140	----
		styrene	100-42-5	E611D	96.5 µg/L	100 µg/L	96.5	60.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		tetrachloroethylene	127-18-4	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		toluene	108-88-3	E611D	95.2 µg/L	100 µg/L	95.2	60.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	109 µg/L	100 µg/L	109	60.0	140	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 768336) - continued</b>										
WT2223910-001	Anonymous	trichloroethylene	79-01-6	E611D	99.8 µg/L	100 µg/L	99.8	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	99.4 µg/L	100 µg/L	99.4	60.0	140	----
		vinyl chloride	75-01-4	E611D	64.6 µg/L	100 µg/L	64.6	60.0	140	----
		xylene, m+p-	179601-23-1	E611D	191 µg/L	200 µg/L	95.4	60.0	140	----
		xylene, o-	95-47-6	E611D	101 µg/L	100 µg/L	101	60.0	140	----
<b>Volatile Organic Compounds (QCLot: 769388)</b>										
WT2224015-001	22-18-01DEC22	Acetone	67-64-1	E611D	115 µg/L	100 µg/L	115	60.0	140	----
		benzene	71-43-2	E611D	116 µg/L	100 µg/L	116	60.0	140	----
		bromodichloromethane	75-27-4	E611D	115 µg/L	100 µg/L	115	60.0	140	----
		bromoform	75-25-2	E611D	92.3 µg/L	100 µg/L	92.3	60.0	140	----
		bromomethane	74-83-9	E611D	82.4 µg/L	100 µg/L	82.4	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	116 µg/L	100 µg/L	116	60.0	140	----
		chlorobenzene	108-90-7	E611D	97.8 µg/L	100 µg/L	97.8	60.0	140	----
		chloroform	67-66-3	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		dibromochloromethane	124-48-1	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	76.8 µg/L	100 µg/L	76.8	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	99.4 µg/L	100 µg/L	99.4	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	71.9 µg/L	100 µg/L	71.9	60.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	88.9 µg/L	100 µg/L	88.9	60.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	122 µg/L	100 µg/L	122	60.0	140	----
		dichloromethane	75-09-2	E611D	116 µg/L	100 µg/L	116	60.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	99.2 µg/L	100 µg/L	99.2	60.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	94.5 µg/L	100 µg/L	94.5	60.0	140	----
		ethylbenzene	100-41-4	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		hexane, n-	110-54-3	E611D	127 µg/L	100 µg/L	127	60.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	92 µg/L	100 µg/L	92.4	60.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	96 µg/L	100 µg/L	95.8	60.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
		styrene	100-42-5	E611D	103 µg/L	100 µg/L	103	60.0	140	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 769388) - continued</b>										
WT2224015-001	22-18-01DEC22	tetrachloroethane, 1,1,1,2-	630-20-6	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	90.8 µg/L	100 µg/L	90.8	60.0	140	----
		tetrachloroethylene	127-18-4	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		toluene	108-88-3	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	87.9 µg/L	100 µg/L	87.9	60.0	140	----
		trichloroethylene	79-01-6	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	125 µg/L	100 µg/L	125	60.0	140	----
		vinyl chloride	75-01-4	E611D	80.7 µg/L	100 µg/L	80.7	60.0	140	----
		xylene, m+p-	179601-23-1	E611D	218 µg/L	200 µg/L	109	60.0	140	----
		xylene, o-	95-47-6	E611D	107 µg/L	100 µg/L	107	60.0	140	----
<b>Volatile Organic Compounds (QCLot: 769647)</b>										
WT2223969-001	Anonymous	Acetone	67-64-1	E611D	138 µg/L	100 µg/L	138	60.0	140	----
		benzene	71-43-2	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		bromodichloromethane	75-27-4	E611D	122 µg/L	100 µg/L	122	60.0	140	----
		bromoform	75-25-2	E611D	135 µg/L	100 µg/L	135	60.0	140	----
		bromomethane	74-83-9	E611D	83.2 µg/L	100 µg/L	83.2	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	130 µg/L	100 µg/L	130	60.0	140	----
		chlorobenzene	108-90-7	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		chloroform	67-66-3	E611D	117 µg/L	100 µg/L	117	60.0	140	----
		dibromochloromethane	124-48-1	E611D	132 µg/L	100 µg/L	132	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	115 µg/L	100 µg/L	115	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	109 µg/L	100 µg/L	109	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	109 µg/L	100 µg/L	109	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	111 µg/L	100 µg/L	111	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	51.3 µg/L	100 µg/L	51.3	60.0	140	MES
		dichloroethane, 1,1-	75-34-3	E611D	123 µg/L	100 µg/L	123	60.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	121 µg/L	100 µg/L	121	60.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	113 µg/L	100 µg/L	113	60.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	115 µg/L	100 µg/L	115	60.0	140	----
		dichloromethane	75-09-2	E611D	123 µg/L	100 µg/L	123	60.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	110 µg/L	100 µg/L	110	60.0	140	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 769647) - continued</b>										
WT2223969-001	Anonymous	ethylbenzene	100-41-4	E611D	118 µg/L	100 µg/L	118	60.0	140	----
		hexane, n-	110-54-3	E611D	93.0 µg/L	100 µg/L	93.0	60.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	152 µg/L	100 µg/L	152	60.0	140	RRQC
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	126 µg/L	100 µg/L	126	60.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		styrene	100-42-5	E611D	116 µg/L	100 µg/L	116	60.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	118 µg/L	100 µg/L	118	60.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	127 µg/L	100 µg/L	127	60.0	140	----
		tetrachloroethylene	127-18-4	E611D	128 µg/L	100 µg/L	128	60.0	140	----
		toluene	108-88-3	E611D	118 µg/L	100 µg/L	118	60.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	120 µg/L	100 µg/L	120	60.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	122 µg/L	100 µg/L	122	60.0	140	----
		trichloroethylene	79-01-6	E611D	112 µg/L	100 µg/L	112	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	98.6 µg/L	100 µg/L	98.6	60.0	140	----
		vinyl chloride	75-01-4	E611D	63.6 µg/L	100 µg/L	63.6	60.0	140	----
		xylene, m+p-	179601-23-1	E611D	238 µg/L	200 µg/L	119	60.0	140	----
		xylene, o-	95-47-6	E611D	120 µg/L	100 µg/L	120	60.0	140	----
<b>Hydrocarbons (QCLot: 768205)</b>										
WT2223843-002	Anonymous	F1 (C6-C10)	----	E581.F1-L	2040 µg/L	2000 µg/L	102	60.0	140	----
<b>Hydrocarbons (QCLot: 768337)</b>										
WT2223910-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	1580 µg/L	2000 µg/L	79.2	60.0	140	----
<b>Hydrocarbons (QCLot: 769648)</b>										
WT2223969-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	1940 µg/L	2000 µg/L	96.9	60.0	140	----

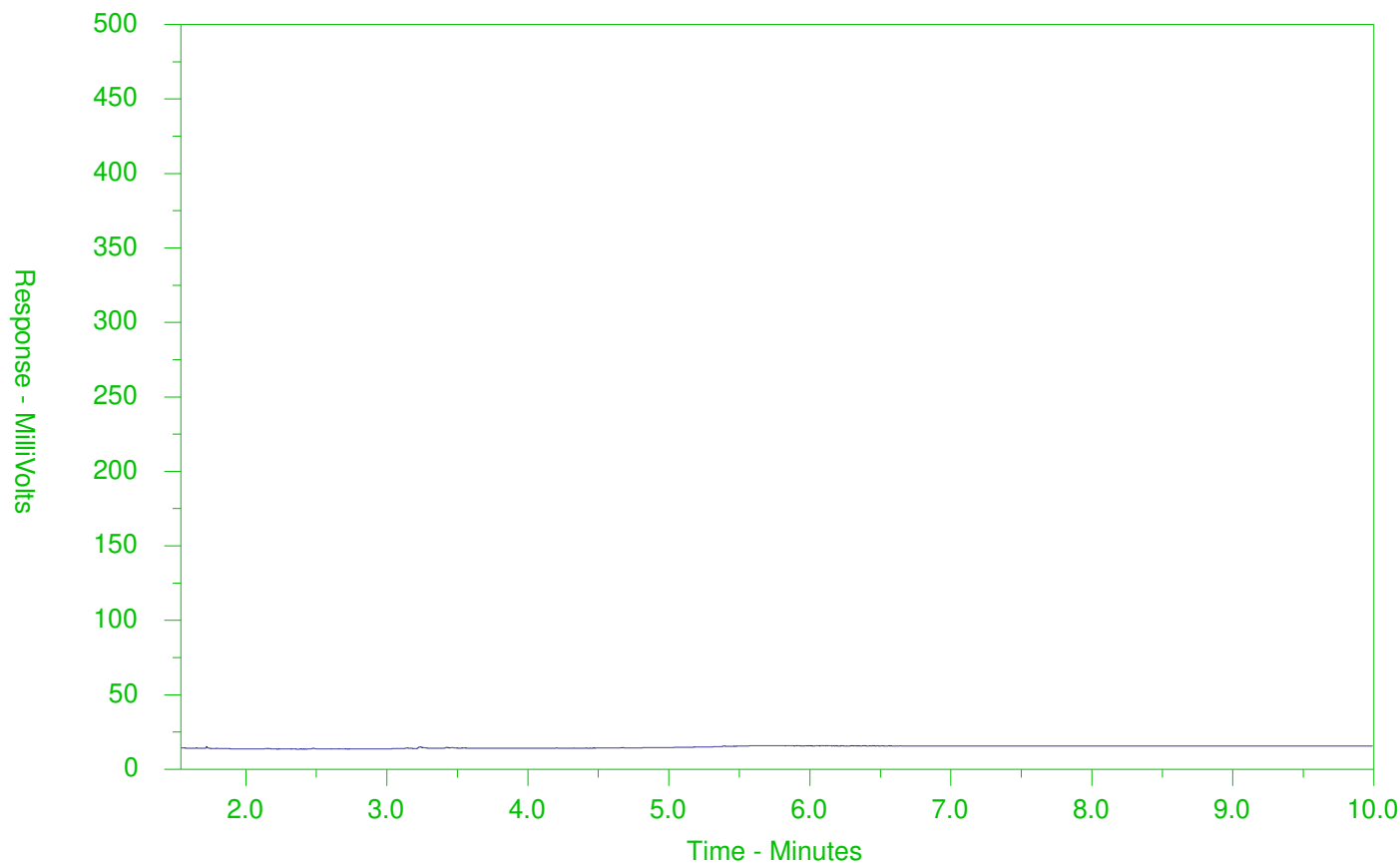
**Qualifiers**

Qualifier	Description
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).
RRQC	Refer to report comments for information regarding this QC result.

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224015-002-E601.SG  
 Client Sample ID: 22-20-01DEC22



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

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

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

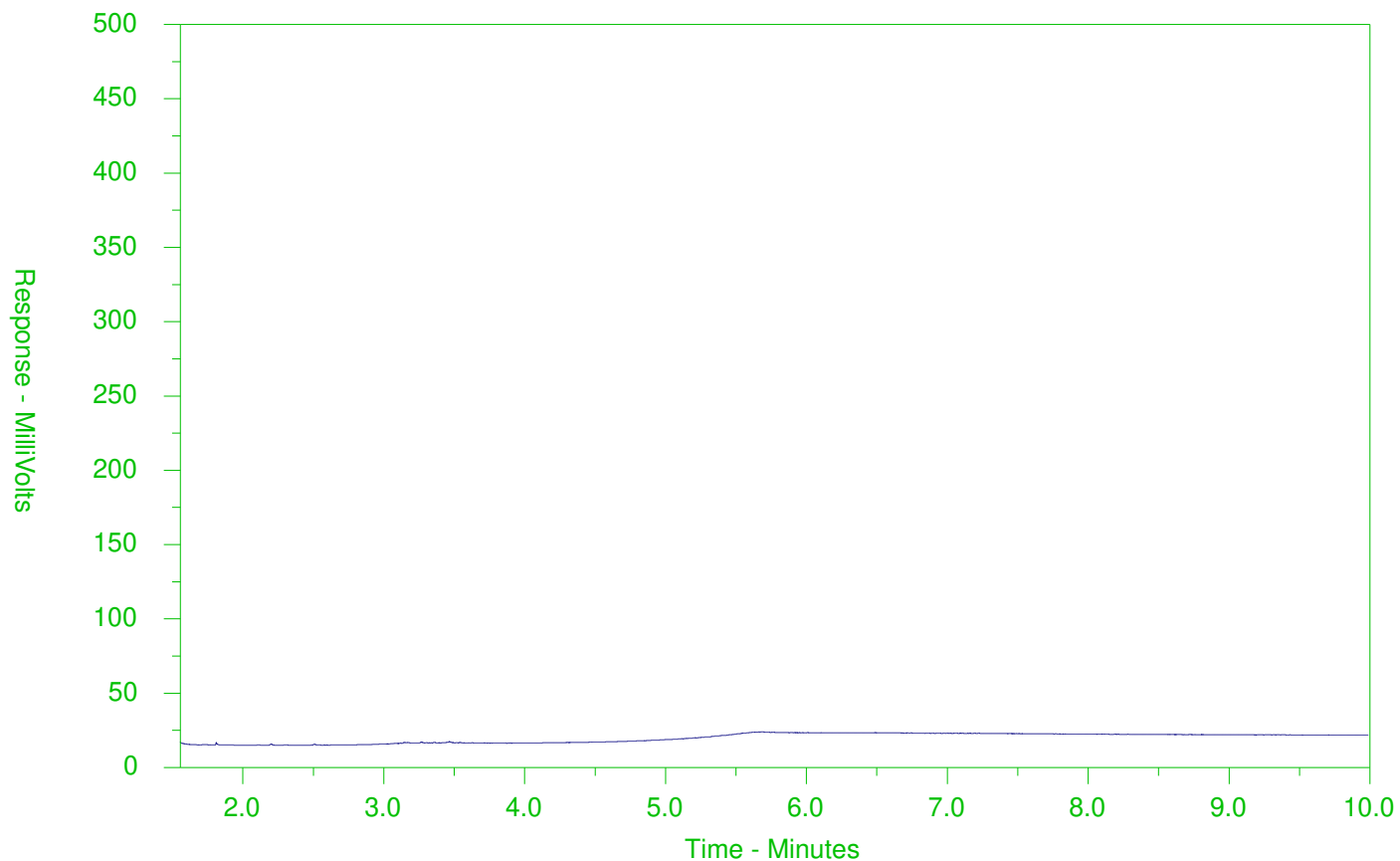
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224015-004-E601.SG  
 Client Sample ID: 22-22-01DEC22



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

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

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

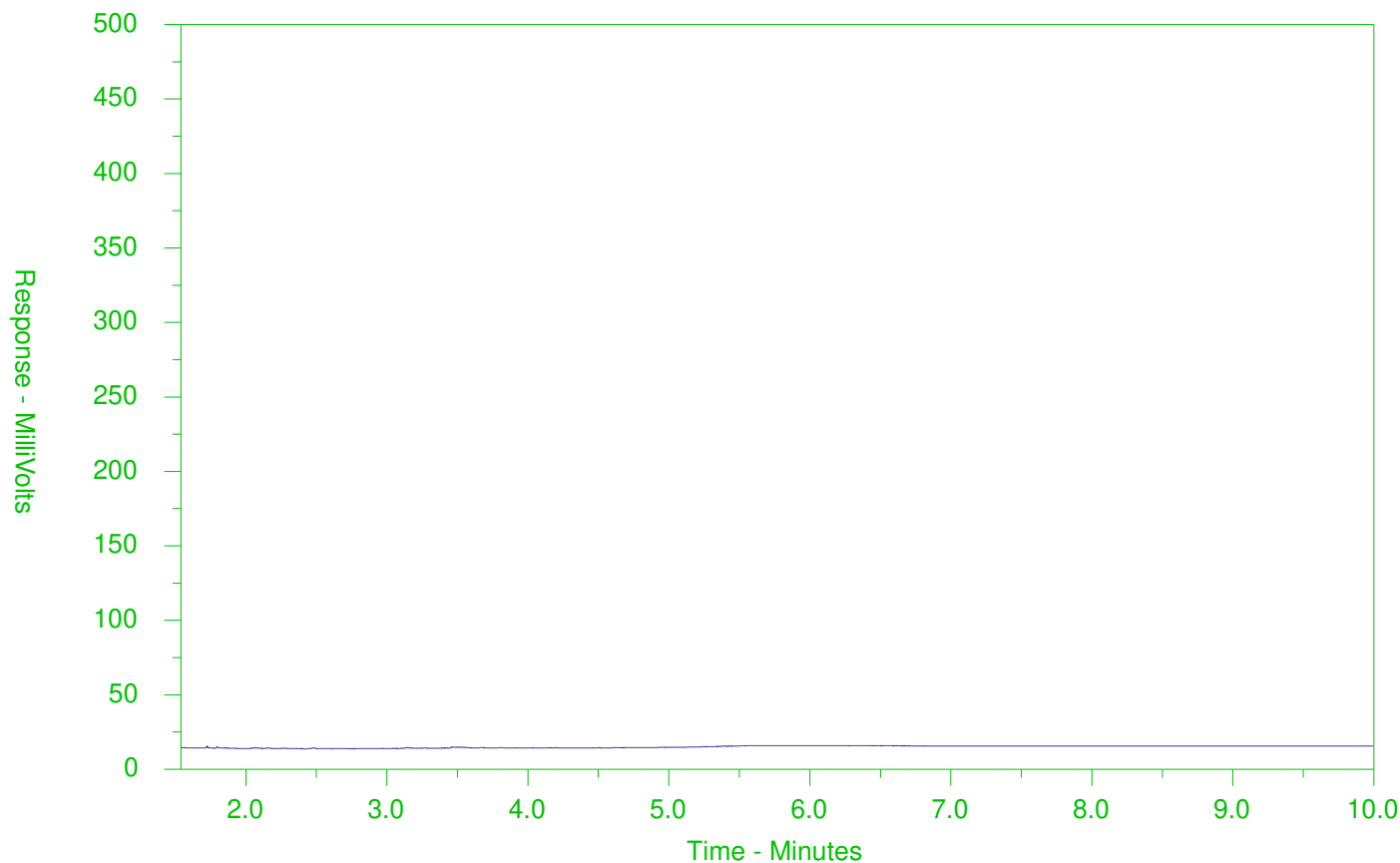
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224015-007-E601.SG  
 Client Sample ID: 22-26-01DEC22



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

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

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

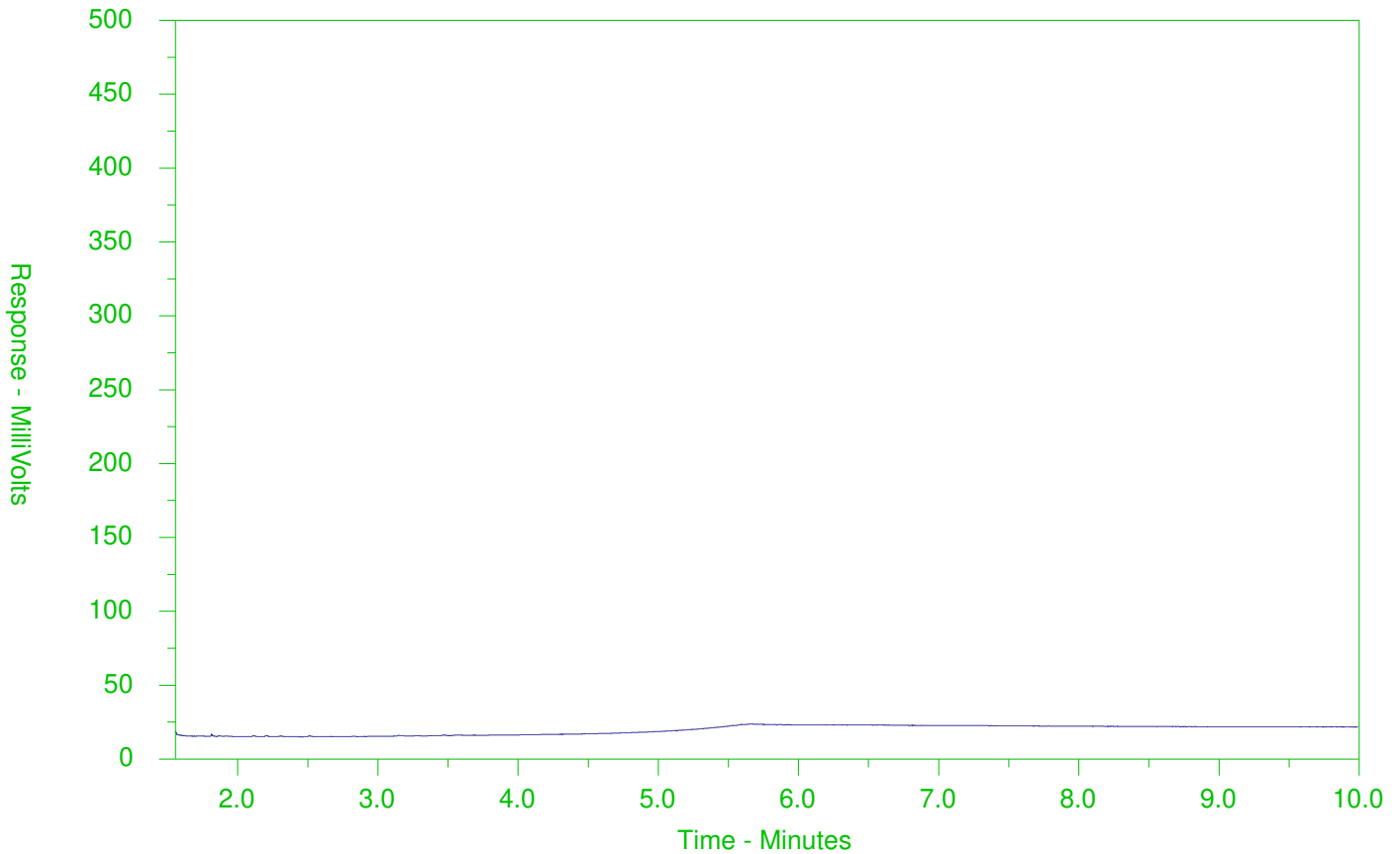
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224015-008-E601.SG  
 Client Sample ID: 22-27-01DEC22



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

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

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

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

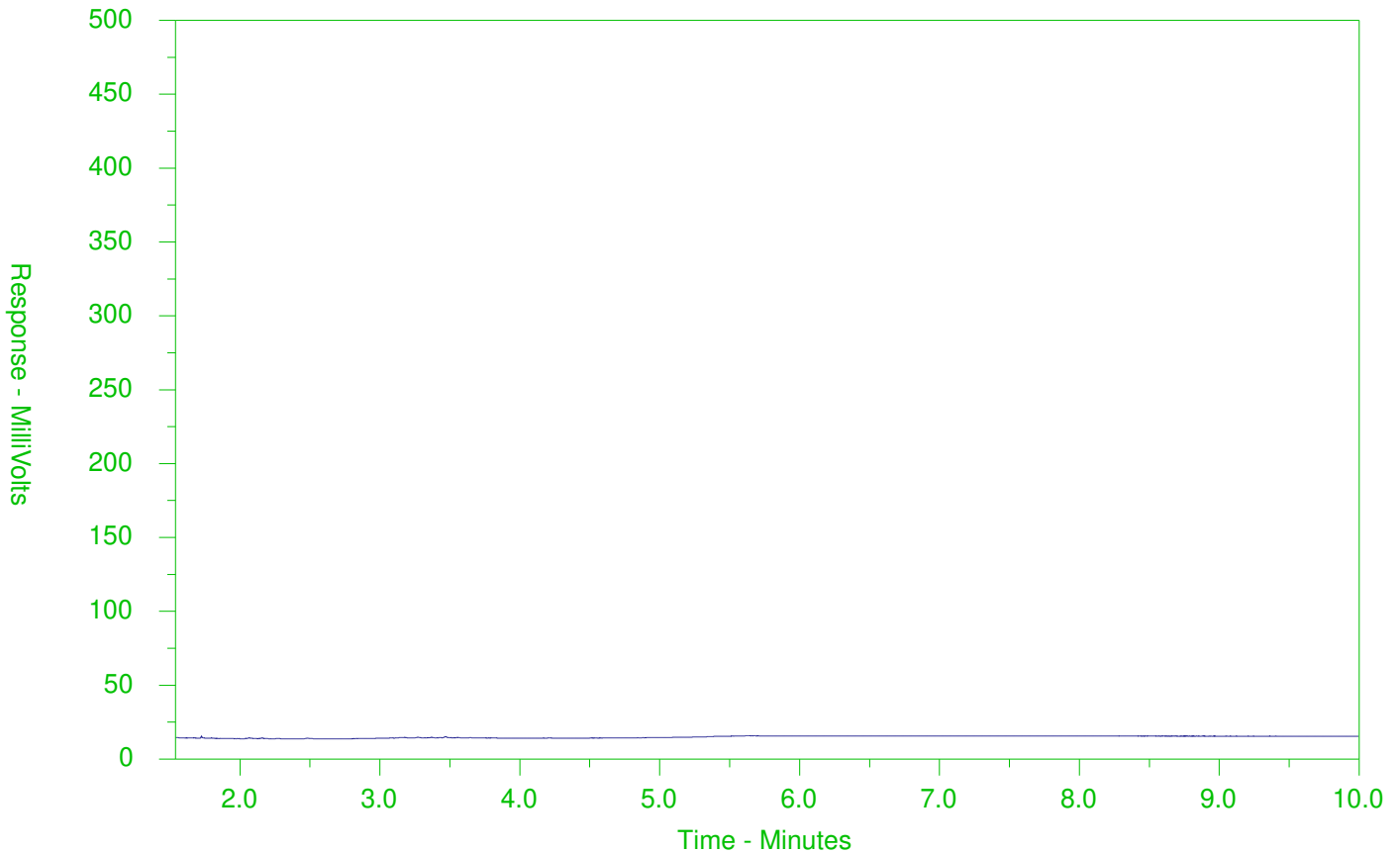
Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).



# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224015-011-E601.SG  
 Client Sample ID: 22-36-01DEC22



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

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

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

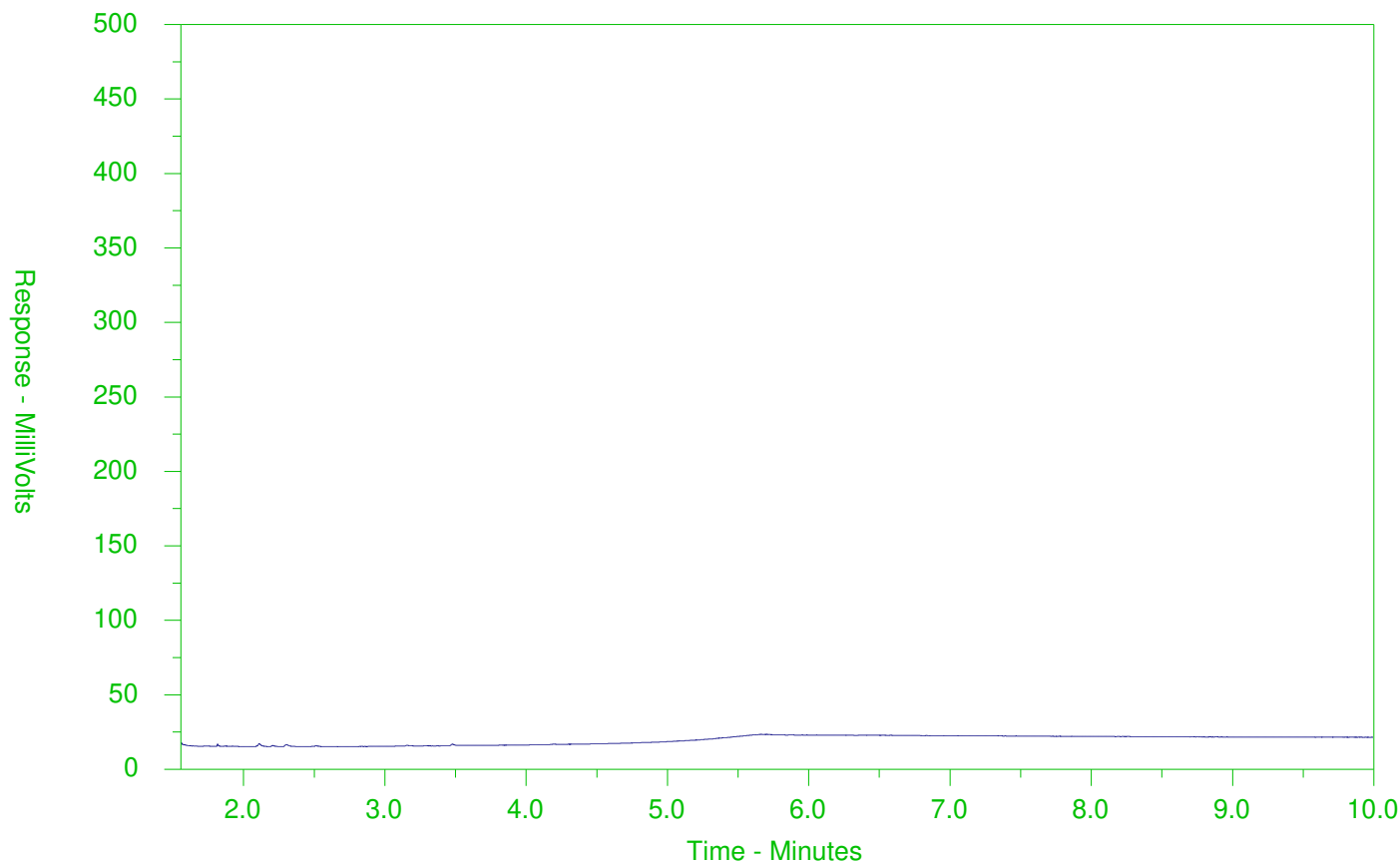
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224015-013-E601.SG  
 Client Sample ID: DUP2-01DEC22



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

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

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

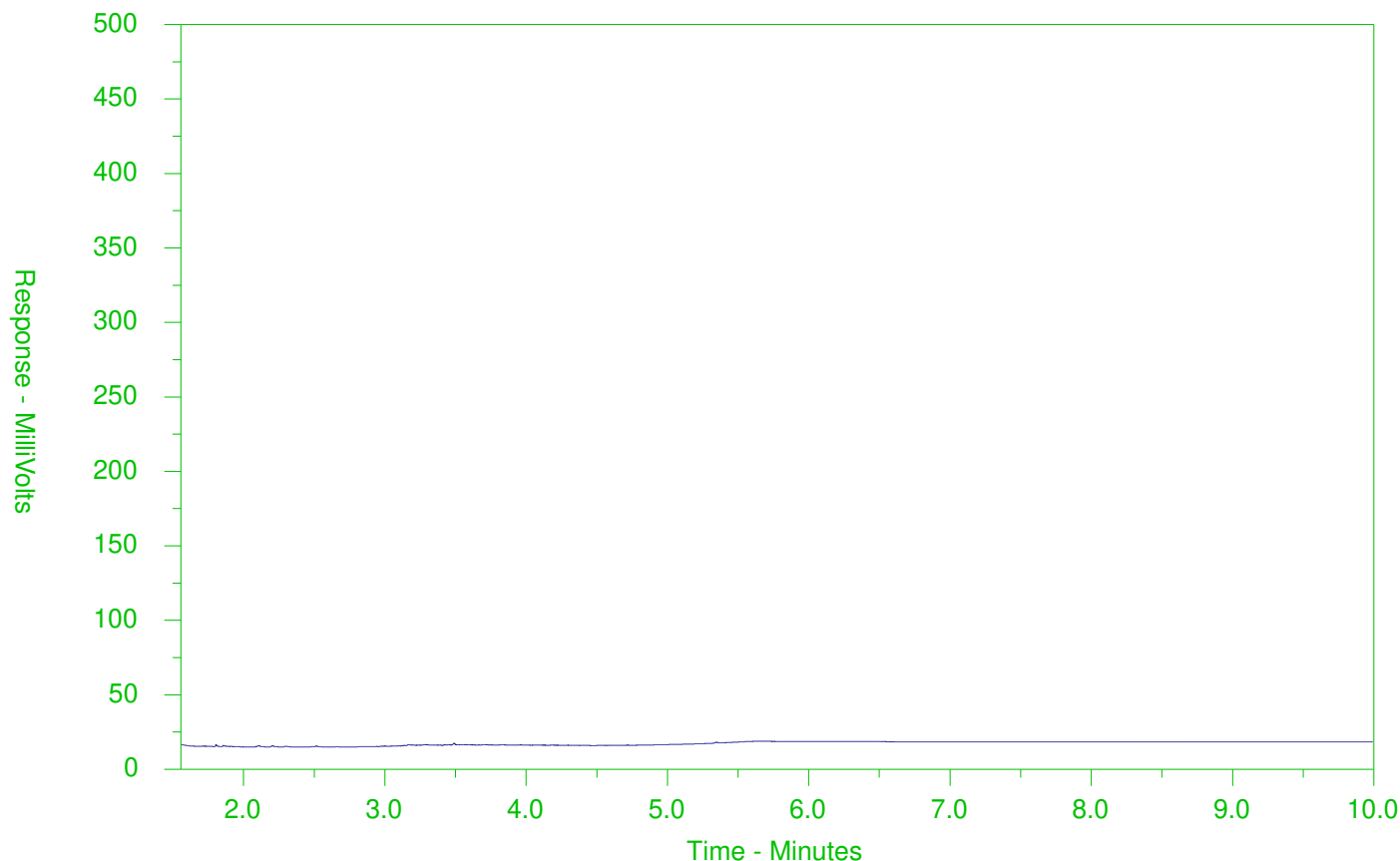
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224015-014-E601.SG  
 Client Sample ID: TB1-1DEC22



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

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

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

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

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



www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20-1009805

Page 1 of 2

Environmental Division  
Waterloo  
Work Order Reference  
WT2224015



Telephone: +1 519 886 6910

Contact and company name below will appear on the final report

Reports / Recipients

Turnaround Time (TAT) Requested

Company: **Dawni-McCann Inc.**

Contact: **Daniel Elliot**

Phone: **413-857-4926**

Street: **1755 Woodward Drive, Unit 200**

City/Province: **Ottawa, ON**

Postal Code: **K2C 0P4**

Invoice To:  Same as Report To  YES  NO

Company:  Copy of Invoice with Report  YES  NO

Contact:  Email 1 or Fax  Email 2

Selected Invoice Distribution:  EMAIL  MAIL  FAX

Selected Report Format:  PDF  EXCEL  BOD (DISTAL)

Merge QC/QCI Reports with COA  YES  NO  N/A

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

Select Distribution:  EMAIL  MAIL  FAX

Email 1 or Fax: **quadrant@dmimcann.com**

Email 2: **antonina@dmimcann.com**

Email 3: **Kristina.Palmieri@dmimcann.com**

Invoice Recipients: **invoicing@dmimcann.com**

Project Information: **Oil and Gas Required Fields (client use)**

ALS Account # / Quote #: **0440026**

Job #: **0006-0163**

PO / AFE: **310**

ALS Lab Work Order #: (ALS use only)

ALS Contact: **Eric**

Sampler: **Antonina Cass**

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type
22-18-01DEC22		01-DEC-22	08:30	
22-20-01DEC22			09:00	
22-21-01DEC22			12:00	
22-22-01DEC22			11:15	
22-23-01DEC22			12:15	
22-24-01DEC22			12:40	
22-26-01DEC22			10:30	
22-27-01DEC22			14:45	
22-32-01DEC22			14:10	
22-33-01DEC22			15:10	
22-36-01DEC22			15:30	
DUP 1-01DEC22			12:40	

NUMBER OF CONTAINERS	VOC	PHC	PAH	Metals	Cr (6)	Hg
2	X	X	X	X	X	X
10	X	X	X	X	X	X
2	X	X	X	X	X	X
10	X	X	X	X	X	X
2	X	X	X	X	X	X
10	X	X	X	X	X	X
10	X	X	X	X	X	X
2	X	X	X	X	X	X
2	X	X	X	X	X	X
16	X	X	X	X	X	X
2	X	X	X	X	X	X

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Drinking Water (DW) Samples (client use)

Are samples taken from a Regulated DW System?  YES  NO

Are samples for human consumption/ use?  YES  NO

Released by: **Antonina Cass** Date: **01-Dec-22** Time: **17:00**

Received by: **Eric Robbins** Date: **01/12/22** Time: **17:00**

SHIPMENT RELEASE (client use)

INITIAL SHIPMENT RECEPTION (ALS use only)

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

COOLING METHOD:  NONE  ICE  ICE PACKS  ROZR  COOLING INTRAY

SUBMISSION COMMENTS IDENTIFIED ON SAMPLE RECEIPT NOTIFICATION:  YES  NO

COOLER CLOSURE/SEALS INTACT:  YES  NO

INITIAL COOLER TEMPERATURES °C: **6.6** FINAL COOLER TEMPERATURES °C: **4.1**

Time: **19:16**

ALS200 FORM



www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

COC Number: 20-1009804

Canada Toll Free: 1 800 668 9878

Page 2 of 2

Contact and company name below will appear on the final report

Reports / Recipients

Turnaround Time (TAT) Requested

AFIX ALS BARCODE LABEL HERE (ALS use only)

Company: **Omni-Alcan Inc.**  
 Contact: **Daniel Elliot**  
 Phone: **613-853-4436**  
 Company address below will appear on the final report

Select Report Format:  PDF  BCEL  BPO (DIGITAL)  
 Merge COC/QCI Reports with COA  YES  NO  N/A  
 Compare Results to Criteria on Report - provide details below if box checked  
 Select Distribution:  EMAIL  MAIL  FAX

Routine [R] if received by 3pm M-F - no surcharges apply  
 4 day [P] if received by 3pm M-F - 20% rush surcharge minimum  
 3 day [P] if received by 3pm M-F - 25% rush surcharge minimum  
 2 day [P] if received by 3pm M-F - 50% rush surcharge minimum  
 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum  
 Same day [E] if received by 10am M-F - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

Street: **1955 Woodward Drive, Unit 205**  
 City/Province: **Chatham, ON**  
 Postal Code: **K2P 0P4**  
 Invoice To:  YES  NO  
 Copy of Invoice with Report  YES  NO

Select Invoice Distribution:  EMAIL  MAIL  FAX  
 Email 1 or Fax: **1.alding@omni-alcan.com**  
 Email 2: **antonio.gommi@omni-alcan.com**  
 Email 3: **eric@omni-alcan.com**

For all tests with rush TATs requested, please contact your AAL to confirm availability.  
 Analysis Request

ALS Account # / Quote #: **040026**  
 Job #: **0006-0103**  
 PO / AFE:  
 LSD:

Project Information  
 ALS Contact: **Eric**  
 Date: **01-Dec-22**  
 Time: **13:30**  
 Sample Type: **WWS**

Indicate Filtered (F), Preserved (P) or Filled and Preserved (FP) below

Sample Identification and/or Coordinates  
 (This description will appear on the report)  
**DUP2-01DEC22**  
**TBA-1DEC22**  
**EB1-1DEC22**

ALS use only:  
 Sample ID: **DUP2-01DEC22**  
 Date: **01-Dec-22**  
 Time: **13:30**  
 Sample Type: **WWS**

NUMBER OF CONTAINERS	VOC	PAC	PH	Metals	Cr (6)	Ig
10	X	X	X	X	X	X
2	X	X	X	X	X	X

SAMPLES ON HOLD  
 EXTENDED STORAGE REQUIRED  
 SUSPECTED HAZARD (see notes)

Drinking Water (DW) Samples (client use)  
 YES  NO  
 Are samples taken from a Regulated DW System?  
 YES  NO  
 Are samples for human consumption use?  
 YES  NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)  
**O. Reg 153/04 Table 7**

COOLING METHOD:  NONE  ICE  ICE PACKS  FROZEN  COOLING INITIATED  
 Submission Comments identified on Sample Receipt Notification:  YES  NO  
 Cooler Custody Seals Intact:  YES  N/A Sample Custody Seals Intact:  YES  N/A  
 INITIAL COOLER TEMPERATURES °C: **6.8** FINAL COOLER TEMPERATURES °C: **5.4**

Released by: **Antonia Cass** Date: **01-Dec-22** Time: **7:06**  
 SHIPMENT RELEASE (client use)

Received by: **Eric** Date: **01/12/22** Time: **16:10**  
 INITIAL SHIPMENT RECEPTION (ALS use only)

Received by: **MA** Date: **2022-12-03** Time: **16:10**  
 FINAL SHIPMENT RECEPTION (ALS use only)

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION  
 Failure to complete all portions of this form may delay analysis. Please fill in this form LEGALY. 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.  
 WHITE - LABORATORY COPY YELLOW - CLIENT COPY



## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

<p><b>Work Order</b> : <b>WT2224326</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 16</p> <p><b>No. of samples analysed</b> : 16</p>	<p><b>Page</b> : 1 of 36</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 05-Dec-2022 16:52</p> <p><b>Date Analysis Commenced</b> : 07-Dec-2022</p> <p><b>Issue Date</b> : 14-Dec-2022 16:37</p>
--	--

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Greg Pokocky	Supervisor - Inorganic	Metals, Waterloo, Ontario
Jeremy Gingras	Team Leader - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Jon Fisher	Department Manager - Inorganics	Inorganics, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Organics, Waterloo, Ontario

## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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. Guidelines 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.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	no units
µg/L	micrograms per litre
pH units	pH units

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .

## Workorder Comments

RRQC - Matrix spike recovery was below ALS DQO for DCDF. Non-detect sample results are considered reliable. Other results, if reported, have been qualified.

## Qualifiers

<i>Qualifier</i>	<i>Description</i>
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
RRV	Reported result verified by repeat analysis.



## Analytical Results

				Client sample ID						
				MW22-37-5DEC22						
				05-Dec-2022						
				15:40						
				WT2224326-001	ON153/04	ON153/04				
					T7-NPGW-C-AI	T7-NPGW-F-AII				
					I					
Sub-Matrix: Water	Method	LOR	Unit							
(Matrix: Water)										
Analyte										
<b>Physical Tests</b>										
pH	E108	0.10	pH units	7.87	--	--	--	--	--	--
<b>Dissolved Metals</b>										
antimony, dissolved	E421	0.10	µg/L	0.30	16000 µg/L	16000 µg/L	--	--	--	--
arsenic, dissolved	E421	0.10	µg/L	0.61	1500 µg/L	1500 µg/L	--	--	--	--
barium, dissolved	E421	0.10	µg/L	233	23000 µg/L	23000 µg/L	--	--	--	--
beryllium, dissolved	E421	0.020	µg/L	<0.020	53 µg/L	53 µg/L	--	--	--	--
boron, dissolved	E421	10	µg/L	27	36000 µg/L	36000 µg/L	--	--	--	--
cadmium, dissolved	E421	0.0050	µg/L	0.0169	2.1 µg/L	2.1 µg/L	--	--	--	--
chromium, dissolved	E421	0.50	µg/L	<0.50	640 µg/L	640 µg/L	--	--	--	--
cobalt, dissolved	E421	0.10	µg/L	1.68	52 µg/L	52 µg/L	--	--	--	--
copper, dissolved	E421	0.20	µg/L	4.57	69 µg/L	69 µg/L	--	--	--	--
lead, dissolved	E421	0.050	µg/L	0.104	20 µg/L	20 µg/L	--	--	--	--
mercury, dissolved	E509	0.0050	µg/L	<0.0050	0.1 µg/L	0.1 µg/L	--	--	--	--
molybdenum, dissolved	E421	0.050	µg/L	3.87	7300 µg/L	7300 µg/L	--	--	--	--
nickel, dissolved	E421	0.50	µg/L	5.32	390 µg/L	390 µg/L	--	--	--	--
selenium, dissolved	E421	0.050	µg/L	0.395	50 µg/L	50 µg/L	--	--	--	--
silver, dissolved	E421	0.010	µg/L	<0.010	1.2 µg/L	1.2 µg/L	--	--	--	--
sodium, dissolved	E421	50	µg/L	177000	DLHC 1800000 µg/L	1800000 µg/L	--	--	--	--
thallium, dissolved	E421	0.010	µg/L	0.360	400 µg/L	400 µg/L	--	--	--	--
uranium, dissolved	E421	0.010	µg/L	6.79	330 µg/L	330 µg/L	--	--	--	--
vanadium, dissolved	E421	0.50	µg/L	<0.50	200 µg/L	200 µg/L	--	--	--	--
zinc, dissolved	E421	1.0	µg/L	3.0	890 µg/L	890 µg/L	--	--	--	--
dissolved mercury filtration location	EP509		-	Field	--	--	--	--	--	--
dissolved metals filtration location	EP421		-	Field	--	--	--	--	--	--
<b>Speciated Metals</b>										
chromium, hexavalent [Cr VI], dissolved	E532A	0.50	µg/L	<0.50	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--





Analyte	Method	LOR	Unit	WT2224326-001 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224326-001 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F2-naphthalene	EC600SG	100	µg/L	<100	--	--	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F3-PAH	EC600SG	250	µg/L	<250	--	--	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	88.2	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	92.3	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	103	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	92.1	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.010	µg/L	<0.010	17 µg/L	17 µg/L	--	--	--	--
acenaphthylene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
anthracene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
benz(a)anthracene	E641A	0.010	µg/L	<0.010	1.8 µg/L	1.8 µg/L	--	--	--	--
benzo(a)pyrene	E641A	0.0050	µg/L	<0.0050	0.81 µg/L	0.81 µg/L	--	--	--	--
benzo(b+j)fluoranthene	E641A	0.010	µg/L	<0.010	0.75 µg/L	0.75 µg/L	--	--	--	--
benzo(g,h,i)perylene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
benzo(k)fluoranthene	E641A	0.010	µg/L	<0.010	0.4 µg/L	0.4 µg/L	--	--	--	--
chrysene	E641A	0.010	µg/L	<0.010	0.7 µg/L	0.7 µg/L	--	--	--	--
dibenz(a,h)anthracene	E641A	0.0050	µg/L	<0.0050	0.4 µg/L	0.4 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224326-001 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
fluoranthene	E641A	0.010	µg/L	<0.010	44 µg/L	44 µg/L	--	--	--	--
fluorene	E641A	0.010	µg/L	<0.010	290 µg/L	290 µg/L	--	--	--	--
indeno(1,2,3-c,d)pyrene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
methylnaphthalene, 1+2-	E641A	0.015	µg/L	<0.015	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 1-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 2-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
naphthalene	E641A	0.050	µg/L	<0.050	7 µg/L	7 µg/L	--	--	--	--
phenanthrene	E641A	0.020	µg/L	<0.020	380 µg/L	380 µg/L	--	--	--	--
pyrene	E641A	0.010	µg/L	<0.010	5.7 µg/L	5.7 µg/L	--	--	--	--
chrysene-d12	E641A	0.1	%	82.8	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	90.0	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	95.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04				
				Sampling date/time	T7-NPGW-C-AI	T7-NPGW-F-AII				
Sub-Matrix: Water (Matrix: Water)				MW21-08-5DEC22						
				05-Dec-2022 11:45						
				WT2224326-002						
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224326-002 (Continued)	ON153/04 T7-NPGW-C-All I	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.89	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	103	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	91.9	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW21-08-5DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.89 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.89 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW21-04A-5DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224326-003	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224326-003 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	102	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	91.5	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID						
				MW21-04B-5DEC22	05-Dec-2022	14:10	WT2224326-004	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII	
<b>Sub-Matrix: Water</b>										
<b>(Matrix: Water)</b>										
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--





Analyte	Method	LOR	Unit	WT2224326-004 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	102	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	91.1	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	Sampling date/time		ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
				MW22-04C-5DEC22	05-Dec-2022 14:40	WT2224326-005						
<b>Sub-Matrix: Water</b>												
<b>(Matrix: Water)</b>												
<b>Volatile Organic Compounds</b>												
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2224326-005 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	103	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	91.4	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	Sampling date/time		ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
				MW21-05A-5DEC22	05-Dec-2022 14:45	WT2224326-006						
<b>Sub-Matrix: Water</b>												
<b>(Matrix: Water)</b>												
<b>Volatile Organic Compounds</b>												
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2224326-006 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	102	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	90.8	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04					
				MW21-05B-5DEC22	T7-NPGW-C-AI	T7-NPGW-F-AII				
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
				05-Dec-2022 15:10						
				WT2224326-007						
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224326-007 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	102	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	90.4	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	Sampling date/time		ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
				MW22-05C-5DEC22	05-Dec-2022 15:30	WT2224326-008						
<b>Sub-Matrix: Water</b>												
<b>(Matrix: Water)</b>												
<b>Volatile Organic Compounds</b>												
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--	--	--





Analyte	Method	LOR	Unit	WT2224326-008 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	101	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	90.2	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	Sampling date/time		ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
				MW21-03A-5DEC22	05-Dec-2022 11:15	WT2224326-009						
<b>Sub-Matrix: Water</b>												
<b>(Matrix: Water)</b>												
<b>Volatile Organic Compounds</b>												
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2224326-009 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	101	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	90.3	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04					
				MW21-03B-5DEC22	T7-NPGW-C-AI	T7-NPGW-F-AII				
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
				05-Dec-2022 11:35						
				WT2224326-010						
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224326-010 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.53	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	101	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	89.9	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW21-03B-5DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.53 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.53 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID						
				MW22-03C-5DEC22	05-Dec-2022	12:35	WT2224326-011	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII	
<b>Sub-Matrix: Water</b>										
<b>(Matrix: Water)</b>										
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224326-011 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	93.5	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	92.1	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID						
				MW21-17A-5DEC22	05-Dec-2022	12:40	WT2224326-012	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII	
<b>Sub-Matrix: Water</b>										
<b>(Matrix: Water)</b>										
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--





Analyte	Method	LOR	Unit	WT2224326-012 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	1.08	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	93.1	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	91.8	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW21-17A-5DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	1.08 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	1.08 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW22-17B-5DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224326-013	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224326-013 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	92.7	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	91.8	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				DUP3-5DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224326-014	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	0.63	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224326-014 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	92.9	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	91.6	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				TB2-5DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224326-015	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	3.0	RRV 26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224326-015 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	94.6	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	91.2	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				FB2-5DEC22						
				05-Dec-2022						
				00:00						
				WT2224326-016	ON153/04	ON153/04				
Analyte	Method	LOR	Unit		T7-NPGW-C-AI	T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--





Analyte	Method	LOR	Unit	WT2224326-016 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	93.4	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	91.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>WT2224326</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 16</p> <p><b>No. of samples analysed</b> : 16</p>	<p><b>Page</b> : 1 of 9</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 05-Dec-2022 16:52</p> <p><b>Issue Date</b> : 14-Dec-2022 16:35</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

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### ***Workorder Comments***

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



**Outliers : Quality Control Samples**

*Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes*

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Laboratory Control Sample (LCS) Recoveries</b>								
Volatile Organic Compounds	QC-771211-002	----	Acetone	67-64-1	E611D	144 % MES	70.0-130%	Recovery greater than upper control limit
Volatile Organic Compounds	QC-770505-002	----	dichlorodifluoromethane	75-71-8	E611D	44.6 % LCS-L	60.0-140%	Recovery less than lower control limit
Volatile Organic Compounds	QC-771211-002	----	hexane, n-	110-54-3	E611D	134 % MES	70.0-130%	Recovery greater than upper control limit

**Result Qualifiers**

Qualifier	Description
LCS-L	Lab Control Sample recovery was below ALS DQO. Reference Material and/or Matrix Spike results were acceptable. 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).

<b>Matrix Spike (MS) Recoveries</b>								
Volatile Organic Compounds	WT2224326-001	MW22-37-5DEC22	dichlorodifluoromethane	75-71-8	E611D	35.4 % RRQC	60.0-140%	Recovery less than lower data quality objective

**Result Qualifiers**

Qualifier	Description
RRQC	Refer to report comments for information regarding this QC result.



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>										
Glass vial dissolved (hydrochloric acid) MW22-37-5DEC22	E509	05-Dec-2022	08-Dec-2022	----	----		08-Dec-2022	28 days	3 days	✓
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>										
HDPE dissolved (nitric acid) MW22-37-5DEC22	E421	05-Dec-2022	08-Dec-2022	----	----		08-Dec-2022	180 days	3 days	✓
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>										
Glass vial (sodium bisulfate) MW22-37-5DEC22	E581.F1-L	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	2 days	✓
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>										
Amber glass/Teflon lined cap (sodium bisulfate) MW22-37-5DEC22	E601.SG	05-Dec-2022	08-Dec-2022	14 days	2 days	✓	12-Dec-2022	40 days	5 days	✓
<b>Physical Tests : pH by Meter</b>										
HDPE [ON MECP] MW22-37-5DEC22	E108	05-Dec-2022	13-Dec-2022	----	----		13-Dec-2022	14 days	8 days	✓
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS</b>										
Amber glass/Teflon lined cap (sodium bisulfate) MW22-37-5DEC22	E641A	05-Dec-2022	07-Dec-2022	14 days	2 days	✓	12-Dec-2022	40 days	5 days	✓
<b>Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC</b>										
HDPE - dissolved (NaOH+Buf) [ON MECP] MW22-37-5DEC22	E532A	05-Dec-2022	----	----	----		08-Dec-2022	28 days	3 days	✓



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) DUP3-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-03A-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-03B-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-04A-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-04B-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-05A-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-05B-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-08-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-17A-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	2 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-03C-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-04C-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-05C-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-17B-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-37-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	2 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) FB2-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) TB2-5DEC22	E611D	05-Dec-2022	07-Dec-2022	----	----		07-Dec-2022	14 days	3 days	✔	

**Legend & Qualifier Definitions**

Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water** Evaluation: \* = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	770506	1	1	100.0	5.0	✓
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	771524	1	18	5.5	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	771414	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	771150	1	20	5.0	5.0	✓
pH by Meter	E108	776112	1	2	50.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	770505	3	25	12.0	5.0	✓
<b>Laboratory Control Samples (LCS)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	770506	1	1	100.0	5.0	✓
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	771524	1	18	5.5	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	771414	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	771150	1	20	5.0	5.0	✓
PAHs by Hexane LVI GC-MS	E641A	775869	1	1	100.0	5.0	✓
pH by Meter	E108	776112	1	2	50.0	5.0	✓
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG	770652	1	18	5.5	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	770505	2	25	8.0	5.0	✓
<b>Method Blanks (MB)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	770506	1	1	100.0	5.0	✓
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	771524	1	18	5.5	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	771414	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	771150	1	20	5.0	5.0	✓
PAHs by Hexane LVI GC-MS	E641A	775869	1	1	100.0	5.0	✓
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG	770652	1	18	5.5	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	770505	2	25	8.0	5.0	✓
<b>Matrix Spikes (MS)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	770506	1	1	100.0	5.0	✓
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	771524	1	18	5.5	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	771414	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	771150	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	770505	2	25	8.0	5.0	✓





## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
pH by Meter	E108 Waterloo - Environmental	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Dissolved Metals in Water by CRC ICPMS	E421 Waterloo - Environmental	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS.  Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Mercury in Water by CVAAS	E509 Waterloo - Environmental	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A Waterloo - Environmental	Water	APHA 3500-Cr C (Ion Chromatography)	Hexavalent Chromium is measured by Ion chromatography-Post column reaction and UV detection.  sample pretreatment involved field or lab filtration following by sample preservation.
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4).
VOCs (Eastern Canada List) by Headspace GC-MS	E611D Waterloo - Environmental	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs by Hexane LVI GC-MS	E641A Waterloo - Environmental	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
F1-BTEX	EC580 Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
SUM F1 to F4 where F2-F4 is SG treated	EC581SG  Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fraction F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50), where F2-F4 have been treated with silica gel. F4G-sg is not used within this calculation due to overlap with other fractions.
F2-F4 (sg) minus PAH	EC600SG  Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	F2-F4 (sg) minus PAH is calculated as follows: F2-F4 minus PAH = Sum of CCME Fraction 2 (C10-C16), CCME Fraction 3 (C16-C34), and CCME Fraction 4 (C34-C50), minus select Polycyclic Aromatic Hydrocarbons (PAH).

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals Water Filtration	EP421  Waterloo - Environmental	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509  Waterloo - Environmental	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581  Waterloo - Environmental	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into the GC/MS-FID system.
PHCs and PAHs Hexane Extraction	EP601  Waterloo - Environmental	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

## QUALITY CONTROL REPORT

<p><b>Work Order</b> : <b>WT2224326</b></p> <p>Client : Omni-McCann Inc.</p> <p>Contact : Daniel Elliot</p> <p>Address : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p>Telephone :</p> <p>Project : 0006-0103</p> <p>PO : ----</p> <p>C-O-C number : ----</p> <p>Sampler : ----                    705 243 5828</p> <p>Site : ----</p> <p>Quote number : Project 0006-0103</p> <p>No. of samples received : 16</p> <p>No. of samples analysed : 16</p>	<p>Page : 1 of 19</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Emily Smith</p> <p>Address : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 05-Dec-2022 16:52</p> <p>Date Analysis Commenced : 07-Dec-2022</p> <p>Issue Date : 14-Dec-2022 16:35</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Greg Pokocky	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario
Jeremy Gingras	Team Leader - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Jon Fisher	Department Manager - Inorganics	Waterloo Inorganics, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Waterloo Organics, Waterloo, Ontario

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Work Order : WT2224326  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

### Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

## Workorder Comments

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Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Physical Tests (QC Lot: 776112)</b>											
WT2224326-001	MW22-37-5DEC22	pH	----	E108	0.10	pH units	7.87	7.85	0.254%	4%	----
<b>Dissolved Metals (QC Lot: 771150)</b>											
WT2224087-003	Anonymous	antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.29 µg/L	0.00029	0.0000002	Diff <2x LOR	----
		arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	1.23 µg/L	0.00120	2.70%	20%	----
		barium, dissolved	7440-39-3	E421	0.00010	mg/L	188 µg/L	0.190	0.875%	20%	----
		beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.020 µg/L	<0.000020	0	Diff <2x LOR	----
		boron, dissolved	7440-42-8	E421	0.010	mg/L	219 µg/L	0.220	0.294%	20%	----
		cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0067 µg/L	0.0000061	0.0000006	Diff <2x LOR	----
		chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.50 µg/L	<0.00050	0	Diff <2x LOR	----
		cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.26 µg/L	0.00026	0.000003	Diff <2x LOR	----
		copper, dissolved	7440-50-8	E421	0.00020	mg/L	2.05 µg/L	0.00202	1.21%	20%	----
		lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.056 µg/L	0.000055	0.0000008	Diff <2x LOR	----
		molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	10.0 µg/L	0.0102	2.51%	20%	----
		nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.92 µg/L	0.00090	0.00001	Diff <2x LOR	----
		selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.098 µg/L	0.000098	0.0000003	Diff <2x LOR	----
		silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.010 µg/L	<0.000010	0	Diff <2x LOR	----
		sodium, dissolved	7440-23-5	E421	0.050	mg/L	28100 µg/L	27.8	0.807%	20%	----
		thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.010 µg/L	<0.000010	0	Diff <2x LOR	----
		uranium, dissolved	7440-61-1	E421	0.000010	mg/L	2.15 µg/L	0.00214	0.582%	20%	----
		vanadium, dissolved	7440-62-2	E421	0.000050	mg/L	1.15 µg/L	0.00111	0.00003	Diff <2x LOR	----
		zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<1.0 µg/L	<0.0010	0	Diff <2x LOR	----
<b>Dissolved Metals (QC Lot: 771414)</b>											
WT2224326-001	MW22-37-5DEC22	mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0050 µg/L	<0.0000050	0	Diff <2x LOR	----
<b>Speciated Metals (QC Lot: 771524)</b>											
WT2224326-001	MW22-37-5DEC22	chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.00050	mg/L	<0.50 µg/L	<0.00050	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 770505)</b>											
WT2224326-001	MW22-37-5DEC22	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 770505) - continued</b>											
WT2224326-001	MW22-37-5DEC22	bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 770505) - continued</b>											
WT2224326-001	MW22-37-5DEC22	xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 771211)</b>											
WT2224025-001	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
WT2224025-001	Anonymous	benzene	71-43-2	E611D	0.50	µg/L	1.89	1.91	0.02	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	0.50	0.53	0.03	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----		
dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----		
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----		
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----		
ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----		
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----		
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----		
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----		
styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----		



Sub-Matrix: <b>Water</b>					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 771211) - continued</b>											
WT2224025-001	Anonymous	tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----		
<b>Hydrocarbons (QC Lot: 770506)</b>											
WT2224326-001	MW22-37-5DEC22	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----





## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Dissolved Metals (QCLot: 771150)</b>						
antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
<b>Dissolved Metals (QCLot: 771414)</b>						
mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
<b>Speciated Metals (QCLot: 771524)</b>						
chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.0005	mg/L	<0.00050	----
<b>Volatile Organic Compounds (QCLot: 770505)</b>						
Acetone	67-64-1	E611D	20	µg/L	<20	----
benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 770505) - continued</b>						
dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
<b>Volatile Organic Compounds (QCLot: 771211)</b>						
Acetone	67-64-1	E611D	20	µg/L	<20	----
benzene	71-43-2	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 771211) - continued</b>						
bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 771211) - continued</b>						
vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
<b>Hydrocarbons (QCLot: 770506)</b>						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
<b>Hydrocarbons (QCLot: 770652)</b>						
F2 (C10-C16)	----	E601.SG	100	µg/L	<100	----
F3 (C16-C34)	----	E601.SG	250	µg/L	<250	----
F4 (C34-C50)	----	E601.SG	250	µg/L	<250	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 775869)</b>						
acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----
naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----



## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Physical Tests (QCLot: 776112)</b>									
pH	----	E108	----	pH units	7 pH units	101	98.0	102	----
<b>Dissolved Metals (QCLot: 771150)</b>									
antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	101	80.0	120	----
arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	110	80.0	120	----
barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.0125 mg/L	106	80.0	120	----
beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	104	80.0	120	----
boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	99.3	80.0	120	----
cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	107	80.0	120	----
chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.0125 mg/L	108	80.0	120	----
cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.0125 mg/L	106	80.0	120	----
copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.0125 mg/L	105	80.0	120	----
lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	103	80.0	120	----
molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.0125 mg/L	103	80.0	120	----
nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	107	80.0	120	----
selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	107	80.0	120	----
silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	95.0	80.0	120	----
sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	111	80.0	120	----
thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	104	80.0	120	----
uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.00025 mg/L	107	80.0	120	----
vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	109	80.0	120	----
zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	112	80.0	120	----
mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0.0001 mg/L	101	80.0	120	----
<b>Speciated Metals (QCLot: 771524)</b>									
chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.0005	mg/L	0.025 mg/L	97.5	80.0	120	----
<b>Volatile Organic Compounds (QCLot: 770505)</b>									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	105	70.0	130	----
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	87.3	60.0	140	----



Sub-Matrix: **Water**

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
<b>Volatile Organic Compounds (QCLot: 770505) - continued</b>									
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	106	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	99.8	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	92.8	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	# 44.6	60.0	140	LCS-L
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	91.2	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	96.2	70.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	90.2	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	96.9	70.0	130	----
dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	97.4	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	95.8	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	100	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	99.6	70.0	130	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	98.8	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	103	70.0	130	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	103	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
tetrachloroethane, 1,1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	95.3	70.0	130	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	121	70.0	130	----
toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	111	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	98.8	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	93.9	60.0	140	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	70.1	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	102	70.0	130	----
xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	108	70.0	130	----
<b>Volatile Organic Compounds (QCLot: 771211)</b>									



Sub-Matrix: Water

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
<b>Volatile Organic Compounds (QCLot: 771211) - continued</b>									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	# 144	70.0	130	MES
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	120	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	119	70.0	130	----
bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	90.5	60.0	140	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	115	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	99.4	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	112	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	84.4	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	95.3	60.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	119	70.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	111	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	91.5	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	129	70.0	130	----
dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	124	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	111	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	106	70.0	130	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	# 134	70.0	130	MES
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	115	70.0	130	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	118	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	97.5	70.0	130	----
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	98.1	70.0	130	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	94.3	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 771211) - continued</b>									
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	132	60.0	140	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	90.4	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	108	70.0	130	----
xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	106	70.0	130	----
<b>Hydrocarbons (QCLot: 770506)</b>									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	99.4	80.0	120	----
<b>Hydrocarbons (QCLot: 770652)</b>									
F2 (C10-C16)	----	E601.SG	100	µg/L	4961.825 µg/L	90.8	70.0	130	----
F3 (C16-C34)	----	E601.SG	250	µg/L	7776.674 µg/L	98.2	70.0	130	----
F4 (C34-C50)	----	E601.SG	250	µg/L	4477.474 µg/L	103	70.0	130	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 775869)</b>									
acenaphthene	83-32-9	E641A	0.01	µg/L	0.5263 µg/L	97.1	50.0	140	----
acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5263 µg/L	97.2	50.0	140	----
anthracene	120-12-7	E641A	0.01	µg/L	0.5263 µg/L	99.2	50.0	140	----
benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5263 µg/L	120	50.0	140	----
benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5263 µg/L	104	50.0	140	----
benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5263 µg/L	96.8	50.0	140	----
benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5263 µg/L	114	50.0	140	----
benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5263 µg/L	103	50.0	140	----
chrysene	218-01-9	E641A	0.01	µg/L	0.5263 µg/L	124	50.0	140	----
dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5263 µg/L	118	50.0	140	----
fluoranthene	206-44-0	E641A	0.01	µg/L	0.5263 µg/L	126	50.0	140	----
fluorene	86-73-7	E641A	0.01	µg/L	0.5263 µg/L	110	50.0	140	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5263 µg/L	134	50.0	140	----
methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5263 µg/L	86.0	50.0	140	----
methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5263 µg/L	89.3	50.0	140	----
naphthalene	91-20-3	E641A	0.05	µg/L	0.5263 µg/L	85.7	50.0	140	----
phenanthrene	85-01-8	E641A	0.02	µg/L	0.5263 µg/L	113	50.0	140	----
pyrene	129-00-0	E641A	0.01	µg/L	0.5263 µg/L	124	50.0	140	----



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Work Order : WT2224326  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## Qualifiers

<i>Qualifier</i>	<i>Description</i>
LCS-L	<i>Lab Control Sample recovery was below ALS DQO. Reference Material and/or Matrix Spike results were acceptable. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.</i>

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## Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Dissolved Metals (QCLot: 771150)</b>										
WT2224326-001	MW22-37-5DEC22	antimony, dissolved	7440-36-0	E421	0.0484 mg/L	0.05 mg/L	96.9	70.0	130	----
		arsenic, dissolved	7440-38-2	E421	0.0567 mg/L	0.05 mg/L	113	70.0	130	----
		barium, dissolved	7440-39-3	E421	ND mg/L	0.0125 mg/L	ND	70.0	130	----
		beryllium, dissolved	7440-41-7	E421	0.00503 mg/L	0.005 mg/L	100	70.0	130	----
		boron, dissolved	7440-42-8	E421	0.045 mg/L	0.05 mg/L	89.5	70.0	130	----
		cadmium, dissolved	7440-43-9	E421	0.00484 mg/L	0.005 mg/L	96.8	70.0	130	----
		chromium, dissolved	7440-47-3	E421	0.0128 mg/L	0.0125 mg/L	102	70.0	130	----
		cobalt, dissolved	7440-48-4	E421	0.0123 mg/L	0.0125 mg/L	98.5	70.0	130	----
		copper, dissolved	7440-50-8	E421	0.0117 mg/L	0.0125 mg/L	93.5	70.0	130	----
		lead, dissolved	7439-92-1	E421	0.0230 mg/L	0.025 mg/L	92.0	70.0	130	----
		molybdenum, dissolved	7439-98-7	E421	0.0123 mg/L	0.0125 mg/L	98.6	70.0	130	----
		nickel, dissolved	7440-02-0	E421	0.0239 mg/L	0.025 mg/L	95.8	70.0	130	----
		selenium, dissolved	7782-49-2	E421	0.0592 mg/L	0.05 mg/L	118	70.0	130	----
		silver, dissolved	7440-22-4	E421	0.00386 mg/L	0.005 mg/L	77.2	70.0	130	----
		sodium, dissolved	7440-23-5	E421	ND mg/L	2.5 mg/L	ND	70.0	130	----
		thallium, dissolved	7440-28-0	E421	0.0465 mg/L	0.05 mg/L	93.0	70.0	130	----
		uranium, dissolved	7440-61-1	E421	ND mg/L	0.00025 mg/L	ND	70.0	130	----
		vanadium, dissolved	7440-62-2	E421	0.0267 mg/L	0.025 mg/L	107	70.0	130	----
		zinc, dissolved	7440-66-6	E421	0.0235 mg/L	0.025 mg/L	94.0	70.0	130	----
<b>Dissolved Metals (QCLot: 771414)</b>										
WT2224351-001	Anonymous	mercury, dissolved	7439-97-6	E509	0.0000983 mg/L	0.0001 mg/L	98.3	70.0	130	----
<b>Speciated Metals (QCLot: 771524)</b>										
WT2224326-001	MW22-37-5DEC22	chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.0387 mg/L	0.04 mg/L	96.7	70.0	130	----
<b>Volatile Organic Compounds (QCLot: 770505)</b>										
WT2224326-001	MW22-37-5DEC22	Acetone	67-64-1	E611D	109 µg/L	100 µg/L	109	60.0	140	----
		benzene	71-43-2	E611D	99.0 µg/L	100 µg/L	99.0	60.0	140	----
		bromodichloromethane	75-27-4	E611D	98.8 µg/L	100 µg/L	98.8	60.0	140	----
		bromoform	75-25-2	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		bromomethane	74-83-9	E611D	79.4 µg/L	100 µg/L	79.4	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	95.0 µg/L	100 µg/L	95.0	60.0	140	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 770505) - continued</b>										
WT2224326-001	MW22-37-5DEC22	chlorobenzene	108-90-7	E611D	94.1 µg/L	100 µg/L	94.1	60.0	140	----
		chloroform	67-66-3	E611D	93.8 µg/L	100 µg/L	93.8	60.0	140	----
		dibromochloromethane	124-48-1	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	91.2 µg/L	100 µg/L	91.2	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	35.4 µg/L	100 µg/L	35.4	60.0	140	RRQC
		dichloroethane, 1,1-	75-34-3	E611D	84.4 µg/L	100 µg/L	84.4	60.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	94.4 µg/L	100 µg/L	94.4	60.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	80.5 µg/L	100 µg/L	80.5	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	95.4 µg/L	100 µg/L	95.4	60.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	87.3 µg/L	100 µg/L	87.3	60.0	140	----
		dichloromethane	75-09-2	E611D	91.8 µg/L	100 µg/L	91.8	60.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	91.5 µg/L	100 µg/L	91.5	60.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	96.4 µg/L	100 µg/L	96.4	60.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	95.3 µg/L	100 µg/L	95.3	60.0	140	----
		ethylbenzene	100-41-4	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		hexane, n-	110-54-3	E611D	86.3 µg/L	100 µg/L	86.3	60.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		styrene	100-42-5	E611D	96.3 µg/L	100 µg/L	96.3	60.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	97.6 µg/L	100 µg/L	97.6	60.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		tetrachloroethylene	127-18-4	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		toluene	108-88-3	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	92.9 µg/L	100 µg/L	92.9	60.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	97.2 µg/L	100 µg/L	97.2	60.0	140	----
		trichloroethylene	79-01-6	E611D	94.7 µg/L	100 µg/L	94.7	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	82.6 µg/L	100 µg/L	82.6	60.0	140	----
		vinyl chloride	75-01-4	E611D	60.6 µg/L	100 µg/L	60.6	60.0	140	----
		xylene, m+p-	179601-23-1	E611D	188 µg/L	200 µg/L	94.2	60.0	140	----
		xylene, o-	95-47-6	E611D	101 µg/L	100 µg/L	101	60.0	140	----
<b>Volatile Organic Compounds (QCLot: 771211)</b>										



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 771211) - continued</b>										
WT2224025-001	Anonymous	benzene	71-43-2	E611D	121 µg/L	100 µg/L	121	60.0	140	----
		bromodichloromethane	75-27-4	E611D	123 µg/L	100 µg/L	123	60.0	140	----
		bromoform	75-25-2	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		bromomethane	74-83-9	E611D	85.8 µg/L	100 µg/L	85.8	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	111 µg/L	100 µg/L	111	60.0	140	----
		chlorobenzene	108-90-7	E611D	99.9 µg/L	100 µg/L	99.9	60.0	140	----
		chloroform	67-66-3	E611D	114 µg/L	100 µg/L	114	60.0	140	----
		dibromochloromethane	124-48-1	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	86.3 µg/L	100 µg/L	86.3	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	82.7 µg/L	100 µg/L	82.7	60.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	121 µg/L	100 µg/L	121	60.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	91.1 µg/L	100 µg/L	91.1	60.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	127 µg/L	100 µg/L	127	60.0	140	----
		dichloromethane	75-09-2	E611D	121 µg/L	100 µg/L	121	60.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	119 µg/L	100 µg/L	119	60.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		ethylbenzene	100-41-4	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	119 µg/L	100 µg/L	119	60.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	122 µg/L	100 µg/L	122	60.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	97.6 µg/L	100 µg/L	97.6	60.0	140	----
		styrene	100-42-5	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		tetrachloroethane, 1,1,1,2-	79-34-5	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		toluene	108-88-3	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	97.4 µg/L	100 µg/L	97.4	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	125 µg/L	100 µg/L	125	60.0	140	----
		vinyl chloride	75-01-4	E611D	83.7 µg/L	100 µg/L	83.7	60.0	140	----
		xylene, m+p-	179601-23-1	E611D	218 µg/L	200 µg/L	109	60.0	140	----



Sub-Matrix: **Water**

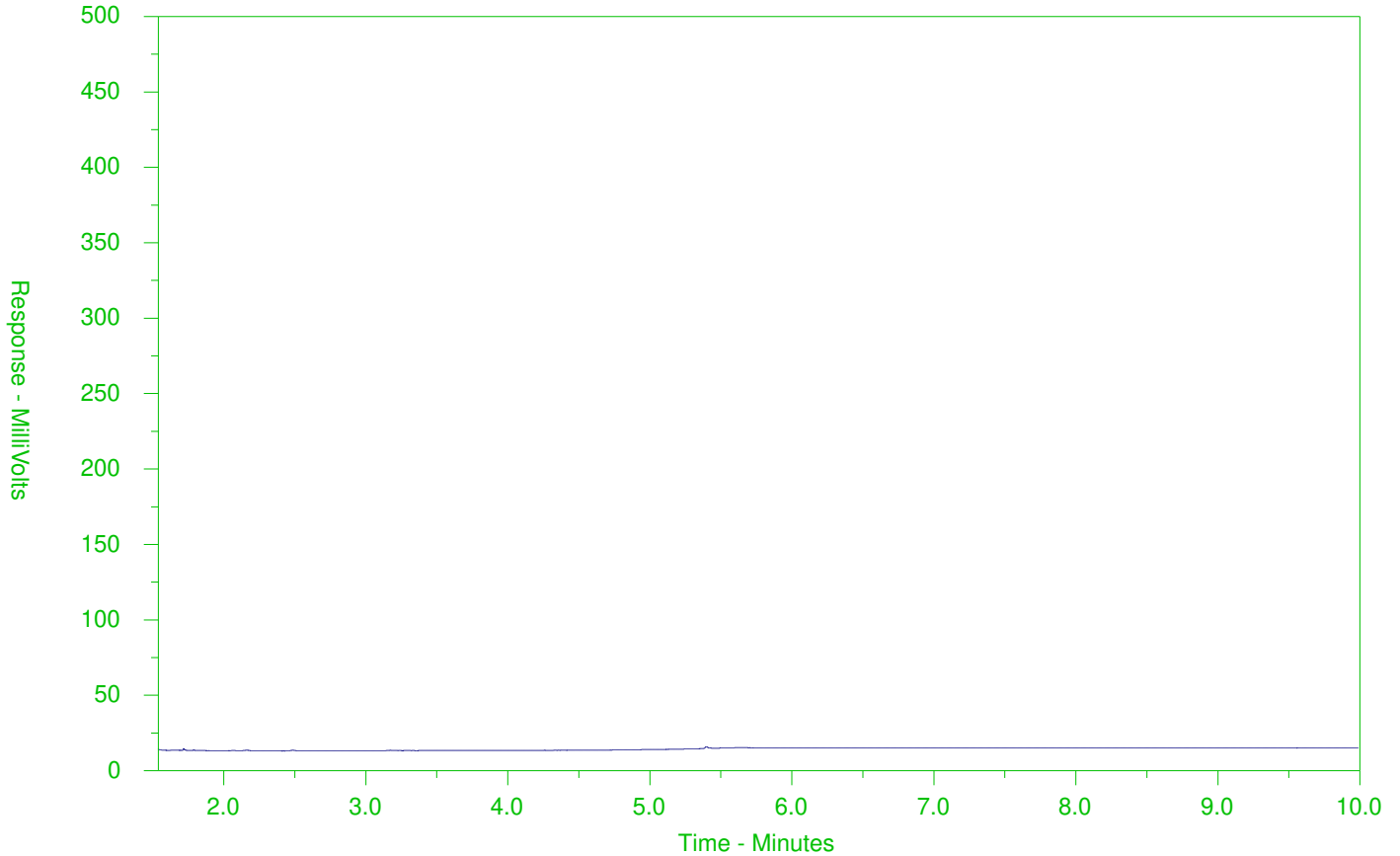
					<i>Matrix Spike (MS) Report</i>					
					<i>Spike</i>		<i>Recovery (%)</i>	<i>Recovery Limits (%)</i>		
<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>Concentration</i>	<i>Target</i>	<i>MS</i>	<i>Low</i>	<i>High</i>	<i>Qualifier</i>
<b>Volatile Organic Compounds (QCLot: 771211) - continued</b>										
WT2224025-001	Anonymous	xylene, o-	95-47-6	E611D	108 µg/L	100 µg/L	108	60.0	140	----
<b>Hydrocarbons (QCLot: 770506)</b>										
WT2224326-001	MW22-37-5DEC22	F1 (C6-C10)	----	E581.F1-L	1770 µg/L	2000 µg/L	88.5	60.0	140	----

RRQC *Refer to report comments for information regarding this QC result.*

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224326-001-E601.SG  
 Client Sample ID: MW22-37-5DEC22



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

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

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

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

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



www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 2C

Page

Environmental Division  
Waterloo  
Work Order Reference  
WT2224326

Report To: Contact and company name below will appear on the final report

Company: **Dwi - McGary**

Contact: **Daniel Elliott**  
**613-857-4936**

Phone: **Company address below will appear on the final report**

Street: **200 - 1755 Woodbine Dr.**

City/Province: **Chatham ON**

Postal Code: **R7C 0P9**

Invoice To: Same as Report To  YES  NO

Company:  YES  NO

Contact:  YES  NO

Selected Report Format:  PDF  EXCEL  EOD (PRINTAL)

Merge COC/QCI Reports with COA  YES  NO  N/A

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

Select Distribution:  EMAIL  MAIL  FAX

Email 1 or Fax: **Dwi McGary**

Email 2: **Kevin O'Rourke**

Email 3: **Andrew O'Rourke**

Selected Invoice Distribution:  EMAIL  MAIL  FAX

Turnaround Time (TAT) Requested

Routine (R) if received by 3pm M-F - no surcharges apply

4 day (P4) if received by 3pm M-F - 25% rush surcharge minimum

3 day (P3) if received by 3pm M-F - 25% rush surcharge minimum

2 day (P2) if received by 3pm M-F - 50% rush surcharge minimum

1 day (P1) if received by 3pm M-F - 100% rush surcharge minimum

Same day (E) if received by 10am M-F - 200% rush surcharge. Additional may apply to rush requests on weekends, statutory holidays and non-tidal

Date and Time Required for all TATs:

ALS Account # / Quote #: **090076**

Job #: **0006-0103**

PO / A/E:

LSD:

ALS Lab Work Order # (ALS use only):

Project Information

ALS Account # / Quote #: **090076**

Job #: **0006-0103**

PO / A/E:

LSD:

ALS Contact:

Selected Invoice Distribution:  EMAIL  MAIL  FAX

Email 1 or Fax: **Tara King**

Email 2:

Oil and Gas (Required Fields (client use))

A/E/Cost Center:

Major/Minor Code:

Requisitioner:

Location:

ALS Contact:

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sampler	Sample Type	NUMBER OF CONTAINERS
MW22-37-5DEC22		05-DEC-22	6:40	GW	7	X PNC F1 - F4 X VOC X PAH X Metals X Hg X Pb X PH
MW21-08-5DEC22			11:45		2	X
MW21-04A-5DEC22			13:20		X	X
MW21-04B-5DEC22			14:10		X	X
MW22-04C-5DEC22			14:40		X	X
MW21-05A-5DEC22			14:45		X	X
MW21-05B-5DEC22			15:10		X	X
MW22-05C-5DEC22			15:30		X	X
MW22-03A-5DEC22			11:15		X	X
MW21-03B-5DEC22			11:35		X	X
MW22-03C-5DEC22			12:35		X	X
MW21-17A-5DEC22			12:40		X	X

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Drinking Water (DW) Samples (client use)

Are samples taken from a Regulated DW System?  YES  NO

Are samples for human consumption use?  YES  NO

SHIPPING RELEASE (client use)

Date: **5-DEC-22** Time: **16:52**

Received by: **ROSSIE F**

INITIAL SHIPMENT RECEPTION (ALS use only)

Date: **12/15/22** Time: **16:52**

Received by: **AP**

FINAL SHIPMENT RECEPTION (ALS use only)

Date: **7 DEC 22** Time: **9:15**

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method:  NONE  ICE  ICE PACKS  FROZEN  COOLING INITIATED

Submission Comments identified on Sample Receipt Notification:  YES  NO

Cooler Custody Seals Intact:  YES  N/A  Sample Custody Seals Intact:  YES  N/A

INITIAL COOLER TEMPERATURES: **8.9**

FINAL COOLER TEMPERATURES: **10.9**

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

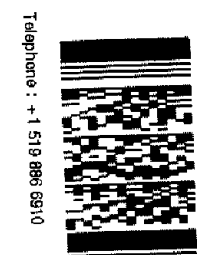
WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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.

GC-193 MM-493 SC-162

OR-129 WU-161



Telephone : +1 519 866 8910





www.alsglobal.com

# Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20-1009820

Page 2 of 2

Contact and company name below will appear on the final report

Company: **OPNH-PCARD**

Contact: *[Signature]*

Phone: *[Blank]*

Company address below will appear on the final report

Select Report Format:  PDF  EXCEL  EOD (DIGITAL)

Merge QC/QCI Reports with COA  YES  NO  N/A

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

Select Distribution:  EMAIL  MAIL  FAX

Email 1 or Fax

Email 2

Email 3

Invoice To: Same as Report To  YES  NO

Select Invoice Distribution:  EMAIL  MAIL  FAX

Company: *[Blank]*

Project Information

ALS Account # / Quote #

AS/EQ/CS Center: *[Blank]* PO#

Job #: *[Blank]*

Major/Minor Code: *[Blank]* Routing Code: *[Blank]*

PO / AFE: *[Blank]*

Requisitioner: *[Blank]* Location: *[Blank]*

LSD: *[Blank]*

ALS Lab Work Order # (ALS use only): *[Blank]*

ALS Contact: *[Blank]* Sampler: *[Blank]*

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type
MW22-17B-5DEC22		5-DEC-22	13:10	ED
DUP3-5DEC22			14:10	
TB2-5DEC22				
FBR-5DEC22				

Drinking Water (DW) Samples (client use)

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Are samples taken from a Regulated DW System?  
 YES  NO

Are samples for human consumption use?  
 YES  NO

Released by: *[Blank]* Date: *[Blank]*

Received by: *[Blank]* Date: *[Blank]*

SHIPMENT RELEASE (client use)

INITIAL SHIPMENT RECEPTION (ALS use only)

Date: *[Blank]* Time: *[Blank]*

Received by: *[Blank]*

FINAL SHIPMENT RECEPTION (ALS use only)

Date: 7 Dec 22 Time: 9:15

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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.

ALS 200 55/011

Turnaround Time (TAT) Requested

For all tests with rush TATs requested, please contact your AM to confirm availability.

Indicate Filled (F), Preserved (P) or Filled and Preserved (FP) below

Analysis Request																	
Route [R] if received by 3pm M-F - no surcharges apply																	
4 day [4d] if received by 3pm M-F - 20% rush surcharge minimum																	
3 day [3d] if received by 3pm M-F - 25% rush surcharge minimum																	
2 day [2d] if received by 3pm M-F - 50% rush surcharge minimum																	
1 day [1d] if received by 3pm M-F - 100% rush surcharge minimum																	
Same day [SD] if received by 10am M-F - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests																	

Price and Time Required for all EAR TATs

NUMBER OF CONTAINERS

Sample	VOC	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other
1	X																
2	X																
3	X																
4	X																
5	X																
6	X																
7	X																
8	X																
9	X																
10	X																
11	X																
12	X																
13	X																
14	X																
15	X																
16	X																
17	X																
18	X																
19	X																
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35	X																
36	X																
37	X																
38	X																
39	X																
40	X																
41	X																
42	X																
43	X																
44	X																
45	X																
46	X																
47	X																
48	X																
49	X																
50	X																

APPENDIX ALS BARCODE LABEL HERE (ALS use only)

SAMPLES ON HOLD  
EXTENDED STORAGE REQUIRED  
SUSPECTED HAZARD (see notes)



## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

<p><b>Work Order</b> : <b>WT2224485</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 20-1009821</p> <p><b>Sampler</b> : DE</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 26</p> <p><b>No. of samples analysed</b> : 26</p>	<p><b>Page</b> : 1 of 63</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 07-Dec-2022 07:45</p> <p><b>Date Analysis Commenced</b> : 08-Dec-2022</p> <p><b>Issue Date</b> : 16-Dec-2022 14:38</p>
--	--

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Jon Fisher	Department Manager - Inorganics	Inorganics, Waterloo, Ontario
Jon Fisher	Department Manager - Inorganics	Metals, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Organics, Waterloo, Ontario

## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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. Guidelines 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.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	no units
µg/L	micrograms per litre
pH units	pH units

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .

## Workorder Comments

RRR - Detection limit raised due to suspected laboratory contamination.

## Qualifiers

<i>Qualifier</i>	<i>Description</i>
DLHC	<i>Detection Limit Raised: Dilution required due to high concentration of test analyte(s).</i>
OWP	<i>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.</i>
RRR	<i>Refer to report comments for issues regarding this analysis.</i>



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04					
				MW22-34-5DEC22	T7-NPGW-C-AI	T7-NPGW-F-AII				
Sub-Matrix: Water (Matrix: Water)				Sampling date/time	05-Dec-2022 00:00					
				WT2224485-001						
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-001 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	1.07	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	110	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	102	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW22-34-5DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	1.07 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	1.07 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04					
				MW21-01A-6DEC22	T7-NPGW-C-AI	T7-NPGW-F-AII				
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
				06-Dec-2022 15:45	WT2224485-002					
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-002 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.88	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	110	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	102	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW21-01A-6DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.88 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.88 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID						
				MW21-01B-6DEC22	06-Dec-2022 16:15	WT2224485-003	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII		
<b>Sub-Matrix: Water</b>										
<b>(Matrix: Water)</b>										
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--





Analyte	Method	LOR	Unit	WT2224485-003 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.82	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	110	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	101	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW21-01B-6DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.82 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.82 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW22-01C-6DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224485-004	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-004 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	110	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	102	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04				
				MW21-02A-6DEC22	T7-NPGW-C-AI	T7-NPGW-F-AII				
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
				06-Dec-2022 14:05						
				WT2224485-005						
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-005 (Continued)	ON153/04 T7-NPGW-C-All I	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.84	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	110	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	101	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW21-02A-6DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.84 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.84 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW21-02B-6DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224485-006	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-006 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.65	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	109	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	101	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW21-02B-6DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.65 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.65 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	Sampling date/time		ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
				MW21-06A-6DEC22	06-Dec-2022 12:15	WT2224485-007						
<b>Sub-Matrix: Water</b>												
<b>(Matrix: Water)</b>												
<b>Volatile Organic Compounds</b>												
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--	--	--





Analyte	Method	LOR	Unit	WT2224485-007 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	92.0	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	97.1	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	110	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	101	--	--	--	--	--	--
<b>Polychlorinated Biphenyls</b>										
Aroclor 1016	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1221	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1232	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1242	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1248	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1254	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1260	E687	0.020	µg/L	<0.020	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-007 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Polychlorinated Biphenyls - Continued</b>										
Aroclor 1262	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1268	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
polychlorinated biphenyls [PCBs], total	E687	0.060	µg/L	<0.060	0.2 µg/L	0.2 µg/L	--	--	--	--
decachlorobiphenyl	E687	0.1	%	102	--	--	--	--	--	--
tetrachloro-m-xylene	E687	0.1	%	82.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- |               |  |
|---------------|--|
| ON153/04      | Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)   |
| T7-NPGW-C-All | 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse |
| T7-NPGW-F-All | 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)  |



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	Sampling date/time		ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
				MW22-06B-6DEC22	06-Dec-2022 12:45	WT2224485-008						
<b>Sub-Matrix: Water</b>												
<b>(Matrix: Water)</b>												
<b>Volatile Organic Compounds</b>												
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-008 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	109	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	101	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW21-07-6DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224485-009	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-009 (Continued)	ON153/04 T7-NPGW-C-All I	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.71	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	109	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	102	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW21-07-6DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.71 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.71 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID							
				MW21-14A-6DEC22							
				06-Dec-2022							
				13:00							
Sub-Matrix: Water (Matrix: Water)				WT2224485-010	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII					
Analyte	Method	LOR	Unit								
<b>Physical Tests</b>											
pH	E108	0.10	pH units	7.43	--	--	--	--	--	--	--
<b>Dissolved Metals</b>											
antimony, dissolved	E421	0.10	µg/L	<1.00	DLHC	16000 µg/L	16000 µg/L	--	--	--	--
arsenic, dissolved	E421	0.10	µg/L	<1.00	DLHC	1500 µg/L	1500 µg/L	--	--	--	--
barium, dissolved	E421	0.10	µg/L	176	DLHC	23000 µg/L	23000 µg/L	--	--	--	--
beryllium, dissolved	E421	0.020	µg/L	<0.200	DLHC	53 µg/L	53 µg/L	--	--	--	--
boron, dissolved	E421	10	µg/L	<100	DLHC	36000 µg/L	36000 µg/L	--	--	--	--
cadmium, dissolved	E421	0.0050	µg/L	<0.0500	DLHC	2.1 µg/L	2.1 µg/L	--	--	--	--
chromium, dissolved	E421	0.50	µg/L	<5.00	DLHC	640 µg/L	640 µg/L	--	--	--	--
cobalt, dissolved	E421	0.10	µg/L	<1.00	DLHC	52 µg/L	52 µg/L	--	--	--	--
copper, dissolved	E421	0.20	µg/L	5.12	DLHC	69 µg/L	69 µg/L	--	--	--	--
lead, dissolved	E421	0.050	µg/L	<0.500	DLHC	20 µg/L	20 µg/L	--	--	--	--
mercury, dissolved	E509	0.0050	µg/L	<0.0050		0.1 µg/L	0.1 µg/L	--	--	--	--
molybdenum, dissolved	E421	0.050	µg/L	1.07	DLHC	7300 µg/L	7300 µg/L	--	--	--	--
nickel, dissolved	E421	0.50	µg/L	6.15	DLHC	390 µg/L	390 µg/L	--	--	--	--
selenium, dissolved	E421	0.050	µg/L	1.10	DLHC	50 µg/L	50 µg/L	--	--	--	--
silver, dissolved	E421	0.010	µg/L	<0.100	DLHC	1.2 µg/L	1.2 µg/L	--	--	--	--
sodium, dissolved	E421	50	µg/L	418000	DLHC	1800000 µg/L	1800000 µg/L	--	--	--	--
thallium, dissolved	E421	0.010	µg/L	0.458	DLHC	400 µg/L	400 µg/L	--	--	--	--
uranium, dissolved	E421	0.010	µg/L	12.2	DLHC	330 µg/L	330 µg/L	--	--	--	--
vanadium, dissolved	E421	0.50	µg/L	<5.00	DLHC	200 µg/L	200 µg/L	--	--	--	--
zinc, dissolved	E421	1.0	µg/L	<10.0	DLHC	890 µg/L	890 µg/L	--	--	--	--
dissolved mercury filtration location	EP509		-	Field		--	--	--	--	--	--
dissolved metals filtration location	EP421		-	Field		--	--	--	--	--	--
<b>Speciated Metals</b>											
chromium, hexavalent [Cr VI], dissolved	E532A	0.50	µg/L	<0.50		--	--	--	--	--	--
<b>Volatile Organic Compounds</b>											
Acetone	E611D	20	µg/L	<20		100000 µg/L	100000 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-010 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--





Analyte	Method	LOR	Unit	WT2224485-010 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.65	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F2-naphthalene	EC600SG	100	µg/L	<100	--	--	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F3-PAH	EC600SG	250	µg/L	<250	--	--	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	91.1	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	89.2	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	109	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	101	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.010	µg/L	<0.010	17 µg/L	17 µg/L	--	--	--	--
acenaphthylene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
anthracene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
benz(a)anthracene	E641A	0.010	µg/L	<0.010	1.8 µg/L	1.8 µg/L	--	--	--	--
benzo(a)pyrene	E641A	0.0050	µg/L	<0.0050	0.81 µg/L	0.81 µg/L	--	--	--	--
benzo(b+j)fluoranthene	E641A	0.010	µg/L	<0.010	0.75 µg/L	0.75 µg/L	--	--	--	--
benzo(g,h,i)perylene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
benzo(k)fluoranthene	E641A	0.010	µg/L	<0.010	0.4 µg/L	0.4 µg/L	--	--	--	--
chrysene	E641A	0.010	µg/L	<0.010	0.7 µg/L	0.7 µg/L	--	--	--	--
dibenz(a,h)anthracene	E641A	0.0050	µg/L	<0.0050	0.4 µg/L	0.4 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-010 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
fluoranthene	E641A	0.010	µg/L	<0.010	44 µg/L	44 µg/L	--	--	--	--
fluorene	E641A	0.010	µg/L	<0.010	290 µg/L	290 µg/L	--	--	--	--
indeno(1,2,3-c,d)pyrene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
methylnaphthalene, 1+2-	E641A	0.015	µg/L	<0.015	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 1-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 2-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
naphthalene	E641A	0.050	µg/L	<0.050	7 µg/L	7 µg/L	--	--	--	--
phenanthrene	E641A	0.020	µg/L	<0.020	380 µg/L	380 µg/L	--	--	--	--
pyrene	E641A	0.010	µg/L	<0.010	5.7 µg/L	5.7 µg/L	--	--	--	--
chrysene-d12	E641A	0.1	%	121	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	100	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	124	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW21-14A-6DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.65 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.65 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID						
				MW22-14B-6DEC22	Sampling date/time	06-Dec-2022 12:15	WT2224485-011	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII	
<b>Sub-Matrix: Water</b>										
<b>(Matrix: Water)</b>										
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-011 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	94.3	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	101	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- |               |  |
|---------------|--|
| ON153/04      | Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)   |
| T7-NPGW-C-All | 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse |
| T7-NPGW-F-All | 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)  |



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	Sampling date/time		ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
				MW21-15A-6DEC22	06-Dec-2022 16:15	WT2224485-012						
<b>Sub-Matrix: Water</b>												
<b>(Matrix: Water)</b>												
<b>Volatile Organic Compounds</b>												
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-012 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.73	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	94.6	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW21-15A-6DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.73 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.73 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW22-15B-6DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224485-013	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-013 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	94.0	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)





## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID						
				MW21-16A-6DEC22	06-Dec-2022	14:50	WT2224485-014	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII	
<b>Sub-Matrix: Water</b>										
<b>(Matrix: Water)</b>										
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-014 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.97	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	92.8	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW21-16A-6DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.97 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.97 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	Sampling date/time		ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
				MW22-16B-6DEC22	06-Dec-2022 15:20	WT2224485-015						
<b>Sub-Matrix: Water</b>												
<b>(Matrix: Water)</b>												
<b>Volatile Organic Compounds</b>												
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-015 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	92.9	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID							
				MW22-28-6DEC22							
Sub-Matrix: Water (Matrix: Water)				Sampling date/time							
Analyte	Method	LOR	Unit	WT2224485-016	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII					
<b>Physical Tests</b>											
pH	E108	0.10	pH units	7.51	--	--	--	--	--	--	--
<b>Dissolved Metals</b>											
antimony, dissolved	E421	0.10	µg/L	<1.00	DLHC	16000 µg/L	16000 µg/L	--	--	--	--
arsenic, dissolved	E421	0.10	µg/L	<1.00	DLHC	1500 µg/L	1500 µg/L	--	--	--	--
barium, dissolved	E421	0.10	µg/L	227	DLHC	23000 µg/L	23000 µg/L	--	--	--	--
beryllium, dissolved	E421	0.020	µg/L	<0.200	DLHC	53 µg/L	53 µg/L	--	--	--	--
boron, dissolved	E421	10	µg/L	<100	DLHC	36000 µg/L	36000 µg/L	--	--	--	--
cadmium, dissolved	E421	0.0050	µg/L	<0.0500	DLHC	2.1 µg/L	2.1 µg/L	--	--	--	--
chromium, dissolved	E421	0.50	µg/L	<5.00	DLHC	640 µg/L	640 µg/L	--	--	--	--
cobalt, dissolved	E421	0.10	µg/L	1.22	DLHC	52 µg/L	52 µg/L	--	--	--	--
copper, dissolved	E421	0.20	µg/L	4.93	DLHC	69 µg/L	69 µg/L	--	--	--	--
lead, dissolved	E421	0.050	µg/L	<0.500	DLHC	20 µg/L	20 µg/L	--	--	--	--
mercury, dissolved	E509	0.0050	µg/L	<0.0050		0.1 µg/L	0.1 µg/L	--	--	--	--
molybdenum, dissolved	E421	0.050	µg/L	4.38	DLHC	7300 µg/L	7300 µg/L	--	--	--	--
nickel, dissolved	E421	0.50	µg/L	8.02	DLHC	390 µg/L	390 µg/L	--	--	--	--
selenium, dissolved	E421	0.050	µg/L	1.12	DLHC	50 µg/L	50 µg/L	--	--	--	--
silver, dissolved	E421	0.010	µg/L	<0.100	DLHC	1.2 µg/L	1.2 µg/L	--	--	--	--
sodium, dissolved	E421	50	µg/L	388000	DLHC	1800000 µg/L	1800000 µg/L	--	--	--	--
thallium, dissolved	E421	0.010	µg/L	0.352	DLHC	400 µg/L	400 µg/L	--	--	--	--
uranium, dissolved	E421	0.010	µg/L	14.8	DLHC	330 µg/L	330 µg/L	--	--	--	--
vanadium, dissolved	E421	0.50	µg/L	<5.00	DLHC	200 µg/L	200 µg/L	--	--	--	--
zinc, dissolved	E421	1.0	µg/L	<10.0	DLHC	890 µg/L	890 µg/L	--	--	--	--
dissolved mercury filtration location	EP509		-	Field		--	--	--	--	--	--
dissolved metals filtration location	EP421		-	Field		--	--	--	--	--	--
<b>Speciated Metals</b>											
chromium, hexavalent [Cr VI], dissolved	E532A	0.50	µg/L	<0.50		--	--	--	--	--	--
<b>Volatile Organic Compounds</b>											
Acetone	E611D	20	µg/L	<20		100000 µg/L	100000 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-016 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-016 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.84	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F2-naphthalene	EC600SG	100	µg/L	<100	--	--	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F3-PAH	EC600SG	250	µg/L	<250	--	--	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	88.0	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	98.5	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	93.2	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.010	µg/L	<0.010	17 µg/L	17 µg/L	--	--	--	--
acenaphthylene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
anthracene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
benz(a)anthracene	E641A	0.010	µg/L	<0.010	1.8 µg/L	1.8 µg/L	--	--	--	--
benzo(a)pyrene	E641A	0.0050	µg/L	<0.0050	0.81 µg/L	0.81 µg/L	--	--	--	--
benzo(b+j)fluoranthene	E641A	0.010	µg/L	<0.010	0.75 µg/L	0.75 µg/L	--	--	--	--
benzo(g,h,i)perylene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
benzo(k)fluoranthene	E641A	0.010	µg/L	<0.010	0.4 µg/L	0.4 µg/L	--	--	--	--
chrysene	E641A	0.010	µg/L	<0.010	0.7 µg/L	0.7 µg/L	--	--	--	--
dibenz(a,h)anthracene	E641A	0.0050	µg/L	<0.0050	0.4 µg/L	0.4 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-016 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
fluoranthene	E641A	0.010	µg/L	<0.010	44 µg/L	44 µg/L	--	--	--	--
fluorene	E641A	0.010	µg/L	<0.010	290 µg/L	290 µg/L	--	--	--	--
indeno(1,2,3-c,d)pyrene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
methylnaphthalene, 1+2-	E641A	0.015	µg/L	<0.015	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 1-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 2-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
naphthalene	E641A	0.050	µg/L	<0.050	7 µg/L	7 µg/L	--	--	--	--
phenanthrene	E641A	0.020	µg/L	<0.020	380 µg/L	380 µg/L	--	--	--	--
pyrene	E641A	0.010	µg/L	<0.010	5.7 µg/L	5.7 µg/L	--	--	--	--
chrysene-d12	E641A	0.1	%	107	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	91.6	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	114	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW22-28-6DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.84 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.84 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)





## Analytical Results

				Client sample ID								
				Sampling date/time								
Sub-Matrix: Water (Matrix: Water)				06-Dec-2022 09:40	MW22-29-6DEC22							
Analyte	Method	LOR	Unit	WT2224485-017	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII						
<b>Physical Tests</b>												
pH	E108	0.10	pH units	7.68	--	--	--	--	--	--	--	--
<b>Dissolved Metals</b>												
antimony, dissolved	E421	0.10	µg/L	<1.00	DLHC	16000 µg/L	16000 µg/L	--	--	--	--	--
arsenic, dissolved	E421	0.10	µg/L	<1.00	DLHC	1500 µg/L	1500 µg/L	--	--	--	--	--
barium, dissolved	E421	0.10	µg/L	95.8	DLHC	23000 µg/L	23000 µg/L	--	--	--	--	--
beryllium, dissolved	E421	0.020	µg/L	<0.200	DLHC	53 µg/L	53 µg/L	--	--	--	--	--
boron, dissolved	E421	10	µg/L	<100	DLHC	36000 µg/L	36000 µg/L	--	--	--	--	--
cadmium, dissolved	E421	0.0050	µg/L	<0.0500	DLHC	2.1 µg/L	2.1 µg/L	--	--	--	--	--
chromium, dissolved	E421	0.50	µg/L	<5.00	DLHC	640 µg/L	640 µg/L	--	--	--	--	--
cobalt, dissolved	E421	0.10	µg/L	4.18	DLHC	52 µg/L	52 µg/L	--	--	--	--	--
copper, dissolved	E421	0.20	µg/L	2.04	DLHC	69 µg/L	69 µg/L	--	--	--	--	--
lead, dissolved	E421	0.050	µg/L	<0.500	DLHC	20 µg/L	20 µg/L	--	--	--	--	--
mercury, dissolved	E509	0.0050	µg/L	<0.0050		0.1 µg/L	0.1 µg/L	--	--	--	--	--
molybdenum, dissolved	E421	0.050	µg/L	0.837	DLHC	7300 µg/L	7300 µg/L	--	--	--	--	--
nickel, dissolved	E421	0.50	µg/L	6.36	DLHC	390 µg/L	390 µg/L	--	--	--	--	--
selenium, dissolved	E421	0.050	µg/L	<0.500	DLHC	50 µg/L	50 µg/L	--	--	--	--	--
silver, dissolved	E421	0.010	µg/L	<0.100	DLHC	1.2 µg/L	1.2 µg/L	--	--	--	--	--
sodium, dissolved	E421	50	µg/L	317000	DLHC	1800000 µg/L	1800000 µg/L	--	--	--	--	--
thallium, dissolved	E421	0.010	µg/L	0.152	DLHC	400 µg/L	400 µg/L	--	--	--	--	--
uranium, dissolved	E421	0.010	µg/L	11.7	DLHC	330 µg/L	330 µg/L	--	--	--	--	--
vanadium, dissolved	E421	0.50	µg/L	<5.00	DLHC	200 µg/L	200 µg/L	--	--	--	--	--
zinc, dissolved	E421	1.0	µg/L	<10.0	DLHC	890 µg/L	890 µg/L	--	--	--	--	--
dissolved mercury filtration location	EP509		-	Field		--	--	--	--	--	--	--
dissolved metals filtration location	EP421		-	Field		--	--	--	--	--	--	--
<b>Speciated Metals</b>												
chromium, hexavalent [Cr VI], dissolved	E532A	0.50	µg/L	<0.50		--	--	--	--	--	--	--
<b>Volatile Organic Compounds</b>												
Acetone	E611D	20	µg/L	<20		100000 µg/L	100000 µg/L	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-017 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-017 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F2-naphthalene	EC600SG	100	µg/L	<100	--	--	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F3-PAH	EC600SG	250	µg/L	<250	--	--	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	87.4	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	81.8	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	91.9	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	99.6	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
acenaphthene	E641A	0.010	µg/L	<0.010	17 µg/L	17 µg/L	--	--	--	--
acenaphthylene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
anthracene	E641A	0.010	µg/L	<0.010	1 µg/L	1 µg/L	--	--	--	--
benz(a)anthracene	E641A	0.010	µg/L	<0.010	1.8 µg/L	1.8 µg/L	--	--	--	--
benzo(a)pyrene	E641A	0.0050	µg/L	<0.0050	0.81 µg/L	0.81 µg/L	--	--	--	--
benzo(b+j)fluoranthene	E641A	0.010	µg/L	<0.010	0.75 µg/L	0.75 µg/L	--	--	--	--
benzo(g,h,i)perylene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
benzo(k)fluoranthene	E641A	0.010	µg/L	<0.010	0.4 µg/L	0.4 µg/L	--	--	--	--
chrysene	E641A	0.010	µg/L	<0.010	0.7 µg/L	0.7 µg/L	--	--	--	--
dibenz(a,h)anthracene	E641A	0.0050	µg/L	<0.0050	0.4 µg/L	0.4 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-017 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Polycyclic Aromatic Hydrocarbons - Continued</b>										
fluoranthene	E641A	0.010	µg/L	<0.010	44 µg/L	44 µg/L	--	--	--	--
fluorene	E641A	0.010	µg/L	<0.010	290 µg/L	290 µg/L	--	--	--	--
indeno(1,2,3-c,d)pyrene	E641A	0.010	µg/L	<0.010	0.2 µg/L	0.2 µg/L	--	--	--	--
methylnaphthalene, 1+2-	E641A	0.015	µg/L	<0.015	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 1-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
methylnaphthalene, 2-	E641A	0.010	µg/L	<0.010	1500 µg/L	1500 µg/L	--	--	--	--
naphthalene	E641A	0.050	µg/L	<0.050	7 µg/L	7 µg/L	--	--	--	--
phenanthrene	E641A	0.020	µg/L	<0.020	380 µg/L	380 µg/L	--	--	--	--
pyrene	E641A	0.010	µg/L	<0.010	5.7 µg/L	5.7 µg/L	--	--	--	--
chrysene-d12	E641A	0.1	%	115	--	--	--	--	--	--
naphthalene-d8	E641A	0.1	%	97.1	--	--	--	--	--	--
phenanthrene-d10	E641A	0.1	%	121	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW22-30-6DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224485-018	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-018 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	92.7	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	99.9	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID			ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
				Sub-Matrix: Water (Matrix: Water)	Sampling date/time	MW22-31-6DEC22						
<b>Volatile Organic Compounds</b>												
Acetone	E611D	20	µg/L	<20	OWP	100000 µg/L	100000 µg/L	--	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	OWP	67000 µg/L	67000 µg/L	--	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	OWP	5 µg/L	5 µg/L	--	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	OWP	0.89 µg/L	0.89 µg/L	--	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	OWP	0.2 µg/L	0.2 µg/L	--	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	OWP	140 µg/L	140 µg/L	--	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	OWP	2 µg/L	2 µg/L	--	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	OWP	65000 µg/L	65000 µg/L	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	OWP	0.2 µg/L	0.2 µg/L	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	OWP	150 µg/L	150 µg/L	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	OWP	7600 µg/L	7600 µg/L	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	OWP	3500 µg/L	3500 µg/L	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	OWP	11 µg/L	11 µg/L	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	OWP	1.6 µg/L	1.6 µg/L	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	OWP	1.6 µg/L	1.6 µg/L	--	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	OWP	26 µg/L	26 µg/L	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	OWP	0.58 µg/L	0.58 µg/L	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	OWP	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	OWP	--	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	OWP	54 µg/L	54 µg/L	--	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	OWP	5 µg/L	5 µg/L	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	OWP	21000 µg/L	21000 µg/L	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	OWP	5200 µg/L	5200 µg/L	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	OWP	15 µg/L	15 µg/L	--	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	OWP	43 µg/L	43 µg/L	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-019 (Continued)		ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>											
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	OWP	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	OWP	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	OWP	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	1.37	OWP	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	OWP	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	OWP	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	OWP	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	OWP	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	OWP	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	OWP	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>											
bromofluorobenzene, 4-	E611D	1.0	%	93.0		--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100		--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW22-31-6DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	1.37 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	1.37 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)





## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	Sampling date/time		ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
				MW22-35-6DEC22	06-Dec-2022 13:35							
<b>Sub-Matrix: Water</b>												
<b>(Matrix: Water)</b>												
<b>Volatile Organic Compounds</b>												
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-020 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	91.9	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				BH4-10-6DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224485-021	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-021 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	92.1	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				DUP4-6DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224485-022	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-022 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	87.5	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	98.7	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	92.1	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--
<b>Polychlorinated Biphenyls</b>										
Aroclor 1016	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1221	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1232	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1242	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1248	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1254	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1260	E687	0.020	µg/L	<0.020	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-022 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Polychlorinated Biphenyls - Continued</b>										
Aroclor 1262	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1268	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
polychlorinated biphenyls [PCBs], total	E687	0.060	µg/L	<0.060	0.2 µg/L	0.2 µg/L	--	--	--	--
decachlorobiphenyl	E687	0.1	%	101	--	--	--	--	--	--
tetrachloro-m-xylene	E687	0.1	%	84.6	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- |               |  |
|---------------|--|
| ON153/04      | Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)   |
| T7-NPGW-C-All | 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse |
| T7-NPGW-F-All | 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)  |



## Analytical Results

				Client sample ID						
				DUP5-6DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224485-023	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--





Analyte	Method	LOR	Unit	WT2224485-023 (Continued)	ON153/04 T7-NPGW-C-All I	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.67	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	91.7	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	99.9	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
DUP5-6DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.67 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.67 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW22-38-6DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224485-024	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-024 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	86.0	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	96.3	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	91.3	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--
<b>Polychlorinated Biphenyls</b>										
Aroclor 1016	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1221	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1232	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1242	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1248	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1254	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1260	E687	0.020	µg/L	<0.020	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-024 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Polychlorinated Biphenyls - Continued</b>										
Aroclor 1262	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
Aroclor 1268	E687	0.020	µg/L	<0.020	--	--	--	--	--	--
polychlorinated biphenyls [PCBs], total	E687	0.060	µg/L	<0.060	0.2 µg/L	0.2 µg/L	--	--	--	--
decachlorobiphenyl	E687	0.1	%	107	--	--	--	--	--	--
tetrachloro-m-xylene	E687	0.1	%	89.1	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- |               |  |
|---------------|--|
| ON153/04      | Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)   |
| T7-NPGW-C-All | 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse |
| T7-NPGW-F-All | 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)  |



## Analytical Results

				Client sample ID						
				TB3-6DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224485-025	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.5	RRR 26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-025 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	103	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	95.2	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	99.9	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T7-NPGW-C-All	153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
T7-NPGW-F-All	153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				FB3-6DEC22						
				06-Dec-2022						
				00:00						
				WT2224485-026	ON153/04	ON153/04				
Analyte	Method	LOR	Unit		T7-NPGW-C-AI	T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224485-026 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	91.3	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	99.7	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>WT2224485</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 20-1009821</p> <p><b>Sampler</b> : DE</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 26</p> <p><b>No. of samples analysed</b> : 26</p>	<p><b>Page</b> : 1 of 12</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 07-Dec-2022 07:45</p> <p><b>Issue Date</b> : 16-Dec-2022 14:38</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

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### ***Workorder Comments***

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>											
Glass vial dissolved (hydrochloric acid) MW21-14A-6DEC22	E509	06-Dec-2022	08-Dec-2022	----	----		08-Dec-2022	28 days	2 days	✓	
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>											
Glass vial dissolved (hydrochloric acid) MW22-28-6DEC22	E509	06-Dec-2022	08-Dec-2022	----	----		08-Dec-2022	28 days	2 days	✓	
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>											
Glass vial dissolved (hydrochloric acid) MW22-29-6DEC22	E509	06-Dec-2022	08-Dec-2022	----	----		08-Dec-2022	28 days	2 days	✓	
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>											
HDPE dissolved (nitric acid) MW21-14A-6DEC22	E421	06-Dec-2022	08-Dec-2022	----	----		08-Dec-2022	180 days	2 days	✓	
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>											
HDPE dissolved (nitric acid) MW22-28-6DEC22	E421	06-Dec-2022	08-Dec-2022	----	----		08-Dec-2022	180 days	2 days	✓	
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>											
HDPE dissolved (nitric acid) MW22-29-6DEC22	E421	06-Dec-2022	08-Dec-2022	----	----		08-Dec-2022	180 days	2 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) MW21-06A-6DEC22	E581.F1-L	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✓	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) MW21-14A-6DEC22	E581.F1-L	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) MW22-28-6DEC22	E581.F1-L	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) MW22-29-6DEC22	E581.F1-L	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) MW22-38-6DEC22	E581.F1-L	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) DUP4-6DEC22	E581.F1-L	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	4 days	✔	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) TB3-6DEC22	E581.F1-L	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	4 days	✔	
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) MW21-06A-6DEC22	E601.SG	06-Dec-2022	08-Dec-2022	14 days	2 days	✔	14-Dec-2022	40 days	6 days	✔	
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) MW21-14A-6DEC22	E601.SG	06-Dec-2022	08-Dec-2022	14 days	2 days	✔	14-Dec-2022	40 days	6 days	✔	
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) MW22-28-6DEC22	E601.SG	06-Dec-2022	08-Dec-2022	14 days	2 days	✔	14-Dec-2022	40 days	6 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) MW22-29-6DEC22	E601.SG	06-Dec-2022	08-Dec-2022	14 days	2 days	✔	14-Dec-2022	40 days	6 days	✔	
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) MW22-38-6DEC22	E601.SG	06-Dec-2022	08-Dec-2022	14 days	2 days	✔	14-Dec-2022	40 days	6 days	✔	
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) DUP4-6DEC22	E601.SG	06-Dec-2022	08-Dec-2022	14 days	3 days	✔	14-Dec-2022	40 days	6 days	✔	
<b>Physical Tests : pH by Meter</b>											
HDPE [ON MECP] MW21-14A-6DEC22	E108	06-Dec-2022	12-Dec-2022	----	----		13-Dec-2022	14 days	7 days	✔	
<b>Physical Tests : pH by Meter</b>											
HDPE [ON MECP] MW22-28-6DEC22	E108	06-Dec-2022	12-Dec-2022	----	----		13-Dec-2022	14 days	7 days	✔	
<b>Physical Tests : pH by Meter</b>											
HDPE [ON MECP] MW22-29-6DEC22	E108	06-Dec-2022	12-Dec-2022	----	----		13-Dec-2022	14 days	7 days	✔	
<b>Polychlorinated Biphenyls : PCB Aroclors by GC-MS</b>											
Amber glass/Teflon lined cap DUP4-6DEC22	E687	06-Dec-2022	09-Dec-2022	14 days	3 days	✔	12-Dec-2022	40 days	3 days	✔	
<b>Polychlorinated Biphenyls : PCB Aroclors by GC-MS</b>											
Amber glass/Teflon lined cap MW21-06A-6DEC22	E687	06-Dec-2022	09-Dec-2022	14 days	3 days	✔	12-Dec-2022	40 days	3 days	✔	
<b>Polychlorinated Biphenyls : PCB Aroclors by GC-MS</b>											
Amber glass/Teflon lined cap MW22-38-6DEC22	E687	06-Dec-2022	09-Dec-2022	14 days	3 days	✔	12-Dec-2022	40 days	3 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS</b>											
<b>Amber glass/Teflon lined cap (sodium bisulfate)</b> MW21-14A-6DEC22	E641A	06-Dec-2022	08-Dec-2022	14 days	2 days	✔	12-Dec-2022	40 days	4 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS</b>											
<b>Amber glass/Teflon lined cap (sodium bisulfate)</b> MW22-28-6DEC22	E641A	06-Dec-2022	08-Dec-2022	14 days	2 days	✔	12-Dec-2022	40 days	4 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS</b>											
<b>Amber glass/Teflon lined cap (sodium bisulfate)</b> MW22-29-6DEC22	E641A	06-Dec-2022	08-Dec-2022	14 days	2 days	✔	12-Dec-2022	40 days	4 days	✔	
<b>Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC</b>											
<b>HDPE - dissolved (NaOH+Buf) [ON MECP]</b> MW21-14A-6DEC22	E532A	06-Dec-2022	----	----	----		09-Dec-2022	28 days	3 days	✔	
<b>Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC</b>											
<b>HDPE - dissolved (NaOH+Buf) [ON MECP]</b> MW22-28-6DEC22	E532A	06-Dec-2022	----	----	----		09-Dec-2022	28 days	3 days	✔	
<b>Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC</b>											
<b>HDPE - dissolved (NaOH+Buf) [ON MECP]</b> MW22-29-6DEC22	E532A	06-Dec-2022	----	----	----		09-Dec-2022	28 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
<b>Glass vial (sodium bisulfate)</b> BH4-10-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
<b>Glass vial (sodium bisulfate)</b> MW21-01A-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
<b>Glass vial (sodium bisulfate)</b> MW21-01B-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-02A-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-02B-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-06A-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-07-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-14A-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-15A-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-16A-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-01C-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-06B-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-14B-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-15B-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-16B-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-28-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-29-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-30-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-31-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-35-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-38-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	3 days	✔	





Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) DUP4-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) DUP5-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) FB3-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-34-5DEC22	E611D	05-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) TB3-6DEC22	E611D	06-Dec-2022	09-Dec-2022	----	----		09-Dec-2022	14 days	4 days	✔	

**Legend & Qualifier Definitions**

Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water** Evaluation: \* = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		Evaluation
			QC	Regular	Actual	Expected	
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	773922	2	12	16.6	5.0	✓
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	773334	1	12	8.3	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	772458	1	17	5.8	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	772573	1	19	5.2	5.0	✓
pH by Meter	E108	775260	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	773921	2	36	5.5	5.0	✓
<b>Laboratory Control Samples (LCS)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	773922	2	12	16.6	5.0	✓
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	773334	1	12	8.3	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	772458	1	17	5.8	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	772573	1	19	5.2	5.0	✓
PAHs by Hexane LVI GC-MS	E641A	772516	1	12	8.3	5.0	✓
PCB Aroclors by GC-MS	E687	772970	1	9	11.1	4.7	✓
pH by Meter	E108	775260	1	20	5.0	5.0	✓
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG	772515	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	773921	2	36	5.5	5.0	✓
<b>Method Blanks (MB)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	773922	2	12	16.6	5.0	✓
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	773334	1	12	8.3	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	772458	1	17	5.8	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	772573	1	19	5.2	5.0	✓
PAHs by Hexane LVI GC-MS	E641A	772516	1	12	8.3	5.0	✓
PCB Aroclors by GC-MS	E687	772970	1	9	11.1	4.7	✓
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG	772515	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	773921	2	36	5.5	5.0	✓
<b>Matrix Spikes (MS)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	773922	2	12	16.6	5.0	✓
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	773334	1	12	8.3	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	772458	1	17	5.8	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	772573	1	19	5.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	773921	2	36	5.5	5.0	✓



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
pH by Meter	E108 Waterloo - Environmental	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Dissolved Metals in Water by CRC ICPMS	E421 Waterloo - Environmental	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS.  Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Mercury in Water by CVAAS	E509 Waterloo - Environmental	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A Waterloo - Environmental	Water	APHA 3500-Cr C (Ion Chromatography)	Hexavalent Chromium is measured by Ion chromatography-Post column reaction and UV detection.  sample pretreatment involved field or lab filtration following by sample preservation.
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4).
VOCs (Eastern Canada List) by Headspace GC-MS	E611D Waterloo - Environmental	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs by Hexane LVI GC-MS	E641A Waterloo - Environmental	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
PCB Aroclors by GC-MS	E687 Waterloo - Environmental	Water	EPA 8270E (mod)	PCB Aroclors are analyzed by GC-MS



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
F1-BTEX	EC580 Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
SUM F1 to F4 where F2-F4 is SG treated	EC581SG Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fraction F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50), where F2-F4 have been treated with silica gel. F4G-sg is not used within this calculation due to overlap with other fractions.
F2-F4 (sg) minus PAH	EC600SG Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	F2-F4 (sg) minus PAH is calculated as follows: F2-F4 minus PAH = Sum of CCME Fraction 2 (C10-C16), CCME Fraction 3 (C16-C34), and CCME Fraction 4 (C34-C50), minus select Polycyclic Aromatic Hydrocarbons (PAH).

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals Water Filtration	EP421 Waterloo - Environmental	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 Waterloo - Environmental	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581 Waterloo - Environmental	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into the GC/MS-FID system.
PHCs and PAHs Hexane Extraction	EP601 Waterloo - Environmental	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.
Pesticides, PCB, and Neutral Extractable Chlorinated Hydrocarbons Extraction	EP660 Waterloo - Environmental	Water	EPA 3511 (mod)	Samples are extracted from aqueous sample using an organic solvent liquid-liquid extraction.

## QUALITY CONTROL REPORT

<p><b>Work Order</b> : <b>WT2224485</b></p> <p>Client : Omni-McCann Inc.</p> <p>Contact : Daniel Elliot</p> <p>Address : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p>Telephone :</p> <p>Project : 0006-0103</p> <p>PO : ----</p> <p>C-O-C number : 20-1009821</p> <p>Sampler : DE 705 243 5828</p> <p>Site : ----</p> <p>Quote number : Project 0006-0103</p> <p>No. of samples received : 26</p> <p>No. of samples analysed : 26</p>	<p>Page : 1 of 20</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Emily Smith</p> <p>Address : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 07-Dec-2022 07:45</p> <p>Date Analysis Commenced : 08-Dec-2022</p> <p>Issue Date : 16-Dec-2022 14:39</p>
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This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Jon Fisher	Department Manager - Inorganics	Waterloo Inorganics, Waterloo, Ontario
Jon Fisher	Department Manager - Inorganics	Waterloo Metals, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Waterloo Organics, Waterloo, Ontario

Page : 2 of 20  
Work Order : WT2224485  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

## Workorder Comments

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Holding times are displayed as "--" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Physical Tests (QC Lot: 775260)</b>											
WT2224463-001	Anonymous	pH	----	E108	0.10	pH units	7.58	7.63	0.657%	4%	----
<b>Dissolved Metals (QC Lot: 772458)</b>											
TY2204786-001	Anonymous	mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
<b>Dissolved Metals (QC Lot: 772573)</b>											
WT2224479-001	Anonymous	antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00010	0.00010	0.0000001	Diff <2x LOR	----
		arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00017	0.00018	0.000009	Diff <2x LOR	----
		barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0242	0.0236	2.58%	20%	----
		beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		boron, dissolved	7440-42-8	E421	0.010	mg/L	0.016	0.016	0.0002	Diff <2x LOR	----
		cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000084	0.0000062	0.0000022	Diff <2x LOR	----
		chromium, dissolved	7440-47-3	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00229	0.00228	0.236%	20%	----
		lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00314	0.00310	1.15%	20%	----
		nickel, dissolved	7440-02-0	E421	0.000050	mg/L	0.00119	0.00118	0.000007	Diff <2x LOR	----
		selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000308	0.000354	0.000046	Diff <2x LOR	----
		silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		sodium, dissolved	7440-23-5	E421	0.050	mg/L	18.3	18.8	2.71%	20%	----
		thallium, dissolved	7440-28-0	E421	0.000010	mg/L	0.000042	0.000043	0.0000009	Diff <2x LOR	----
uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00518	0.00524	1.12%	20%	----		
vanadium, dissolved	7440-62-2	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----		
zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0336	0.0331	1.44%	20%	----		
<b>Speciated Metals (QC Lot: 773334)</b>											
WT2224483-001	Anonymous	chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.00050	mg/L	<0.50 µg/L	<0.00050	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 773233)</b>											
WT2224485-007	MW21-06A-6DEC22	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: **Water**

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 773233) - continued</b>											
WT2224485-007	MW21-06A-6DEC22	bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----





Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 773233) - continued</b>											
WT2224485-007	MW21-06A-6DEC22	xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 773921)</b>											
WT2224485-016	MW22-28-6DEC22	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----		
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----		
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----		



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 773921) - continued</b>											
WT2224485-016	MW22-28-6DEC22	tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.50	µg/L	0.84	0.81	0.03	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----		
<b>Hydrocarbons (QC Lot: 773234)</b>											
WT2224485-007	MW21-06A-6DEC22	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 773922)</b>											
WT2224485-016	MW22-28-6DEC22	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----



## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Dissolved Metals (QCLot: 772458)</b>						
mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
<b>Dissolved Metals (QCLot: 772573)</b>						
antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
<b>Speciated Metals (QCLot: 773334)</b>						
chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.0005	mg/L	<0.00050	----
<b>Volatile Organic Compounds (QCLot: 773233)</b>						
Acetone	67-64-1	E611D	20	µg/L	<20	----
benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 773233) - continued</b>						
dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
<b>Volatile Organic Compounds (QCLot: 773921)</b>						
Acetone	67-64-1	E611D	20	µg/L	<20	----
benzene	71-43-2	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 773921) - continued</b>						
bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 773921) - continued</b>						
vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
<b>Hydrocarbons (QCLot: 772515)</b>						
F2 (C10-C16)	----	E601.SG	100	µg/L	<100	----
F3 (C16-C34)	----	E601.SG	250	µg/L	<250	----
F4 (C34-C50)	----	E601.SG	250	µg/L	<250	----
<b>Hydrocarbons (QCLot: 773234)</b>						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
<b>Hydrocarbons (QCLot: 773922)</b>						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 772516)</b>						
acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----
naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----
<b>Polychlorinated Biphenyls (QCLot: 772970)</b>						
Aroclor 1016	12674-11-2	E687	0.02	µg/L	<0.020	----
Aroclor 1221	11104-28-2	E687	0.02	µg/L	<0.020	----
Aroclor 1232	11141-16-5	E687	0.02	µg/L	<0.020	----
Aroclor 1242	53469-21-9	E687	0.02	µg/L	<0.020	----



Sub-Matrix: **Water**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
<b>Polychlorinated Biphenyls (QCLot: 772970) - continued</b>						
Aroclor 1248	12672-29-6	E687	0.02	µg/L	<0.020	----
Aroclor 1254	11097-69-1	E687	0.02	µg/L	<0.020	----
Aroclor 1260	11096-82-5	E687	0.02	µg/L	<0.020	----
Aroclor 1262	37324-23-5	E687	0.02	µg/L	<0.020	----
Aroclor 1268	11100-14-4	E687	0.02	µg/L	<0.020	----



## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Physical Tests (QCLot: 775260)</b>									
pH	----	E108	----	pH units	7 pH units	101	98.0	102	----
mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0.0001 mg/L	92.2	80.0	120	----
<b>Dissolved Metals (QCLot: 772573)</b>									
antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	102	80.0	120	----
arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	105	80.0	120	----
barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.0125 mg/L	104	80.0	120	----
beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	102	80.0	120	----
boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	97.0	80.0	120	----
cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	102	80.0	120	----
chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.0125 mg/L	99.3	80.0	120	----
cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.0125 mg/L	99.8	80.0	120	----
copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.0125 mg/L	98.1	80.0	120	----
lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	101	80.0	120	----
molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.0125 mg/L	97.2	80.0	120	----
nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	99.3	80.0	120	----
selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	98.9	80.0	120	----
silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	89.1	80.0	120	----
sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	101	80.0	120	----
thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	101	80.0	120	----
uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.00025 mg/L	108	80.0	120	----
vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	101	80.0	120	----
zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	98.4	80.0	120	----
<b>Speciated Metals (QCLot: 773334)</b>									
chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.0005	mg/L	0.025 mg/L	96.8	80.0	120	----
<b>Volatile Organic Compounds (QCLot: 773233)</b>									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	97.6	70.0	130	----
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	98.0	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	97.7	70.0	130	----
bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	96.7	60.0	140	----





Sub-Matrix: Water

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
<b>Volatile Organic Compounds (QCLot: 773233) - continued</b>									
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	108	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	95.0	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	99.5	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	97.4	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	99.5	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	99.4	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	77.8	60.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	88.1	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	93.7	70.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	86.9	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	98.7	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	90.9	70.0	130	----
dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	99.5	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	91.1	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	95.4	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	88.1	70.0	130	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	92.7	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	89.0	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	103	70.0	130	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	94.2	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	94.5	70.0	130	----
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	96.2	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
tetrachloroethane, 1,1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	97.0	70.0	130	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	111	70.0	130	----
toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	94.9	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	98.0	70.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	96.5	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	111	70.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	99.8	60.0	140	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	75.2	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	93.6	70.0	130	----
xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	93.1	70.0	130	----

**Volatile Organic Compounds (QCLot: 773921)**



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 773921) - continued</b>									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	116	70.0	130	----
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	92.2	70.0	130	----
bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	106	60.0	140	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	97.8	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	94.3	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	97.6	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	96.9	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	99.4	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	99.9	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	92.7	60.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	99.4	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	96.3	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	99.8	70.0	130	----
dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	102	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	114	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	112	70.0	130	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	98.1	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	96.8	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	102	70.0	130	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	106	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	99.0	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	93.7	70.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	99.2	70.0	130	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	95.0	70.0	130	----
toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	98.3	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	99.6	70.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	99.0	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	95.1	70.0	130	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 773921) - continued</b>									
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	97.4	60.0	140	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	90.5	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	101	70.0	130	----
xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	97.5	70.0	130	----
<b>Hydrocarbons (QCLot: 772515)</b>									
F2 (C10-C16)	----	E601.SG	100	µg/L	5034.53 µg/L	76.2	70.0	130	----
F3 (C16-C34)	----	E601.SG	250	µg/L	7141.89 µg/L	72.3	70.0	130	----
F4 (C34-C50)	----	E601.SG	250	µg/L	4466.46 µg/L	70.5	70.0	130	----
<b>Hydrocarbons (QCLot: 773234)</b>									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	103	80.0	120	----
<b>Hydrocarbons (QCLot: 773922)</b>									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	97.6	80.0	120	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 772516)</b>									
acenaphthene	83-32-9	E641A	0.01	µg/L	0.5263 µg/L	108	50.0	140	----
acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5263 µg/L	107	50.0	140	----
anthracene	120-12-7	E641A	0.01	µg/L	0.5263 µg/L	101	50.0	140	----
benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5263 µg/L	128	50.0	140	----
benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5263 µg/L	102	50.0	140	----
benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5263 µg/L	98.3	50.0	140	----
benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5263 µg/L	128	50.0	140	----
benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5263 µg/L	110	50.0	140	----
chrysene	218-01-9	E641A	0.01	µg/L	0.5263 µg/L	133	50.0	140	----
dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5263 µg/L	105	50.0	140	----
fluoranthene	206-44-0	E641A	0.01	µg/L	0.5263 µg/L	135	50.0	140	----
fluorene	86-73-7	E641A	0.01	µg/L	0.5263 µg/L	121	50.0	140	----
indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5263 µg/L	134	50.0	140	----
methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5263 µg/L	99.0	50.0	140	----
methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5263 µg/L	104	50.0	140	----
naphthalene	91-20-3	E641A	0.05	µg/L	0.5263 µg/L	98.2	50.0	140	----
phenanthrene	85-01-8	E641A	0.02	µg/L	0.5263 µg/L	125	50.0	140	----
pyrene	129-00-0	E641A	0.01	µg/L	0.5263 µg/L	133	50.0	140	----
<b>Polychlorinated Biphenyls (QCLot: 772970)</b>									
Aroclor 1016	12674-11-2	E687	0.02	µg/L	0.2 µg/L	114	60.0	140	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Polychlorinated Biphenyls (QCLot: 772970) - continued</b>									
Aroclor 1221	11104-28-2	E687	0.02	µg/L	0.2 µg/L	114	60.0	140	----
Aroclor 1232	11141-16-5	E687	0.02	µg/L	0.2 µg/L	114	60.0	140	----
Aroclor 1242	53469-21-9	E687	0.02	µg/L	0.2 µg/L	114	60.0	140	----
Aroclor 1248	12672-29-6	E687	0.02	µg/L	0.2 µg/L	86.7	60.0	140	----
Aroclor 1254	11097-69-1	E687	0.02	µg/L	0.2 µg/L	103	60.0	140	----
Aroclor 1260	11096-82-5	E687	0.02	µg/L	0.2 µg/L	115	60.0	140	----
Aroclor 1262	37324-23-5	E687	0.02	µg/L	0.2 µg/L	115	60.0	140	----
Aroclor 1268	11100-14-4	E687	0.02	µg/L	0.2 µg/L	115	60.0	140	----



### Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Dissolved Metals (QCLot: 772458)</b>										
TY2204786-002	Anonymous	mercury, dissolved	7439-97-6	E509	0.0000901 mg/L	0.0001 mg/L	90.1	70.0	130	----
<b>Dissolved Metals (QCLot: 772573)</b>										
WT2224479-002	Anonymous	antimony, dissolved	7440-36-0	E421	0.0514 mg/L	0.05 mg/L	103	70.0	130	----
		arsenic, dissolved	7440-38-2	E421	0.0548 mg/L	0.05 mg/L	110	70.0	130	----
		barium, dissolved	7440-39-3	E421	ND mg/L	0.0125 mg/L	ND	70.0	130	----
		beryllium, dissolved	7440-41-7	E421	0.00518 mg/L	0.005 mg/L	104	70.0	130	----
		boron, dissolved	7440-42-8	E421	0.046 mg/L	0.05 mg/L	92.3	70.0	130	----
		cadmium, dissolved	7440-43-9	E421	0.00511 mg/L	0.005 mg/L	102	70.0	130	----
		chromium, dissolved	7440-47-3	E421	0.0124 mg/L	0.0125 mg/L	99.5	70.0	130	----
		cobalt, dissolved	7440-48-4	E421	0.0122 mg/L	0.0125 mg/L	97.9	70.0	130	----
		copper, dissolved	7440-50-8	E421	0.0115 mg/L	0.0125 mg/L	92.1	70.0	130	----
		lead, dissolved	7439-92-1	E421	0.0243 mg/L	0.025 mg/L	97.2	70.0	130	----
		molybdenum, dissolved	7439-98-7	E421	0.0122 mg/L	0.0125 mg/L	97.4	70.0	130	----
		nickel, dissolved	7440-02-0	E421	0.0244 mg/L	0.025 mg/L	97.8	70.0	130	----
		selenium, dissolved	7782-49-2	E421	0.0556 mg/L	0.05 mg/L	111	70.0	130	----
		silver, dissolved	7440-22-4	E421	0.00442 mg/L	0.005 mg/L	88.3	70.0	130	----
		sodium, dissolved	7440-23-5	E421	ND mg/L	2.5 mg/L	ND	70.0	130	----
		thallium, dissolved	7440-28-0	E421	0.0507 mg/L	0.05 mg/L	101	70.0	130	----
		uranium, dissolved	7440-61-1	E421	0.000252 mg/L	0.00025 mg/L	101	70.0	130	----
		vanadium, dissolved	7440-62-2	E421	0.0251 mg/L	0.025 mg/L	100	70.0	130	----
		zinc, dissolved	7440-66-6	E421	ND mg/L	0.025 mg/L	ND	70.0	130	----
<b>Speciated Metals (QCLot: 773334)</b>										
WT2224483-001	Anonymous	chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.0384 mg/L	0.04 mg/L	95.9	70.0	130	----
<b>Volatile Organic Compounds (QCLot: 773233)</b>										
WT2224485-007	MW21-06A-6DEC22	Acetone	67-64-1	E611D	96 µg/L	100 µg/L	96.3	60.0	140	----
		benzene	71-43-2	E611D	97.8 µg/L	100 µg/L	97.8	60.0	140	----
		bromodichloromethane	75-27-4	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		bromoform	75-25-2	E611D	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		bromomethane	74-83-9	E611D	93.4 µg/L	100 µg/L	93.4	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	107 µg/L	100 µg/L	107	60.0	140	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 773233) - continued</b>										
WT2224485-007	MW21-06A-6DEC22	chlorobenzene	108-90-7	E611D	94.4 µg/L	100 µg/L	94.4	60.0	140	----
		chloroform	67-66-3	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		dibromochloromethane	124-48-1	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	99.0 µg/L	100 µg/L	99.0	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	99.0 µg/L	100 µg/L	99.0	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	97.4 µg/L	100 µg/L	97.4	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	99.0 µg/L	100 µg/L	99.0	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	71.3 µg/L	100 µg/L	71.3	60.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	88.3 µg/L	100 µg/L	88.3	60.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	95.0 µg/L	100 µg/L	95.0	60.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	84.8 µg/L	100 µg/L	84.8	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	98.4 µg/L	100 µg/L	98.4	60.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	88.3 µg/L	100 µg/L	88.3	60.0	140	----
		dichloromethane	75-09-2	E611D	99.2 µg/L	100 µg/L	99.2	60.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	93.1 µg/L	100 µg/L	93.1	60.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	85.0 µg/L	100 µg/L	85.0	60.0	140	----
		ethylbenzene	100-41-4	E611D	91.8 µg/L	100 µg/L	91.8	60.0	140	----
		hexane, n-	110-54-3	E611D	85.7 µg/L	100 µg/L	85.7	60.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	96 µg/L	100 µg/L	96.3	60.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	93.4 µg/L	100 µg/L	93.4	60.0	140	----
		styrene	100-42-5	E611D	94.8 µg/L	100 µg/L	94.8	60.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	98.5 µg/L	100 µg/L	98.5	60.0	140	----
		tetrachloroethylene	127-18-4	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		toluene	108-88-3	E611D	94.2 µg/L	100 µg/L	94.2	60.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	97.2 µg/L	100 µg/L	97.2	60.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	97.4 µg/L	100 µg/L	97.4	60.0	140	----
		trichloroethylene	79-01-6	E611D	109 µg/L	100 µg/L	109	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	96.9 µg/L	100 µg/L	96.9	60.0	140	----
		vinyl chloride	75-01-4	E611D	71.6 µg/L	100 µg/L	71.6	60.0	140	----
		xylene, m+p-	179601-23-1	E611D	185 µg/L	200 µg/L	92.4	60.0	140	----
		xylene, o-	95-47-6	E611D	92.3 µg/L	100 µg/L	92.3	60.0	140	----
<b>Volatile Organic Compounds (QCLot: 773921)</b>										



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 773921) - continued</b>										
WT2224485-016	MW22-28-6DEC22	Acetone	67-64-1	E611D	124 µg/L	100 µg/L	124	60.0	140	----
		benzene	71-43-2	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		bromodichloromethane	75-27-4	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		bromoform	75-25-2	E611D	93.2 µg/L	100 µg/L	93.2	60.0	140	----
		bromomethane	74-83-9	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	95.1 µg/L	100 µg/L	95.1	60.0	140	----
		chlorobenzene	108-90-7	E611D	94.6 µg/L	100 µg/L	94.6	60.0	140	----
		chloroform	67-66-3	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		dibromochloromethane	124-48-1	E611D	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	99.4 µg/L	100 µg/L	99.4	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	99.0 µg/L	100 µg/L	99.0	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	99.9 µg/L	100 µg/L	99.9	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	82.7 µg/L	100 µg/L	82.7	60.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	99.1 µg/L	100 µg/L	99.1	60.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	94.3 µg/L	100 µg/L	94.3	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	97.3 µg/L	100 µg/L	97.3	60.0	140	----
		dichloromethane	75-09-2	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	112 µg/L	100 µg/L	112	60.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	109 µg/L	100 µg/L	109	60.0	140	----
		ethylbenzene	100-41-4	E611D	96.8 µg/L	100 µg/L	96.8	60.0	140	----
		hexane, n-	110-54-3	E611D	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	111 µg/L	100 µg/L	111	60.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		styrene	100-42-5	E611D	98.5 µg/L	100 µg/L	98.5	60.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	92.3 µg/L	100 µg/L	92.3	60.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		tetrachloroethylene	127-18-4	E611D	90.4 µg/L	100 µg/L	90.4	60.0	140	----
		toluene	108-88-3	E611D	97.7 µg/L	100 µg/L	97.7	60.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	98.4 µg/L	100 µg/L	98.4	60.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	102 µg/L	100 µg/L	102	60.0	140	----

Page : 20 of 20  
 Work Order : WT2224485  
 Client : Omni-McCann Inc.  
 Project : 0006-0103



Sub-Matrix: **Water**

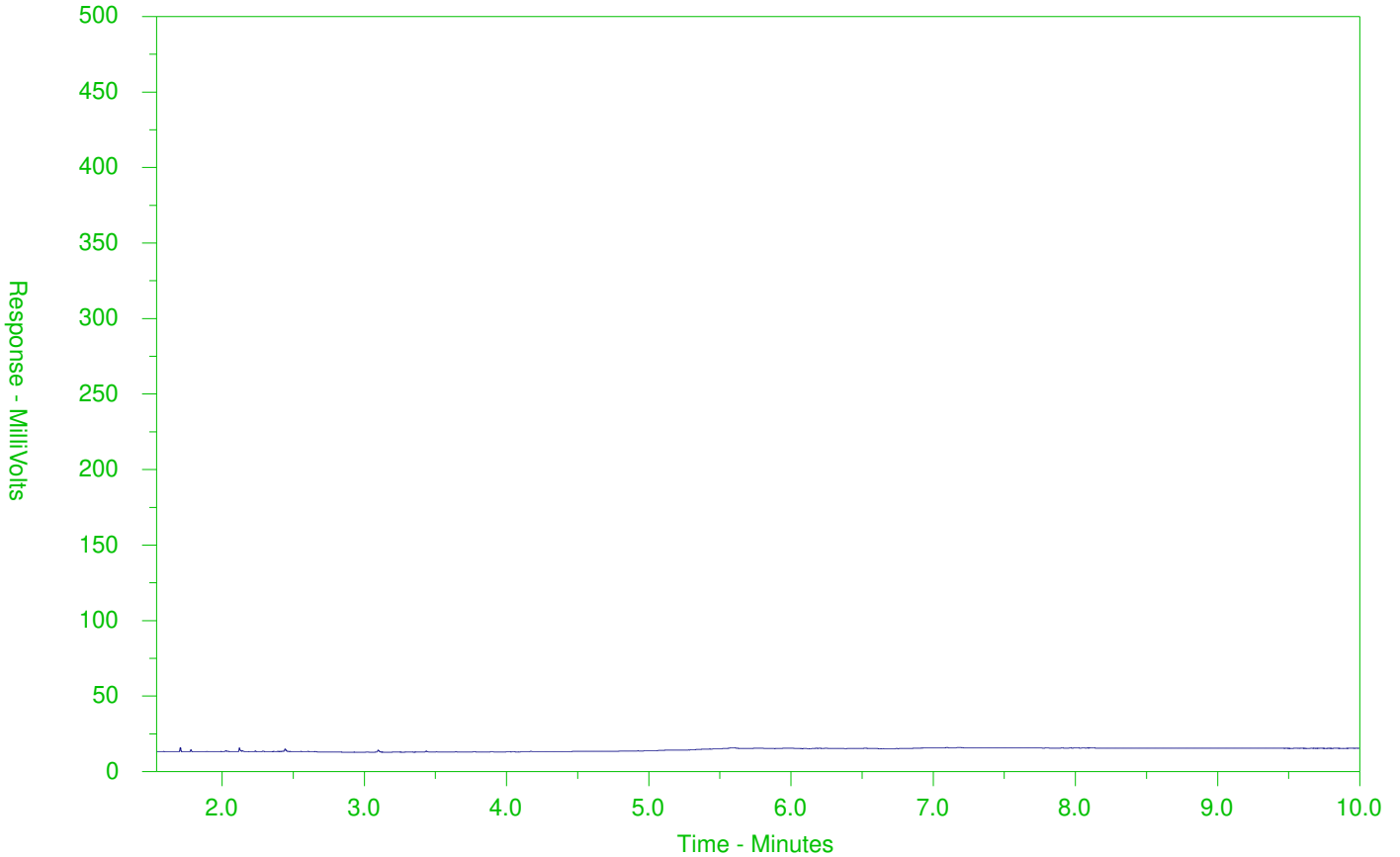
					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 773921) - continued</b>										
WT2224485-016	MW22-28-6DEC22	trichloroethylene	79-01-6	E611D	92.0 µg/L	100 µg/L	92.0	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	93.7 µg/L	100 µg/L	93.7	60.0	140	----
		vinyl chloride	75-01-4	E611D	86.3 µg/L	100 µg/L	86.3	60.0	140	----
		xylene, m+p-	179601-23-1	E611D	201 µg/L	200 µg/L	100	60.0	140	----
		xylene, o-	95-47-6	E611D	97.2 µg/L	100 µg/L	97.2	60.0	140	----
<b>Hydrocarbons (QCLot: 773234)</b>										
WT2224485-007	MW21-06A-6DEC22	F1 (C6-C10)	----	E581.F1-L	1870 µg/L	2000 µg/L	93.5	60.0	140	----
<b>Hydrocarbons (QCLot: 773922)</b>										
WT2224485-016	MW22-28-6DEC22	F1 (C6-C10)	----	E581.F1-L	1730 µg/L	2000 µg/L	86.7	60.0	140	----



# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224485-007-E601.SG  
 Client Sample ID: MW21-06A-6DEC22



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

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

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

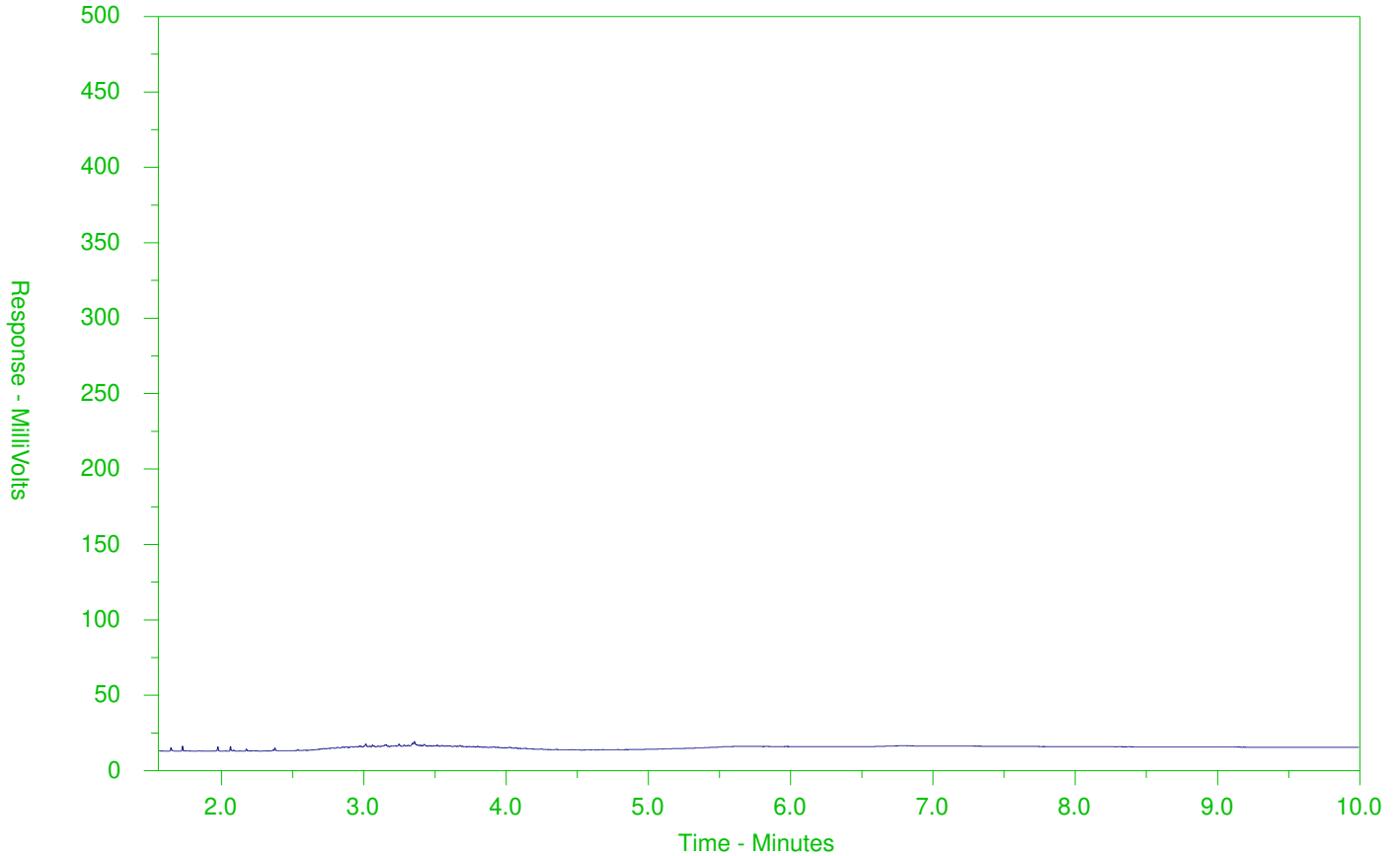
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224485-010-E601.SG  
 Client Sample ID: MW21-14A-6DEC22



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

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

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

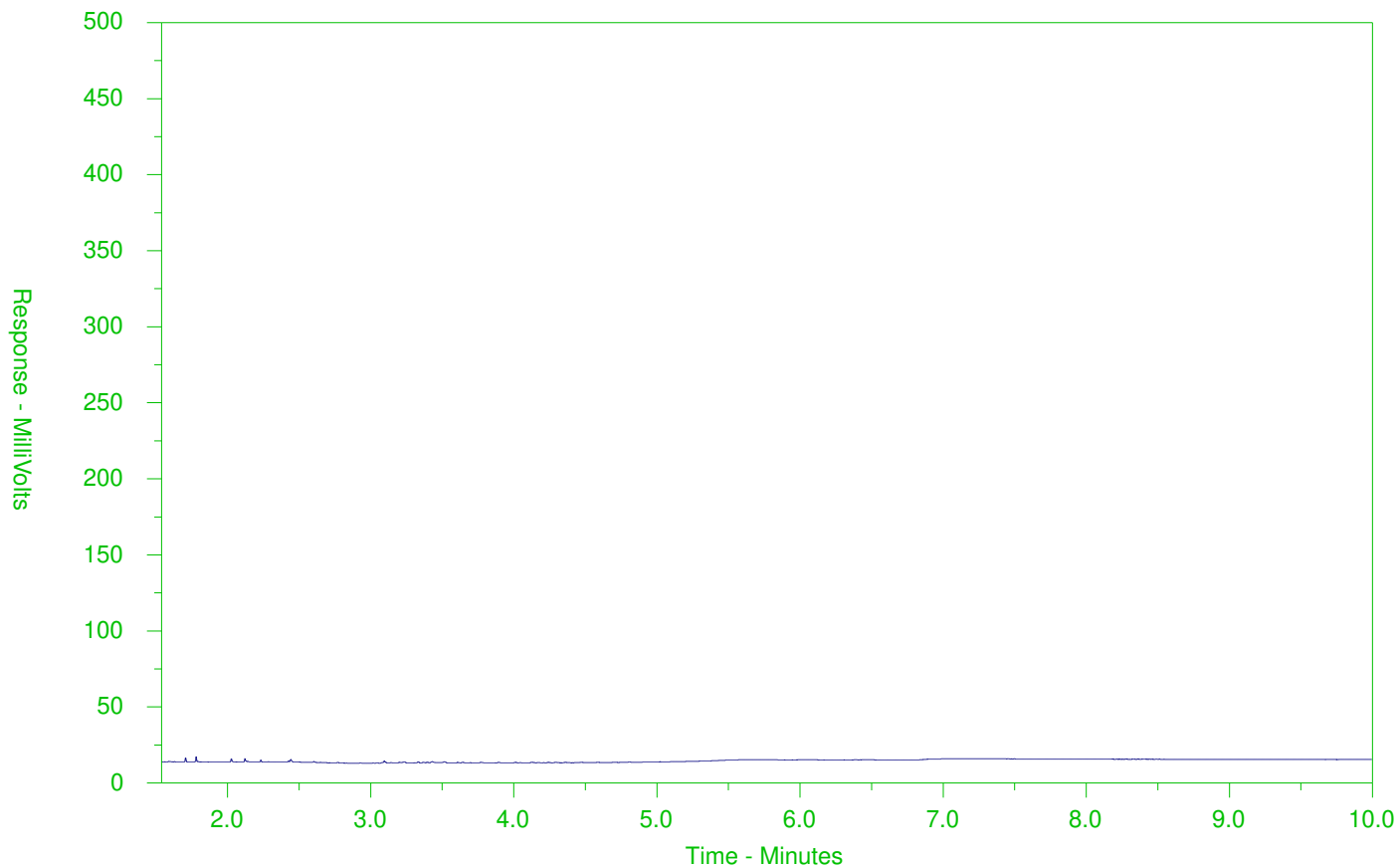
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224485-016-E601.SG  
 Client Sample ID: MW22-28-6DEC22



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

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

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

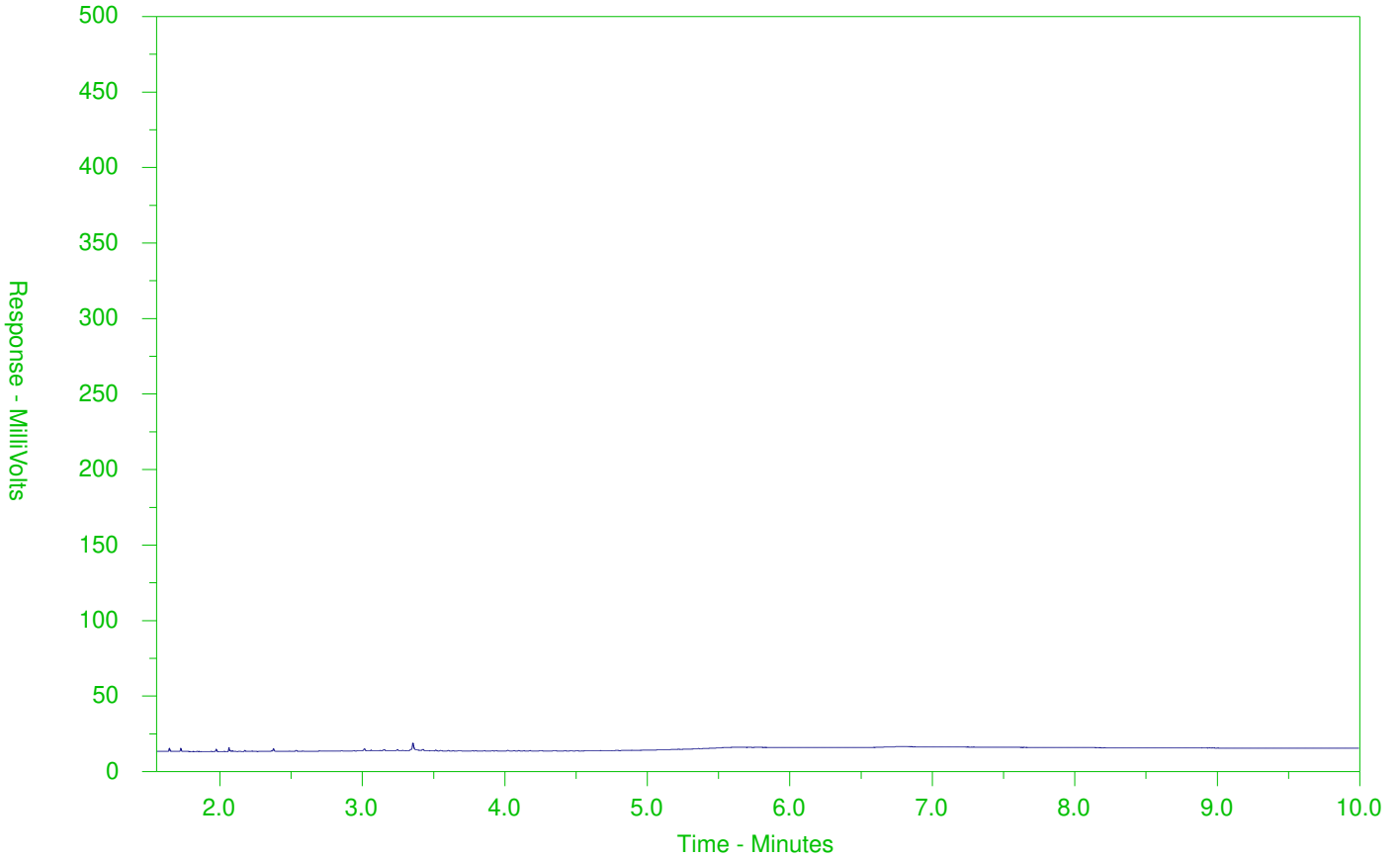
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224485-017-E601.SG  
 Client Sample ID: MW22-29-6DEC22



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

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

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

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

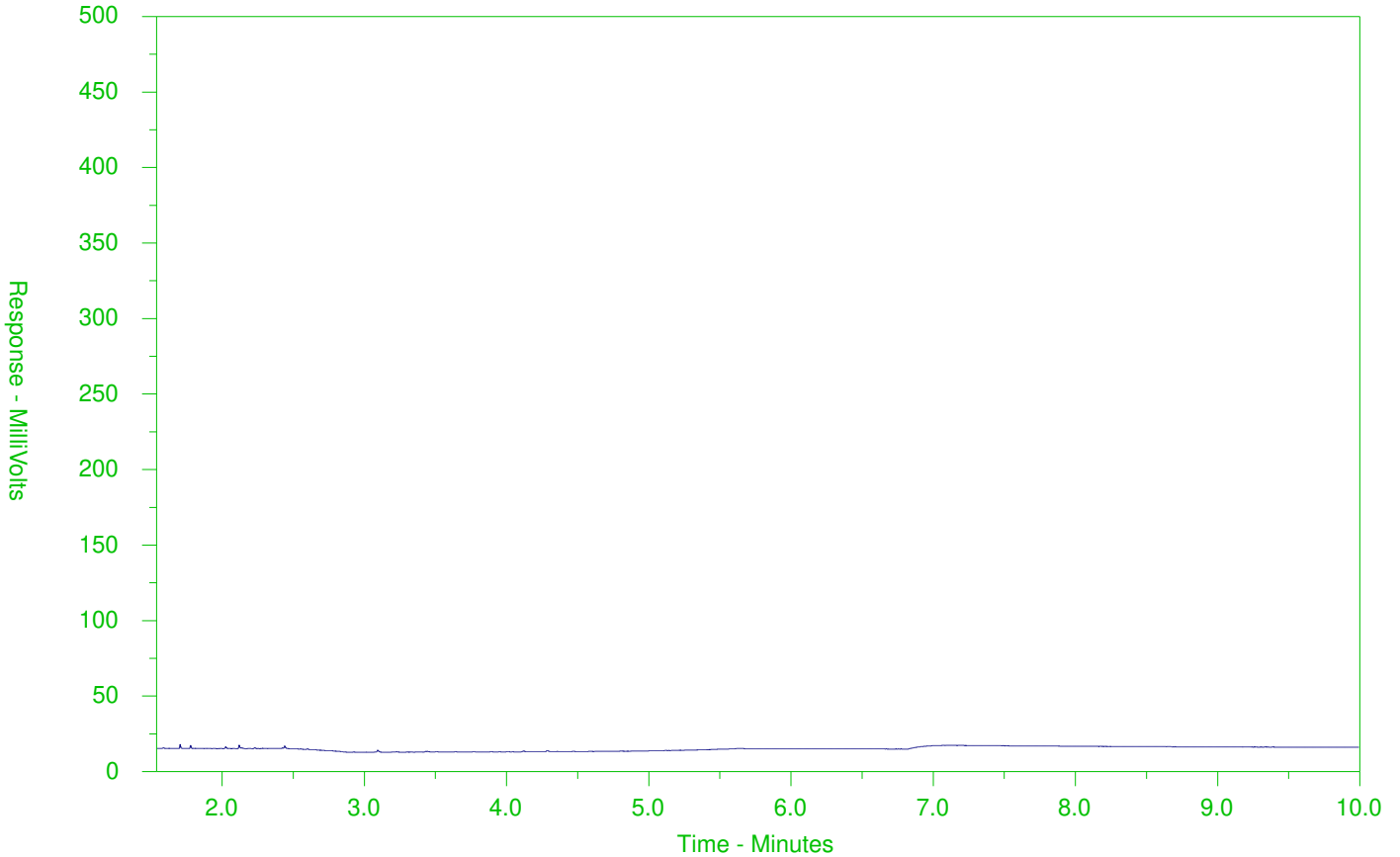
**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).



# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224485-022-E601.SG  
 Client Sample ID: DUP4-6DEC22



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

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

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

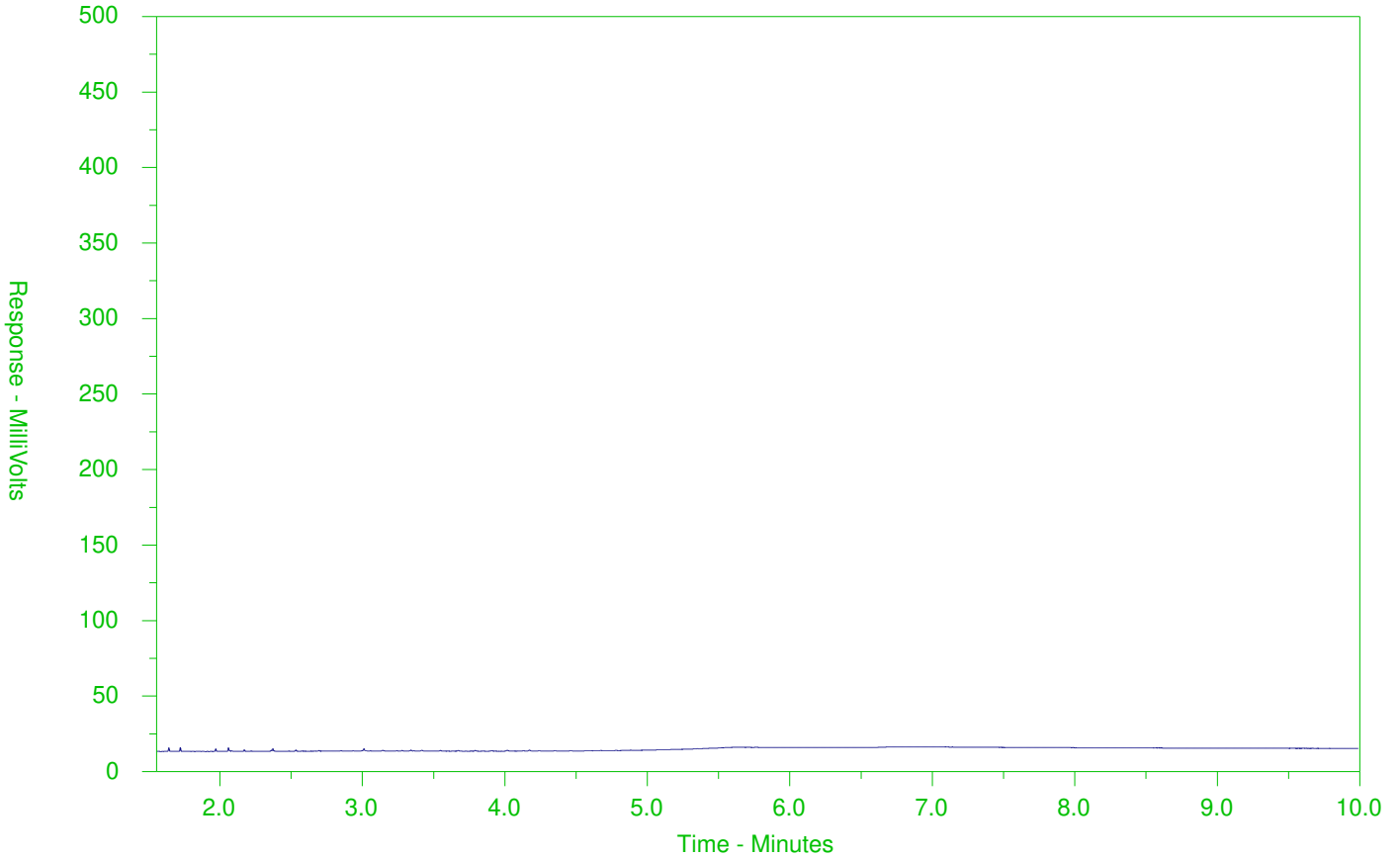
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224485-024-E601.SG  
 Client Sample ID: MW22-38-6DEC22



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

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

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

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

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



www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20

Page

Environmental Division
Waterloo
Work Order Reference
WT2224485



Telephone : +1 519 886 6910

Report To: Omni McCann Inc.
Reports / Recipients: Select Report Format: PDF, EXCEL, EDD (DIGITAL)
Turnaround Time (TAT) Requested: Routine [R] if received by 3pm M-F - no surcharges apply
Analysis Request: PHC FI-F4, VOC, PAH, Metals, Hg, Cr VI, Pk, PCB
ALS Sample #: MW22-34-5 DEC 22, MW21-01A-6 DEC 22, MW21-01B-6 DEC 22, MW21-01C-6 DEC 22, MW21-02A-6 DEC 22, MW21-02B-6 DEC 22, MW21-06A-6 DEC 22, MW22-06B-6 DEC 22, MW21-07-6 DEC 22, MW21-14A-6 DEC 22, MW22-14B-6 DEC 22, MW21-15A-6 DEC 22
SHIPPING RELEASE: Released by: Daniel Elliot, Date: 6-Dec-22, Time: 17:30
INITIAL SHIPMENT RECEPTION: Received by: [Signature], Date: 12/7/22, Time: 7:45
FINAL SHIPMENT RECEPTION: Received by: [Signature], Date: 12/08/22, Time: 9:00

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 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.

OR-134
VW-168; M-496; SC-163; GC-201; OR-133;





www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20-1009823

Page 3 of 3

Contact and company name below will appear on the final report

Reports / Recipients

Turnaround Time (TAT) Requested

Company: **Omni-McEwan Inc.**

Contact: **Omni-McEwan Inc.**

Phone:

Company address below will appear on the final report

Select Report Format:  PDF  EXCEL  EOD (DIGITAL)

Merge QC/QC1 Reports with COA  YES  NO  N/A

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

Select Distribution:  EMAIL  MAIL  FAX

Email 1 or Fax

Email 2

Email 3

Routine [R] if received by 3pm M-F - no surcharges apply

4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum

3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum

2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum

1 day [E] if received by 3pm M-F - 100% rush surcharge minimum

Same day [E2] if received by 1pm M-S - 200% rush surcharge. Additional fees may apply to rush requests on weekends, statutory holidays and non-routine tests

AFIX ALS BARCODE LABEL HERE (ALS use only)

Street:

City/Province:

Postal Code:

Invoice To: Same as Report To  YES  NO

Copy of Invoice with Report  YES  NO

Select Invoice Distribution:  EMAIL  MAIL  FAX

Email 1 or Fax

Email 2

Invoice Recipients

For all tests with rush TATs requested, please contact your AAI to confirm availability.

Analysis Request

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

Company:

Contact:

Project Information

ALS Account # / Quote #:

Job #:

PO / AFE:

LSD:

ALS Lab Work Order # (ALS use only):

AFIX Cost Center:

Major/Minor Code:

Requisitioner:

Location:

ALS Contact:

Sampler:

SAMPLES ON HOLD

ALS Sample # (ALS use only):

Sample Identification and/or Coordinates (This description will appear on the report)

Date (dd-mm-yy):

Time (hh:mm):

Sample Type:

NUMBER OF CONTAINERS

PHC FI-F4

VOC

PCB

EXTENDED STORAGE REQUIRED

Drinking Water (DW) Samples<sup>1</sup> (client use)

Are samples taken from a Regulated DW System?  YES  NO

Are samples for human consumption/ use?  YES  NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Cooling Method:  NONE  ICE  ICE PACKS  FROZEN

Submission Comments identified on Sample Receipt Notification:  YES  NO

Cooler Custody Seals Intact:  YES  N/A

INITIAL COOLER TEMPERATURES °C:  YES  N/A

SUSPECTED HAZARD (see notes)

Released by: **Daniel Blais** Date: **6-Dec-22** Time: **17:30**

Received by: **[Signature]** Date: **12/07/22** Time: **14:48**

SHIPMENT RELEASE (client use)

INITIAL SHIPMENT RECEPTION (ALS use only)

WHITE LABORATORY COPY

YELLOW CLIENT COPY

FINAL SHIPMENT RECEPTION (ALS use only)

Date: **21/08/20** Time: **8:00**

WHITE LABORATORY COPY

YELLOW CLIENT COPY

FINAL SHIPMENT RECEPTION (ALS use only)

Sample Receipt Details (ALS use only)

Cooling Method:  NONE  ICE  ICE PACKS  FROZEN

Submission Comments identified on Sample Receipt Notification:  YES  NO

Cooler Custody Seals Intact:  YES  N/A

INITIAL COOLER TEMPERATURES °C:  YES  N/A

Sample Receipt Details (ALS use only)

Cooling Method:  NONE  ICE  ICE PACKS  FROZEN

Submission Comments identified on Sample Receipt Notification:  YES  NO

Cooler Custody Seals Intact:  YES  N/A

INITIAL COOLER TEMPERATURES °C:  YES  N/A

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



## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

<p><b>Work Order</b> : <b>WT2224609</b></p> <p><b>Amendment</b> : <b>1</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 27</p> <p><b>No. of samples analysed</b> : 27</p>	<p><b>Page</b> : 1 of 56</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 08-Dec-2022 07:35</p> <p><b>Date Analysis Commenced</b> : 12-Dec-2022</p> <p><b>Issue Date</b> : 15-Dec-2022 14:36</p>
---	--

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Organics, Waterloo, Ontario



## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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. Guidelines 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.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	no units
µg/L	micrograms per litre

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .

## Workorder Comments

RRQC: Matrix spike recovery was outside ALS DQO. LCS results were acceptable.

## Qualifiers

<i>Qualifier</i>	<i>Description</i>
RRV	Reported result verified by repeat analysis.



## Analytical Results

Sub-Matrix: Water (Matrix: Water)	Method	LOR	Unit	Client sample ID	MW21-13A-07DEC22					
				Sampling date/time	07-Dec-2022 13:45	WT2224609-001				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-001 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	82.0	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	90.0	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	95.3	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	99.6	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

## No Breaches Found

**Key:**

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T7-NPGW-C-AII	153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
T7-NPGW-F-AII	153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW21-13B-07DEC22						
				07-Dec-2022						
				14:20						
				WT2224609-002	ON153/04	ON153/04				
Analyte	Method	LOR	Unit		T7-NPGW-C-AI	T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-002 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	94.3	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	99.7	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW22-39-01-07DEC22						
				07-Dec-2022						
				15:30						
				WT2224609-003	ON153/04	ON153/04				
Analyte	Method	LOR	Unit		T7-NPGW-C-AI	T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--





## Analytical Results

				Client sample ID						
				MW22-39-03-07DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224609-004	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	0.62	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--





Analyte	Method	LOR	Unit	WT2224609-004 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	93.8	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	99.9	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW22-39-04-07DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224609-005	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-005 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	93.0	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	99.9	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW22-39-05-07DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224609-006	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-006 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	93.0	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW22-39-06-07DEC22						
				07-Dec-2022						
				17:05						
				WT2224609-007	ON153/04	ON153/04				
Analyte	Method	LOR	Unit		T7-NPGW-C-AI	T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-007 (Continued)	ON153/04 T7-NPGW-C-All I	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.81	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	91.8	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW22-39-06-07DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.81 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.81 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW22-39-07-07DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224609-008	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--





Analyte	Method	LOR	Unit	WT2224609-008 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	92.6	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	MW22-40-01-07DEC22					
				Sampling date/time	07-Dec-2022	09:15				
Sub-Matrix: Water (Matrix: Water)				WT2224609-009	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-009 (Continued)	ON153/04 T7-NPGW-C-All I	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.53	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	92.0	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW22-40-01-07DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.53 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.53 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID						
				MW22-40-02-07DEC22	07-Dec-2022	09:35	WT2224609-010	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII	
<b>Sub-Matrix: Water</b>										
<b>(Matrix: Water)</b>										
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	1.23	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-010 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	92.0	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Sub-Matrix: Water (Matrix: Water)	Method	LOR	Unit	Client sample ID	MW22-40-03-07DEC22					
				Sampling date/time	07-Dec-2022 10:10	WT2224609-011				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	0.98	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-011 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	0.84	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	0.45	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	1.3	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	91.9	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	101	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW22-40-04-07DEC22						
				07-Dec-2022						
				10:30						
				WT2224609-012	ON153/04	ON153/04				
Analyte	Method	LOR	Unit		T7-NPGW-C-AI	T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--





Analyte	Method	LOR	Unit	WT2224609-012 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	91.5	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID						
				MW22-40-05-07DEC22	07-Dec-2022	10:55	WT2224609-013	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII	
<b>Sub-Matrix: Water</b>										
<b>(Matrix: Water)</b>										
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-013 (Continued)	ON153/04 T7-NPGW-C-All I	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.66	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	91.7	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	101	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW22-40-05-07DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.66 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.66 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW22-40-06-07DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224609-014	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	27	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	0.81	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-014 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	91.3	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	101	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	MW22-40-07-07DEC22					
				Sampling date/time	07-Dec-2022	11:35				
Sub-Matrix: Water (Matrix: Water)				WT2224609-015	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-015 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	91.0	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	101	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	Sampling date/time		ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
				MW22-41-01-07DEC22	07-Dec-2022 17:20							
Sub-Matrix: Water (Matrix: Water)												
WT2224609-016												
<b>Volatile Organic Compounds</b>												
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--	--	--





Analyte	Method	LOR	Unit	WT2224609-016 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	10.2	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	91.0	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	101	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW22-41-01-07DEC22	Water	tetrachloroethylene		ON153/04	T7-NPGW-C-All	10.2 µg/L	0.5 µg/L
	Water	tetrachloroethylene		ON153/04	T7-NPGW-F-All	10.2 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Sub-Matrix: Water (Matrix: Water)	Method	LOR	Unit	Client sample ID	MW22-41-02-07DEC22					
				Sampling date/time	07-Dec-2022 17:00	WT2224609-017				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-017 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	91.0	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	MW22-41-03-07DEC22					
				Sampling date/time	07-Dec-2022	16:40				
Sub-Matrix: Water (Matrix: Water)				WT2224609-018	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-018 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	91.6	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	101	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Sub-Matrix: Water (Matrix: Water)	Method	LOR	Unit	Client sample ID	ON153/04					
				MW22-41-04-07DEC22	T7-NPGW-C-AI	T7-NPGW-F-AII				
Analyte				Sampling date/time						
				07-Dec-2022 16:15	WT2224609-019					
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-019 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	91.4	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	100	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

## No Breaches Found

**Key:**

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T7-NPGW-C-All	153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
T7-NPGW-F-All	153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	ON153/04	ON153/04				
				MW22-41-05-07DEC22	T7-NPGW-C-AI	T7-NPGW-F-AII				
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
				07-Dec-2022 16:10						
				WT2224609-020						
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--





Analyte	Method	LOR	Unit	WT2224609-020 (Continued)	ON153/04 T7-NPGW-C-All I	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.73	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	91.5	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	101	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW22-41-05-07DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.73 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.73 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				MW22-41-06-07DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224609-021	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-021 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	87.8	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	95.8	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID						
				MW22-41-07-07DEC22	07-Dec-2022	15:15	WT2224609-022	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII	
<b>Sub-Matrix: Water</b>										
<b>(Matrix: Water)</b>										
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-022 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	90.9	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	93.8	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	DUP6-07DEC22		ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
				Sampling date/time	07-Dec-2022 00:00							
<b>Sub-Matrix: Water</b>												
<b>(Matrix: Water)</b>												
<b>Client sample ID</b>												
<b>DUP6-07DEC22</b>												
<b>Sampling date/time</b>												
<b>07-Dec-2022 00:00</b>												
<b>WT2224609-023</b>												
<b>ON153/04 T7-NPGW-C-AI I</b>												
<b>ON153/04 T7-NPGW-F-AII</b>												
<b>Volatile Organic Compounds</b>												
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-023 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	86.2	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	93.2	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	86.6	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	97.9	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- |               |  |
|---------------|--|
| ON153/04      | Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)   |
| T7-NPGW-C-AII | 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse |
| T7-NPGW-F-AII | 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)  |



## Analytical Results

				Client sample ID						
				DUP7-07DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224609-024	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--





Analyte	Method	LOR	Unit	WT2224609-024 (Continued)	ON153/04 T7-NPGW-C-All I	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	0.64	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	86.3	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	99.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
DUP7-07DEC22	Water	trichloroethylene		ON153/04	T7-NPGW-C-All	0.64 µg/L	0.5 µg/L
	Water	trichloroethylene		ON153/04	T7-NPGW-F-All	0.64 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				DUP8-07DEC22						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224609-025	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-025 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	8.24	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	87.6	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	98.3	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
DUP8-07DEC22	Water	tetrachloroethylene		ON153/04	T7-NPGW-C-All	8.24 µg/L	0.5 µg/L
	Water	tetrachloroethylene		ON153/04	T7-NPGW-F-All	8.24 µg/L	0.5 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				TB4-07DEC22						
				07-Dec-2022						
				00:00						
Sub-Matrix: Water (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2224609-026	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	1.3	RRV 26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-026 (Continued)	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1-L	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
F2 (C10-C16)	E601.SG	100	µg/L	<100	150 µg/L	150 µg/L	--	--	--	--
F3 (C16-C34)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F4 (C34-C50)	E601.SG	250	µg/L	<250	500 µg/L	500 µg/L	--	--	--	--
F1-BTEX	EC580	25	µg/L	<25	420 µg/L	420 µg/L	--	--	--	--
hydrocarbons, total (C6-C50)	EC581SG	240	µg/L	<370	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG		-	YES	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG	1.0	%	79.3	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1-L	1.0	%	106	--	--	--	--	--	--
bromofluorobenzene, 4-	E611D	1.0	%	86.3	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	98.4	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

## No Breaches Found

**Key:**

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T7-NPGW-C-AII	153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
T7-NPGW-F-AII	153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				FB4-07DEC22						
				07-Dec-2022						
				00:00						
				WT2224609-027	ON153/04	ON153/04				
Analyte	Method	LOR	Unit		T7-NPGW-C-AI	T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2224609-027 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	86.5	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	98.8	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)

## QUALITY CONTROL INTERPRETIVE REPORT

<p><b>Work Order</b> : <b>WT2224609</b></p> <p><b>Amendment</b> : <b>1</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 27</p> <p><b>No. of samples analysed</b> : 27</p>	<p><b>Page</b> : 1 of 9</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 08-Dec-2022 07:35</p> <p><b>Issue Date</b> : 15-Dec-2022 14:36</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

### ***Workorder Comments***

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.



### ***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

### ***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.



**Outliers : Quality Control Samples**

*Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes*

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Matrix Spike (MS) Recoveries</b>								
Volatile Organic Compounds	Anonymous	Anonymous	dichlorodifluoromethane	75-71-8	E611D	22.5 % RRQC	60.0-140%	Recovery less than lower data quality objective
Volatile Organic Compounds	Anonymous	Anonymous	vinyl chloride	75-01-4	E611D	41.8 % RRQC	60.0-140%	Recovery less than lower data quality objective

**Result Qualifiers**

Qualifier	Description
RRQC	Refer to report comments for information regarding this QC result.



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) MW21-13A-07DEC22	E581.F1-L	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	4 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) DUP6-07DEC22	E581.F1-L	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	6 days	✓	
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)</b>											
Glass vial (sodium bisulfate) TB4-07DEC22	E581.F1-L	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	6 days	✓	
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) DUP6-07DEC22	E601.SG	07-Dec-2022	12-Dec-2022	14 days	5 days	✓	15-Dec-2022	40 days	3 days	✓	
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) MW21-13A-07DEC22	E601.SG	07-Dec-2022	12-Dec-2022	14 days	5 days	✓	15-Dec-2022	40 days	3 days	✓	
<b>Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID</b>											
Amber glass/Teflon lined cap (sodium bisulfate) TB4-07DEC22	E601.SG	07-Dec-2022	12-Dec-2022	14 days	5 days	✓	15-Dec-2022	40 days	3 days	✓	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-13A-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	4 days	✓	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW21-13B-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-39-01-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-39-03-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-39-04-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-39-05-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-39-06-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-39-07-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-41-01-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-41-02-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	4 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-41-03-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-41-04-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-41-05-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	4 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-40-01-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-40-02-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-40-03-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-40-04-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-40-05-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-40-06-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	5 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-40-07-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-41-06-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) MW22-41-07-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	5 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) DUP6-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	6 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) DUP7-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	6 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) DUP8-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	6 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) FB4-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	6 days	✔	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>											
Glass vial (sodium bisulfate) TB4-07DEC22	E611D	07-Dec-2022	12-Dec-2022	----	----		12-Dec-2022	14 days	6 days	✔	

**Legend & Qualifier Definitions**

Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water** Evaluation: \* = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	775201	2	5	40.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	775200	2	34	5.8	5.0	✓
<b>Laboratory Control Samples (LCS)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	775201	2	5	40.0	5.0	✓
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG	773549	1	19	5.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	775200	2	34	5.8	5.0	✓
<b>Method Blanks (MB)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	775201	2	5	40.0	5.0	✓
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG	773549	1	19	5.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	775200	2	34	5.8	5.0	✓
<b>Matrix Spikes (MS)</b>							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	775201	2	5	40.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	775200	2	34	5.8	5.0	✓



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4).
VOCs (Eastern Canada List) by Headspace GC-MS	E611D Waterloo - Environmental	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
F1-BTEX	EC580 Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
SUM F1 to F4 where F2-F4 is SG treated	EC581SG Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fraction F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50), where F2-F4 have been treated with silica gel. F4G-sg is not used within this calculation due to overlap with other fractions.
Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
VOCs Preparation for Headspace Analysis	EP581 Waterloo - Environmental	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into the GC/MS-FID system.
PHCs and PAHs Hexane Extraction	EP601 Waterloo - Environmental	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.



## QUALITY CONTROL REPORT

<b>Work Order</b>	: <b>WT2224609</b>	<b>Page</b>	: 1 of 14
<b>Amendment</b>	: <b>1</b>		
<b>Client</b>	: Omni-McCann Inc.	<b>Laboratory</b>	: Waterloo - Environmental
<b>Contact</b>	: Daniel Elliot	<b>Account Manager</b>	: Emily Smith
<b>Address</b>	: 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9	<b>Address</b>	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
<b>Telephone</b>	:	<b>Telephone</b>	: +1 519 886 6910
<b>Project</b>	: 0006-0103	<b>Date Samples Received</b>	: 08-Dec-2022 07:35
<b>PO</b>	: ----	<b>Date Analysis Commenced</b>	: 12-Dec-2022
<b>C-O-C number</b>	: ----	<b>Issue Date</b>	: 15-Dec-2022 14:36
<b>Sampler</b>	: ----                    705 243 5828		
<b>Site</b>	: ----		
<b>Quote number</b>	: Project 0006-0103		
<b>No. of samples received</b>	: 27		
<b>No. of samples analysed</b>	: 27		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Waterloo Organics, Waterloo, Ontario

Page : 2 of 14  
Work Order : WT2224609 Amendment 1  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

### Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

## Workorder Comments

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Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 775200)</b>											
WT2224609-001	MW21-13A-07DEC22	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 775200) - continued</b>											
WT2224609-001	MW21-13A-07DEC22	tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.50	µg/L	0.50	<0.50	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----		
<b>Volatile Organic Compounds (QC Lot: 775709)</b>											
WT2224468-001	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----		
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----		



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 775709) - continued</b>											
WT2224468-001	Anonymous	ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 775201)</b>											
WT2224609-001	MW21-13A-07DEC22	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 775710)</b>											
WT2224468-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----



## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 775200)</b>						
Acetone	67-64-1	E611D	20	µg/L	<20	----
benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 775200) - continued</b>						
toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
<b>Volatile Organic Compounds (QCLot: 775709)</b>						
Acetone	67-64-1	E611D	20	µg/L	<20	----
benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 775709) - continued</b>						
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
<b>Hydrocarbons (QCLot: 773549)</b>						
F2 (C10-C16)	----	E601.SG	100	µg/L	<100	----
F3 (C16-C34)	----	E601.SG	250	µg/L	<250	----
F4 (C34-C50)	----	E601.SG	250	µg/L	<250	----
<b>Hydrocarbons (QCLot: 775201)</b>						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
<b>Hydrocarbons (QCLot: 775710)</b>						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----





## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 775200)</b>									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	129	70.0	130	----
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	111	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	113	70.0	130	----
bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	95.6	70.0	130	----
bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	92.9	60.0	140	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	105	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	99.9	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	90.8	60.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	108	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	111	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	95.7	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	81.6	70.0	130	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	108	70.0	130	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	112	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	99.2	70.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 775200) - continued</b>									
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	104	60.0	140	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	96.0	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	108	70.0	130	----
xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	104	70.0	130	----
<b>Volatile Organic Compounds (QCLot: 775709)</b>									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	101	70.0	130	----
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	88.4	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	96.7	70.0	130	----
bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	83.3	60.0	140	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	95.2	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	94.5	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	88.8	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	88.5	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	95.0	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	95.9	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	96.7	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	85.1	60.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	88.4	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	90.7	70.0	130	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	82.3	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	80.4	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	83.5	70.0	130	----
dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	84.6	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	80.8	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	87.3	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	91.2	70.0	130	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	95.5	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	89.1	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	80.5	70.0	130	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	90.6	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 775709) - continued</b>									
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	93.0	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	92.6	70.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	91.6	70.0	130	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	91.9	70.0	130	----
toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	96.5	70.0	130	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	91.1	70.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	92.6	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	80.2	70.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	92.9	60.0	140	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	72.2	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	97.0	70.0	130	----
xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	96.4	70.0	130	----
<b>Hydrocarbons (QCLot: 773549)</b>									
F2 (C10-C16)	----	E601.SG	100	µg/L	4961.825 µg/L	88.8	70.0	130	----
F3 (C16-C34)	----	E601.SG	250	µg/L	7776.674 µg/L	80.3	70.0	130	----
F4 (C34-C50)	----	E601.SG	250	µg/L	4477.474 µg/L	92.1	70.0	130	----
<b>Hydrocarbons (QCLot: 775201)</b>									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	103	80.0	120	----
<b>Hydrocarbons (QCLot: 775710)</b>									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	112	80.0	120	----



## Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 775200)</b>										
WT2224609-001	MW21-13A-07DEC22	Acetone	67-64-1	E611D	125 µg/L	100 µg/L	125	60.0	140	----
		benzene	71-43-2	E611D	112 µg/L	100 µg/L	112	60.0	140	----
		bromodichloromethane	75-27-4	E611D	114 µg/L	100 µg/L	114	60.0	140	----
		bromoform	75-25-2	E611D	96.2 µg/L	100 µg/L	96.2	60.0	140	----
		bromomethane	74-83-9	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		chlorobenzene	108-90-7	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		chloroform	67-66-3	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		dibromochloromethane	124-48-1	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	109 µg/L	100 µg/L	109	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	83.7 µg/L	100 µg/L	83.7	60.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	112 µg/L	100 µg/L	112	60.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	112 µg/L	100 µg/L	112	60.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		dichloromethane	75-09-2	E611D	109 µg/L	100 µg/L	109	60.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	112 µg/L	100 µg/L	112	60.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	121 µg/L	100 µg/L	121	60.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	117 µg/L	100 µg/L	117	60.0	140	----
		ethylbenzene	100-41-4	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		hexane, n-	110-54-3	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	111 µg/L	100 µg/L	111	60.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	114 µg/L	100 µg/L	114	60.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		styrene	100-42-5	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	99.1 µg/L	100 µg/L	99.1	60.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	110 µg/L	100 µg/L	110	60.0	140	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 775200) - continued</b>										
WT2224609-001	MW21-13A-07DEC22	tetrachloroethylene	127-18-4	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		toluene	108-88-3	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		trichloroethylene	79-01-6	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		vinyl chloride	75-01-4	E611D	93.1 µg/L	100 µg/L	93.1	60.0	140	----
		xylene, m+p-	179601-23-1	E611D	219 µg/L	200 µg/L	109	60.0	140	----
		xylene, o-	95-47-6	E611D	105 µg/L	100 µg/L	105	60.0	140	----
<b>Volatile Organic Compounds (QCLot: 775709)</b>										
WT2224468-001	Anonymous	Acetone	67-64-1	E611D	111 µg/L	100 µg/L	111	60.0	140	----
		benzene	71-43-2	E611D	87.2 µg/L	100 µg/L	87.2	60.0	140	----
		bromodichloromethane	75-27-4	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		bromoform	75-25-2	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		bromomethane	74-83-9	E611D	62.8 µg/L	100 µg/L	62.8	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	88.6 µg/L	100 µg/L	88.6	60.0	140	----
		chlorobenzene	108-90-7	E611D	94.2 µg/L	100 µg/L	94.2	60.0	140	----
		chloroform	67-66-3	E611D	89.0 µg/L	100 µg/L	89.0	60.0	140	----
		dibromochloromethane	124-48-1	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	93.4 µg/L	100 µg/L	93.4	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	93.6 µg/L	100 µg/L	93.6	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	91.2 µg/L	100 µg/L	91.2	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	93.4 µg/L	100 µg/L	93.4	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	22.5 µg/L	100 µg/L	22.5	60.0	140	RRQC
		dichloroethane, 1,1-	75-34-3	E611D	87.0 µg/L	100 µg/L	87.0	60.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	97.7 µg/L	100 µg/L	97.7	60.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	71.8 µg/L	100 µg/L	71.8	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	83.0 µg/L	100 µg/L	83.0	60.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	80.6 µg/L	100 µg/L	80.6	60.0	140	----
		dichloromethane	75-09-2	E611D	84.2 µg/L	100 µg/L	84.2	60.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	83.2 µg/L	100 µg/L	83.2	60.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	93.9 µg/L	100 µg/L	93.9	60.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
		ethylbenzene	100-41-4	E611D	90.7 µg/L	100 µg/L	90.7	60.0	140	----
		hexane, n-	110-54-3	E611D	75.2 µg/L	100 µg/L	75.2	60.0	140	----



Sub-Matrix: Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 775709) - continued</b>										
WT2224468-001	Anonymous	methyl ethyl ketone [MEK]	78-93-3	E611D	91 µg/L	100 µg/L	90.6	60.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	109 µg/L	100 µg/L	109	60.0	140	----
		styrene	100-42-5	E611D	92.2 µg/L	100 µg/L	92.2	60.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	89.2 µg/L	100 µg/L	89.2	60.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		tetrachloroethylene	127-18-4	E611D	83.2 µg/L	100 µg/L	83.2	60.0	140	----
		toluene	108-88-3	E611D	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	89.3 µg/L	100 µg/L	89.3	60.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	97.9 µg/L	100 µg/L	97.9	60.0	140	----
		trichloroethylene	79-01-6	E611D	76.8 µg/L	100 µg/L	76.8	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	77.4 µg/L	100 µg/L	77.4	60.0	140	----
		vinyl chloride	75-01-4	E611D	41.8 µg/L	100 µg/L	41.8	60.0	140	RRQC
		xylene, m+p-	179601-23-1	E611D	187 µg/L	200 µg/L	93.3	60.0	140	----
		xylene, o-	95-47-6	E611D	93.3 µg/L	100 µg/L	93.3	60.0	140	----
<b>Hydrocarbons (QCLot: 775201)</b>										
WT2224609-001	MW21-13A-07DEC22	F1 (C6-C10)	----	E581.F1-L	1780 µg/L	2000 µg/L	89.2	60.0	140	----
<b>Hydrocarbons (QCLot: 775710)</b>										
WT2224468-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	2050 µg/L	2000 µg/L	103	60.0	140	----

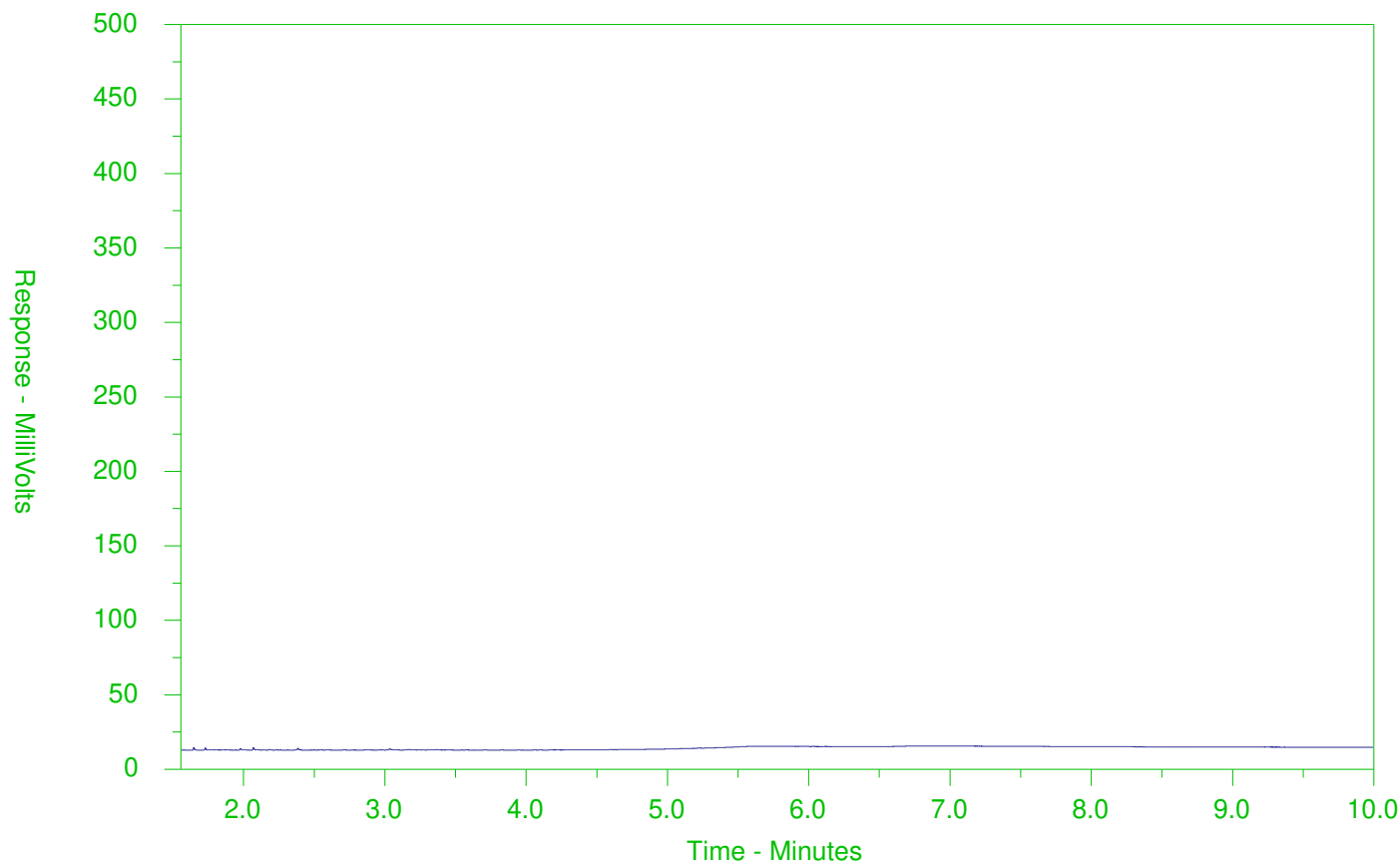
**Qualifiers**

Qualifier	Description
RRQC	Refer to report comments for information regarding this QC result.

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224609-001-E601.SG  
 Client Sample ID: MW21-13A



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

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

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

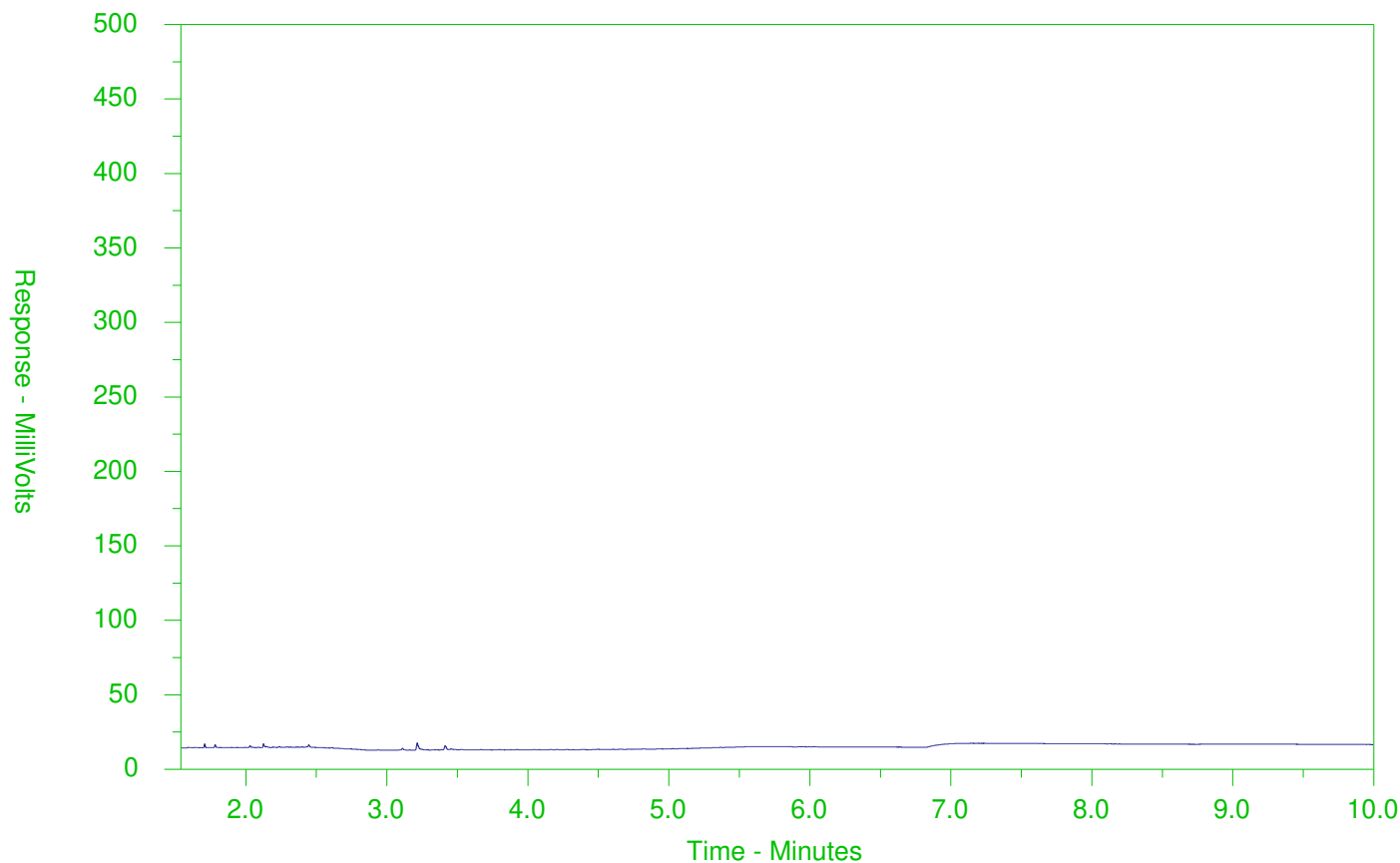
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224609-023-E601.SG  
 Client Sample ID: DUP6



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

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

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

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

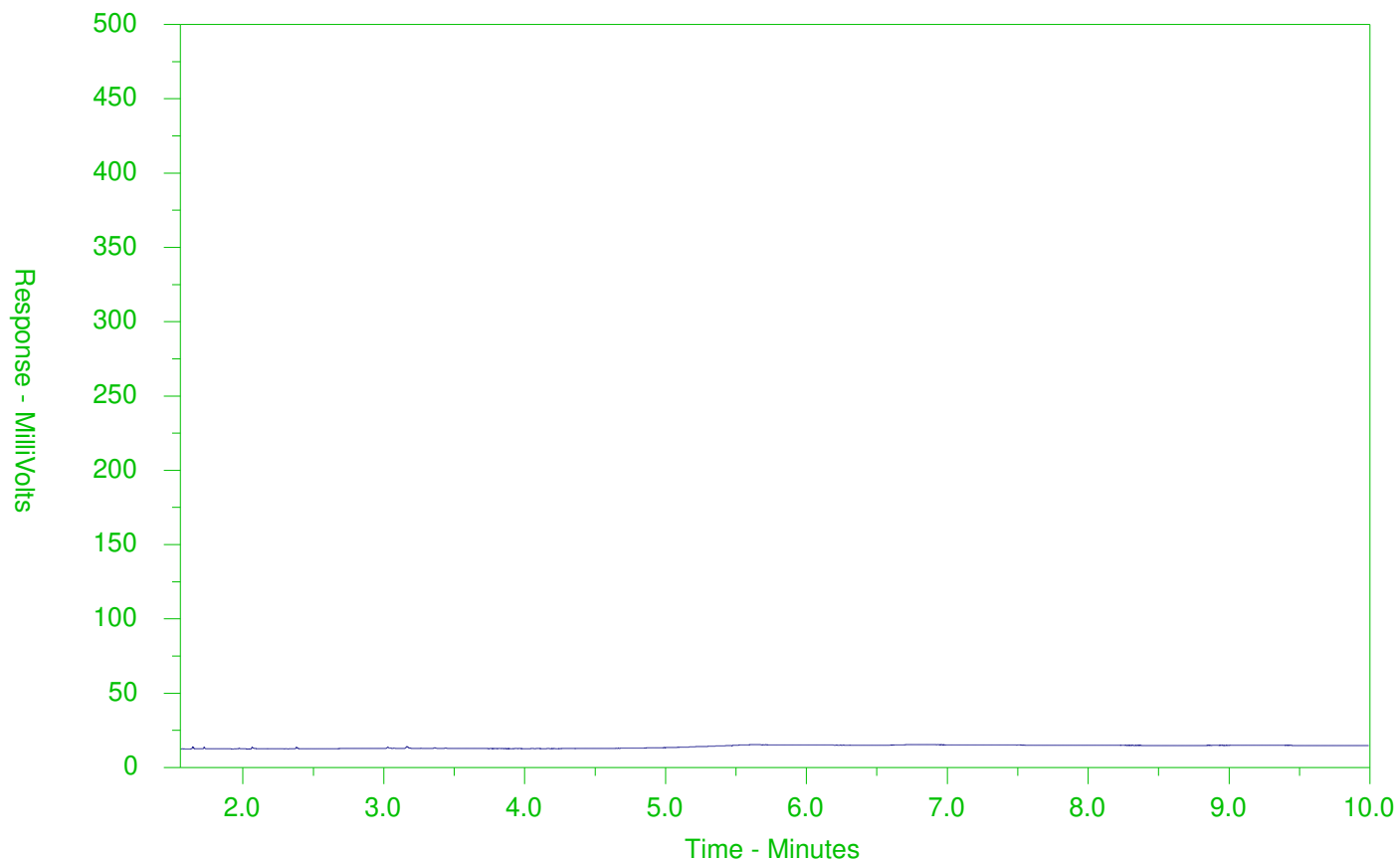
**Note:** This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at [www.alsglobal.com](http://www.alsglobal.com).



# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2224609-026-E601.SG  
 Client Sample ID: TB4



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

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

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

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

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



www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20-1009810

Page 1 of 3

Environmental Division  
Waterloo  
Work Order Reference  
WT22224609

Report To: Contact and company name below will appear on the final report

Company: **Dani McCann Inc.**

Contact: **Daniel Elliot**

Phone: **613-857-4936**

Company address below will appear on the final report

Street: **200-1755 Woodward Dr.**

City/Province: **Ottawa, ON**

Postal Code: **K2C 6P4**

Invoice To: **Same as Report To**  YES  NO

Copy of Invoice with Report:  YES  NO

Company: \_\_\_\_\_

Contact: \_\_\_\_\_

Project Information

ALS Account # / Quote #: **B90026**

Job #: **0006-0103**

PO / A/E: \_\_\_\_\_

LSD: \_\_\_\_\_

ALS Lab Work Order # (ALS use only): \_\_\_\_\_

Select Report Format:  PDF  EXCEL  BOD (SIGNAL)

Merge QC/QCI Reports with COA  YES  NO  N/A

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

Select Distribution:  EMAIL  MAIL  FAX

Email 1 or Fax: **Dani McCann Inc.**

Email 2: **Kristina@dmccann.com**

Email 3: **Afania@dmccann.com**

Select Invoices Distribution:  EMAIL  MAIL  FAX

Email 1 or Fax: **Invoicing@dmccann.com**

Email 2: \_\_\_\_\_

Oil and Gas Required Fields (client use)

A/E/COC Center: \_\_\_\_\_ PO#: \_\_\_\_\_

Majority Code: \_\_\_\_\_ Routing Code: \_\_\_\_\_

Requisitioner: \_\_\_\_\_ Location: \_\_\_\_\_

ALS contact: **Eric Abbias**

Sampler: **D. Elliot**

Turnaround Time (TAT) Requested

Routine [R] if received by 3pm M-F - no surcharges apply

4 day [P4] if received by 3pm M-F - 20% rush surcharge m

3 day [P3] if received by 3pm M-F - 25% rush surcharge m

2 day [P2] if received by 3pm M-F - 50% rush surcharge m

1 day [P1] if received by 3pm M-F - 100% rush surcharge m

Same day [D] if received by 10am M-F - 20% rush surcharge m

Same day [D] if received on weekends, statutory holidays and major holidays

Date and Time Required for all EAP/TAS

For all tests with rush TAT's requested, if

Indicate Filtered (F), Preserved (P) or Filter

Analysis: \_\_\_\_\_

Telephone: +1 519 886 6970

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	PHC	FI-F4	VOC	SAMPLES ON HOLD	EXTENDED STORAGE REQUI	SUSPECTED HAZARD (see notes)
MW21-13A-07DEC22		07-DEC-22	13:45	GU	4	X	X	X			
MW22-13B-07DEC22			14:20		2	X	X	X			
MW22-39-01-07DEC22			15:30		2	X	X	X			
MW22-39-02-07DEC22			16:05		2	X	X	X			
MW22-39-03-07DEC22			16:20		2	X	X	X			
MW22-39-04-07DEC22			16:40		2	X	X	X			
MW22-39-05-07DEC22			17:05		2	X	X	X			
MW22-39-06-07DEC22			17:20		2	X	X	X			
MW22-40-01-07DEC22			17:35		2	X	X	X			
MW22-40-02-07DEC22			18:10		2	X	X	X			
MW22-40-03-07DEC22			18:10		2	X	X	X			

Drinking Water (DW) Samples (client use)

Are samples taken from a Regulated DW System?  YES  NO

Are samples for human consumption use?  YES  NO

SHIPMENT RELEASE (client use)

Date: **7-Dec-22** Time: **18:45**

Received by: \_\_\_\_\_

INITIAL SHIPMENT RECEPTION (ALS use only)

Date: **11/08/22** Time: **13:55**

Received by: \_\_\_\_\_

FINAL SHIPMENT RECEPTION (ALS use only)

Date: **9 Dec 22** Time: **8:45**

Received by: \_\_\_\_\_

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method:  NONE  ICE PACKS  FROZEN

Submission Comments identified on Sample Receipt Notification: \_\_\_\_\_

Cooler Custody Seals Intact:  YES  N/A

INITIAL COOLER TEMPERATURES °C: \_\_\_\_\_

FINAL COOLER TEMPERATURES °C: \_\_\_\_\_

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

Released by: **Daniel Elliot** Date: **7-Dec-22** Time: **18:45**

Received by: \_\_\_\_\_

Date: **9 Dec 22** Time: **8:45**

Received by: \_\_\_\_\_

WT-170/171, OR-137



www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20-1009811

Page 2 of 3

Report To		Contact and company name below will appear on the final report	
Company:	Dunn's Helium Inc.		
Contact:			
Phone:	Company address below will appear on the final report		
Street:			
City/Province:			
Postal Code:			
Invoice To	Same as Report To	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Company:	Copy of Invoice with Report	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Contact:	Project Information		
ALS Account # / Quote #:	ALS Account # / Quote #		
Job #:	Job #		
PO / AFE:	PO / AFE		
LSD:	LSD		
ALS Lab Work Order # (ALS use only):	ALS Lab Work Order # (ALS use only)		
ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mm-yy)	Time (hh:mm)
	MW22-40-04-07 DEC 22	07-DEC-22	10:30
	MW22-40-05-07 DEC 22		10:55
	MW22-40-06-07 DEC 22		11:05
	MW22-40-07-07 DEC 22		11:35
	MW22-41-01-7 DEC 22		17:20
	MW22-41-02-7 DEC 22		17:00
	MW22-41-03-7 DEC 22		16:40
	MW22-41-04-7 DEC 22		16:15
	MW22-41-05-7 DEC 22		16:10
	MW22-41-06-7 DEC 22		15:45
	MW22-41-07-7 DEC 22		15:15
	DUP16-07 DEC 22		
Drinking Water (DW) Samples (client use)			
Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)			
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
Are samples for human consumption use? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
Released by: <i>Daniel Elliott</i> Date: <i>7-Dec-22</i> Time: <i>19:45</i>			
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)	
Date: <i>7-Dec-22</i>		Date: <i>7-Dec-22</i>	
Time: <i>19:45</i>		Time: <i>19:45</i>	
Receiver: <i>[Signature]</i>		Receiver: <i>[Signature]</i>	
WHITE - LABORATORY COPY		YELLOW - CLIENT COPY	
NUMBER OF CONTAINERS			
PHCFI-F4 VOC			
Turnaround Time (TAT) Requested			
<input type="checkbox"/> Routine [24] If received by 3pm M-F - no surcharges apply <input type="checkbox"/> 4 day [P4] If received by 3pm M-F - 20% rush surcharge minimum <input type="checkbox"/> 3 day [P3] If received by 3pm M-F - 25% rush surcharge minimum <input type="checkbox"/> 2 day [P2] If received by 3pm M-F - 50% rush surcharge minimum <input type="checkbox"/> 1 day [E] If received by 3pm M-F - 100% rush surcharge minimum <input type="checkbox"/> Same day [E1] If received by 12pm M-F - 200% rush surcharge. Additional fees may apply for rush requests on weekends, statutory holidays and non-routine tests.			
Date and Time Required for all E&E Tests: _____			
For all tests with rush TATs requested, please contact your ALS to confirm availability.			
Analysis Request			
Indicate Filtered (F), Preserved (P) or Filtered and Preserved (FP) below			
SAMPLES ON HOLD			
EXTENDED STORAGE REQUIRED			
SUSPECTED HAZARD (see notes)			
Coding Method: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> ICE <input type="checkbox"/> ICE PACKS <input type="checkbox"/> FROZEN <input type="checkbox"/> COOLING INITIATED			
Submission Comments identified on Sample Receipt Notification: <input type="checkbox"/> YES <input type="checkbox"/> NO			
Cooler Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> NO			
INITIAL COOLER TEMPERATURES °C: _____			
FINAL COOLER TEMPERATURES °C: _____			
Cooler Custody Seals Intact: <input type="checkbox"/> YES <input type="checkbox"/> NO			
INITIAL COOLER TEMPERATURES °C: _____			
FINAL COOLER TEMPERATURES °C: _____			
Released by: <i>[Signature]</i> Date: <i>9-Dec-22</i> Time: <i>8:45</i>			
Date: <i>9-Dec-22</i> Time: <i>8:45</i>			

AFIX ALS BARCODE LABEL HERE (ALS use only)



www.alslab.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

COC Number: 20-1009812

Page 3 of 3

Report To: Contact and company name below will appear on the final report

Company: *Dunn, McCann Inc.*

Contact: *Dunn, McCann Inc.*

Phone: *Dunn, McCann Inc.*

Street: *Dunn, McCann Inc.*

City/Province: *Dunn, McCann Inc.*

Postal Code: *Dunn, McCann Inc.*

Invoice To: *Dunn, McCann Inc.*

Company: *Dunn, McCann Inc.*

Contact: *Dunn, McCann Inc.*

ALS Account # / Quote #:

Job #:

PO / AFE:

LSD:

ALS Lab Work Order # (ALS use only):

Sample Identification and/or Coordinates (This description will appear on the report)

ALS Sample # (ALS use only)

Sample Identification and/or Coordinates (This description will appear on the report)

Sample Identification and/or Coordinates (This description will appear on the report)

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Sample Identification and/or Coordinates (This description will appear on the report)

Sample Identification and/or Coordinates (This description will appear on the report)

Reports / Recipients

Select Report Format:  PDF  EXCEL  ESD (DIGITAL)

Merge QO/QCI Reports with COA  YES  NO  N/A

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

Select Distribution:  EMAIL  MAIL  FAX

Email 1 or Fax

Email 2

Email 3

Invoice Recipients

Select Invoice Distribution:  EMAIL  MAIL  FAX

Email 1 or Fax

Email 2

Oil and Gas Required Fields (client use)

A/E/Cost Center

Major/Minor Code

Requisitioner

Location

ALS Contact:

Date (dd-mm-yy)

Time (hh:mm)

Sampler:

Sample Type

PHC F1-F4

VOC

2

2

2

2

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Turnaround Time (TAT) Requested

Routine (R) if received by 3pm M-F - no surcharges apply

4 day (P4) if received by 3pm M-F - 20% rush surcharge minimum

3 day (P3) if received by 3pm M-F - 25% rush surcharge minimum

2 day (P2) if received by 3pm M-F - 50% rush surcharge minimum

1 day (E) if received by 3pm M-F - 100% rush surcharge minimum

Same day (E) if received by 10am M-F - 200% rush surcharge. Additional fees may apply for rush requests on weekends, statutory holidays and non-routine tests

Date and Time Required for all ESD/FATs:

For all tests with rush TATs requested, please contact your ALS to confirm availability.

Analysis Request

Indicates Filtered (F), Preserved (P) or Filtered and Preserved (FP) below

PHC F1-F4

VOC

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AFIX ALS BARCODE LABEL HERE (ALS use only)

SAMPLES ON HOLD

EXTENDED STORAGE REQUIRED

SUSPECTED HAZARD (see notes)

Drinking Water (DW) Samples (client use)

Are samples taken from a Regulated DW System?  YES  NO

Are samples for human consumption/ use?  YES  NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Released by: *David Elliot* Date: *7-Dec-22* Time: *19:45*

Received by: *[Signature]* Date: *12/08/22* Time: *17:38*

SHIPMENT RELEASE (client use)

INITIAL SHIPMENT RECEPTION (ALS use only)

WHITE - LABORATORY COPY

YELLOW - CLIENT COPY

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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

ALS 2021 FORM



## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

<p><b>Work Order</b> : <b>WT2225424</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : DE</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 4</p> <p><b>No. of samples analysed</b> : 4</p>	<p><b>Page</b> : 1 of 10</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 15-Dec-2022 16:20</p> <p><b>Date Analysis Commenced</b> : 20-Dec-2022</p> <p><b>Issue Date</b> : 22-Dec-2022 17:44</p>
--	--

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Sarah Birch	VOC Section Supervisor	Organics, Waterloo, Ontario

## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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. Guidelines 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.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
µg/L	micrograms per litre

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .

## Workorder Comments

---

RRR: RL raised due to suspected laboratory contamination.

## Qualifiers

<i>Qualifier</i>	<i>Description</i>
RRR	Refer to report comments for issues regarding this analysis.



## Analytical Results

Sub-Matrix: Groundwater (Matrix: Water)		Client sample ID Sampling date/time		MW22-33-15DEC22						
Analyte	Method	LOR	Unit	15-Dec-2022 10:50	WT2225424-001	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII			
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20		100000 µg/L	100000 µg/L	--	--	--
benzene	E611D	0.50	µg/L	<0.50		0.5 µg/L	0.5 µg/L	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50		67000 µg/L	67000 µg/L	--	--	--
bromoform	E611D	0.50	µg/L	<0.50		5 µg/L	5 µg/L	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50		0.89 µg/L	0.89 µg/L	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20		0.2 µg/L	0.2 µg/L	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50		140 µg/L	140 µg/L	--	--	--
chloroform	E611D	0.50	µg/L	0.84		2 µg/L	2 µg/L	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50		65000 µg/L	65000 µg/L	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20		0.2 µg/L	0.2 µg/L	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50		150 µg/L	150 µg/L	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50		7600 µg/L	7600 µg/L	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50		0.5 µg/L	0.5 µg/L	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50		3500 µg/L	3500 µg/L	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50		11 µg/L	11 µg/L	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50		0.5 µg/L	0.5 µg/L	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50		0.5 µg/L	0.5 µg/L	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50		1.6 µg/L	1.6 µg/L	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50		1.6 µg/L	1.6 µg/L	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0		26 µg/L	26 µg/L	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50		0.58 µg/L	0.58 µg/L	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50		0.5 µg/L	0.5 µg/L	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30		--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30		--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50		54 µg/L	54 µg/L	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50		5 µg/L	5 µg/L	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20		21000 µg/L	21000 µg/L	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20		5200 µg/L	5200 µg/L	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50		15 µg/L	15 µg/L	--	--	--
styrene	E611D	0.50	µg/L	<0.50		43 µg/L	43 µg/L	--	--	--



Analyte	Method	LOR	Unit	WT2225424-001 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	84.2	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	130	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)





## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID	MW22-36-15DEC22		ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
				Sampling date/time	15-Dec-2022 11:20	WT2225424-002						
Sub-Matrix: Groundwater (Matrix: Water)												
<b>Volatile Organic Compounds</b>												
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--	--	--
chloroform	E611D	0.50	µg/L	2.40	2 µg/L	2 µg/L	--	--	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2225424-002 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	93.3	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	101	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
MW22-36-15DEC22	Water	chloroform		ON153/04	T7-NPGW-C-All	2.40 µg/L	2 µg/L
	Water	chloroform		ON153/04	T7-NPGW-F-All	2.40 µg/L	2 µg/L

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				FB5-15DEC22						
				15-Dec-2022						
				00:00						
				WT2225424-003	ON153/04	ON153/04				
					T7-NPGW-C-AI	T7-NPGW-F-AII				
Analyte	Method	LOR	Unit							
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.0	26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2225424-003 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	84.3	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	130	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)



## Analytical Results

				Client sample ID						
				TB5-15DEC22						
Sub-Matrix: Groundwater (Matrix: Water)				Sampling date/time						
Analyte	Method	LOR	Unit	WT2225424-004	ON153/04 T7-NPGW-C-AI I	ON153/04 T7-NPGW-F-AII				
<b>Volatile Organic Compounds</b>										
Acetone	E611D	20	µg/L	<20	100000 µg/L	100000 µg/L	--	--	--	--
benzene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
bromodichloromethane	E611D	0.50	µg/L	<0.50	67000 µg/L	67000 µg/L	--	--	--	--
bromoform	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
bromomethane	E611D	0.50	µg/L	<0.50	0.89 µg/L	0.89 µg/L	--	--	--	--
carbon tetrachloride	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
chlorobenzene	E611D	0.50	µg/L	<0.50	140 µg/L	140 µg/L	--	--	--	--
chloroform	E611D	0.50	µg/L	<0.50	2 µg/L	2 µg/L	--	--	--	--
dibromochloromethane	E611D	0.50	µg/L	<0.50	65000 µg/L	65000 µg/L	--	--	--	--
dibromoethane, 1,2-	E611D	0.20	µg/L	<0.20	0.2 µg/L	0.2 µg/L	--	--	--	--
dichlorobenzene, 1,2-	E611D	0.50	µg/L	<0.50	150 µg/L	150 µg/L	--	--	--	--
dichlorobenzene, 1,3-	E611D	0.50	µg/L	<0.50	7600 µg/L	7600 µg/L	--	--	--	--
dichlorobenzene, 1,4-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichlorodifluoromethane	E611D	0.50	µg/L	<0.50	3500 µg/L	3500 µg/L	--	--	--	--
dichloroethane, 1,1-	E611D	0.50	µg/L	<0.50	11 µg/L	11 µg/L	--	--	--	--
dichloroethane, 1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, 1,1-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloroethylene, cis-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloroethylene, trans-1,2-	E611D	0.50	µg/L	<0.50	1.6 µg/L	1.6 µg/L	--	--	--	--
dichloromethane	E611D	1.0	µg/L	<1.7	RRR 26 µg/L	26 µg/L	--	--	--	--
dichloropropane, 1,2-	E611D	0.50	µg/L	<0.50	0.58 µg/L	0.58 µg/L	--	--	--	--
dichloropropylene, cis+trans-1,3-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
dichloropropylene, cis-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
dichloropropylene, trans-1,3-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
ethylbenzene	E611D	0.50	µg/L	<0.50	54 µg/L	54 µg/L	--	--	--	--
hexane, n-	E611D	0.50	µg/L	<0.50	5 µg/L	5 µg/L	--	--	--	--
methyl ethyl ketone [MEK]	E611D	20	µg/L	<20	21000 µg/L	21000 µg/L	--	--	--	--
methyl isobutyl ketone [MIBK]	E611D	20	µg/L	<20	5200 µg/L	5200 µg/L	--	--	--	--
methyl-tert-butyl ether [MTBE]	E611D	0.50	µg/L	<0.50	15 µg/L	15 µg/L	--	--	--	--
styrene	E611D	0.50	µg/L	<0.50	43 µg/L	43 µg/L	--	--	--	--



Analyte	Method	LOR	Unit	WT2225424-004 (Continued)	ON153/04 T7-NPGW-C-All	ON153/04 T7-NPGW-F-All				
<b>Volatile Organic Compounds - Continued</b>										
tetrachloroethane, 1,1,1,2-	E611D	0.50	µg/L	<0.50	1.1 µg/L	1.1 µg/L	--	--	--	--
tetrachloroethane, 1,1,2,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
tetrachloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
toluene	E611D	0.50	µg/L	<0.50	320 µg/L	320 µg/L	--	--	--	--
trichloroethane, 1,1,1-	E611D	0.50	µg/L	<0.50	23 µg/L	23 µg/L	--	--	--	--
trichloroethane, 1,1,2-	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichloroethylene	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
trichlorofluoromethane	E611D	0.50	µg/L	<0.50	2000 µg/L	2000 µg/L	--	--	--	--
vinyl chloride	E611D	0.50	µg/L	<0.50	0.5 µg/L	0.5 µg/L	--	--	--	--
xylene, m+p-	E611D	0.40	µg/L	<0.40	--	--	--	--	--	--
xylene, o-	E611D	0.30	µg/L	<0.30	--	--	--	--	--	--
xylenes, total	E611D	0.50	µg/L	<0.50	72 µg/L	72 µg/L	--	--	--	--
BTEX, total	E611D	1.0	µg/L	<1.0	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
bromofluorobenzene, 4-	E611D	1.0	%	82.0	--	--	--	--	--	--
difluorobenzene, 1,4-	E611D	1.0	%	130	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any qualifiers detected.

### No Breaches Found

**Key:**

- ON153/04 Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
- T7-NPGW-C-All 153 T7-Non-Potable Ground Water-All Types of Property Use - Coarse
- T7-NPGW-F-All 153 T7-Non-Potable Ground Water-All Types of Property Uses (Fine)

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>WT2225424</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : DE</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 4</p> <p><b>No. of samples analysed</b> : 4</p>	<p><b>Page</b> : 1 of 6</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 15-Dec-2022 16:20</p> <p><b>Issue Date</b> : 22-Dec-2022 17:43</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
- CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
- DQO: Data Quality Objective.
- LOR: Limit of Reporting (detection limit).
- RPD: Relative Percent Difference.

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### ***Workorder Comments***

Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.





**Outliers : Quality Control Samples**

*Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes*

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
<b>Laboratory Control Sample (LCS) Recoveries</b>								
Volatile Organic Compounds	QC-785016-002	----	Acetone	67-64-1	E611D	132 % <sup>MES</sup>	70.0-130%	Recovery greater than upper control limit
Volatile Organic Compounds	QC-785016-002	----	dichloroethane, 1,2-	107-06-2	E611D	132 % <sup>MES</sup>	70.0-130%	Recovery greater than upper control limit

**Result Qualifiers**

Qualifier	Description
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).

<b>Matrix Spike (MS) Recoveries</b>								
Volatile Organic Compounds	Anonymous	Anonymous	Acetone	67-64-1	E611D	145 % <sup>MES</sup>	60.0-140%	Recovery greater than upper data quality objective

**Result Qualifiers**

Qualifier	Description
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).



## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>										
Glass vial (sodium bisulfate) MW22-33-15DEC22	E611D	15-Dec-2022	20-Dec-2022	----	----		20-Dec-2022	14 days	5 days	✓
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>										
Glass vial (sodium bisulfate) MW22-36-15DEC22	E611D	15-Dec-2022	20-Dec-2022	----	----		20-Dec-2022	14 days	5 days	✓
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>										
Glass vial (sodium bisulfate) FB5-15DEC22	E611D	15-Dec-2022	20-Dec-2022	----	----		20-Dec-2022	14 days	6 days	✓
<b>Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS</b>										
Glass vial (sodium bisulfate) TB5-15DEC22	E611D	15-Dec-2022	20-Dec-2022	----	----		20-Dec-2022	14 days	6 days	✓

### Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	785016	1	20	5.0	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	785016	1	20	5.0	5.0	✔
<b>Method Blanks (MB)</b>							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	785016	1	20	5.0	5.0	✔
<b>Matrix Spikes (MS)</b>							
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	785016	1	20	5.0	5.0	✔



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

<i>Analytical Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
VOCs (Eastern Canada List) by Headspace GC-MS	E611D  Waterloo - Environmental	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
VOCs Preparation for Headspace Analysis	EP581  Waterloo - Environmental	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into the GC/MS-FID system.

## QUALITY CONTROL REPORT

<p><b>Work Order</b> : <b>WT2225424</b></p> <p>Client : Omni-McCann Inc.</p> <p>Contact : Daniel Elliot</p> <p>Address : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p>Telephone :</p> <p>Project : 0006-0103</p> <p>PO : ----</p> <p>C-O-C number : ----</p> <p>Sampler : DE                      705 243 5828</p> <p>Site : ----</p> <p>Quote number : Project 0006-0103</p> <p>No. of samples received : 4</p> <p>No. of samples analysed : 4</p>	<p>Page : 1 of 10</p> <p>Laboratory : Waterloo - Environmental</p> <p>Account Manager : Emily Smith</p> <p>Address : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p>Telephone : +1 519 886 6910</p> <p>Date Samples Received : 15-Dec-2022 16:20</p> <p>Date Analysis Commenced : 20-Dec-2022</p> <p>Issue Date : 22-Dec-2022 17:42</p>
--	--

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Sarah Birch	VOC Section Supervisor	Waterloo Organics, Waterloo, Ontario

Page : 2 of 10  
Work Order : WT2225424  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

### Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

## Workorder Comments

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Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 785016)</b>											
WP2205862-001	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: <b>Water</b>					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 785016) - continued</b>											
WP2205862-001	Anonymous	tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	<0.30	0	Diff <2x LOR	----	





## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 785016)</b>						
Acetone	67-64-1	E611D	20	µg/L	<20	----
benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----



Sub-Matrix: **Water**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
<b>Volatile Organic Compounds (QCLot: 785016) - continued</b>						
toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----



## Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 785016)</b>									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	# 132	70.0	130	MES
benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	118	70.0	130	----
bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	86.2	70.0	130	----
bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	119	60.0	140	----
carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	109	70.0	130	----
chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	91.6	70.0	130	----
chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	114	70.0	130	----
dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	99.5	70.0	130	----
dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	108	70.0	130	----
dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	95.8	70.0	130	----
dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	96.7	70.0	130	----
dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	98.1	70.0	130	----
dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	111	60.0	140	----
dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	126	70.0	130	----
dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	# 132	70.0	130	MES
dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	115	70.0	130	----
dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	122	70.0	130	----
dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	126	70.0	130	----
dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----
dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	119	70.0	130	----
dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	98.5	70.0	130	----
ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	87.7	70.0	130	----
hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	112	70.0	130	----
methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	116	70.0	130	----
methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	124	70.0	130	----
methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	84.0	70.0	130	----
tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	92.7	70.0	130	----
tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	89.1	70.0	130	----
toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	88.9	70.0	130	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 785016) - continued</b>									
trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	114	70.0	130	----
trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	113	60.0	140	----
vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	99.7	60.0	140	----
xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	90.4	70.0	130	----
xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	87.8	70.0	130	----



## Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 785016)</b>										
WP2205862-001	Anonymous	Acetone	67-64-1	E611D	145 µg/L	100 µg/L	145	60.0	140	MES
		benzene	71-43-2	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		bromodichloromethane	75-27-4	E611D	120 µg/L	100 µg/L	120	60.0	140	----
		bromoform	75-25-2	E611D	92.4 µg/L	100 µg/L	92.4	60.0	140	----
		bromomethane	74-83-9	E611D	117 µg/L	100 µg/L	117	60.0	140	----
		carbon tetrachloride	56-23-5	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		chlorobenzene	108-90-7	E611D	91.0 µg/L	100 µg/L	91.0	60.0	140	----
		chloroform	67-66-3	E611D	114 µg/L	100 µg/L	114	60.0	140	----
		dibromochloromethane	124-48-1	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		dibromoethane, 1,2-	106-93-4	E611D	111 µg/L	100 µg/L	111	60.0	140	----
		dichlorobenzene, 1,2-	95-50-1	E611D	94.5 µg/L	100 µg/L	94.5	60.0	140	----
		dichlorobenzene, 1,3-	541-73-1	E611D	90.9 µg/L	100 µg/L	90.9	60.0	140	----
		dichlorobenzene, 1,4-	106-46-7	E611D	93.3 µg/L	100 µg/L	93.3	60.0	140	----
		dichlorodifluoromethane	75-71-8	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		dichloroethane, 1,1-	75-34-3	E611D	125 µg/L	100 µg/L	125	60.0	140	----
		dichloroethane, 1,2-	107-06-2	E611D	137 µg/L	100 µg/L	137	60.0	140	----
		dichloroethylene, 1,1-	75-35-4	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		dichloroethylene, cis-1,2-	156-59-2	E611D	116 µg/L	100 µg/L	116	60.0	140	----
		dichloroethylene, trans-1,2-	156-60-5	E611D	119 µg/L	100 µg/L	119	60.0	140	----
		dichloromethane	75-09-2	E611D	127 µg/L	100 µg/L	127	60.0	140	----
		dichloropropane, 1,2-	78-87-5	E611D	111 µg/L	100 µg/L	111	60.0	140	----
		dichloropropylene, cis-1,3-	10061-01-5	E611D	119 µg/L	100 µg/L	119	60.0	140	----
		dichloropropylene, trans-1,3-	10061-02-6	E611D	97.1 µg/L	100 µg/L	97.1	60.0	140	----
		ethylbenzene	100-41-4	E611D	85.8 µg/L	100 µg/L	85.8	60.0	140	----
		hexane, n-	110-54-3	E611D	109 µg/L	100 µg/L	109	60.0	140	----
		methyl ethyl ketone [MEK]	78-93-3	E611D	125 µg/L	100 µg/L	125	60.0	140	----
		methyl isobutyl ketone [MIBK]	108-10-1	E611D	139 µg/L	100 µg/L	139	60.0	140	----
		methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		styrene	100-42-5	E611D	83.5 µg/L	100 µg/L	83.5	60.0	140	----
		tetrachloroethane, 1,1,1,2-	630-20-6	E611D	93.1 µg/L	100 µg/L	93.1	60.0	140	----
		tetrachloroethane, 1,1,2,2-	79-34-5	E611D	116 µg/L	100 µg/L	116	60.0	140	----



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Volatile Organic Compounds (QCLot: 785016) - continued</b>										
WP2205862-001	Anonymous	tetrachloroethylene	127-18-4	E611D	85.5 µg/L	100 µg/L	85.5	60.0	140	----
		toluene	108-88-3	E611D	86.9 µg/L	100 µg/L	86.9	60.0	140	----
		trichloroethane, 1,1,1-	71-55-6	E611D	113 µg/L	100 µg/L	113	60.0	140	----
		trichloroethane, 1,1,2-	79-00-5	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		trichloroethylene	79-01-6	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		trichlorofluoromethane	75-69-4	E611D	111 µg/L	100 µg/L	111	60.0	140	----
		vinyl chloride	75-01-4	E611D	96.5 µg/L	100 µg/L	96.5	60.0	140	----
		xylene, m+p-	179601-23-1	E611D	176 µg/L	200 µg/L	88.0	60.0	140	----
		xylene, o-	95-47-6	E611D	86.7 µg/L	100 µg/L	86.7	60.0	140	----

### Qualifiers

Qualifier	Description
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).



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Canada Toll Free: 1 800 668 9878

# Chain of Custody (COC) / Analytical Request Form

Affix ALS barcode label here (lab use only)

COC Number: 17

Environmental Division Waterloo

Work Order Reference WT2225424

Page

Report To: **Omni McCann Inc.**

Contact: **David Elliot**

Phone: **613-857-4934**

Street: **200-1755 Woodward Dr.**

City/Province: **Ottawa, ON**

Postal Code: **K2C 8P9**

Invoice To: **Same as Report To**

Company: **Omni McCann Inc.**

Company address below will appear on the final report

Select Report Format:  PDF  EXCEL  EDD (DIGITAL)

Quality Control (QC) Report with Report  YES  NO

Select Invoice Distribution:  EMAIL  MAIL  FAX

Invoice Distribution:  EMAIL  MAIL  FAX

Oil and Gas Required Fields (client use)

ALS Account # / Quote #: **R990026**

Job #: **0006-0103**

PO / AFE: **0006-0103**

LSD: **0006-0103**

ALS Lab Work Order # (lab use only): **0022285417 JD**

ALS Contact: **E. Robbins**

Sampler: **D. Elliot**

Sample Identification and/or Coordinates (This description will appear on the report)

Sample # (lab use only)

Date (dd-mmm-yy)

Time (hh:mm)

Sample Type

Number of Containers

Sample Condition as Received (lab use only)

Initial Shipment Reception (lab use only)

Final Shipment Reception (lab use only)

Shipping Release (client use)

Released by: **2012/11/15** Date: **15-Dec-12** Time: **15:45**

Received by: **[Signature]** Date: **12/15/12** Time: **12:30**

Time: **10:45 AM**

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.

Priority (Business Days)	Standard TAT if received by 3 pm - business days	Emergency (Laboratory open)
4 day [P4-20%]	<input type="checkbox"/>	1 Business day
3 day [P3-25%]	<input type="checkbox"/>	Same Day, Week
2 day [P2-50%]	<input type="checkbox"/>	Laboratory open

Date and Time Required for all ESP TATs:

Analysis Request

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

Sample #	Date	Time	Sample Type	Number of Containers	Sample Condition as Received	Initial Shipment Reception	Final Shipment Reception
MW22-33-15DEC12	15-Dec-12	10:50	GW	2	X		
MW22-36-15DEC12	15-Dec-12	11:20		2	X		
FB5-15DEC12	15-Dec-12	-		2	X		
TB5-15DEC12	15-Dec-12	-		2	X		

SAMPLES ON HOLD

SUSPECTED HAZARD (see Special Instructions)



Telephone: + 1 519 886 8910



# APPENDIX D

## Residue Management





## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

<p><b>Work Order</b> : <b>WT2223671</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 20-1009803</p> <p><b>Sampler</b> : AC</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 1</p> <p><b>No. of samples analysed</b> : 1</p>	<p><b>Page</b> : 1 of 6</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 29-Nov-2022 16:40</p> <p><b>Date Analysis Commenced</b> : 02-Dec-2022</p> <p><b>Issue Date</b> : 08-Dec-2022 15:59</p>
--	---

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

**Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).**

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Greg Pokocky	Supervisor - Inorganic	Inorganics, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Organics, Waterloo, Ontario
Jon Fisher	Department Manager - Inorganics	Inorganics, Waterloo, Ontario
Jon Fisher	Department Manager - Inorganics	Metals, Waterloo, Ontario
Niral Patel		Centralized Prep, Waterloo, Ontario
Robert Braun	Soils Team Supervisor	Inorganics, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Organics, Waterloo, Ontario

## General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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. Guidelines 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.

Key : LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	no units
%	percent
°C	degrees celsius
µg/L	micrograms per litre
m/sec	metres per second
mg/kg	milligrams per kilogram
mg/L	milligrams per litre
mm/sec	millimetres per second
none	none
pH units	pH units
sec	seconds

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID							
				Sampling date/time	MARCH TCLP						
Sub-Matrix: Soil (Matrix: Soil/Solid)				WT2223671-001	29-Nov-2022 00:00	ONWCR Sch. 4					
<b>Physical Tests</b>											
ignitability	E209		none	Negative	--	--	--	--	--	--	--
moisture	E144	0.25	%	17.6	--	--	--	--	--	--	--
sample comment	E209		none	BROWN CLAY LOAM	--	--	--	--	--	--	--
time to ignition	E209	1	sec	Not Determined	--	--	--	--	--	--	--
burning rate	E209	0.01	mm/sec	Not Determined	--	--	--	--	--	--	--
temperature of test material	E209	1.0	°C	20.0	--	--	--	--	--	--	--
air velocity of fume hood	E209	0.10	m/sec	0.44	--	--	--	--	--	--	--
<b>TCLP Anions &amp; Nutrients</b>											
nitrate + nitrite (as N), TCLP	EC240.N+N	7.50	mg/L	<7.50	1000 mg/L	--	--	--	--	--	--
<b>TCLP Extractables</b>											
acenaphthene, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--	--
acenaphthylene, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--	--
acridine, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--	--
anthracene, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--	--
Aroclor 1016, TCLP	E688A	0.00020	mg/L	<0.00020	--	--	--	--	--	--	--
Aroclor 1221, TCLP	E688A	0.00020	mg/L	<0.00020	--	--	--	--	--	--	--
Aroclor 1232, TCLP	E688A	0.00020	mg/L	<0.00020	--	--	--	--	--	--	--
Aroclor 1242, TCLP	E688A	0.00020	mg/L	<0.00020	--	--	--	--	--	--	--
Aroclor 1248, TCLP	E688A	0.00020	mg/L	<0.00020	--	--	--	--	--	--	--
Aroclor 1254, TCLP	E688A	0.00020	mg/L	<0.00020	--	--	--	--	--	--	--
Aroclor 1260, TCLP	E688A	0.00020	mg/L	<0.00020	--	--	--	--	--	--	--
Aroclor 1262, TCLP	E688A	0.00020	mg/L	<0.00020	--	--	--	--	--	--	--
Aroclor 1268, TCLP	E688A	0.00020	mg/L	<0.00020	--	--	--	--	--	--	--
benz(a)anthracene, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--	--
benzo(a)pyrene, TCLP	E644	0.00050	mg/L	<0.00050	0.001 mg/L	--	--	--	--	--	--
benzo(b+j)fluoranthene, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--	--
benzo(g,h,i)perylene, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--	--
benzo(k)fluoranthene, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--	--
chrysene, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--	--
cyanide, weak acid dissociable, TCLP	E337A	0.10	mg/L	<0.10	--	--	--	--	--	--	--
dibenz(a,h)anthracene, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2223671-001 (Continued)	ONWCR Sch. 4					
<b>TCLP Extractables - Continued</b>										
fluoranthene, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--
fluorene, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--
fluoride, TCLP	E240.F	10	mg/L	<10	150 mg/L	--	--	--	--	--
indeno(1,2,3-c,d)pyrene, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--
naphthalene, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--
nitrate (as N), TCLP	E240.NO3	5.0	mg/L	<5.0	--	--	--	--	--	--
nitrite (as N), TCLP	E240.NO2	5.0	mg/L	<5.0	--	--	--	--	--	--
phenanthrene, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--
pyrene, TCLP	E644	0.0050	mg/L	<0.0050	--	--	--	--	--	--
decachlorobiphenyl, TCLP	E688A	0.1	%	76.2	--	--	--	--	--	--
tetrachloro-m-xylene, TCLP	E688A	0.1	%	79.7	--	--	--	--	--	--
<b>TCLP Extractables Surrogates</b>										
chrysene-d12, TCLP	E644	5.0	%	95.8	--	--	--	--	--	--
naphthalene-d8, TCLP	E644	5.0	%	88.4	--	--	--	--	--	--
phenanthrene-d10, TCLP	E644	5.0	%	102	--	--	--	--	--	--
<b>TCLP Metals</b>										
arsenic, TCLP	E444	1.0	mg/L	<1.0	2.5 mg/L	--	--	--	--	--
barium, TCLP	E444	2.5	mg/L	<2.5	100 mg/L	--	--	--	--	--
boron, TCLP	E444	0.50	mg/L	<0.50	500 mg/L	--	--	--	--	--
cadmium, TCLP	E444	0.050	mg/L	<0.050	0.5 mg/L	--	--	--	--	--
chromium, TCLP	E444	0.25	mg/L	<0.25	5 mg/L	--	--	--	--	--
lead, TCLP	E444	0.25	mg/L	<0.25	5 mg/L	--	--	--	--	--
mercury, TCLP	E512	0.0010	mg/L	<0.0010	0.1 mg/L	--	--	--	--	--
pH, TCLP 1st preliminary	EPP444	0.010	pH units	9.99	--	--	--	--	--	--
pH, TCLP 2nd preliminary	EPP444	0.010	pH units	5.57	--	--	--	--	--	--
pH, TCLP extraction fluid initial	EPP444	0.010	pH units	2.86	--	--	--	--	--	--
pH, TCLP final	EPP444	0.010	pH units	5.70	--	--	--	--	--	--
selenium, TCLP	E444	0.10	mg/L	<0.10	1 mg/L	--	--	--	--	--
silver, TCLP	E444	0.050	mg/L	<0.050	5 mg/L	--	--	--	--	--
uranium, TCLP	E444	0.20	mg/L	<0.20	10 mg/L	--	--	--	--	--
<b>TCLP VOCs</b>										
benzene, TCLP	E615B	0.0050	mg/L	<0.0050	0.5 mg/L	--	--	--	--	--
bromodichloromethane, TCLP	E615B	0.10	mg/L	<0.10	--	--	--	--	--	--
bromoform, TCLP	E615B	0.10	mg/L	<0.10	--	--	--	--	--	--
carbon tetrachloride, TCLP	E615B	0.025	mg/L	<0.025	0.5 mg/L	--	--	--	--	--
chlorobenzene, TCLP	E615B	0.025	mg/L	<0.025	8 mg/L	--	--	--	--	--



Analyte	Method	LOR	Unit	WT2223671-001 (Continued)	ONWCR Sch. 4					
<b>TCLP VOCs - Continued</b>										
chloroform, TCLP	E615B	0.10	mg/L	<0.10	10 mg/L	--	--	--	--	--
dibromochloromethane, TCLP	E615B	0.10	mg/L	<0.10	--	--	--	--	--	--
dichlorobenzene, 1,2-, TCLP	E615B	0.025	mg/L	<0.025	20 mg/L	--	--	--	--	--
dichlorobenzene, 1,4-, TCLP	E615B	0.025	mg/L	<0.025	0.5 mg/L	--	--	--	--	--
dichloroethane, 1,2-, TCLP	E615B	0.025	mg/L	<0.025	0.5 mg/L	--	--	--	--	--
dichloroethylene, 1,1-, TCLP	E615B	0.025	mg/L	<0.025	1.4 mg/L	--	--	--	--	--
dichloromethane, TCLP	E615B	0.10	mg/L	<0.10	5 mg/L	--	--	--	--	--
ethylbenzene, TCLP	E615B	0.0050	mg/L	<0.0050	--	--	--	--	--	--
methyl ethyl ketone [MEK], TCLP	E615B	0.10	mg/L	<0.10	200 mg/L	--	--	--	--	--
tetrachloroethylene, TCLP	E615B	0.025	mg/L	<0.025	3 mg/L	--	--	--	--	--
toluene, TCLP	E615B	0.0050	mg/L	<0.0050	2.4 mg/L	--	--	--	--	--
trichloroethylene, TCLP	E615B	0.025	mg/L	<0.025	5 mg/L	--	--	--	--	--
vinyl chloride, TCLP	E615B	0.050	mg/L	<0.050	0.2 mg/L	--	--	--	--	--
xylene, m+p-, TCLP	E615B	0.0050	mg/L	<0.0050	--	--	--	--	--	--
xylene, o-, TCLP	E615B	0.0050	mg/L	<0.0050	--	--	--	--	--	--
xylenes, total, TCLP	E615B	0.0075	mg/L	<0.0075	--	--	--	--	--	--
BTEX, total, TCLP	E615B	0.012	mg/L	<0.012	--	--	--	--	--	--
trihalomethanes [THMs], total, TCLP	E615B	0.20	mg/L	<0.20	--	--	--	--	--	--
bromofluorobenzene, 4-, TCLP	E615B	1.0	%	103	--	--	--	--	--	--
difluorobenzene, 1,4-, TCLP	E615B	1.0	%	102	--	--	--	--	--	--
<b>Hydrocarbons</b>										
F1 (C6-C10)	E581.F1	5.0	mg/kg	<5.0	--	--	--	--	--	--
F2 (C10-C16)	E601.SG-L	10	mg/kg	<10	--	--	--	--	--	--
F3 (C16-C34)	E601.SG-L	50	mg/kg	60	--	--	--	--	--	--
F4 (C34-C50)	E601.SG-L	50	mg/kg	60	--	--	--	--	--	--
F4G-sg	E601.F4G-L	250	mg/kg	620	--	--	--	--	--	--
hydrocarbons, total (C6-C50)	EC581	80	mg/kg	120	--	--	--	--	--	--
chromatogram to baseline at nC50	E601.SG-L		-	NO	--	--	--	--	--	--
bromobenzotrifluoride, 2- (F2-F4 surr)	E601.SG-L	1.0	%	97.4	--	--	--	--	--	--
dichlorotoluene, 3,4-	E581.F1	1.0	%	97.1	--	--	--	--	--	--
<b>Polychlorinated Biphenyls</b>										
polychlorinated biphenyls [PCBs], total, TCLP	E688A	0.00060	mg/L	<0.00060	0.3 mg/L	--	--	--	--	--



Please refer to the General Comments section for an explanation of any qualifiers detected.

## No Breaches Found

<b>Key:</b>	
ONWCR	Ontario MECP, General Waste Control Regulation No. 347/90
Sch. 4	Schedule 4 Leachate Quality Criteria

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## QUALITY CONTROL INTERPRETIVE REPORT

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<p><b>Work Order</b> : <b>WT2223671</b></p> <p><b>Client</b> : <b>Omni-McCann Inc.</b></p> <p><b>Contact</b> : Daniel Elliot</p> <p><b>Address</b> : 1755 Woodward Dr. Suite 200 Ottawa ON Canada K2C 0P9</p> <p><b>Telephone</b> : 705 243 5828</p> <p><b>Project</b> : 0006-0103</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 20-1009803</p> <p><b>Sampler</b> : AC</p> <p><b>Site</b> : ----</p> <p><b>Quote number</b> : Project 0006-0103</p> <p><b>No. of samples received</b> : 1</p> <p><b>No. of samples analysed</b> : 1</p>	<p><b>Page</b> : 1 of 10</p> <p><b>Laboratory</b> : Waterloo - Environmental</p> <p><b>Account Manager</b> : Emily Smith</p> <p><b>Address</b> : 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8</p> <p><b>Telephone</b> : +1 519 886 6910</p> <p><b>Date Samples Received</b> : 29-Nov-2022 16:40</p> <p><b>Issue Date</b> : 08-Dec-2022 16:01</p>
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This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

**Key**

- Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
  - CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
  - DQO: Data Quality Objective.
  - LOR: Limit of Reporting (detection limit).
  - RPD: Relative Percent Difference.
- 

### ***Workorder Comments***

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Holding times are displayed as "----" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### ***Summary of Outliers***

#### ***Outliers : Quality Control Samples***

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

#### ***Outliers: Reference Material (RM) Samples***

- No Reference Material (RM) Sample outliers occur.

### ***Outliers : Analysis Holding Time Compliance (Breaches)***

- No Analysis Holding Time Outliers exist.

### ***Outliers : Frequency of Quality Control Samples***

- No Quality Control Sample Frequency Outliers occur.





## Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: Soil/Solid

Evaluation: \* = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Hydrocarbons : CCME PHC - F1 by Headspace GC-FID</b>											
Glass soil methanol vial [ON MECP] MARCH TCLP	E581.F1	29-Nov-2022	07-Dec-2022	14 days	9 days	✓	07-Dec-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHCs - F4G by Gravimetry (Low Level)</b>											
Glass soil jar/Teflon lined cap MARCH TCLP	E601.F4G-L	29-Nov-2022	06-Dec-2022	14 days	8 days	✓	06-Dec-2022	40 days	0 days	✓	
<b>Hydrocarbons : CCME PHCs - F2-F4 by GC-FID (Low Level)</b>											
Glass soil jar/Teflon lined cap MARCH TCLP	E601.SG-L	29-Nov-2022	02-Dec-2022	14 days	4 days	✓	06-Dec-2022	40 days	4 days	✓	
<b>Physical Tests : Ignitability (O. Reg. 347/558)</b>											
Glass soil jar/Teflon lined cap MARCH TCLP	E209	29-Nov-2022	----	----	----		03-Dec-2022	30 days	5 days	✓	
<b>Physical Tests : Moisture Content by Gravimetry</b>											
Glass soil jar/Teflon lined cap MARCH TCLP	E144	29-Nov-2022	----	----	----		02-Dec-2022	----	----		
<b>Polychlorinated Biphenyls : PCB Aroclors by GC-MS (TCLP)</b>											
Amber glass/Teflon lined cap MARCH TCLP	E688A	05-Dec-2022	06-Dec-2022	----	----		07-Dec-2022	----	----		
<b>TCLP Extractables : Fluoride by IC (TCLP)</b>											
HDPE [ON MECP] MARCH TCLP	E240.F	05-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	28 days	7 days	✓	



Matrix: Soil/Solid

Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>TCLP Extractables : Nitrate by IC (TCLP)</b>											
HDPE [ON MECP] MARCH TCLP	E240.NO3	05-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	7 days	7 days	✔	
<b>TCLP Extractables : Nitrite by IC (TCLP)</b>											
HDPE [ON MECP] MARCH TCLP	E240.NO2	05-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	7 days	7 days	✔	
<b>TCLP Extractables : PAHs by GC-MS (TCLP)</b>											
Amber glass/Teflon lined cap (sodium bisulfate) MARCH TCLP	E644	05-Dec-2022	06-Dec-2022	20 days	8 days	✔	07-Dec-2022	40 days	1 days	✔	
<b>TCLP Extractables : PCB Aroclors by GC-MS (TCLP)</b>											
Amber glass/Teflon lined cap MARCH TCLP	E688A	05-Dec-2022	06-Dec-2022	20 days	8 days	✔	07-Dec-2022	40 days	1 days	✔	
<b>TCLP Extractables : WAD Cyanide (TCLP)</b>											
UV-inhibited HDPE - total (lab preserved) MARCH TCLP	E337A	05-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	8 days	✔	
<b>TCLP Metals : Mercury by CVAAS (TCLP)</b>											
Glass vial - total (lab preserved) MARCH TCLP	E512	05-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	28 days	7 days	✔	
<b>TCLP Metals : Metals by CRC ICMS (TCLP)</b>											
HDPE - total (lab preserved) MARCH TCLP	E444	05-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	180 days	7 days	✔	
<b>TCLP Metals : TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)</b>											
Lab Split - Non-Volatile Leach: 14 day HT (e.g. CN, SVOC, NOX) MARCH TCLP	EPP444	29-Nov-2022	05-Dec-2022	----	----		----	----	----		
<b>TCLP VOCs : VOCs by Headspace GC-MS (TCLP)</b>											
Glass vial (sodium bisulfate) MARCH TCLP	E615B	05-Dec-2022	06-Dec-2022	----	----		06-Dec-2022	14 days	7 days	✔	

[Legend & Qualifier Definitions](#)

Page : 5 of 10  
Work Order : WT2223671  
Client : Omni-McCann Inc.  
Project : 0006-0103



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Rec. HT: ALS recommended hold time (see units).



## Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: \* = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
CCME PHC - F1 by Headspace GC-FID	E581.F1	770811	1	18	5.5	5.0	✓
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	768937	1	6	16.6	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	766036	1	9	11.1	5.0	✓
Fluoride by IC (TCLP)	E240.F	768498	1	5	20.0	5.0	✓
Mercury by CVAAS (TCLP)	E512	768515	1	6	16.6	5.0	✓
Metals by CRC ICPMS (TCLP)	E444	768501	1	6	16.6	5.0	✓
Moisture Content by Gravimetry	E144	765612	1	20	5.0	5.0	✓
Nitrate by IC (TCLP)	E240.NO3	768499	1	5	20.0	5.0	✓
Nitrite by IC (TCLP)	E240.NO2	768500	1	5	20.0	5.0	✓
PAHs by GC-MS (TCLP)	E644	769048	1	3	33.3	5.0	✓
PCB Aroclors by GC-MS (TCLP)	E688A	769058	1	3	33.3	5.0	✓
VOCs by Headspace GC-MS (TCLP)	E615B	768511	1	4	25.0	5.0	✓
WAD Cyanide (TCLP)	E337A	769101	1	6	16.6	5.0	✓
<b>Laboratory Control Samples (LCS)</b>							
CCME PHC - F1 by Headspace GC-FID	E581.F1	770811	1	18	5.5	5.0	✓
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	768937	1	6	16.6	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	766036	1	9	11.1	5.0	✓
Fluoride by IC (TCLP)	E240.F	768498	1	5	20.0	5.0	✓
Mercury by CVAAS (TCLP)	E512	768515	1	6	16.6	5.0	✓
Metals by CRC ICPMS (TCLP)	E444	768501	1	6	16.6	5.0	✓
Moisture Content by Gravimetry	E144	765612	1	20	5.0	5.0	✓
Nitrate by IC (TCLP)	E240.NO3	768499	1	5	20.0	5.0	✓
Nitrite by IC (TCLP)	E240.NO2	768500	1	5	20.0	5.0	✓
PAHs by GC-MS (TCLP)	E644	769048	1	3	33.3	5.0	✓
PCB Aroclors by GC-MS (TCLP)	E688A	769058	1	3	33.3	5.0	✓
VOCs by Headspace GC-MS (TCLP)	E615B	768511	1	4	25.0	5.0	✓
WAD Cyanide (TCLP)	E337A	769101	1	6	16.6	5.0	✓
<b>Method Blanks (MB)</b>							
CCME PHC - F1 by Headspace GC-FID	E581.F1	770811	1	18	5.5	5.0	✓
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	768937	1	6	16.6	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	766036	1	9	11.1	5.0	✓
Fluoride by IC (TCLP)	E240.F	768498	1	5	20.0	5.0	✓
Mercury by CVAAS (TCLP)	E512	768515	1	6	16.6	5.0	✓
Metals by CRC ICPMS (TCLP)	E444	768501	1	6	16.6	5.0	✓
Moisture Content by Gravimetry	E144	765612	1	20	5.0	5.0	✓



Matrix: **Soil/Solid**

Evaluation: \* = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
<b>Method Blanks (MB) - Continued</b>							
Nitrate by IC (TCLP)	E240.NO3	768499	1	5	20.0	5.0	✓
Nitrite by IC (TCLP)	E240.NO2	768500	1	5	20.0	5.0	✓
PAHs by GC-MS (TCLP)	E644	769048	1	3	33.3	5.0	✓
PCB Aroclors by GC-MS (TCLP)	E688A	769058	1	3	33.3	5.0	✓
VOCs by Headspace GC-MS (TCLP)	E615B	768511	1	4	25.0	5.0	✓
WAD Cyanide (TCLP)	E337A	769101	1	6	16.6	5.0	✓
<b>Matrix Spikes (MS)</b>							
CCME PHC - F1 by Headspace GC-FID	E581.F1	770811	1	18	5.5	5.0	✓
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L	768937	1	6	16.6	5.0	✓
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L	766036	1	9	11.1	5.0	✓
Fluoride by IC (TCLP)	E240.F	768498	1	5	20.0	5.0	✓
Mercury by CVAAS (TCLP)	E512	768515	1	6	16.6	5.0	✓
Metals by CRC ICPMS (TCLP)	E444	768501	1	6	16.6	5.0	✓
Nitrate by IC (TCLP)	E240.NO3	768499	1	5	20.0	5.0	✓
Nitrite by IC (TCLP)	E240.NO2	768500	1	5	20.0	5.0	✓
PAHs by GC-MS (TCLP)	E644	769048	1	3	33.3	5.0	✓
PCB Aroclors by GC-MS (TCLP)	E688A	769058	1	3	33.3	5.0	✓
VOCs by Headspace GC-MS (TCLP)	E615B	768511	1	4	25.0	5.0	✓
WAD Cyanide (TCLP)	E337A	769101	1	6	16.6	5.0	✓



## Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Moisture Content by Gravimetry	E144 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Ignitability (O. Reg. 347/558)	E209 Waterloo - Environmental	Soil/Solid	EPA 1030 (mod)	Ignitability is determined by placing a sample on a ceramic tile and formed into a test strip. One end of the strip is then heated with a torch. Any burn rate for non-metallic samples that exceeds 2.2 mm/sec is considered to have a positive result. For metals, a burn rate of more than 0.17 mm/sec is considered to have a positive result.
Fluoride by IC (TCLP)	E240.F Waterloo - Environmental	Soil/Solid	EPA 1311/EPA 300.1 (mod)	Inorganic anions are analyzed by obtaining an extract produced by the Toxicity Characteristic Leachate Procedure (TCLP) as per EPA 1311, which is then analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite by IC (TCLP)	E240.NO2 Waterloo - Environmental	Soil/Solid	EPA 1311/EPA 300.1 (mod)	Inorganic anions are analyzed by obtaining an extract produced by the Toxicity Characteristic Leachate Procedure (TCLP) as per EPA 1311, which is then analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate by IC (TCLP)	E240.NO3 Waterloo - Environmental	Soil/Solid	EPA 1311/EPA 300.1 (mod)	Inorganic anions are analyzed by obtaining an extract produced by the Toxicity Characteristic Leachate Procedure (TCLP) as per EPA 1311, which is then analyzed by Ion Chromatography with conductivity and/or UV detection.
WAD Cyanide (TCLP)	E337A Waterloo - Environmental	Soil/Solid	APHA 4500-CN I (mod)	Weak Acid Dissociable (WAD) cyanide is determined after extraction by Continuous Flow Analyzer (CFA) with in-line distillation followed by colourmetric analysis.
Metals by CRC ICPMS (TCLP)	E444 Waterloo - Environmental	Soil/Solid	EPA 1311/6020B (mod)	An extract produced by the Toxicity Characteristic Leachate Procedure (TCLP) as per EPA 1311 is analyzed by Collision/Reaction Cell ICPMS.
Mercury by CVAAS (TCLP)	E512 Waterloo - Environmental	Soil/Solid	SW 846 -1311/245.1 CVAA ON TCLP LEACHATE	An extract produced by the Toxicity Characteristic Leachate Procedure (TCLP) as per EPA 1311 is analyzed by CVAAS.
CCME PHC - F1 by Headspace GC-FID	E581.F1 Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
CCME PHCs - F4G by Gravimetry (Low Level)	E601.F4G-L Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	A portion of the silica gel treated sample extract is filtered and dried at 105°C and the mass of the residual gravimetric heavy hydrocarbons (F4G) is determined gravimetrically.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHCs - F2-F4 by GC-FID (Low Level)	E601.SG-L  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4).
VOCs by Headspace GC-MS (TCLP)	E615B  Waterloo - Environmental	Soil/Solid	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs by GC-MS (TCLP)	E644  Waterloo - Environmental	Soil/Solid	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by GC-MS.
PCB Aroclors by GC-MS (TCLP)	E688A  Waterloo - Environmental	Soil/Solid	EPA 8270E (mod)	PCB Aroclors are analyzed by GC-MS
Nitrate and Nitrite (as N), (TCLP) (Calculation)	EC240.N+N  Waterloo - Environmental	Soil/Solid	EPA 300.0	Nitrate and Nitrite (as N) is a calculated parameter. Nitrate and Nitrite (as N) = Nitrite (as N) + Nitrate (as N).
Sum F1 to F4 (C6-C50)	EC581  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
VOCs Methanol Extraction for Headspace Analysis	EP581  Waterloo - Environmental	Soil/Solid	EPA 5035A (mod)	VOCs in samples are extracted with methanol. Extracts are then prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
VOCs Preparation for Headspace Analysis (TCLP)	EP582  Waterloo - Environmental	Soil/Solid	EPA 5021A (mod)	Liquid obtained after the TCLP process is prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PHCs and PAHs Hexane-Acetone Tumbler Extraction	EP601  Waterloo - Environmental	Soil/Solid	CCME PHC in Soil - Tier 1 (mod)	Samples are subsampled and Petroleum Hydrocarbons (PHC) and PAHs are extracted with 1:1 hexane:acetone using a rotary extractor.
PHCs and PAHs Extraction (TCLP)	EP602  Waterloo - Environmental	Soil/Solid	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.



<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
Pesticides, PCB, and Neutral Extractable Chlorinated Hydrocarbons Extraction (TCLP)	EP661  Waterloo - Environmental	Soil/Solid	EPA 3511 (mod)	Samples are extracted from aqueous sample using an organic solvent liquid-liquid extraction.
TCLP Leachate Preparation (Metals, Inorganics, and SVOCs)	EPP444  Waterloo - Environmental	Soil/Solid	EPA 1311	Preparation of a Toxicity Characteristic Leaching Procedure (TCLP) solid sample involves particle size reduction, homogenization, then determination of appropriate extraction fluid. A measured portion of fresh subsample is placed in an extraction bottle with the appropriate extraction fluid then tumbled in a rotary extractor for 18+/- 2 hours at 23 +/- 2 C. The liquid leachate is filtered to separate from solids then bottled and prepared for analytical tests.
TCLP Leachate Preparation (VOCs)	EPP582  Waterloo - Environmental	Soil/Solid	EPA 1311	An extract produced by the Toxicity Characteristic Leaching Procedure (TCLP) as per EPA 1311.



## QUALITY CONTROL REPORT

**Work Order** : **WT2223671**  
**Client** : Omni-McCann Inc.  
**Contact** : Daniel Elliot  
**Address** : 1755 Woodward Dr. Suite 200  
 Ottawa ON Canada K2C 0P9  
**Telephone** :  
**Project** : 0006-0103  
**PO** : ----  
**C-O-C number** : 20-1009803  
**Sampler** : AC 705 243 5828  
**Site** : ----  
**Quote number** : Project 0006-0103  
**No. of samples received** : 1  
**No. of samples analysed** : 1

**Page** : 1 of 14  
**Laboratory** : Waterloo - Environmental  
**Account Manager** : Emily Smith  
**Address** : 60 Northland Road, Unit 1  
 Waterloo, Ontario Canada N2V 2B8  
**Telephone** : +1 519 886 6910  
**Date Samples Received** : 29-Nov-2022 16:40  
**Date Analysis Commenced** : 02-Dec-2022  
**Issue Date** : 08-Dec-2022 16:01

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

### Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

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Work Order : WT2223671  
Client : Omni-McCann Inc.  
Project : 0006-0103



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## General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include 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 predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

### Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.

CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

# = Indicates a QC result that did not meet the ALS DQO.

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## Workorder Comments

Holding times are displayed as "--" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

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### Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: Soil/Solid

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Physical Tests (QC Lot: 765612)</b>											
WT2223850-018	Anonymous	moisture	----	E144	0.25	%	9.21	9.23	0.212%	20%	----
<b>TCLP Extractables (QC Lot: 768498)</b>											
WT2223671-001	MARCH TCLP	fluoride, TCLP	16984-48-8	E240.F	10	mg/L	<10	<10	0	Diff <2x LOR	----
<b>TCLP Extractables (QC Lot: 768499)</b>											
WT2223671-001	MARCH TCLP	nitrate (as N), TCLP	14797-55-8	E240.NO3	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
<b>TCLP Extractables (QC Lot: 768500)</b>											
WT2223671-001	MARCH TCLP	nitrite (as N), TCLP	14797-65-0	E240.NO2	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
<b>TCLP Extractables (QC Lot: 769048)</b>											
WT2223671-001	MARCH TCLP	acenaphthene, TCLP	83-32-9	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----
		acenaphthylene, TCLP	208-96-8	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----
		acridine, TCLP	260-94-6	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----
		anthracene, TCLP	120-12-7	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----
		benz(a)anthracene, TCLP	56-55-3	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----
		benzo(a)pyrene, TCLP	50-32-8	E644	0.50	µg/L	<0.00050 mg/L	<0.50	0	Diff <2x LOR	----
		benzo(b+j)fluoranthene, TCLP	----	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----
		benzo(g,h,i)perylene, TCLP	191-24-2	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----
		benzo(k)fluoranthene, TCLP	207-08-9	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----
		chrysene, TCLP	218-01-9	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----
		dibenz(a,h)anthracene, TCLP	53-70-3	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----
		fluoranthene, TCLP	206-44-0	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----
		fluorene, TCLP	86-73-7	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----
		indeno(1,2,3-c,d)pyrene, TCLP	193-39-5	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----
		naphthalene, TCLP	91-20-3	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----
phenanthrene, TCLP	85-01-8	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----		
pyrene, TCLP	129-00-0	E644	5.0	µg/L	<0.0050 mg/L	<5.0	0	Diff <2x LOR	----		
<b>TCLP Extractables (QC Lot: 769058)</b>											
WT2223671-001	MARCH TCLP	Aroclor 1016, TCLP	12674-11-2	E688A	0.20	µg/L	<0.00020 mg/L	<0.20	0	Diff <2x LOR	----
		Aroclor 1221, TCLP	11104-28-2	E688A	0.20	µg/L	<0.00020 mg/L	<0.20	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>TCLP Extractables (QC Lot: 769058) - continued</b>											
WT2223671-001	MARCH TCLP	Aroclor 1232, TCLP	11141-16-5	E688A	0.20	µg/L	<0.00020 mg/L	<0.20	0	Diff <2x LOR	----
		Aroclor 1242, TCLP	53469-21-9	E688A	0.20	µg/L	<0.00020 mg/L	<0.20	0	Diff <2x LOR	----
		Aroclor 1248, TCLP	12672-29-6	E688A	0.20	µg/L	<0.00020 mg/L	<0.20	0	Diff <2x LOR	----
		Aroclor 1254, TCLP	11097-69-1	E688A	0.20	µg/L	<0.00020 mg/L	<0.20	0	Diff <2x LOR	----
		Aroclor 1260, TCLP	11096-82-5	E688A	0.20	µg/L	<0.00020 mg/L	<0.20	0	Diff <2x LOR	----
		Aroclor 1262, TCLP	37324-23-5	E688A	0.20	µg/L	<0.00020 mg/L	<0.20	0	Diff <2x LOR	----
		Aroclor 1268, TCLP	11100-14-4	E688A	0.20	µg/L	<0.00020 mg/L	<0.20	0	Diff <2x LOR	----
<b>TCLP Extractables (QC Lot: 769101)</b>											
WT2223671-001	MARCH TCLP	cyanide, weak acid dissociable, TCLP	----	E337A	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
<b>TCLP Metals (QC Lot: 768501)</b>											
WT2223833-001	Anonymous	arsenic, TCLP	7440-38-2	E444	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
		barium, TCLP	7440-39-3	E444	2.5	mg/L	<2.5	<2.5	0	Diff <2x LOR	----
		boron, TCLP	7440-42-8	E444	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
		cadmium, TCLP	7440-43-9	E444	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		chromium, TCLP	7440-47-3	E444	0.25	mg/L	<0.25	<0.25	0	Diff <2x LOR	----
		lead, TCLP	7439-92-1	E444	0.25	mg/L	<0.25	<0.25	0	Diff <2x LOR	----
		selenium, TCLP	7782-49-2	E444	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
		silver, TCLP	7440-22-4	E444	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		uranium, TCLP	7440-61-1	E444	0.20	mg/L	<0.20	<0.20	0	Diff <2x LOR	----
<b>TCLP Metals (QC Lot: 768515)</b>											
WT2223833-001	Anonymous	mercury, TCLP	7439-97-6	E512	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
<b>TCLP VOCs (QC Lot: 768511)</b>											
TY2204664-001	Anonymous	benzene, TCLP	71-43-2	E615B	5.0	µg/L	0.0137 mg/L	13.0	0.7	Diff <2x LOR	----
		bromodichloromethane, TCLP	75-27-4	E615B	100	µg/L	<0.10 mg/L	<100	0	Diff <2x LOR	----
		bromoform, TCLP	75-25-2	E615B	100	µg/L	<0.10 mg/L	<100	0	Diff <2x LOR	----
		carbon tetrachloride, TCLP	56-23-5	E615B	25	µg/L	<0.025 mg/L	<25	0	Diff <2x LOR	----
		chlorobenzene, TCLP	108-90-7	E615B	25	µg/L	<0.025 mg/L	<25	0	Diff <2x LOR	----
		chloroform, TCLP	67-66-3	E615B	100	µg/L	<0.10 mg/L	<100	0	Diff <2x LOR	----
		dibromochloromethane, TCLP	124-48-1	E615B	100	µg/L	<0.10 mg/L	<100	0	Diff <2x LOR	----
		dichlorobenzene, 1,2-, TCLP	95-50-1	E615B	25	µg/L	<0.025 mg/L	<25	0	Diff <2x LOR	----
		dichlorobenzene, 1,4-, TCLP	106-46-7	E615B	25	µg/L	<0.025 mg/L	<25	0	Diff <2x LOR	----



Sub-Matrix: Soil/Solid					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>TCLP VOCs (QC Lot: 768511) - continued</b>											
TY2204664-001	Anonymous	dichloroethane, 1,2-, TCLP	107-06-2	E615B	25	µg/L	<0.025 mg/L	<25	0	Diff <2x LOR	----
		dichloroethylene, 1,1-, TCLP	75-35-4	E615B	25	µg/L	<0.025 mg/L	<25	0	Diff <2x LOR	----
		dichloromethane, TCLP	75-09-2	E615B	100	µg/L	<0.10 mg/L	<100	0	Diff <2x LOR	----
		ethylbenzene, TCLP	100-41-4	E615B	5.0	µg/L	0.0680 mg/L	64.2	5.74%	50%	----
		methyl ethyl ketone [MEK], TCLP	78-93-3	E615B	100	µg/L	<0.10 mg/L	<100	0	Diff <2x LOR	----
		tetrachloroethylene, TCLP	127-18-4	E615B	25	µg/L	<0.025 mg/L	<25	0	Diff <2x LOR	----
		toluene, TCLP	108-88-3	E615B	5.0	µg/L	0.221 mg/L	210	5.35%	50%	----
		trichloroethylene, TCLP	79-01-6	E615B	25	µg/L	<0.025 mg/L	<25	0	Diff <2x LOR	----
		vinyl chloride, TCLP	75-01-4	E615B	50	µg/L	<0.050 mg/L	<50	0	Diff <2x LOR	----
		xylylene, m+p-, TCLP	179601-23-1	E615B	5.0	µg/L	0.291 mg/L	276	5.33%	50%	----
xylylene, o-, TCLP	95-47-6	E615B	5.0	µg/L	0.167 mg/L	159	4.85%	50%	----		
<b>Hydrocarbons (QC Lot: 766036)</b>											
WT2223868-001	Anonymous	F2 (C10-C16)	----	E601.SG-L	10	mg/kg	13	17	4	Diff <2x LOR	----
		F3 (C16-C34)	----	E601.SG-L	50	mg/kg	219	220	2	Diff <2x LOR	----
		F4 (C34-C50)	----	E601.SG-L	50	mg/kg	400	457	13.4%	40%	----
<b>Hydrocarbons (QC Lot: 768937)</b>											
WT2223868-001	Anonymous	F4G-sg	----	E601.F4G-L	250	mg/kg	1400	1840	27.2%	40%	----
<b>Hydrocarbons (QC Lot: 770811)</b>											
WT2224339-001	Anonymous	F1 (C6-C10)	----	E581.F1	5.0	mg/kg	<5.0 µg/g	<5.0	0	Diff <2x LOR	----



## Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 765612)</b>						
moisture	---	E144	0.25	%	<0.25	---
<b>TCLP Extractables (QCLot: 768498)</b>						
fluoride, TCLP	16984-48-8	E240.F	10	mg/L	<10	---
<b>TCLP Extractables (QCLot: 768499)</b>						
nitrate (as N), TCLP	14797-55-8	E240.NO3	5	mg/L	<5.0	---
<b>TCLP Extractables (QCLot: 768500)</b>						
nitrite (as N), TCLP	14797-65-0	E240.NO2	5	mg/L	<5.0	---
<b>TCLP Extractables (QCLot: 769048)</b>						
acenaphthene, TCLP	83-32-9	E644	5	µg/L	<5.0	---
acenaphthylene, TCLP	208-96-8	E644	5	µg/L	<5.0	---
acridine, TCLP	260-94-6	E644	5	µg/L	<5.0	---
anthracene, TCLP	120-12-7	E644	5	µg/L	<5.0	---
benz(a)anthracene, TCLP	56-55-3	E644	5	µg/L	<5.0	---
benzo(a)pyrene, TCLP	50-32-8	E644	0.5	µg/L	<0.50	---
benzo(b+j)fluoranthene, TCLP	---	E644	5	µg/L	<5.0	---
benzo(g,h,i)perylene, TCLP	191-24-2	E644	5	µg/L	<5.0	---
benzo(k)fluoranthene, TCLP	207-08-9	E644	5	µg/L	<5.0	---
chrysene, TCLP	218-01-9	E644	5	µg/L	<5.0	---
dibenz(a,h)anthracene, TCLP	53-70-3	E644	5	µg/L	<5.0	---
fluoranthene, TCLP	206-44-0	E644	5	µg/L	<5.0	---
fluorene, TCLP	86-73-7	E644	5	µg/L	<5.0	---
indeno(1,2,3-c,d)pyrene, TCLP	193-39-5	E644	5	µg/L	<5.0	---
naphthalene, TCLP	91-20-3	E644	5	µg/L	<5.0	---
phenanthrene, TCLP	85-01-8	E644	5	µg/L	<5.0	---
pyrene, TCLP	129-00-0	E644	5	µg/L	<5.0	---
<b>TCLP Extractables (QCLot: 769058)</b>						
Aroclor 1016, TCLP	12674-11-2	E688A	0.2	µg/L	<0.20	---
Aroclor 1221, TCLP	11104-28-2	E688A	0.2	µg/L	<0.20	---
Aroclor 1232, TCLP	11141-16-5	E688A	0.2	µg/L	<0.20	---
Aroclor 1242, TCLP	53469-21-9	E688A	0.2	µg/L	<0.20	---
Aroclor 1248, TCLP	12672-29-6	E688A	0.2	µg/L	<0.20	---
Aroclor 1254, TCLP	11097-69-1	E688A	0.2	µg/L	<0.20	---



Sub-Matrix: Soil/Solid

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>TCLP Extractables (QCLot: 769058) - continued</b>						
Aroclor 1260, TCLP	11096-82-5	E688A	0.2	µg/L	<0.20	----
Aroclor 1262, TCLP	37324-23-5	E688A	0.2	µg/L	<0.20	----
Aroclor 1268, TCLP	11100-14-4	E688A	0.2	µg/L	<0.20	----
<b>TCLP Extractables (QCLot: 769101)</b>						
cyanide, weak acid dissociable, TCLP	----	E337A	0.1	mg/L	<0.10	----
<b>TCLP Metals (QCLot: 768501)</b>						
arsenic, TCLP	7440-38-2	E444	1	mg/L	<1.0	----
barium, TCLP	7440-39-3	E444	2.5	mg/L	<2.5	----
boron, TCLP	7440-42-8	E444	0.5	mg/L	<0.50	----
cadmium, TCLP	7440-43-9	E444	0.05	mg/L	<0.050	----
chromium, TCLP	7440-47-3	E444	0.25	mg/L	<0.25	----
lead, TCLP	7439-92-1	E444	0.25	mg/L	<0.25	----
selenium, TCLP	7782-49-2	E444	0.1	mg/L	<0.10	----
silver, TCLP	7440-22-4	E444	0.05	mg/L	<0.050	----
uranium, TCLP	7440-61-1	E444	0.2	mg/L	<0.20	----
<b>TCLP Metals (QCLot: 768515)</b>						
mercury, TCLP	7439-97-6	E512	0.001	mg/L	<0.0010	----
<b>TCLP VOCs (QCLot: 768511)</b>						
benzene, TCLP	71-43-2	E615B	5	µg/L	<5.0	----
bromodichloromethane, TCLP	75-27-4	E615B	100	µg/L	<100	----
bromoform, TCLP	75-25-2	E615B	100	µg/L	<100	----
carbon tetrachloride, TCLP	56-23-5	E615B	25	µg/L	<25	----
chlorobenzene, TCLP	108-90-7	E615B	25	µg/L	<25	----
chloroform, TCLP	67-66-3	E615B	100	µg/L	<100	----
dibromochloromethane, TCLP	124-48-1	E615B	100	µg/L	<100	----
dichlorobenzene, 1,2-, TCLP	95-50-1	E615B	25	µg/L	<25	----
dichlorobenzene, 1,4-, TCLP	106-46-7	E615B	25	µg/L	<25	----
dichloroethane, 1,2-, TCLP	107-06-2	E615B	25	µg/L	<25	----
dichloroethylene, 1,1-, TCLP	75-35-4	E615B	25	µg/L	<25	----
dichloromethane, TCLP	75-09-2	E615B	100	µg/L	<100	----
ethylbenzene, TCLP	100-41-4	E615B	5	µg/L	<5.0	----
methyl ethyl ketone [MEK], TCLP	78-93-3	E615B	100	µg/L	<100	----
tetrachloroethylene, TCLP	127-18-4	E615B	25	µg/L	<25	----
toluene, TCLP	108-88-3	E615B	5	µg/L	<5.0	----
trichloroethylene, TCLP	79-01-6	E615B	25	µg/L	<25	----



Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>TCLP VOCs (QCLot: 768511) - continued</b>						
vinyl chloride, TCLP	75-01-4	E615B	50	µg/L	<50	----
xylene, m+p-, TCLP	179601-23-1	E615B	5	µg/L	<5.0	----
xylene, o-, TCLP	95-47-6	E615B	5	µg/L	<5.0	----
<b>Hydrocarbons (QCLot: 766036)</b>						
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	<10	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	<50	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	<50	----
<b>Hydrocarbons (QCLot: 768937)</b>						
F4G-sg	----	E601.F4G-L	250	mg/kg	<250	----
<b>Hydrocarbons (QCLot: 770811)</b>						
F1 (C6-C10)	----	E581.F1	5	mg/kg	<5.0	----





### Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
Analyte	CAS Number	Method	LOR	Unit	Spike	Recovery (%)	Recovery Limits (%)		Qualifier
					Concentration	LCS	Low	High	
<b>Physical Tests (QCLot: 765612)</b>									
moisture	----	E144	0.25	%	50 %	100	90.0	110	----
<b>TCLP Extractables (QCLot: 768498)</b>									
fluoride, TCLP	16984-48-8	E240.F	10	mg/L	1 mg/L	90.9	70.0	130	----
<b>TCLP Extractables (QCLot: 768499)</b>									
nitrate (as N), TCLP	14797-55-8	E240.NO3	5	mg/L	2.5 mg/L	92.9	70.0	130	----
<b>TCLP Extractables (QCLot: 768500)</b>									
nitrite (as N), TCLP	14797-65-0	E240.NO2	5	mg/L	0.5 mg/L	102	70.0	130	----
<b>TCLP Extractables (QCLot: 769048)</b>									
acenaphthene, TCLP	83-32-9	E644	5	µg/L	0.5263 µg/L	99.7	50.0	130	----
acenaphthylene, TCLP	208-96-8	E644	5	µg/L	0.5263 µg/L	101	50.0	130	----
acridine, TCLP	260-94-6	E644	5	µg/L	0.5263 µg/L	126	50.0	140	----
anthracene, TCLP	120-12-7	E644	5	µg/L	0.5263 µg/L	108	50.0	130	----
benz(a)anthracene, TCLP	56-55-3	E644	5	µg/L	0.5263 µg/L	130	50.0	140	----
benzo(a)pyrene, TCLP	50-32-8	E644	0.5	µg/L	0.5263 µg/L	101	60.0	140	----
benzo(b+j)fluoranthene, TCLP	----	E644	5	µg/L	0.5263 µg/L	101	50.0	130	----
benzo(g,h,i)perylene, TCLP	191-24-2	E644	5	µg/L	0.5263 µg/L	129	50.0	140	----
benzo(k)fluoranthene, TCLP	207-08-9	E644	5	µg/L	0.5263 µg/L	103	50.0	150	----
chrysene, TCLP	218-01-9	E644	5	µg/L	0.5263 µg/L	125	50.0	140	----
dibenz(a,h)anthracene, TCLP	53-70-3	E644	5	µg/L	0.5263 µg/L	120	50.0	140	----
fluoranthene, TCLP	206-44-0	E644	5	µg/L	0.5263 µg/L	128	50.0	130	----
fluorene, TCLP	86-73-7	E644	5	µg/L	0.5263 µg/L	112	50.0	130	----
indeno(1,2,3-c,d)pyrene, TCLP	193-39-5	E644	5	µg/L	0.5263 µg/L	138	50.0	140	----
naphthalene, TCLP	91-20-3	E644	5	µg/L	0.5263 µg/L	86.2	50.0	130	----
phenanthrene, TCLP	85-01-8	E644	5	µg/L	0.5263 µg/L	117	50.0	130	----
pyrene, TCLP	129-00-0	E644	5	µg/L	0.5263 µg/L	128	50.0	140	----
<b>TCLP Extractables (QCLot: 769058)</b>									
Aroclor 1016, TCLP	12674-11-2	E688A	0.2	µg/L	0.2 µg/L	105	65.0	130	----
Aroclor 1221, TCLP	11104-28-2	E688A	0.2	µg/L	0.2 µg/L	105	65.0	130	----
Aroclor 1232, TCLP	11141-16-5	E688A	0.2	µg/L	0.2 µg/L	105	65.0	130	----
Aroclor 1242, TCLP	53469-21-9	E688A	0.2	µg/L	0.2 µg/L	105	65.0	130	----
Aroclor 1248, TCLP	12672-29-6	E688A	0.2	µg/L	0.2 µg/L	78.6	65.0	130	----
Aroclor 1254, TCLP	11097-69-1	E688A	0.2	µg/L	0.2 µg/L	108	65.0	130	----



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>TCLP Extractables (QCLot: 769058) - continued</b>									
Aroclor 1260, TCLP	11096-82-5	E688A	0.2	µg/L	0.2 µg/L	96.6	65.0	130	----
Aroclor 1262, TCLP	37324-23-5	E688A	0.2	µg/L	0.2 µg/L	96.6	65.0	130	----
Aroclor 1268, TCLP	11100-14-4	E688A	0.2	µg/L	0.2 µg/L	96.6	65.0	130	----
<b>TCLP Extractables (QCLot: 769101)</b>									
cyanide, weak acid dissociable, TCLP	----	E337A	0.1	mg/L	6.25 mg/L	111	70.0	130	----
<b>TCLP Metals (QCLot: 768501)</b>									
arsenic, TCLP	7440-38-2	E444	1	mg/L	0.05 mg/L	104	70.0	130	----
barium, TCLP	7440-39-3	E444	2.5	mg/L	0.0125 mg/L	102	70.0	130	----
boron, TCLP	7440-42-8	E444	0.5	mg/L	0.05 mg/L	99.3	70.0	130	----
cadmium, TCLP	7440-43-9	E444	0.05	mg/L	0.005 mg/L	98.8	70.0	130	----
chromium, TCLP	7440-47-3	E444	0.25	mg/L	0.0125 mg/L	100	70.0	130	----
lead, TCLP	7439-92-1	E444	0.25	mg/L	0.025 mg/L	102	70.0	130	----
selenium, TCLP	7782-49-2	E444	0.1	mg/L	0.05 mg/L	101	70.0	130	----
silver, TCLP	7440-22-4	E444	0.05	mg/L	0.005 mg/L	97.2	70.0	130	----
uranium, TCLP	7440-61-1	E444	0.2	mg/L	0.00025 mg/L	105	70.0	130	----
<b>TCLP Metals (QCLot: 768515)</b>									
mercury, TCLP	7439-97-6	E512	0.001	mg/L	0.0001 mg/L	93.1	70.0	130	----
<b>TCLP VOCs (QCLot: 768511)</b>									
benzene, TCLP	71-43-2	E615B	5	µg/L	250 µg/L	101	70.0	130	----
bromodichloromethane, TCLP	75-27-4	E615B	100	µg/L	250 µg/L	104	70.0	130	----
bromoform, TCLP	75-25-2	E615B	100	µg/L	250 µg/L	94.6	70.0	130	----
carbon tetrachloride, TCLP	56-23-5	E615B	25	µg/L	250 µg/L	108	60.0	140	----
chlorobenzene, TCLP	108-90-7	E615B	25	µg/L	250 µg/L	100	70.0	130	----
chloroform, TCLP	67-66-3	E615B	100	µg/L	250 µg/L	101	70.0	130	----
dibromochloromethane, TCLP	124-48-1	E615B	100	µg/L	250 µg/L	98.5	70.0	130	----
dichlorobenzene, 1,2-, TCLP	95-50-1	E615B	25	µg/L	250 µg/L	102	70.0	130	----
dichlorobenzene, 1,4-, TCLP	106-46-7	E615B	25	µg/L	250 µg/L	105	70.0	130	----
dichloroethane, 1,2-, TCLP	107-06-2	E615B	25	µg/L	250 µg/L	92.8	70.0	130	----
dichloroethylene, 1,1-, TCLP	75-35-4	E615B	25	µg/L	250 µg/L	93.8	70.0	130	----
dichloromethane, TCLP	75-09-2	E615B	100	µg/L	250 µg/L	97.3	70.0	130	----
ethylbenzene, TCLP	100-41-4	E615B	5	µg/L	250 µg/L	102	70.0	130	----
methyl ethyl ketone [MEK], TCLP	78-93-3	E615B	100	µg/L	250 µg/L	97.1	50.0	150	----
tetrachloroethylene, TCLP	127-18-4	E615B	25	µg/L	250 µg/L	108	70.0	130	----
toluene, TCLP	108-88-3	E615B	5	µg/L	250 µg/L	102	70.0	130	----



Sub-Matrix: Soil/Solid

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
<b>TCLP VOCs (QCLot: 768511) - continued</b>									
trichloroethylene, TCLP	79-01-6	E615B	25	µg/L	250 µg/L	106	70.0	130	----
vinyl chloride, TCLP	75-01-4	E615B	50	µg/L	250 µg/L	78.3	60.0	130	----
xylene, m+p-, TCLP	179601-23-1	E615B	5	µg/L	500 µg/L	102	70.0	130	----
xylene, o-, TCLP	95-47-6	E615B	5	µg/L	250 µg/L	99.8	70.0	130	----
<b>Hydrocarbons (QCLot: 766036)</b>									
F2 (C10-C16)	----	E601.SG-L	10	mg/kg	883.825 mg/kg	77.3	70.0	130	----
F3 (C16-C34)	----	E601.SG-L	50	mg/kg	1385.22 mg/kg	71.0	70.0	130	----
F4 (C34-C50)	----	E601.SG-L	50	mg/kg	797.55 mg/kg	80.0	70.0	130	----
<b>Hydrocarbons (QCLot: 768937)</b>									
F4G-sg	----	E601.F4G-L	250	mg/kg	1298.6 mg/kg	70.6	70.0	130	----
<b>Hydrocarbons (QCLot: 770811)</b>									
F1 (C6-C10)	----	E581.F1	5	mg/kg	69.1875 mg/kg	120	80.0	120	----



### Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>TCLP Extractables (QCLot: 768498)</b>										
WT2223671-001	MARCH TCLP	fluoride, TCLP	16984-48-8	E240.F	17 mg/L	20 mg/L	86.3	50.0	150	----
<b>TCLP Extractables (QCLot: 768499)</b>										
WT2223671-001	MARCH TCLP	nitrate (as N), TCLP	14797-55-8	E240.NO3	48.5 mg/L	50 mg/L	96.9	50.0	150	----
<b>TCLP Extractables (QCLot: 768500)</b>										
WT2223671-001	MARCH TCLP	nitrite (as N), TCLP	14797-65-0	E240.NO2	9.6 mg/L	10 mg/L	96.2	50.0	150	----
<b>TCLP Extractables (QCLot: 769048)</b>										
WT2223671-001	MARCH TCLP	acenaphthene, TCLP	83-32-9	E644	0.5 µg/L	0.5263 µg/L	102	50.0	140	----
		acenaphthylene, TCLP	208-96-8	E644	0.5 µg/L	0.5263 µg/L	104	50.0	140	----
		acridine, TCLP	260-94-6	E644	0.6 µg/L	0.5263 µg/L	123	50.0	140	----
		anthracene, TCLP	120-12-7	E644	0.6 µg/L	0.5263 µg/L	108	50.0	140	----
		benz(a)anthracene, TCLP	56-55-3	E644	0.7 µg/L	0.5263 µg/L	132	50.0	140	----
		benzo(a)pyrene, TCLP	50-32-8	E644	0.56 µg/L	0.5263 µg/L	106	50.0	140	----
		benzo(b+j)fluoranthene, TCLP	----	E644	0.6 µg/L	0.5263 µg/L	105	50.0	140	----
		benzo(g,h,i)perylene, TCLP	191-24-2	E644	0.7 µg/L	0.5263 µg/L	138	50.0	140	----
		benzo(k)fluoranthene, TCLP	207-08-9	E644	0.6 µg/L	0.5263 µg/L	106	50.0	140	----
		chrysene, TCLP	218-01-9	E644	0.6 µg/L	0.5263 µg/L	120	50.0	140	----
		dibenz(a,h)anthracene, TCLP	53-70-3	E644	0.5 µg/L	0.5263 µg/L	101	50.0	140	----
		fluoranthene, TCLP	206-44-0	E644	0.7 µg/L	0.5263 µg/L	129	50.0	140	----
		fluorene, TCLP	86-73-7	E644	0.6 µg/L	0.5263 µg/L	115	50.0	140	----
		indeno(1,2,3-c,d)pyrene, TCLP	193-39-5	E644	0.7 µg/L	0.5263 µg/L	139	50.0	140	----
		naphthalene, TCLP	91-20-3	E644	0.5 µg/L	0.5263 µg/L	91.2	50.0	140	----
phenanthrene, TCLP	85-01-8	E644	0.6 µg/L	0.5263 µg/L	119	50.0	140	----		
pyrene, TCLP	129-00-0	E644	0.7 µg/L	0.5263 µg/L	127	50.0	140	----		
<b>TCLP Extractables (QCLot: 769058)</b>										
WT2223671-001	MARCH TCLP	Aroclor 1016, TCLP	12674-11-2	E688A	0.22 µg/L	0.2 µg/L	109	50.0	150	----
		Aroclor 1221, TCLP	11104-28-2	E688A	0.22 µg/L	0.2 µg/L	109	50.0	150	----
		Aroclor 1232, TCLP	11141-16-5	E688A	0.22 µg/L	0.2 µg/L	109	50.0	150	----
		Aroclor 1242, TCLP	53469-21-9	E688A	0.22 µg/L	0.2 µg/L	108	50.0	150	----
		Aroclor 1248, TCLP	12672-29-6	E688A	0.22 µg/L	0.2 µg/L	109	50.0	150	----
		Aroclor 1254, TCLP	11097-69-1	E688A	0.19 µg/L	0.2 µg/L	93.1	50.0	150	----



Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>TCLP Extractables (QCLot: 769058) - continued</b>										
WT2223671-001	MARCH TCLP	Aroclor 1260, TCLP	11096-82-5	E688A	0.15 µg/L	0.2 µg/L	73.7	50.0	150	----
		Aroclor 1262, TCLP	37324-23-5	E688A	0.15 µg/L	0.2 µg/L	74.9	50.0	150	----
		Aroclor 1268, TCLP	11100-14-4	E688A	0.15 µg/L	0.2 µg/L	74.9	50.0	150	----
<b>TCLP Extractables (QCLot: 769101)</b>										
WT2223671-001	MARCH TCLP	cyanide, weak acid dissociable, TCLP	----	E337A	6.71 mg/L	6.25 mg/L	107	50.0	140	----
<b>TCLP Metals (QCLot: 768501)</b>										
WT2223833-001	Anonymous	arsenic, TCLP	7440-38-2	E444	9.5 mg/L	10 mg/L	94.8	50.0	140	----
		barium, TCLP	7440-39-3	E444	12.8 mg/L	12.5 mg/L	102	50.0	140	----
		boron, TCLP	7440-42-8	E444	9.75 mg/L	10 mg/L	97.5	50.0	140	----
		cadmium, TCLP	7440-43-9	E444	9.97 mg/L	10 mg/L	99.7	50.0	140	----
		chromium, TCLP	7440-47-3	E444	10.3 mg/L	10 mg/L	103	50.0	140	----
		lead, TCLP	7439-92-1	E444	10.2 mg/L	10 mg/L	102	50.0	140	----
		selenium, TCLP	7782-49-2	E444	10.3 mg/L	10 mg/L	103	50.0	140	----
		silver, TCLP	7440-22-4	E444	0.060 mg/L	0.1 mg/L	60.1	50.0	140	----
		uranium, TCLP	7440-61-1	E444	10.3 mg/L	10 mg/L	103	50.0	140	----
<b>TCLP Metals (QCLot: 768515)</b>										
WT2223833-001	Anonymous	mercury, TCLP	7439-97-6	E512	0.0027 mg/L	0.003 mg/L	90.0	50.0	140	----
<b>TCLP VOCs (QCLot: 768511)</b>										
TY2204664-001	Anonymous	benzene, TCLP	71-43-2	E615B	264 µg/L	250 µg/L	106	50.0	140	----
		bromodichloromethane, TCLP	75-27-4	E615B	290 µg/L	250 µg/L	117	50.0	140	----
		bromoform, TCLP	75-25-2	E615B	280 µg/L	250 µg/L	114	50.0	140	----
		carbon tetrachloride, TCLP	56-23-5	E615B	268 µg/L	250 µg/L	107	50.0	140	----
		chlorobenzene, TCLP	108-90-7	E615B	258 µg/L	250 µg/L	103	50.0	140	----
		chloroform, TCLP	67-66-3	E615B	270 µg/L	250 µg/L	107	50.0	140	----
		dibromochloromethane, TCLP	124-48-1	E615B	280 µg/L	250 µg/L	112	50.0	140	----
		dichlorobenzene, 1,2-, TCLP	95-50-1	E615B	255 µg/L	250 µg/L	102	50.0	140	----
		dichlorobenzene, 1,4-, TCLP	106-46-7	E615B	256 µg/L	250 µg/L	102	50.0	140	----
		dichloroethane, 1,2-, TCLP	107-06-2	E615B	273 µg/L	250 µg/L	109	50.0	140	----
		dichloroethylene, 1,1-, TCLP	75-35-4	E615B	230 µg/L	250 µg/L	92.2	50.0	140	----
		dichloromethane, TCLP	75-09-2	E615B	270 µg/L	250 µg/L	108	50.0	140	----
		ethylbenzene, TCLP	100-41-4	E615B	245 µg/L	250 µg/L	97.8	50.0	140	----
		methyl ethyl ketone [MEK], TCLP	78-93-3	E615B	310 µg/L	250 µg/L	124	50.0	140	----
		tetrachloroethylene, TCLP	127-18-4	E615B	260 µg/L	250 µg/L	104	50.0	140	----
		toluene, TCLP	108-88-3	E615B	243 µg/L	250 µg/L	97.2	50.0	140	----



Sub-Matrix: Soil/Solid

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>TCLP VOCs (QCLot: 768511) - continued</b>										
TY2204664-001	Anonymous	trichloroethylene, TCLP	79-01-6	E615B	271 µg/L	250 µg/L	108	50.0	140	----
		vinyl chloride, TCLP	75-01-4	E615B	193 µg/L	250 µg/L	77.1	50.0	140	----
		xylene, m+p-, TCLP	179601-23-1	E615B	488 µg/L	500 µg/L	97.6	50.0	140	----
		xylene, o-, TCLP	95-47-6	E615B	249 µg/L	250 µg/L	99.5	50.0	140	----
<b>Hydrocarbons (QCLot: 766036)</b>										
WT2223868-001	Anonymous	F2 (C10-C16)	----	E601.SG-L	593 mg/kg	1040.925 mg/kg	74.3	60.0	140	----
		F3 (C16-C34)	----	E601.SG-L	921 mg/kg	1783.035 mg/kg	67.4	60.0	140	----
		F4 (C34-C50)	----	E601.SG-L	686 mg/kg	802.11 mg/kg	112	60.0	140	----
<b>Hydrocarbons (QCLot: 768937)</b>										
WT2223868-001	Anonymous	F4G-sg	----	E601.F4G-L	ND mg/kg	1298.6 mg/kg	ND	60.0	140	E
<b>Hydrocarbons (QCLot: 770811)</b>										
WT2224339-001	Anonymous	F1 (C6-C10)	----	E581.F1	55.9 mg/kg	62.5 mg/kg	106	60.0	140	----

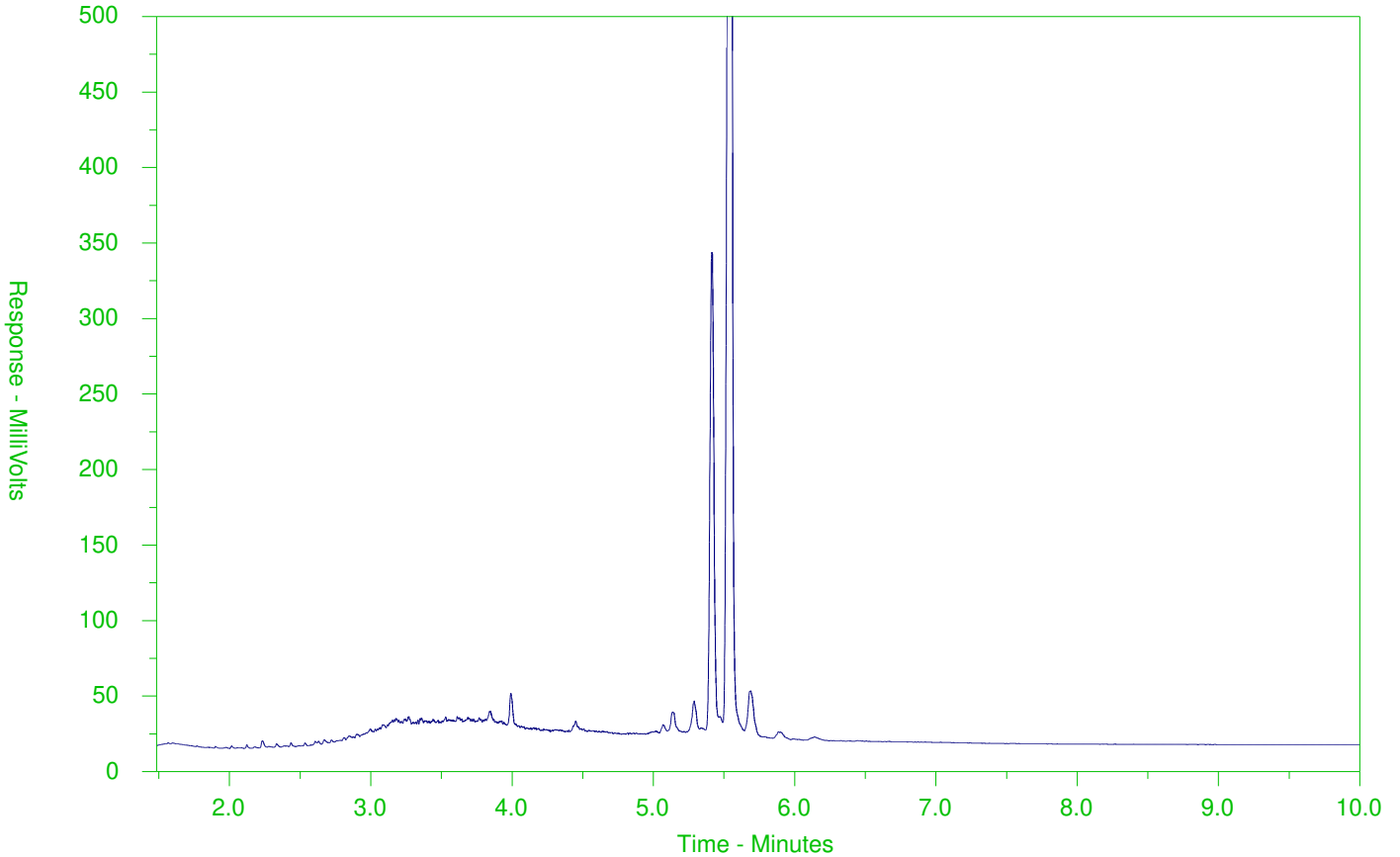
**Qualifiers**

Qualifier	Description
E	Matrix Spike recovery outside ALS DQO due to heterogeneous analyte background in sample.

# CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: WT2223671-001-E601.SG-L  
 Client Sample ID: MARCH TCLP



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

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

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

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

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







# MANIFEST

Movement Document

DO NOT SIGN OR MAIL THIS DOCUMENT TO ONTARIO'S MINISTRY OF THE ENVIRONMENT, CONSERVATION AND PARKS.

This document is a paper copy of information submitted to Ontario's Hazardous Waste Program Registry. All parties on the manifest are required to submit information to the Registry as required by R.R.O. 1990, Reg. 347.

Manifest Number

**MN-000008070**

<b>A Generator/Consignor</b>		<b>B Carrier</b>		<b>C Receiver/Consignee</b>										
Registration Number <b>ON5431332</b>		Registration Number <b>A860302</b>		Registration Number <b>A460722</b>										
Company Name <b>March and Main Developments Inc.</b>		Company Name <b>DRAIN-ALL LTD.</b>		Company Name <b>DRAIN-ALL LTD.</b>										
Mailing Address <b>109 Atlantic Ave., Unit 308B, Toronto, Ontario M6K1X4 Canada</b>		Mailing Address <b>1611 LIVERPOOL CRT., GLOUCESTER, Ontario, K1B4L1</b>		Mailing Address <b>2705 Stevenage Drive, Ottawa, Ontario, K1G 3N2</b>										
Email <b>dan@omnimccann.com</b>		Email <b>delsie@gflenv.com</b>		Email <b>delsie@gflenv.com</b>										
Generating Site Address <b>603 March Rd, Ottawa, Ontario K2K2M5 Canada</b>		Phone <b>6137391070 ext. 301</b>		Receiving Site Address <b>2705 STEVENAGE DRIVE OTTAWA, Ontario K1G3N2 Canada</b>										
Phone <b>6138574936 ext.</b>		Vehicle Information (Trailer / Rail Car)		Phone <b>6137391070 ext. 301</b>										
		(1) Registration Number <b>PA11398</b> Province/State <b>Ontario</b>												
		(2) Registration Number Province/State												
<u>Generator Signature</u> <b>SIGNED</b> Jan 09, 2023 11:28 AM		<u>Carrier Signature</u> <b>SIGNED</b> Jan 09, 2023 11:27 AM		<u>Receiver Signature</u> <b>SIGNED</b> Jan 11, 2023 09:31 AM										
Name <b>Daniel Elliot</b>		Name <b>Stephan Morin</b>		Name <b>Michael Shuker</b>										
Phone <b>(613)857-4936</b>		Phone <b>(613)739-1070</b>		Phone <b>(613)739-1070 ext. 314</b>										
<u>Shipment Details</u>				<u>Additional information</u>										
Shipment Date <b>Jan 09 2023 (Anticipated)</b>		Scheduled Arrival Date <b>Jan 09 2023</b>												
Special Handling		24-HOUR NUMBER <b>ext</b>												
		Additional TDG Information												
<u>Waste Information</u>														
Waste Number	DG	UN Number	Shipping Name	Class (Sub. Class)	Packing Group	Toxic by Inhalation	Quantity Shipped	Number of Packages	Packaging Code	Physical State	Quantity Received	Comments	Handling Code	Accepted/Refused
(1) 241 L		NA	PURGE WATER	NA	NA		2200.000 L	3	07 - Other	Liquid	2100.000 L		01 - Storage	ACCEPTED
I certify that the information contained in Part A is correct and complete. I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.										Manifest Status <b>Completed</b>				
										Daniel Elliot				
										Shipper's name (Print)				

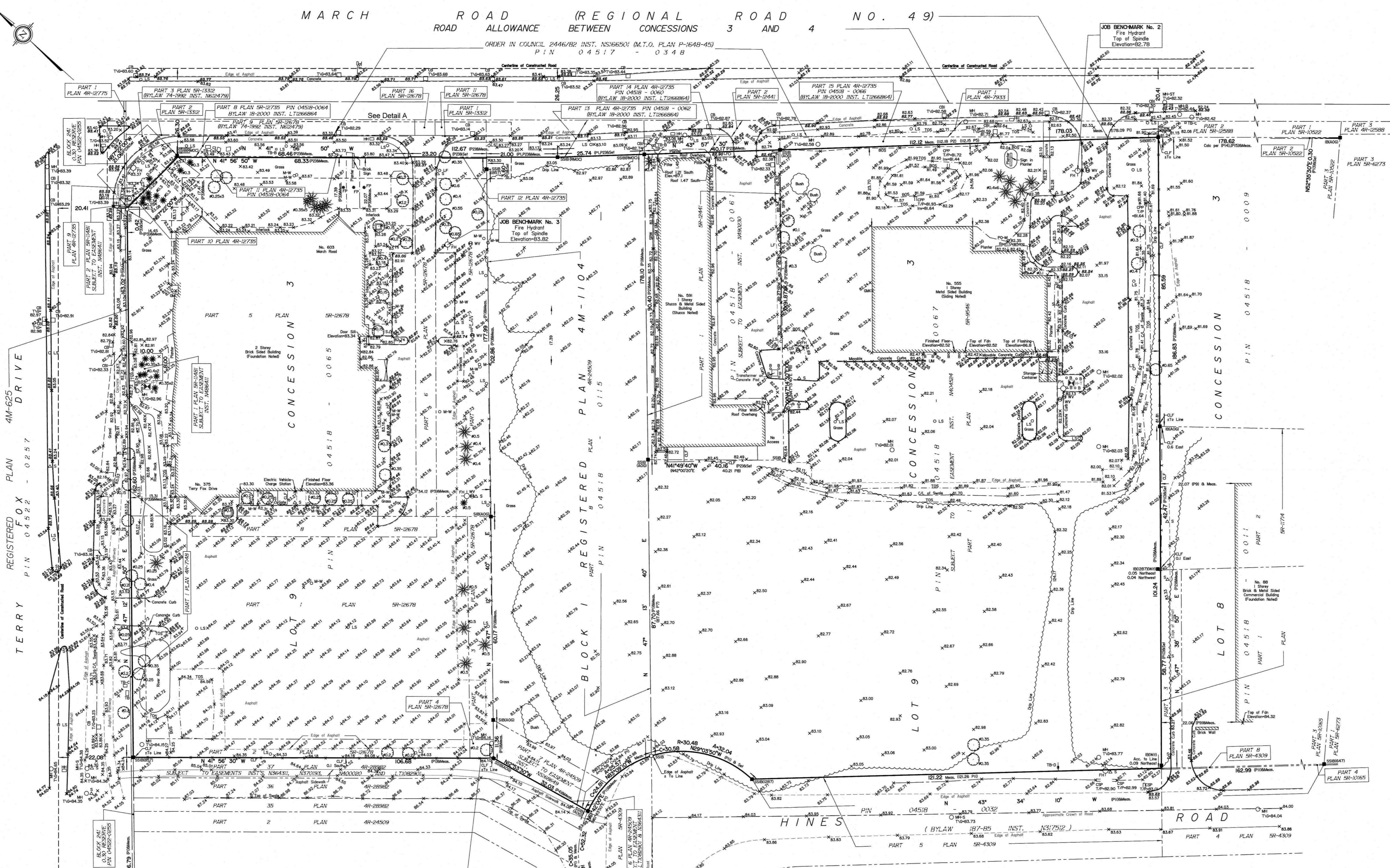


# APPENDIX E

## Survey of Phase Two Property

MARCH ROAD ROAD ALLOWANCE BETWEEN CONCESSIONS 3 AND 4 NO. 49

ORDER IN COUNCIL 2446/92 INST. NS166501 (M.T.O. PLAN P-1648-45)  
P.I.N. 04517 - 0348



TOPOGRAPHICAL PLAN OF SURVEY OF  
BLOCK 1  
REGISTERED PLAN 4M-1104  
AND PART OF LOT 9  
CONCESSION 3  
Geographic Township of March  
OTTAWA  
Surveyed by Annis, O'Sullivan, Vollebek Ltd.

Scale 1:500  
0 10 20 30 40 50 60 70 80 90 100 Metres

Metric  
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND  
CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

Surveyor's Certificate  
I CERTIFY THAT:  
1. This survey and plan are correct and in accordance with the Surveys  
Act and the Surveyors Act and the regulations made under them.  
2. The survey was completed on the 30th day of June, 2022.

July 13, 2022  
Date  
J. E. Anderson  
Ontario Land Surveyor

Notes & Legend

- Denotes
- Survey Monument Planted
  - Survey Monument Found
  - SIB Standard Iron Bar
  - SSIB Short Standard Iron Bar
  - IB Iron Bar
  - CC Cut Cross
  - CP Concrete Pin
  - IBR Round Iron Bar
  - SBW Short Standard Iron Bar
  - SSB\* Spike & Washer
  - IB\* Iron Bar
  - (WIT) Witness
  - Meas. unred Meas. unred
  - (AOG) Annis, O'Sullivan, Vollebek Ltd.
  - (RPI) Registered Plan 4M-1104
  - (P2) Plan 4R-12735
  - (P3) Plan by (AOG) dated March 23, 2009
  - (P4) Plan 4R-24509
  - (P5) Plan 5R-6546
  - (P6) Plan by (AOG) dated June 6, 1989
  - (P7) Plan 5R-11923
  - (P8) Plan 5R-12441
  - (P9) Plan by (AOG) dated July 9, 1998
  - (P10) Plan 5R-11714
  - (P11) Plan 5R-4309
  - (P12) Plan 5R-16165
  - (P13) Plan 5R-15522
  - (P14) Plan 4R-12558
  - (P15) (AOG) Plan dated July 6, 1999
  - Deciduous Tree
  - Coniferous Tree
  - Fire Hydrant
  - Water Valve
  - Water Stand Post
  - MHS Maintenance Hole (Sanitary)
  - MHR Maintenance Hole (Bell Telephone)
  - MHT Maintenance Hole (Traffic)
  - MHI Maintenance Hole (Hydro)
  - MH Maintenance Hole (Unidentified)
  - VC Valve Chamber (Watermain)
  - CB Catch Basin
  - CSP Corrugated Steel Pipe
  - CPP Corrugated Plastic Pipe
  - GM Gas Meter
  - HH Handhole
  - TB-B Bell Terminal Box
  - TB-C Cable Terminal Box
  - TB-T Traffic Terminal Box
  - TB-U Unidentified Terminal Box
  - TS Traffic Signal Post
  - B Bollard
  - M-W Monitoring Well
  - S Sign
  - CLF Chain Link Fence
  - BF Board Fence
  - IF Iron Fence
  - C Gate
  - M-P Metal Pole
  - T-L Traffic Light
  - LS Light Standard
  - FP Flag Pole
  - D Diameter
  - E Location of Elevations
  - +5.00 Top of Concrete Curb Elevation
  - CL Centreline

Distances shown on this plan are ground distances and can be converted to grid distances by multiplying by the combined scale factor of 0.999912.  
Bearings are grid, derived from Can-Net 2016 Real Time Network GPS observations referenced to Specified Control Points 0191980037 and 0191979151, MTM Zone 9 (79°30' West Longitude) NAD-83 (original).  
For bearing comparisons, a rotation of 0°23'07" counter-clockwise was applied to bearings on plans P1 and P4, a rotation of 0°25'10" counter-clockwise was applied to bearings on plan P8 and a rotation of 0°24'40" counter-clockwise was applied to bearings on plan P11.

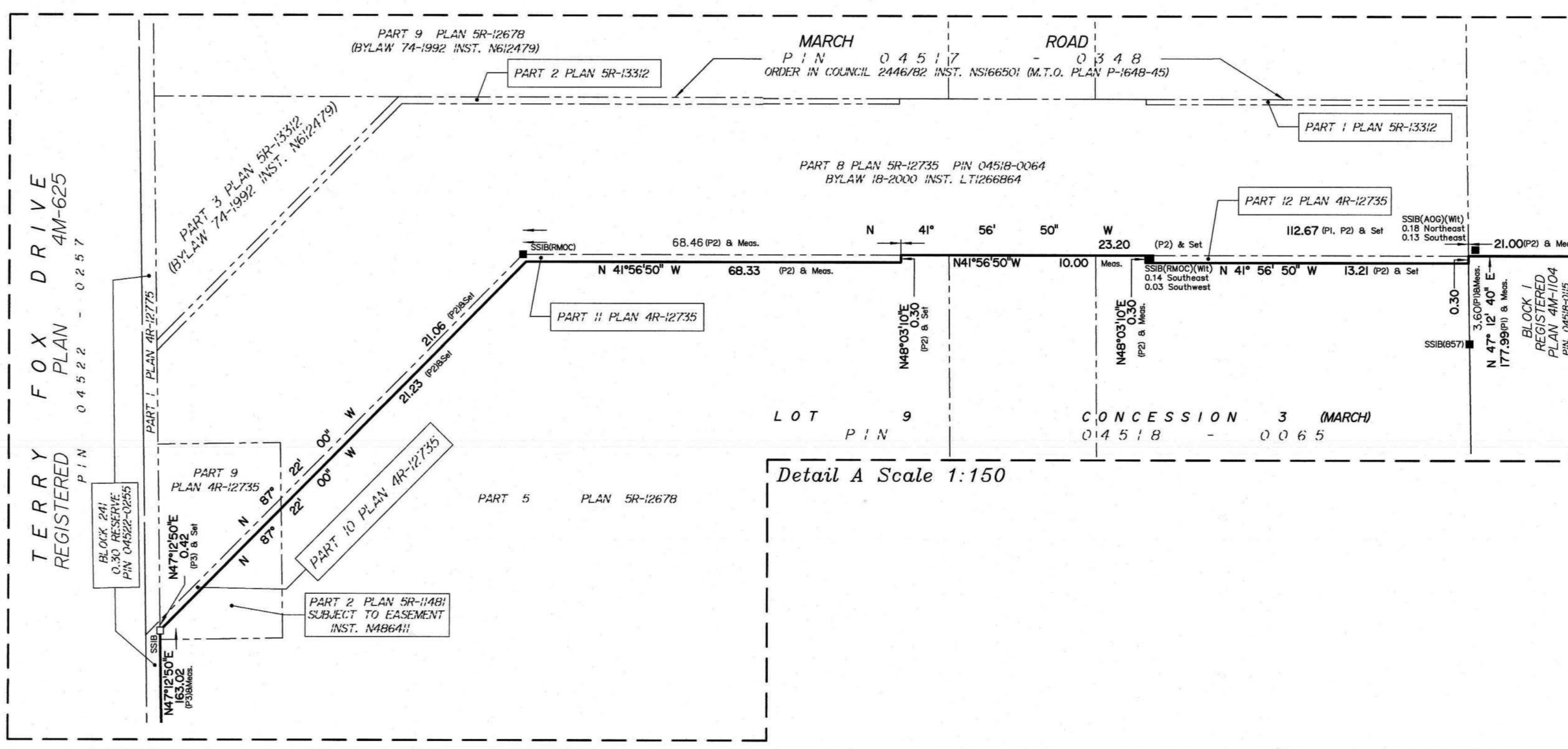
SITE AREA = 55524 m<sup>2</sup>

UTILITY NOTES  
1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.  
2. Only visible surface utilities were located.  
3. A field location of underground plant by the permit utility authority is mandatory before any work involving breaking ground, probing, excavating etc.

ELEVATION NOTES  
1. Elevations shown are geodetic and are referred to the CGVD28 geodetic datum and are related to the Ministry of Natural Resources monument number 001198U001 having an elevation of 78.945.  
2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that its relative elevation and description agrees with the information shown on this drawing.



ASSOCIATION OF ONTARIO  
LAND SURVEYORS  
PLAN SUBMISSION FORM  
V-27756  
THIS PLAN IS NOT VALID UNLESS  
IT IS AN EMBOSSED ORIGINAL  
COPY ISSUED BY THE SURVEYOR  
IN ACCORDANCE WITH  
REGULATION 102R, SECTION 29 (3)





# APPENDIX F

## City of Ottawa Response to Use of Non-Potable Groundwater Standards

## Dan Elliot

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**From:** Dan Elliot  
**Sent:** March 29, 2023 12:04 PM  
**To:** michel.kearney@ottawa.ca  
**Subject:** Request for Non-Potable Status 555 to 603 March Road  
**Attachments:** March Road Properties - Plan of Survey.pdf

Hello Michel,

We are preparing a Phase Two ESA for a City re-zoning application and eventual RSC filing for municipal addresses 555, 591, 595, and 603 March Road in Kanata, see the attached survey plan. We would like to apply non-potable groundwater conditions to the site and require acknowledgement that the City of Ottawa does not have an objection under O.Reg. 153/04. Can you provide a written response on the City's behalf?

Thank you,

**Daniel Elliot, P.Geo. (ON)**

Regional Director, ON/Arctic

T: 343.809.3368 | M: 613.857.4936



**Omni-McCann**

Geoscience | Engineering | Environment