



# 420 and 436 Mohawk Road East, Hamilton

## Phase II Environmental Site Assessment Report

### **Project Location:**

Part of 420 and 436 Mohawk Road East, Hamilton, ON

### **Prepared for:**

Roman Catholic Diocese of Hamilton  
700 King Street West, Hamilton, ON L8P 1C7

### **Prepared by:**

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July 28, 2022

**MTE File No.:** 51124-100





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## Executive Summary

MTE Consultants Inc. (MTE) was retained by the Roman Catholic Diocese of Hamilton (Diocese of Hamilton) to conduct a Phase II Environmental Site Assessment (ESA) for the property located at part of 420 and 436 Mohawk Road East in Hamilton, Ontario. The Site, approximately 0.83 hectares (2.07 acres) in size, is located on the south side of Mohawk Road East, and east of Mall Road in a mixed commercial, residential and institutional area.

The Site includes a two-storey residential/office building with a basement located in the northern portion of the Site with asphalted access laneways from Mohawk Road East. The remaining Site includes manicured landscape areas, grass lands and some mature trees. The Phase II ESA was completed for due-diligence purposes to assess general soil and groundwater quality in the southern portion of the Site. The scope of work was developed based on the results of a previous Phase I ESA, which identified on-Site potential environmental concerns. The scope of work included the collection of soil and groundwater samples from three boreholes, with one completed as a monitoring well. The three boreholes advanced in the southern portion of the Site, are located within the footprint a former construction staging area.

### Phase II ESA Results

The subsurface stratigraphy consisted of topsoil above native silt and clay till to a depth of 7.6 m. The depth to groundwater in monitoring well MW203-22 was measured between 1.49 and 1.96m below ground surface (m bgs). Given that only one monitoring was installed, the groundwater flow direction could not be determined at this time. However, the inferred groundwater flow direction was northerly based on the local topography.

Soil samples were collected from each of the three boreholes and submitted for analysis of one or more of metals, hydride-forming metals (arsenic-As, antimony-Sb, selenium-Se), hexavalent chromium (Cr(VI)), mercury (Hg), hot-water-soluble boron (B-HWS), pH, organochlorine pesticides (OCs), polychlorinated biphenyls (PCBs), petroleum hydrocarbons (PHCs) and benzene, toluene, ethylbenzene, xylene (BTEX). No visual or olfactory evidence (i.e. staining or odours) of potential contamination was observed during the borehole drilling. The analytical results for all soil samples submitted were below the 2011 Ministry of Environment Conservation and Parks Site Condition Standards for Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional uses (2011 Table 3 RPI SCSs).

A groundwater sample was collected from MW203-22 and submitted for analysis of PCBs, PHCs and VOCs including BTEX. During the purging and sampling activities, no evidence of sheen, odours or free product was observed. The analytical results for the groundwater samples submitted were below the 2011 Table 3 RPI SCSs.

Based on the above, no impacts to soil or groundwater were identified within the portion of the former construction staging area that extend onto the southern portion of the Site.

The monitoring well is the responsibility of the property owner and must be maintained or abandoned in accordance with O.Reg. 903. This report does not address geotechnical or potential excess soil concerns related to the potential future development activities.

# 1.0 Introduction

## 1.1 Background

MTE Consultants Inc. (MTE) was retained by the Roman Catholic Diocese of Hamilton (hereafter referred to as the Diocese of Hamilton) to conduct a Phase II Environmental Site Assessment (ESA) for the property at part of 420 and 436 Mohawk Road East in Hamilton, Ontario (the “Site”). The Site location is illustrated on **Figure 1**.

The purpose of the Phase II ESA was to assess potential environmental concerns identified in a previous Phase I ESA (MTE, 2022). The Phase II ESA was completed for the Diocese of Hamilton for due diligence purposes in advance of a potential land swap. A Record of Site Condition (RSC) under Ontario Regulation (O.Reg.) 153/04 is not required and has not been requested.

Authorization to proceed with the Phase II ESA was provided by the Diocese of Hamilton following acceptance of MTE’s proposal for services dated June 24, 2022. The assignment was completed by MTE under Reference Number 51124-100, with the report organized into the following sections:

- Section 1.0 - Introduction;
- Section 2.0 - Phase II ESA Investigation Methodology;
- Section 3.0 - Phase II ESA Results;
- Section 4.0 - Summary and Conclusions; and
- Section 5.0 to 7.0 - Limitations, References and Assessor Qualifications.

Analytical data summary tables, report figures and appendices are provided following the text portion of the report. It is noted that the MECP was previously named the Ontario Ministry of the Environment (MOE), the Ministry of Environment and Energy (MOEE) and the Ontario Ministry of the Environment and Climate Change (MOECC). For ease of discussion in this report, “MECP” is used to represent this provincial ministry and is inclusive of MOE, MOEE and MOECC.

## 1.2 General Site Description and History

The Site is rectangular in shape and includes portions of the larger overall properties located at 420 and 436 Mohawk Road East, including: vacant land in the southern portion of the Site from part of 420 Mohawk Road East, and a clergy residence/office building and vacant land in the remainder of the Site from part of 436 Mohawk Road East. It is noted that 420 and 436 Mohawk Road East are listed as 440 and 416 Mohawk Road East, respectively, in the City of Hamilton’s interactive map. For the ease of this report, the Site is referred to as ‘part of 420 and 436 Mohawk Road East.’

The Site is approximately 0.83 hectares (2.07 acres) is located on the south side of Mohawk Road East, and east of Mall Road in a mixed commercial, residential and institutional area of Hamilton. The property includes a two-storey residential/office building with a basement located in the northern portion of the Site with asphalted access laneways from Mohawk Road East. The remaining Site surface includes manicured landscape areas, grass lands and some mature trees. A filled in dug well, believed to be associated with historical residential land uses, is located southwest of the residence building.

The western portion of the Site included part of a rural residential/farm building from prior to 1934 until 1958 when the Site was developed with the current building. The remaining areas of the Site prior to 1958 included agricultural fields. The Site has been in use as a rectory/clergy residence and office since 1958. An attached garage structure was built between 1979 and 1995.

The larger overall property at 420 Mohawk Road East is occupied by a catholic elementary school and the larger overall property at 436 Mohawk Road East includes a church. Refer to **Figure 2** for the Site Layout.

### 1.3 Phase I ESA Results

The Phase I ESA identified the following potential environmental concerns on the Site:

- Fill material was identified in one borehole location (BH103-22) located in the western portion of the Site during a geotechnical investigation. It is noted that this borehole is located within the proximity of the former residential building footprint that was partially located on the Site. No other fill material was identified in the geotechnical investigation on the Site and no other potential areas of historical fill placement were noted during the Phase I ESA. Based on this, the presence of fill material is considered to represent a low potential environmental concern to the Site. The quality of the fill material could be assessed at a future date during an excess soil investigation to facilitate Site redevelopment.
- The use of the southeastern portion of the Site as a construction staging area during refurbishment of the adjoining transformer substation is considered to represent a potential environmental concern to the Site, particularly the potential for placement of fill material of unknown quality during regrading and the potential storage of fuels in aboveground tanks or other chemicals.

This Phase II ESA investigation was limited to investigating the potential environmental concerns associated with the former construction staging area that encroached onto the 420 Mohawk Road portion of the Site.

### 1.4 Scope of Work

The objective of this Phase II ESA was to evaluate the environmental condition of the southern portion of the Site, within the former construction staging area, through the collection of soil and groundwater samples. The Phase II ESA was conducted in general accordance with CSA document Z769-00 (R2018) and included the following:

- Preparing a Site Specific Health & Safety Plan.
- Completing utility locates prior to on-Site work, including retaining a private utility locator.
- Advancing three boreholes to a maximum depth of 7.6m below ground surface (bgs), with one borehole location constructed as a groundwater monitoring well for groundwater assessment.
- Collecting soil samples from the boreholes for laboratory analysis of one or more of the following parameters: metals, hydride-forming metals (arsenic-As, antimony-Sb, selenium-Se), hexavalent chromium (Cr(VI)), mercury (Hg), hot-water-soluble boron (B-HWS), pH, organochlorine pesticides (OCs), polychlorinated biphenyls (PCBs), petroleum hydrocarbons (PHCs) and benzene, toluene, ethylbenzene, xylene (BTEX).
- Surveying the boreholes and monitoring well to a local datum and collecting groundwater levels in the monitoring well.
- Developing the new monitoring well and collecting field parameters including pH, electrical conductivity and temperature during purging to determine when adequate development was achieved.
- Collection of groundwater samples for laboratory analysis of PCBs, PHCs, BTEX and VOCs.
- Analysis of quality assurance/quality control (QA/QC) including field duplicates.

- Interpreting and documenting the results of the Phase II ESA in this report supported by figures, photographs and laboratory Certificates of Analysis.

The Phase II ESA was completed by Ms. Kay Harvey, B.Eng., EIT. and reviewed by Mr. Kelvin Lee, P.Eng., M.Eng., QP<sub>ESA</sub> of MTE. The qualifications of Mr. Lee and Ms. Harvey are included in **Section 7.0**.

The drilling work was completed by Ground Force Environmental Inc. (Ground Force) of Kitchener, Ontario. Ground Force is an MECP-licensed well contractor. Photographs taken at the time of the field activity are included in **Appendix A**.

The soil and groundwater analyses were completed by Bureau Veritas of Mississauga, Ontario. Bureau Veritas is an accredited by the Standards Council of Canada (SCC) in accordance with ISO/IEC 17025:2005 for the analyses completed during this Phase II ESA.

## 1.5 Applicable Site Condition Standards

The analytical results for soil and groundwater samples collected by MTE were compared to the MECP Table 3 Full Depth Generic Site Condition Standards in a Non Potable Ground Water Condition, for residential/parkland/institutional land use and medium to fine textured soils (i.e. 2011 Table 3 RPI SCSs) based on the following:

- Subsurface investigations on the Site determined there is more than 2 metres of overburden above bedrock and the Site is not a “shallow soil property”.
- There are no surface water bodies on or within 30 metres of the Site.
- The Site is not on or within 30m of an area of natural significance and soil pH was within the acceptable range. The Site was not considered to be an “Environmentally Sensitive Area” as defined by O.Reg.153/04.
- The Site is currently institutional land uses (church and school) and future land use of the Site may include residential uses.
- The results of three representative soil grain size analysis completed during a geotechnical investigation (MTE, 2022) identified the native silty and clay soil as medium and fine textured soils. As this soil makes up greater than 2/3 of the soil underlying the Site, the medium-fine textured soil site condition standards were considered appropriate.

## 2.0 Phase II ESA Investigation Methodology

### 2.1 Borehole Drilling

The drilling activities included the advancement of three boreholes at the Site on July 5, 2022. The locations of the boreholes were selected to evaluate soil and groundwater quality in the former construction staging area on the Site. The sampling locations are illustrated on **Figure 2** and included:

Sampling Location	Rationale
BH201-22	<ul style="list-style-type: none"><li>Assess soil fill quality in the southern portion of the former construction staging area at the Site.</li></ul>
BH202-22	<ul style="list-style-type: none"><li>Assess soil fill quality in central portion of the former construction staging area at the Site.</li></ul>
MW203-22	<ul style="list-style-type: none"><li>Assess soil and groundwater quality in the northern (inferred hydraulically down-gradient) portion of the former construction staging area at the Site.</li></ul>

Boreholes were advanced by Ground Force using a track-mounted Geoprobe 7822DT direct push drill rig. Continuous soil cores were recovered from each borehole location using macro-core samplers and logged by MTE for geological characteristics as well as visual and olfactory evidence of environmental impacts such as staining, odours or the presence of non-soil materials. New macro-core samplers were used for each sampling interval. Other sampling equipment was cleaned between locations using soapy water and a tap water rinse to minimize the potential for cross contamination between boreholes. Borehole logs were prepared for each location and are included in **Appendix B**.

### 2.2 Soil Sampling

Soil samples were collected for field headspace screening and for possible laboratory analysis. Soil samples for potential BTEX and PHC F1 analyses were collected following USEPA SW-846 Method 5035 (field methanol preservation). This soil sampling procedure included collecting approximately 5 grams of sample from the undisturbed soil core using a Terra Core™ sampling device and placing the sample in a laboratory supplied glass vial containing 5mL of methanol. Soil samples for other analyses including metals, hydrides, Cr(VI), Hg, B-HWS, pH, OCs, PCBs and PHCs F2-F4 were collected directly from the soil core and placed into new laboratory supplied soil jars. New nitrile gloves were worn during the handling of all samples, sampling equipment and sample jars and changed between each sample.

### 2.3 Field Headspace Screening

A portion of each soil sample was placed into a new zip-top plastic bag for field headspace screening. The organic vapour concentrations in the headspace of each soil sample were measured using an RKI Eagle II field meter. The RKI Eagle II is a combination hydrocarbon detector and a Photo Ionization Detector (PID), providing an indication of both hydrocarbon and VOC vapours. Equipment calibration and maintenance was performed by MTE according to manufacturers' recommendations prior to arriving at the Site and in the field to ensure proper operation.

The procedure for collection of field headspace measurements included waiting approximately 15 minutes for the soil/vapour in the zip-top plastic bag to equilibrate and allow for headspace development, and inserting the Eagle II sampling probe into a small opening in the bag. The maximum meter readings were recorded. The field headspace readings are summarized on the borehole logs in **Appendix B**.



## 2.4 Monitoring Well Installation

A groundwater monitoring well was installed in one borehole (MW203-22) on July 5, 2022. MTE was present during the monitoring well installation to record and document the well construction details. The monitoring well was constructed with a 3.1m long, 51mm diameter, No. 10 slotted PVC screen that crossed the water table. All monitoring well materials were new and were received sealed in a protective plastic wrap from the manufacturer. The riser pipe and screen sections were pre-threaded with O-ring seals. No glues or solvents were used to connect the pipe sections and nitrile gloves were worn during all work with the monitoring well.

A coarse grained sand pack was placed around and above the well screen to allow for groundwater collection in the well. Bentonite (holeplug) was placed immediately above the sand pack to hydraulically isolate the screened portion of the well. The monitoring well was completed with a flushmount, steel protective casing, which was cemented in place. MECP Well Records were filed by Ground Force in accordance with O.Reg. 903/90.

## 2.5 Groundwater Level Measurement

The depth to groundwater was measured in the monitoring well using an interface probe on July 7, 2022 and July 8, 2022. The water levels were measured by lowering the probe into the well until the tone sounded and recording the depth to water from the highest point on the well riser pipe (the groundwater level measuring reference point). Measurements were recorded to the nearest 0.01m. The probe was cleaned with successive rinses of soapy and distilled water between each well. Groundwater level measurements are summarized in **Table 2**.

## 2.6 Groundwater Sample Collection

The monitoring well was developed using dedicated LDPE waterra tubing and a foot valve to remove stagnant water and fine grain materials that may have been introduced during drilling. Prior to collecting groundwater samples, the monitoring wells were purged to obtain a groundwater sample representative of the surrounding formation. During purging, field parameter measurements (temperature, pH and conductivity) were recorded after each well volume. Groundwater samples were collected using a peristaltic pump after stabilized parameters had been measured and a minimum of three well volumes had been removed. All groundwater samples were placed directly into pre-preserved laboratory supplied bottles.

## 2.7 Sample Storage Handling and Custody

Soil and groundwater samples were labelled, given a unique sample identifier and placed in a sealed cooler with ice for transportation to Bureau Veritas. The samples were transported directly to the laboratory by MTE and accompanied by a Chain of Custody form.

## 2.8 Quality Control/Quality Assurance

A QA/QC program was implemented during this Phase II ESA to demonstrate that the data collected was representative of the Site conditions and suitable to meet the sampling program objectives. The QA/QC program included field QA/QC procedures and laboratory QA/QC procedures.

Field QA procedures included:

- Adherence to MTE's standard operating procedures (SOPs), which meet industry standards and MECP guidance for field sample data collection;
- The use of new laboratory-supplied sample containers;
- The use of new and dedicated sampling equipment;
- The wearing of a new pair of nitrile gloves during and between the handling of all samples and field equipment; and
- Implementing equipment cleaning procedures.

Laboratory QA/QC procedures were implemented internally by the laboratory and validated through a review of the sample Chain-of-Custody forms and Laboratory Certificates of Analysis. The laboratory QA/QC assessment included a review of the following:

- Sample holding times and arrival temperatures;
- Laboratory analytical methods (i.e., MECP approved methods were used);
- Results were received for all of the requested samples and analyses;
- Laboratory surrogate recovery and spike sample results;
- Dilution factors and method detection limits;
- Duplicate sample analytical results;
- Laboratory Certificate of Analysis notes; and
- Analytical results as compared to visual/olfactory observations.

QC samples (field duplicates) were also submitted for analysis. The analytical data precision was assessed by calculating the Relative Percent Difference (RPD) between the investigation sample results (C1) and the field duplicate sample results (C2). The RPD was calculated as follows:

$$RPD = 2 | C1 - C2 | / (C1 + C2) \times 100\%$$

The RPD acceptance criteria were 50% for soil samples and 30% for groundwater.

## 3.0 Phase II ESA Results

### 3.1 Geology and Hydrogeology

The subsurface stratigraphy consisted of topsoil material above native silt and clay till to the maximum drilling depth of 7.6 m bgs. Bedrock was not encountered during the borehole drilling.

The depth to groundwater in the monitoring well was measured on July 7, 2022 and July 8, 2022 and ranged from 1.49 m bgs pre well development to 1.96m bgs post well development. The measured groundwater levels and corresponding elevations are summarized in **Table 2**. The regional topography is mildly sloped from south to the north and decreases in elevation toward Lake Ontario, located approximately 5.5km north of the Site. The inferred groundwater flow direction is northerly following a decrease in surface elevation toward Hamilton Harbour.

### 3.2 Soil Analytical Results

Soil samples from all three boreholes drilled at the Site were selected for laboratory analysis of one or more of the following parameters: metals, including hydride-forming metals (As, Sb and Se), Hg, Cr(VI), B-HWS, pH, PCBs, PHCs and BTEX. Soil samples were selected for analysis from the upper layer of the surface soil at each borehole, the area inferred to be most likely to be impacted by the previous use/grading of the construction staging area. In addition, a soil sample was submitted from the inferred water table interface at MW203-22 to assess the potential for deeper soil impacts to be present.

The soil analytical results as compared to the 2011 Table 3 RPI SCSs are summarized in **Tables 3 to 7**. The laboratory Certificates of Analysis are included in **Appendix C**.

The analytical results of the soil samples meet the 2011 Table 3 RPI SCSs for all compounds tested. The pH results in soil were within the MECP acceptable range for both surface (less than 1.5m bgs) and subsurface (greater than 1.5m bgs) soil.

### 3.3 Groundwater Analytical Results

During the purging and sampling activities, groundwater was examined for visual and olfactory evidence of impact. No sheen, odours, free product or other evidence of potential environmental contamination was observed.

Groundwater samples were collected from the monitoring well and submitted for laboratory analysis of PCBs, PHCs, and VOCs including BTEX.

The groundwater analytical results as compared to the 2011 Table 3 RPI SCSs are summarized in **Tables 8 to 10**. The laboratory Certificates of Analysis are included in **Appendix C**.

The groundwater analytical results were below the 2011 Table 3 RPI SCSs for all compounds tested.

### 3.4 Quality Assurance/Quality Control

A QA/QC program was implemented during this Phase II ESA to demonstrate that the data collected was suitable to meet the sampling program objectives. The following is a summary of the QA/QC review:

- Soil and groundwater samples were collected using industry standard methods in laboratory supplied containers, and transported in insulated coolers containing ice under Chain-of-Custody to the laboratory.
- All samples were analyzed by the laboratory using MECP approved analytical methods and within the required holding times.
- Analytical results were received for all samples submitted for analysis. No data qualifiers were noted on the Certificate of Analysis.

MTE submitted a soil field duplicate sample from BH201-22 (0.0-0.8m bgs) for analysis of metals, As, Sb, Se, PHCs and BTEX and a groundwater duplicate sample from MW203-22 for analysis of PHCs, BTEX and VOCs. The results between each primary sample and its' duplicate were comparable. The calculated RPDs for the original and duplicate samples were less than 50% (for soil) and 30% (for groundwater) for all parameters where a calculation could be completed.

## 4.0 Summary and Conclusions

MTE was retained by the Diocese of Hamilton to conduct a Phase II Environmental Site Assessment (ESA) for the property location at part of 420 and 436 Mohawk Road East in Hamilton for due-diligence purposes. The scope of work included the collection of soil and groundwater samples from three boreholes, one completed as a monitoring well, all advanced within the southern portion of the Site, within the footprint a former construction staging area.

### Phase II ESA Results

The subsurface stratigraphy consisted of topsoil above native silt and clay till to a depth of 7.6 m. The depth to groundwater in monitoring well MW203-22 was measured between 1.49 and 1.96m bgs. Given that only one monitoring was installed, the groundwater flow contour cannot be determined at this time. However, the inferred groundwater flow direction was northerly based on the local topography.

Soil samples were collected from each of three boreholes and submitted for analysis of one or more of metals, hydride-forming metals (arsenic-As, antimony-Sb, selenium-Se), hexavalent chromium (Cr(VI)), mercury (Hg), hot-water-soluble boron (B-HWS), pH, organochlorine pesticides (OCs), polychlorinated biphenyls (PCBs), petroleum hydrocarbons (PHCs) and benzene, toluene, ethylbenzene, xylene (BTEX); No visual or olfactory evidence (i.e. staining or odours) of potential contamination was observed during the borehole drilling and the analytical results for all soil samples submitted were below the 2011 Table 3 RPI SCSs.

A groundwater sample was collected from MW203-22 and submitted for analysis of PCBs, PHCs and VOCs including BTEX. During the purging and sampling activities, no evidence of sheen, odours or free product was observed. The analytical results for the groundwater samples submitted were below the 2011 Table 3 RPI SCSs.

Based on the above, no impacts to soil or groundwater were identified within the portion of the former construction staging area that extend onto the southern portion of the Site.

The monitoring well is the responsibility of the property owner and must be maintained or abandoned in accordance with O.Reg. 903. This report does not address geotechnical or potential excess soil concerns related to the potential future development activities.

## 5.0 Qualifications of Assessors

The key participants involved in performing the components of the Phase II ESA are Mr. Kelvin Lee, P. Eng., M.Eng., QPESA, and Ms. Kay Harvey. B.Eng., EIT. of MTE Consultants Inc.

Ms. Kay Harvey. B.Eng., EIT. is a graduate of the University of Guelph with a Bachelors of Environmental Engineering. Ms. Harvey has three years of experience in the environmental consulting industry and has conducted numerous due diligence Phase I and II Environmental Site Assessments, Ontario Regulation 153/04 (as amended) Phase One and Two Environmental Site Assessments, and a variety of soil and groundwater remediation projects.

Mr. Lee is a graduate of the University of Toronto with a Master of Chemical Engineering degree. He also has an Undergraduate degree in Chemical Engineering from McMaster University. Mr. Lee is a Senior Environmental Engineer at MTE with over 13 years of environmental consulting experience across Canada and USA. Mr. Lee is a licensed Professional in the provinces of Ontario, and a Qualified Person for Environmental Site Assessment as defined in O.Reg. 153/04. His technical experience includes conducting and managing Phase I and II environmental site assessments, remediation, risk management plan, fill management, and filing of Records of Site Condition.

## 6.0 Limitations

Services performed by **MTE Consultants Inc. (MTE)** were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the Environmental Engineering & Consulting profession. No other warranty or representation expressed or implied as to the accuracy of the information, conclusions or recommendations is included or intended in this report.

This report was completed for the sole use of MTE and the Diocese of Hamilton. It was completed in accordance with the Scope of Work referred to in Section 1.4. As such, this report may not deal with all issues potentially applicable to the Site and may omit issues, which are or may be of interest to the reader. Reasonable care was exercised to identify the important features, including the important environmental features, and this report addresses only those features as provided in the Scope of Work. All findings and conclusions presented in this report are based on the Site conditions as they existed during the time period of the investigation. This report is not intended to be exhaustive in scope or to imply a risk-free facility or conditions.

Any use which a third party makes of this report, or any reliance on, or decisions to be made based upon it, are the responsibility of such third parties. MTE accepts no responsibility for liabilities incurred by or damages, if any, suffered by any third party as a result of decisions made or actions taken, based upon this report. Others with interest in the Site should undertake their own investigations and studies to determine how or if the condition affects them or their plans.

It should be recognized that the passage of time may affect the views, conclusions and recommendations (if any) provided in this report because environmental conditions of a property can change. Should additional or new information become available, MTE recommends that it be brought to our attention in order that we may re-assess the contents of this report.

All of which is respectfully submitted,

**MTE Consultants Inc.**



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KDH:apm

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## 7.0 References

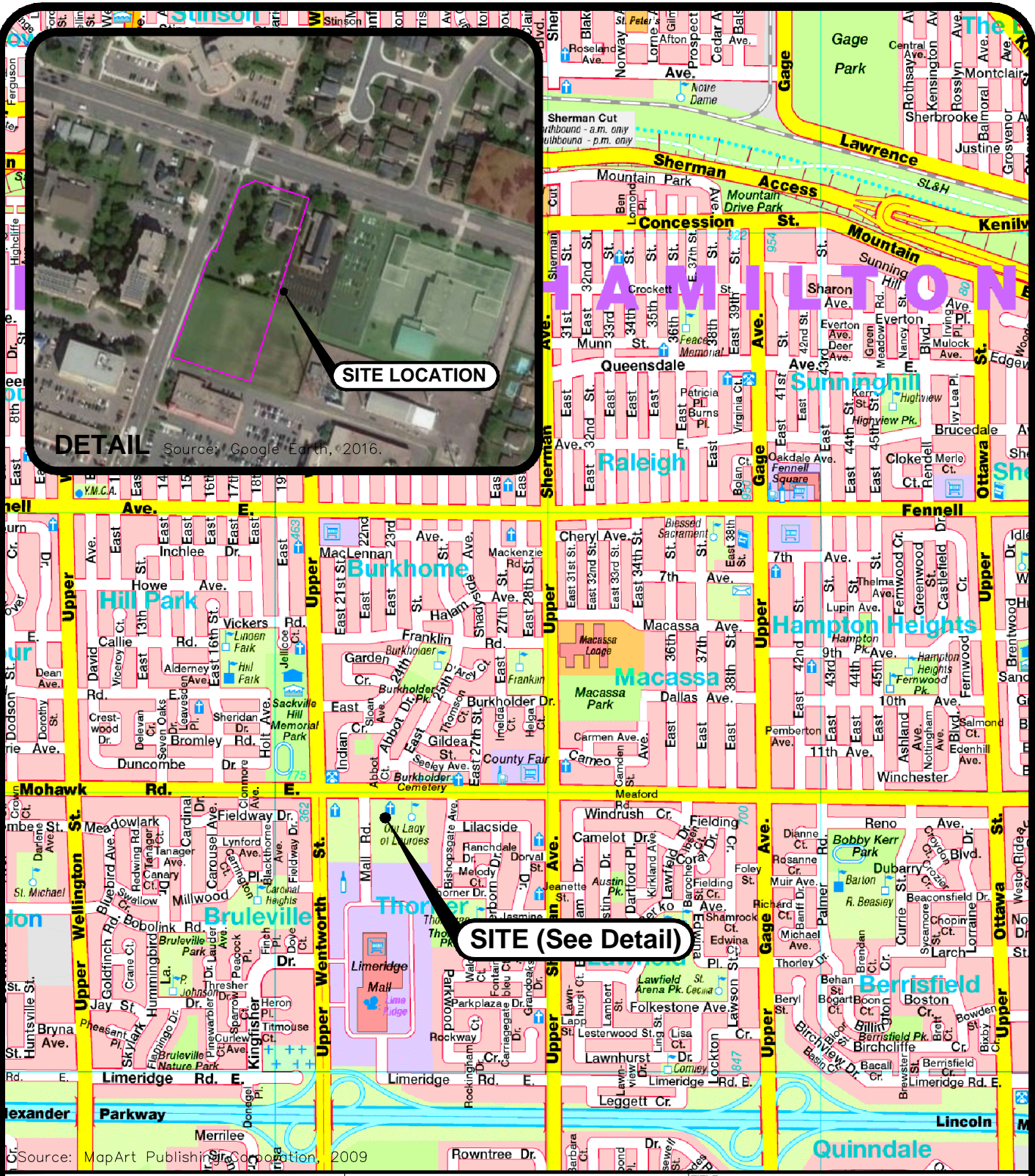
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6. Ontario Ministry of the Environment, April 15, 2011, Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act.
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# Figures

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Project: 51124-100 CAD: P:\P\51124\100\51124-100-MS1.DWG  
 1 SITE LOCATION MAP  
 July 20, 2022 — 7:22 PM — Plotted By: TSchneider



Engineers, Scientists, Surveyors  
 Ph. (519) 743-6500

0 200 400 600 800 1000m  
 Scale(8.5x11): 1:20000

CLIENT	Diocese of Hamilton
PROJECT	Phase II Environmental Site Assessment
SITE	Part of 420 and 436 Mohawk Road East Hamilton, Ontario

TITLE	Site Location Map
Reviewed By	KCL
Prepared By	KH
Drawn By	TXS
Date	July 2022
Project No.	51124-100
Figure No.	1



Project: 51124-100 CAD: P:\51124\100\51124-100-MS1.DWG  
2 SITE LAYOUT AND FEATURES  
July 21, 2022 - 10:26 PM - Plotted By: TSchneider

Mohawk Road East

Mall Road

436 Mohawk Road East

Offices

Clergy Residence

Deck

Garage

Church

Historical Dug Well

Recycling  
Lugger Bins

420 Mohawk Road East

Hydro Transformer Station

Multi-tenant Commercial Building



NORTH



PROJECT  
NORTH

LEGEND

- Site Boundary
- Parcel Line
- Adjoining Property Line
- Existing Building
- Former Construction Staging Area
- Geotechnical Borehole (MTE, 2022)
- Environmental Borehole (MTE, 2022)
- Environmental Monitoring Well (MTE, 2022)

0 7.5 15 22.5 30 37.5m

Scale(11x17): 1:750



Engineers, Scientists, Surveyors

Ph. (519) 743-6500

CLIENT

Diocese of Hamilton

PROJECT

Phase II Environmental  
Site Assessment

SITE

Part of 420 and 436  
Mohawk Road East  
Hamilton, Ontario

TITLE

Site Layout and  
Sampling Locations

Reviewed By KCL

Prepared By KH

Drawn By TXS

Date July 2022

Project No. 51124-100

Figure No.

2

# Tables

---

Table 1: Monitoring Well Construction Details

Well ID	Completed By	Ground Surface Elevation (m)	Top of Pipe Elevation (m)	Well Depth (mbgs)	Screen Length (m)	Well Construction Details						Type of Casing
						Depth of Screen (m)		Sand Pack (m)		Bentonite (m)		
						Top	Bottom	Top	Bottom	Top	Bottom	
MW203-22	MTE	214.05	213.94	6.1	3.1	3.0	6.1	2.7	6.1	0.0	2.7	Flushmount

Notes:

Date of elevation survey: July 7 & 8, 2022  
Elevations relative to previously surveyed BH106-22 set to 213.50m  
"m" - meters  
"mbgs" - meters below ground surface  
"-" not measured or not applicable

Table 2: Summary of Groundwater Elevations

Well ID	Ground Surface Elevation (m)	Top of Pipe Elevation (m)	7-Jul-22			8-Jul-22		
			Water Level (mbtop)	Water Level (mbgs)	Elevation (m)	Water Level (mbtop)	Water Level (mbgs)	Elevation (m)
MW203-22	214.05	213.94	1.37	1.49	212.56	1.84	1.96	212.09

**Notes:**  
Date of elevation survey: July 7 & 8, 2022  
Elevations relative to previously surveyed BH106-22 set to 213.50m  
"m" - meters  
"mbgs" - meters below ground surface  
"-" not measured or not applicable

Table 3: Metals and Inorganics Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (R/P/I, Med/Fine)	Sample Location		BH201-22	BH201-22	BH202-22	MW203-22	MW203-22
				Sample Name		BH201-22 0-2.5	BH1201-22 0-2.5	BH202-22 0.5-2.5	MW203-22 0.5-2.5	MW203-22 12.5-15
				Lab Job #		C2I6820	C2I6820	C2I6820	C2I6820	C2I6820
				Laboratory ID		TBZ939	TBZ941	TBZ942	TBZ944	TBZ946
				Sampling Date		05-Jul-2022	05-Jul-2022	05-Jul-2022	05-Jul-2022	05-Jul-2022
				Sample Depth (m bgs)		0.0-0.8	0.0-0.8	0.2-0.8	0.2-0.8	3.8-4.6
Maximum Concentration				Field Duplicate						
Metals and Inorganics										
Antimony	µg/g	0.2	7.5		0.26	0.26	<0.20	<0.20	<0.20	-
Arsenic	µg/g	1	18		4.4	4.4	4.4	4.1	4.4	-
Barium	µg/g	0.5	390		150	100	100	120	150	-
Beryllium	µg/g	0.2	5		1.1	0.85	0.8	0.93	1.1	-
Boron	µg/g	5	120		8.2	6.2	<5.0	5.2	8.2	-
Boron (Hot Water Soluble)	µg/g	0.05	1.5		0.21	0.21	-	0.1	-	-
Cadmium	µg/g	0.1	1.2		0.23	0.23	0.22	0.12	0.16	-
Chromium	µg/g	1	160		32	26	24	27	32	-
Chromium VI	µg/g	0.18	10	<	0.18	<0.18	-	<0.18	-	-
Cobalt	µg/g	0.1	22		14	14	14	14	14	-
Copper	µg/g	0.5	180		33	25	24	25	33	-
Lead	µg/g	1	120		25	25	25	17	16	-
Mercury	µg/g	0.05	1.8	<	0.05	<0.050	-	<0.050	-	-
Molybdenum	µg/g	0.5	6.9		0.63	0.63	0.55	<0.50	<0.50	-
Nickel	µg/g	0.5	130		35	26	25	29	35	-
Selenium	µg/g	0.5	2.4	<	0.5	<0.50	<0.50	<0.50	<0.50	-
Silver	µg/g	0.2	25	<	0.2	<0.20	<0.20	<0.20	<0.20	-
Thallium	µg/g	0.05	1		0.2	0.16	0.15	0.17	0.2	-
Uranium	µg/g	0.05	23		0.61	0.58	0.51	0.6	0.61	-
Vanadium	µg/g	5	86		41	35	34	37	41	-
Zinc	µg/g	5	340		85	84	85	75	67	-
pH	pH units		NR		7.77	-	-	-	7.55	7.77

**Notes:**  
2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

**Bold** - Exceeds 2011 Table 3 SCS

"-" - parameter not analyzed  
RDL - Reported detection limit  
NR - Not Relevant  
NV- No Value  
NA - Not Applicable  
"<" - Less than the Reporting Detection Limit

Table 4: Organochlorine (OC) Pesticides Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (R/P/I, Med/Fine)	Sample Location		BH202-22
				Sample Name		BH202-22 0.5-2.5
				Lab Job #		C2I6820
				Laboratory ID		TBZ942
				Sampling Date		05-Jul-2022
				Sample Depth (m bgs)		0.2-0.8
				Maximum Concentration		
Organochlorine Pesticides (OCs)						
alpha-Chlordane	µg/g	0.002	NR	<	0.002	<0.0020
gamma-Chlordane	µg/g	0.002	NR	<	0.002	<0.0020
Chlordane (Total)	µg/g	0.002	0.05	<	0.002	<0.0020
o,p-DDD	µg/g	0.002	NR	<	0.002	<0.0020
p,p-DDD	µg/g	0.002	NR	<	0.002	<0.0020
o,p-DDD + p,p-DDD	µg/g	0.002	3.3	<	0.002	<0.0020
o,p-DDE	µg/g	0.002	NR	<	0.002	<0.0020
p,p-DDE	µg/g	0.002	NR	<	0.002	<0.0020
o,p-DDE + p,p-DDE	µg/g	0.002	0.33	<	0.002	<0.0020
o,p-DDT	µg/g	0.002	NR	<	0.002	<0.0020
p,p-DDT	µg/g	0.002	NR	<	0.002	<0.0020
o,p-DDT + p,p-DDT	µg/g	0.002	1.4	<	0.002	<0.0020
Dieldrin	µg/g	0.002	0.05	<	0.002	<0.0020
Endosulfan I	µg/g	0.002	NR	<	0.002	<0.0020
Endosulfan II	µg/g	0.002	NR	<	0.002	<0.0020
Total Endosulfan	µg/g	0.002	0.04	<	0.002	<0.0020
Endrin	µg/g	0.002	0.04	<	0.002	<0.0020
Heptachlor	µg/g	0.002	0.15	<	0.002	<0.0020
Heptachlor epoxide	µg/g	0.002	0.05	<	0.002	<0.0020
Hexachlorobenzene	µg/g	0.002	0.52	<	0.002	<0.0020
Hexachlorobutadiene	µg/g	0.002	0.014	<	0.002	<0.0020
gamma-Hexachlorocyclohexane (Lindane)	µg/g	0.002	0.063	<	0.002	<0.0020
Hexachloroethane	µg/g	0.002	0.071	<	0.002	<0.0020
Methoxychlor	µg/g	0.005	0.13	<	0.005	<0.0050

**Notes:**  
2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

**Bold** - Exceeds 2011 Table 3 SCS

"-" - parameter not analyzed  
RDL - Reported detection limit  
NR - Not Relevant  
NV- No Value  
NA - Not Applicable  
"<" - Less than the Reporting Detection Limit

Table 5: Polychlorinated Biphenyls (PCBs) Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (R/P/I, Med/Fine)	Sample Location		BH201-22	BH202-22
				Sample Name		BH201-22 0-2.5	BH202-22 0.5-2.5
				Lab Job #		C2I6820	C2I6820
				Laboratory ID		TBZ939	TBZ942
				Sampling Date		05-Jul-2022	05-Jul-2022
				Sample Depth (m bgs)		0.0-0.8	0.2-0.8
				Maximum Concentration			
Polychlorinated Biphenyls (PCBs)							
Aroclor 1242	µg/g	0.01 - 0.015	NR	<	0.015	<0.010	<0.015
Aroclor 1248	µg/g	0.01 - 0.015	NR	<	0.015	<0.010	<0.015
Aroclor 1254	µg/g	0.01 - 0.015	NR	<	0.015	<0.010	<0.015
Aroclor 1260	µg/g	0.01 - 0.015	NR	<	0.015	<0.010	<0.015
Total Polychlorinated Biphenyls	µg/g	0.01 - 0.015	0.35	<	0.015	<0.010	<0.015

**Notes:**  
2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

**Bold** - Exceeds 2011 Table 3 SCS

"-" - parameter not analyzed  
RDL - Reported detection limit  
NR - Not Relevant  
NV- No Value  
NA - Not Applicable  
"<" - Less than the Reporting Detection Limit



Table 6: Petroleum Hydrocarbons (PHCs) Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (R/P/I, Med/Fine)	Sample Location		BH201-22	BH201-22	BH202-22	MW203-22	MW203-22	
				Sample Name		BH201-22 0-2.5	BH1201-22 0-2.5	BH202-22 0.5-2.5	MW203-22 0.5-2.5	MW203-22 12.5-15	
				Lab Job #		C2I6820	C2I6820	C2I6820	C2I6820	C2I6820	
				Laboratory ID		TBZ939	TBZ941	TBZ942	TBZ944	TBZ946	
				Sampling Date		05-Jul-2022	05-Jul-2022	05-Jul-2022	05-Jul-2022	05-Jul-2022	
				Sample Depth (m bgs)		0.0-0.8	0.0-0.8	0.2-0.8	0.2-0.8	3.8-4.6	
Maximum Concentration				Field Duplicate							
Petroleum Hydrocarbons (PHCs)											
F1 (C6 to C10)	µg/g	10	65	<	10	<10	<10	<10	<10	<10	
F1 (C6 to C10) minus BTEX	µg/g	10	65	<	10	<10	<10	<10	<10	<10	
F2 (C10 to C16)	µg/g	10	150	<	10	<10	<10	<10	<10	<10	
F3 (C16 to C34)	µg/g	50	1300	<	50	<50	<50	<50	<50	<50	
F4 (C34 to C50)	µg/g	50	5600	<	50	<50	<50	<50	<50	<50	
Reached Baseline at C50	unitless		NR		NA	YES	YES	YES	YES	YES	

**Notes:**  
2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

**Bold** - Exceeds 2011 Table 3 SCS

"-" - parameter not analyzed  
RDL - Reported detection limit  
NR - Not Relevant  
NV- No Value  
NA - Not Applicable  
"<" - Less than the Reporting Detection Limit

Table 7: Benzene Toluene Ethylbenzene Xylene (BTEX) Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (R/P/I, Med/Fine)	Sample Location		BH201-22	BH201-22	BH202-22	MW203-22	MW203-22
				Sample Name		BH201-22 0-2.5	BH1201-22 0-2.5	BH202-22 0.5-2.5	MW203-22 0.5-2.5	MW203-22 12.5-15
				Lab Job #		C2I6820	C2I6820	C2I6820	C2I6820	C2I6820
				Laboratory ID		TBZ939	TBZ941	TBZ942	TBZ944	TBZ946
				Sampling Date		05-Jul-2022	05-Jul-2022	05-Jul-2022	05-Jul-2022	05-Jul-2022
				Sample Depth (m bgs)		0.0-0.8	0.0-0.8	0.2-0.8	0.2-0.8	3.8-4.6
Maximum Concentration					Field Duplicate					
Benzene Toluene Ethylbenzene Xylene (BTEX)										
Benzene	µg/g	0.02	0.17	<	0.02	<0.020	<0.020	<0.020	<0.020	<0.020
Ethylbenzene	µg/g	0.02	15	<	0.02	<0.020	<0.020	<0.020	<0.020	<0.020
Toluene	µg/g	0.02	6	<	0.02	<0.020	<0.020	<0.020	<0.020	<0.020
o-Xylene	µg/g	0.02	NR	<	0.02	<0.020	<0.020	<0.020	<0.020	<0.020
m+p-Xylene	µg/g	0.04	NR	<	0.04	<0.040	<0.040	<0.040	<0.040	<0.040
Xylene Mixture	µg/g	0.04	25	<	0.04	<0.040	<0.040	<0.040	<0.040	<0.040

**Notes:**  
2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

**Bold** - Exceeds 2011 Table 3 SCS

"-" - parameter not analyzed  
RDL - Reported detection limit  
NR - Not Relevant  
NV- No Value  
NA - Not Applicable  
"<" - Less than the Reporting Detection Limit



Table 9: Petroleum Hydrocarbons (PHCs) Analysis in Groundwater

Parameters	Unit	RDL	2011 Table 3 SCS (R/P/I, Med/Fine)	Sample Location		MW203-22	MW203-22
				Sample Name		MW203-22	MW1203-22
				Lab Job #		C2I9830	C2I9830
				Laboratory ID		TCP352	TCQ048
				Sampling Date		08-Jul-2022	08-Jul-2022
				Well Screen Interval (m bgs)		3.0-6.1	3.0-6.1
Maximum Concentration					Field Duplicate		
Petroleum Hydrocarbons (PHCs)							
F1 (C6 to C10)	µg/L	25	750	<	25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	25	750	<	25	<25	<25
F2 (C10 to C16)	µg/L	100	150	<	100	<100	<100
F3 (C16 to C34)	µg/L	200	500	<	200	<200	<200
F4 (C34 to C50)	µg/L	200	500	<	200	<200	<200
Reached Baseline at C50	unitless		NR		NA	YES	YES

**Notes:**  
2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

**Exceeds 2011 Table 3 SCS**

"-" - parameter not analyzed  
RDL - Reported detection limit  
NR - Not Relevant  
NV- No Value  
NA - Not Applicable  
"<" - Less than the Reporting Detection Limit

Table 10: Volatile Organic Compounds (VOCs) Analysis in Groundwater

Parameters	Unit	RDL	2011 Table 3 SCS (R/P/I, Med/Fine)	Sample Location		MW203-22	MW203-22
				Sample Name		MW203-22	MW1203-22
				Lab Job #		C2I9830	C2I9830
				Laboratory ID		TCP352	TCQ048
				Sampling Date		08-Jul-2022	08-Jul-2022
				Well Screen Interval (m bgs)		3.0-6.1	3.0-6.1
				Maximum Concentration			Field Duplicate
Volatile Organic Compounds (VOCs)							
Acetone	µg/L	10	130000	<	10	<10	<10
Benzene	µg/L	0.17	430	<	0.17	<0.17	<0.17
Bromodichloromethane	µg/L	0.5	85000	<	0.5	<0.50	<0.50
Bromoform	µg/L	1	770	<	1	<1.0	<1.0
Bromomethane	µg/L	0.5	56	<	0.5	<0.50	<0.50
Carbon Tetrachloride	µg/L	0.2	8.4	<	0.2	<0.20	<0.20
Chlorobenzene	µg/L	0.2	630	<	0.2	<0.20	<0.20
Chloroform	µg/L	0.2	22	<	0.2	<0.20	<0.20
Dibromochloromethane	µg/L	0.5	82000	<	0.5	<0.50	<0.50
1,2-Dichlorobenzene	µg/L	0.5	9600	<	0.5	<0.50	<0.50
1,3-Dichlorobenzene	µg/L	0.5	9600	<	0.5	<0.50	<0.50
1,4-Dichlorobenzene	µg/L	0.5	67	<	0.5	<0.50	<0.50
Dichlorodifluoromethane	µg/L	1	4400	<	1	<1.0	<1.0
1,1-Dichloroethane	µg/L	0.2	3100	<	0.2	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	12	<	0.5	<0.50	<0.50
1,1-Dichloroethylene	µg/L	0.2	17	<	0.2	<0.20	<0.20
Ethylbenzene	µg/L	0.2	2300	<	0.2	<0.20	<0.20
cis-1,2-Dichloroethylene	µg/L	0.5	17	<	0.5	<0.50	<0.50
trans-1,2-Dichloroethylene	µg/L	0.5	17	<	0.5	<0.50	<0.50
1,2-Dichloropropane	µg/L	0.2	140	<	0.2	<0.20	<0.20
cis-1,3-Dichloropropene	µg/L	0.3	NR	<	0.3	<0.30	<0.30
trans-1,3-Dichloropropene	µg/L	0.4	NR	<	0.4	<0.40	<0.40
1,3-Dichloropropene	µg/L	0.5	45	<	0.5	<0.50	<0.50
Ethylene Dibromide	µg/L	0.2	0.83	<	0.2	<0.20	<0.20
Hexane (n)	µg/L	1	520	<	1	<1.0	<1.0
Methyl Ethyl Ketone	µg/L	10	1500000	<	10	<10	<10
Methyl Isobutyl Ketone	µg/L	5	580000	<	5	<5.0	<5.0
Methyl Tert-Butyl Ether	µg/L	0.5	1400	<	0.5	<0.50	<0.50
Methylene Chloride	µg/L	2	5500	<	2	<2.0	<2.0
Styrene	µg/L	0.5	9100	<	0.5	<0.50	<0.50
1,1,1,2-Tetrachloroethane	µg/L	0.5	28	<	0.5	<0.50	<0.50
1,1,2,2-Tetrachloroethane	µg/L	0.5	15	<	0.5	<0.50	<0.50
Tetrachloroethylene	µg/L	0.2	17	<	0.2	<0.20	<0.20
Toluene	µg/L	0.2	18000	<	0.2	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.2	6700	<	0.2	<0.20	<0.20
1,1,2-Trichloroethane	µg/L	0.5	30	<	0.5	<0.50	<0.50
Trichloroethylene	µg/L	0.2	17	<	0.2	<0.20	<0.20
Trichlorofluoromethane	µg/L	0.5	2500	<	0.5	<0.50	<0.50
Vinyl Chloride	µg/L	0.2	1.7	<	0.2	<0.20	<0.20
o-Xylene	µg/L	0.2	NR	<	0.2	<0.20	<0.20
m+p-Xylene	µg/L	0.2	NR	<	0.2	<0.20	<0.20
Xylene Mixture	µg/L	0.2	4200	<	0.2	<0.20	<0.20

**Notes:**  
2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

**Bold** - Exceeds 2011 Table 3 SCS

"-" - parameter not analyzed  
RDL - Reported detection limit  
NR - Not Relevant  
NV- No Value  
NA - Not Applicable  
"<" - Less than the Reporting Detection Limit

# Appendix A

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## Site Photographs



**Photograph No. 1** – View of the southern portion of the Site, facing south



**Photograph No. 2** – View of the southern portion of the Site, facing southeast.





**Photograph No. 3** – View of the southern portion of the Site, facing north.



**Photograph No. 4** – View of advancement of MW203-22.





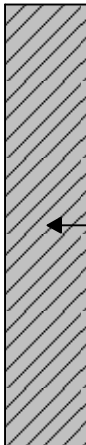
**Photograph No. 5** – View of the soil stratigraphy observed at borehole MW203-22 (soil cores ordered from shallowest (bottom) to deepest (top)).

# Appendix B

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## Borehole Logs

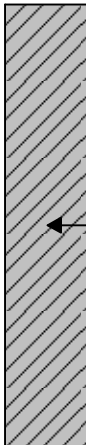





**ID No.: BH201-22****Project Name:** Phase II ESA**MTE File No.:** 51124-100**Client:** Diocese of Hamilton**Site Location:** Part of 420 and 436 Mohawk Road E, Hamilton, ON**Date Completed:** 7/5/2022**Drilling Contractor:** Ground Force Environmental Inc**Drill Rig:** Geoprobe 7822DT**Drill Method:** Direct Push**Protective Cover:** N/A

Subsurface Profile			Sample						Well Completion Details	
Depth	Symbol	Soil Description	Elevation (masl) Depth (m)	Number	Type	Recovery (%)	Soil Sample Lab Analysis	PID (ppm)		
0 ft 0 m		Ground Surface	213.8 0.0				Metals, As, Sb, Se, Cr(VI), Hg, B-HWS, PCBs, PHCs, BTEX			
2		<b>TOPSOIL</b> brown sandy silt, moist with rootlets	<b>SILT AND CLAY TILL</b> brown and grey mottled, some sand, APL to DTPL, with rootlets	1	DP	95		0	0	
4								0	0	
6		grey and brown mottled, trace sand						0	0	
8								0	0	
10			210.8 3.0							
12		Drilling Terminated								
14										
16										
18										
20										
22										
24										

**Field Technician:** KDH**Drafted by:** KDH**Reviewed by:** KCL

Sheet: 1 of 1

**ID No.: BH202-22****Project Name:** Phase II ESA**MTE File No.:** 51124-100**Client:** Diocese of Hamilton**Site Location:** Part of 420 and 436 Mohawk Road E, Hamilton, ON**Date Completed:** 7/5/2022**Drilling Contractor:** Ground Force Environmental Inc**Drill Rig:** Geoprobe 7822DT**Drill Method:** Direct Push**Protective Cover:** N/A

Subsurface Profile			Sample						Well Completion Details	
Depth	Symbol	Soil Description	Elevation (masl) Depth (m)	Number	Type	Recovery (%)	Soil Sample Lab Analysis	PID (ppm)		
0		Ground Surface	213.9				Metals, As, Sb, Se, Cr(VI), Hg, B-HWS, OCs, PCBs, PHCs, BTEX			
0		<b>TOPSOIL</b> brown sandy silt, moist with rootlets	0.0	1	DP	95		0	0	
2		<b>SILT AND CLAY TILL</b> brown and grey mottled, some to trace sand, trace gravel, DTPL						0	0	
4								0	0	
6		grey and brown mottled, some sand	212.4 1.5	2	DP	100		0	0	
8							0	0		
10		Drilling Terminated	210.9 3.0							
12										
14										
16										
18										
20										
22										
24										

**Field Technician:** KDH**Drafted by:** KDH**Reviewed by:** KCL

Sheet: 1 of 1

**ID No.: MW203-22****Project Name:** Phase II ESA**MTE File No.:** 51124-100**Client:** Diocese of Hamilton**Site Location:** Part of 420 and 436 Mohawk Road E, Hamilton, ON**Date Completed:** 7/5/2022**Drilling Contractor:** Ground Force Environmental Inc**Drill Rig:** Geoprobe 7822DT**Drill Method:** Direct Push**Protective Cover:** Flushmount

Subsurface Profile			Sample						Well Completion Details	
Depth	Symbol	Soil Description	Elevation (masl) Depth (m)	Number	Type	Recovery (%)	Soil Sample Lab Analysis	PID (ppm)		
0		Ground Surface	214.1							
0		<b>TOPSOIL</b> brown sandy silt, moist with rootlets	0.0				Metals, As, Sb, Se, pH, PHCs, BTEX	0	0	
2		<b>SILT AND CLAY TILL</b> brown and grey mottled, some to trace sand, trace gravel, DTPL		1	DP	95		0	0	
4								0	0	
6								0	0	
8				2	DP	100		0	0	
10			211.1					0	0	
12		grey, brown and orange mottled, trace to some sand APL	3.0					0	0	
14		<b>SILTY CLAY</b> grey and orange mottled silty clay, some sand, WTPL	210.3	3	DP	100	pH, PHCs, BTEX	0	0	
16			3.8					0	0	
18				4	DP	100		0	0	
20								0	0	
22				5	DP	100		0	0	
24			206.5							
			7.6							

**Field Technician:** KDH**Drafted by:** KDH**Reviewed by:** KCL

Groundwater level measured at 1.49 mbgs (212.56 masl) on July 7, 2022

## Appendix C

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# Laboratory Certificates of Analysis



Your Project #: 51124-100  
Your C.O.C. #: 882979-02-01

**Attention: Spencer Buck**

MTE Consultants Inc  
520 Bingham Centre Dr  
Kitchener, ON  
CANADA N2B 3X9

**Report Date: 2022/07/20**

Report #: R7218533

Version: 3 - Revision

**CERTIFICATE OF ANALYSIS – REVISED REPORT**

**BUREAU VERITAS JOB #: C2I6820**

**Received: 2022/07/06, 11:25**

Sample Matrix: Soil  
# Samples Received: 5

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Hot Water Extractable Boron	1	2022/07/11	2022/07/12	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron	1	2022/07/12	2022/07/13	CAM SOP-00408	R153 Ana. Prot. 2011
Hexavalent Chromium in Soil by IC (1)	2	2022/07/09	2022/07/15	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	1	N/A	2022/07/10	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	4	N/A	2022/07/11	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	5	2022/07/11	2022/07/11	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	4	2022/07/11	2022/07/11	CAM SOP-00447	EPA 6020B m
Moisture	5	N/A	2022/07/08	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (4)	1	2022/07/10	2022/07/11	CAM SOP-00307	SW846 8081, 8082
OC Pesticides Summed Parameters	1	N/A	2022/07/09	CAM SOP-00307	EPA 8081/8082 m
Polychlorinated Biphenyl in Soil	1	2022/07/09	2022/07/09	CAM SOP-00309	EPA 8082A m
pH CaCl2 EXTRACT	2	2022/07/20	2022/07/20	CAM SOP-00413	EPA 9045 D m

**Remarks:**

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.



Your Project #: 51124-100  
Your C.O.C. #: 882979-02-01

**Attention: Spencer Buck**

MTE Consultants Inc  
520 Bingemans Centre Dr  
Kitchener, ON  
CANADA N2B 3X9

**Report Date: 2022/07/20**  
Report #: R7218533  
Version: 3 - Revision

**CERTIFICATE OF ANALYSIS – REVISED REPORT**

**BUREAU VERITAS JOB #: C2I6820**

**Received: 2022/07/06, 11:25**

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

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

- (1) Soils are reported on a dry weight basis unless otherwise specified.
- (2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
- (3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.
- (4) Chlordane ( Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key

Ronklin Gracian  
Project Manager  
20 Jul 2022 14:54:18

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Ronklin Gracian, Project Manager

Email: Ronklin.Gracian@bureauveritas.com

Phone# (905)817-5752

=====

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



**O.REG 153 METALS GROUPS 1.2.2 & 1.2.3 (SOIL)**

Bureau Veritas ID			TBZ941	TBZ944		
Sampling Date			2022/07/05 12:00	2022/07/05 12:30		
COC Number			882979-02-01	882979-02-01		
	UNITS	Criteria	BH201-22 0-2.5	MW203-22 0.5-2.5	RDL	QC Batch
Metals						
Acid Extractable Antimony (Sb)	ug/g	50	<0.20	<0.20	0.20	8101785
Acid Extractable Arsenic (As)	ug/g	18	4.4	4.4	1.0	8101785
Acid Extractable Barium (Ba)	ug/g	670	100	150	0.50	8101785
Acid Extractable Beryllium (Be)	ug/g	10	0.80	1.1	0.20	8101785
Acid Extractable Boron (B)	ug/g	120	<5.0	8.2	5.0	8101785
Acid Extractable Cadmium (Cd)	ug/g	1.9	0.22	0.16	0.10	8101785
Acid Extractable Chromium (Cr)	ug/g	160	24	32	1.0	8101785
Acid Extractable Cobalt (Co)	ug/g	100	14	14	0.10	8101785
Acid Extractable Copper (Cu)	ug/g	300	24	33	0.50	8101785
Acid Extractable Lead (Pb)	ug/g	120	25	16	1.0	8101785
Acid Extractable Molybdenum (Mo)	ug/g	40	0.55	<0.50	0.50	8101785
Acid Extractable Nickel (Ni)	ug/g	340	25	35	0.50	8101785
Acid Extractable Selenium (Se)	ug/g	5.5	<0.50	<0.50	0.50	8101785
Acid Extractable Silver (Ag)	ug/g	50	<0.20	<0.20	0.20	8101785
Acid Extractable Thallium (Tl)	ug/g	3.3	0.15	0.20	0.050	8101785
Acid Extractable Uranium (U)	ug/g	33	0.51	0.61	0.050	8101785
Acid Extractable Vanadium (V)	ug/g	86	34	41	5.0	8101785
Acid Extractable Zinc (Zn)	ug/g	340	85	67	5.0	8101785
No Fill	No Exceedance					
Grey	Exceeds 1 criteria policy/level					
Black	Exceeds both criteria/levels					
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)						
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition						
Soil - Industrial/Commercial/Community- Medium and Fine Textured Soil						



BUREAU  
VERITAS

Bureau Veritas Job #: C2I6820  
Report Date: 2022/07/20

MTE Consultants Inc  
Client Project #: 51124-100  
Sampler Initials: KDH

### O.REG 153 METALS PACKAGE (SOIL)

Bureau Veritas ID			TBZ939		TBZ942		
Sampling Date			2022/07/05 12:00		2022/07/05 12:15		
COC Number			882979-02-01		882979-02-01		
	UNITS	Criteria	BH201-22 0-2.5	QC Batch	BH202-22 0.5-2.5	RDL	QC Batch
Inorganics							
Chromium (VI)	ug/g	10	<0.18	8100105	<0.18	0.18	8100105
Metals							
Hot Water Ext. Boron (B)	ug/g	2	0.21	8101267	0.10	0.050	8103511
Acid Extractable Antimony (Sb)	ug/g	50	0.26	8101785	<0.20	0.20	8101785
Acid Extractable Arsenic (As)	ug/g	18	4.4	8101785	4.1	1.0	8101785
Acid Extractable Barium (Ba)	ug/g	670	100	8101785	120	0.50	8101785
Acid Extractable Beryllium (Be)	ug/g	10	0.85	8101785	0.93	0.20	8101785
Acid Extractable Boron (B)	ug/g	120	6.2	8101785	5.2	5.0	8101785
Acid Extractable Cadmium (Cd)	ug/g	1.9	0.23	8101785	0.12	0.10	8101785
Acid Extractable Chromium (Cr)	ug/g	160	26	8101785	27	1.0	8101785
Acid Extractable Cobalt (Co)	ug/g	100	14	8101785	14	0.10	8101785
Acid Extractable Copper (Cu)	ug/g	300	25	8101785	25	0.50	8101785
Acid Extractable Lead (Pb)	ug/g	120	25	8101785	17	1.0	8101785
Acid Extractable Molybdenum (Mo)	ug/g	40	0.63	8101785	<0.50	0.50	8101785
Acid Extractable Nickel (Ni)	ug/g	340	26	8101785	29	0.50	8101785
Acid Extractable Selenium (Se)	ug/g	5.5	<0.50	8101785	<0.50	0.50	8101785
Acid Extractable Silver (Ag)	ug/g	50	<0.20	8101785	<0.20	0.20	8101785
Acid Extractable Thallium (Tl)	ug/g	3.3	0.16	8101785	0.17	0.050	8101785
Acid Extractable Uranium (U)	ug/g	33	0.58	8101785	0.60	0.050	8101785
Acid Extractable Vanadium (V)	ug/g	86	35	8101785	37	5.0	8101785
Acid Extractable Zinc (Zn)	ug/g	340	84	8101785	75	5.0	8101785
Acid Extractable Mercury (Hg)	ug/g	20	<0.050	8101785	<0.050	0.050	8101785
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)							
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition							
Soil - Industrial/Commercial/Community- Medium and Fine Textured Soil							

**O.REG 153 OC PESTICIDES (SOIL)**

Bureau Veritas ID			TBZ942		
Sampling Date			2022/07/05 12:15		
COC Number			882979-02-01		
	UNITS	Criteria	BH202-22 0.5-2.5	RDL	QC Batch
Inorganics					
Moisture	%	-	13	1.0	8097923
Calculated Parameters					
Chlordane (Total)	ug/g	0.05	<0.0020	0.0020	8093505
o,p-DDD + p,p-DDD	ug/g	4.6	<0.0020	0.0020	8093505
o,p-DDE + p,p-DDE	ug/g	0.65	<0.0020	0.0020	8093505
o,p-DDT + p,p-DDT	ug/g	1.4	<0.0020	0.0020	8093505
Total Endosulfan	ug/g	-	<0.0020	0.0020	8093505
Total PCB	ug/g	1.1	<0.015	0.015	8093505
Pesticides & Herbicides					
Aldrin	ug/g	0.11	<0.0020	0.0020	8100656
a-Chlordane	ug/g	0.05	<0.0020	0.0020	8100656
g-Chlordane	ug/g	0.05	<0.0020	0.0020	8100656
o,p-DDD	ug/g	-	<0.0020	0.0020	8100656
p,p-DDD	ug/g	-	<0.0020	0.0020	8100656
o,p-DDE	ug/g	-	<0.0020	0.0020	8100656
p,p-DDE	ug/g	-	<0.0020	0.0020	8100656
o,p-DDT	ug/g	-	<0.0020	0.0020	8100656
p,p-DDT	ug/g	-	<0.0020	0.0020	8100656
Dieldrin	ug/g	0.11	<0.0020	0.0020	8100656
Lindane	ug/g	0.063	<0.0020	0.0020	8100656
Endosulfan I (alpha)	ug/g	0.38	<0.0020	0.0020	8100656
Endosulfan II (beta)	ug/g	0.38	<0.0020	0.0020	8100656
Endrin	ug/g	0.04	<0.0020	0.0020	8100656
Heptachlor	ug/g	0.19	<0.0020	0.0020	8100656
Heptachlor epoxide	ug/g	0.05	<0.0020	0.0020	8100656
Hexachlorobenzene	ug/g	0.66	<0.0020	0.0020	8100656
Hexachlorobutadiene	ug/g	0.095	<0.0020	0.0020	8100656
Hexachloroethane	ug/g	0.43	<0.0020	0.0020	8100656
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition					
Soil - Industrial/Commercial/Community- Medium and Fine Textured Soil					



### O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID			TBZ942		
Sampling Date			2022/07/05 12:15		
COC Number			882979-02-01		
	UNITS	Criteria	BH202-22 0.5-2.5	RDL	QC Batch
Methoxychlor	ug/g	1.6	<0.0050	0.0050	8100656
Aroclor 1242	ug/g	-	<0.015	0.015	8100656
Aroclor 1248	ug/g	-	<0.015	0.015	8100656
Aroclor 1254	ug/g	-	<0.015	0.015	8100656
Aroclor 1260	ug/g	-	<0.015	0.015	8100656
Surrogate Recovery (%)					
2,4,5,6-Tetrachloro-m-xylene	%	-	73		8100656
Decachlorobiphenyl	%	-	87		8100656
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition					
Soil - Industrial/Commercial/Community- Medium and Fine Textured Soil					



### O.REG 153 PCBS (SOIL)

Bureau Veritas ID			TBZ939		
Sampling Date			2022/07/05 12:00		
COC Number			882979-02-01		
	UNITS	Criteria	BH201-22 0-2.5	RDL	QC Batch
Inorganics					
Moisture	%	-	16	1.0	8097923
PCBs					
Aroclor 1242	ug/g	-	<0.010	0.010	8100137
Aroclor 1248	ug/g	-	<0.010	0.010	8100137
Aroclor 1254	ug/g	-	<0.010	0.010	8100137
Aroclor 1260	ug/g	-	<0.010	0.010	8100137
Total PCB	ug/g	1.1	<0.010	0.010	8100137
Surrogate Recovery (%)					
Decachlorobiphenyl	%	-	109		8100137
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition					
Soil - Industrial/Commercial/Community- Medium and Fine Textured Soil					



BUREAU  
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Bureau Veritas Job #: C2I6820  
Report Date: 2022/07/20

MTE Consultants Inc  
Client Project #: 51124-100  
Sampler Initials: KDH

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

Bureau Veritas ID			TBZ939			TBZ941			TBZ942		
Sampling Date			2022/07/05 12:00			2022/07/05 12:00			2022/07/05 12:15		
COC Number			882979-02-01			882979-02-01			882979-02-01		
	<b>UNITS</b>	<b>Criteria</b>	<b>BH201-22 0-2.5</b>	<b>RDL</b>	<b>QC Batch</b>	<b>BH201-22 0-2.5</b>	<b>RDL</b>	<b>QC Batch</b>	<b>BH202-22 0.5-2.5</b>	<b>RDL</b>	<b>QC Batch</b>

#### Inorganics

Moisture	%	-				15	1.0	8097923			
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#### BTEX & F1 Hydrocarbons

Benzene	ug/g	0.4	<0.020	0.020	8100633	<0.020	0.020	8100633	<0.020	0.020	8100633
Toluene	ug/g	78	<0.020	0.020	8100633	<0.020	0.020	8100633	<0.020	0.020	8100633
Ethylbenzene	ug/g	19	<0.020	0.020	8100633	<0.020	0.020	8100633	<0.020	0.020	8100633
o-Xylene	ug/g	-	<0.020	0.020	8100633	<0.020	0.020	8100633	<0.020	0.020	8100633
p+m-Xylene	ug/g	-	<0.040	0.040	8100633	<0.040	0.040	8100633	<0.040	0.040	8100633
Total Xylenes	ug/g	30	<0.040	0.040	8100633	<0.040	0.040	8100633	<0.040	0.040	8100633
F1 (C6-C10)	ug/g	65	<10	10	8100633	<10	10	8100633	<10	10	8100633
F1 (C6-C10) - BTEX	ug/g	65	<10	10	8100633	<10	10	8100633	<10	10	8100633

#### F2-F4 Hydrocarbons

F2 (C10-C16 Hydrocarbons)	ug/g	250	<10	10	8101109	<10	10	8101109	<10	10	8101109
F3 (C16-C34 Hydrocarbons)	ug/g	2500	<50	50	8101109	<50	50	8101109	<50	50	8101109
F4 (C34-C50 Hydrocarbons)	ug/g	6600	<50	50	8101109	<50	50	8101109	<50	50	8101109
Reached Baseline at C50	ug/g	-	Yes		8101109	Yes		8101109	Yes		8101109

#### Surrogate Recovery (%)

1,4-Difluorobenzene	%	-	99		8100633	98		8100633	99		8100633
4-Bromofluorobenzene	%	-	97		8100633	100		8100633	98		8100633
D10-o-Xylene	%	-	98		8100633	92		8100633	97		8100633
D4-1,2-Dichloroethane	%	-	104		8100633	100		8100633	103		8100633
o-Terphenyl	%	-	98		8101109	95		8101109	99		8101109

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

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)

Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition

Soil - Industrial/Commercial/Community- Medium and Fine Textured Soil



BUREAU  
VERITAS

Bureau Veritas Job #: C2I6820  
Report Date: 2022/07/20

MTE Consultants Inc  
Client Project #: 51124-100  
Sampler Initials: KDH

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

Bureau Veritas ID			TBZ944	TBZ946			TBZ946		
Sampling Date			2022/07/05 12:30	2022/07/05 12:40			2022/07/05 12:40		
COC Number			882979-02-01	882979-02-01			882979-02-01		
	UNITS	Criteria	MW203-22 0.5-2.5	MW203-22 12.5-15	RDL	QC Batch	MW203-22 12.5-15 Lab-Dup	RDL	QC Batch

<b>Inorganics</b>									
Moisture	%	-	13	19	1.0	8097923	18	1.0	8097923
<b>BTEX &amp; F1 Hydrocarbons</b>									
Benzene	ug/g	0.4	<0.020	<0.020	0.020	8100633			
Toluene	ug/g	78	<0.020	<0.020	0.020	8100633			
Ethylbenzene	ug/g	19	<0.020	<0.020	0.020	8100633			
o-Xylene	ug/g	-	<0.020	<0.020	0.020	8100633			
p+m-Xylene	ug/g	-	<0.040	<0.040	0.040	8100633			
Total Xylenes	ug/g	30	<0.040	<0.040	0.040	8100633			
F1 (C6-C10)	ug/g	65	<10	<10	10	8100633			
F1 (C6-C10) - BTEX	ug/g	65	<10	<10	10	8100633			
<b>F2-F4 Hydrocarbons</b>									
F2 (C10-C16 Hydrocarbons)	ug/g	250	<10	<10	10	8101109			
F3 (C16-C34 Hydrocarbons)	ug/g	2500	<50	<50	50	8101109			
F4 (C34-C50 Hydrocarbons)	ug/g	6600	<50	<50	50	8101109			
Reached Baseline at C50	ug/g	-	Yes	Yes		8101109			
<b>Surrogate Recovery (%)</b>									
1,4-Difluorobenzene	%	-	95	99		8100633			
4-Bromofluorobenzene	%	-	102	99		8100633			
D10-o-Xylene	%	-	95	105		8100633			
D4-1,2-Dichloroethane	%	-	105	102		8100633			
o-Terphenyl	%	-	97	95		8101109			

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels
RDL = Reportable Detection Limit	
QC Batch = Quality Control Batch	
Lab-Dup = Laboratory Initiated Duplicate	
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)	
Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition	
Soil - Industrial/Commercial/Community- Medium and Fine Textured Soil	





BUREAU  
VERITAS

Bureau Veritas Job #: C2I6820

Report Date: 2022/07/20

MTE Consultants Inc

Client Project #: 51124-100

Sampler Initials: KDH

### RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		TBZ944	TBZ946	
Sampling Date		2022/07/05 12:30	2022/07/05 12:40	
COC Number		882979-02-01	882979-02-01	
	UNITS	MW203-22 0.5-2.5	MW203-22 12.5-15	QC Batch
<b>Inorganics</b>				
Available (CaCl <sub>2</sub> ) pH	pH	7.55	7.77	8119424
QC Batch = Quality Control Batch				



BUREAU  
VERITAS

Bureau Veritas Job #: C2I6820

Report Date: 2022/07/20

MTE Consultants Inc

Client Project #: 51124-100

Sampler Initials: KDH

## TEST SUMMARY

**Bureau Veritas ID:** TBZ939  
**Sample ID:** BH201-22 0-2.5  
**Matrix:** Soil

**Collected:** 2022/07/05  
**Shipped:**  
**Received:** 2022/07/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8101267	2022/07/11	2022/07/12	Jolly John
Hexavalent Chromium in Soil by IC	IC/SPEC	8100105	2022/07/09	2022/07/15	Surleen Kaur Romana
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8100633	N/A	2022/07/10	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8101109	2022/07/11	2022/07/11	Jeevaraj Jeevaratnam
Acid Extractable Metals by ICPMS	ICP/MS	8101785	2022/07/11	2022/07/11	Daniel Teclu
Moisture	BAL	8097923	N/A	2022/07/08	Min Yang
Polychlorinated Biphenyl in Soil	GC/ECD	8100137	2022/07/09	2022/07/09	Svitlana Shaula

**Bureau Veritas ID:** TBZ941  
**Sample ID:** BH201-22 0-2.5  
**Matrix:** Soil

**Collected:** 2022/07/05  
**Shipped:**  
**Received:** 2022/07/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8100633	N/A	2022/07/11	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8101109	2022/07/11	2022/07/11	Jeevaraj Jeevaratnam
Acid Extractable Metals by ICPMS	ICP/MS	8101785	2022/07/11	2022/07/11	Daniel Teclu
Moisture	BAL	8097923	N/A	2022/07/08	Min Yang

**Bureau Veritas ID:** TBZ942  
**Sample ID:** BH202-22 0.5-2.5  
**Matrix:** Soil

**Collected:** 2022/07/05  
**Shipped:**  
**Received:** 2022/07/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8103511	2022/07/12	2022/07/13	Jolly John
Hexavalent Chromium in Soil by IC	IC/SPEC	8100105	2022/07/09	2022/07/15	Surleen Kaur Romana
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8100633	N/A	2022/07/11	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8101109	2022/07/11	2022/07/11	Jeevaraj Jeevaratnam
Acid Extractable Metals by ICPMS	ICP/MS	8101785	2022/07/11	2022/07/11	Daniel Teclu
Moisture	BAL	8097923	N/A	2022/07/08	Min Yang
OC Pesticides (Selected) & PCB	GC/ECD	8100656	2022/07/10	2022/07/11	Li Peng
OC Pesticides Summed Parameters	CALC	8093505	N/A	2022/07/09	Automated Statchk

**Bureau Veritas ID:** TBZ944  
**Sample ID:** MW203-22 0.5-2.5  
**Matrix:** Soil

**Collected:** 2022/07/05  
**Shipped:**  
**Received:** 2022/07/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8100633	N/A	2022/07/11	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8101109	2022/07/11	2022/07/11	Jeevaraj Jeevaratnam
Acid Extractable Metals by ICPMS	ICP/MS	8101785	2022/07/11	2022/07/11	Daniel Teclu
Moisture	BAL	8097923	N/A	2022/07/08	Min Yang
pH CaCl2 EXTRACT	AT	8119424	2022/07/20	2022/07/20	Taslina Aktar



BUREAU  
VERITAS

Bureau Veritas Job #: C2I6820  
Report Date: 2022/07/20

MTE Consultants Inc  
Client Project #: 51124-100  
Sampler Initials: KDH

## TEST SUMMARY

**Bureau Veritas ID:** TBZ946  
**Sample ID:** MW203-22 12.5-15  
**Matrix:** Soil

**Collected:** 2022/07/05  
**Shipped:**  
**Received:** 2022/07/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8100633	N/A	2022/07/11	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8101109	2022/07/11	2022/07/11	Jeevaraj Jeevaratnam
Moisture	BAL	8097923	N/A	2022/07/08	Min Yang
pH CaCl2 EXTRACT	AT	8119424	2022/07/20	2022/07/20	Taslima Aktar

**Bureau Veritas ID:** TBZ946 Dup  
**Sample ID:** MW203-22 12.5-15  
**Matrix:** Soil

**Collected:** 2022/07/05  
**Shipped:**  
**Received:** 2022/07/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8097923	N/A	2022/07/08	Min Yang



### GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.7°C
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Revised Report [2022/07/20]: Samples MW203-22 0.5-2.5 and MW203-22 12.5-15 have been analyzed for pH as per client request.

Sample TBZ946 [MW203-22 12.5-15] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

**Results relate only to the items tested.**



BUREAU  
VERITAS

Bureau Veritas Job #: C216820

Report Date: 2022/07/20

## QUALITY ASSURANCE REPORT

MTE Consultants Inc

Client Project #: 51124-100

Sampler Initials: KDH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8100137	Decachlorobiphenyl	2022/07/09	123	60 - 130	86	60 - 130	106	%		
8100633	1,4-Difluorobenzene	2022/07/10	98	60 - 140	99	60 - 140	99	%		
8100633	4-Bromofluorobenzene	2022/07/10	100	60 - 140	99	60 - 140	97	%		
8100633	D10-o-Xylene	2022/07/10	96	60 - 140	96	60 - 140	97	%		
8100633	D4-1,2-Dichloroethane	2022/07/10	99	60 - 140	101	60 - 140	103	%		
8100656	2,4,5,6-Tetrachloro-m-xylene	2022/07/11	68	50 - 130	68	50 - 130	71	%		
8100656	Decachlorobiphenyl	2022/07/11	102	50 - 130	97	50 - 130	88	%		
8101109	o-Terphenyl	2022/07/11	94	60 - 130	91	60 - 130	103	%		
8097923	Moisture	2022/07/08							4.3	20
8100105	Chromium (VI)	2022/07/15	82	70 - 130	91	80 - 120	<0.18	ug/g	NC	35
8100137	Aroclor 1242	2022/07/09					<0.010	ug/g	NC	50
8100137	Aroclor 1248	2022/07/09					<0.010	ug/g	NC	50
8100137	Aroclor 1254	2022/07/09					<0.010	ug/g	NC	50
8100137	Aroclor 1260	2022/07/09	131 (1)	30 - 130	107	30 - 130	<0.010	ug/g	NC	50
8100137	Total PCB	2022/07/09	131 (1)	30 - 130	107	30 - 130	<0.010	ug/g	NC	50
8100633	Benzene	2022/07/10	91	50 - 140	93	50 - 140	<0.020	ug/g	NC	50
8100633	Ethylbenzene	2022/07/10	98	50 - 140	99	50 - 140	<0.020	ug/g	NC	50
8100633	F1 (C6-C10) - BTEX	2022/07/10					<10	ug/g	NC	30
8100633	F1 (C6-C10)	2022/07/10	98	60 - 140	103	80 - 120	<10	ug/g	NC	30
8100633	o-Xylene	2022/07/10	97	50 - 140	97	50 - 140	<0.020	ug/g	NC	50
8100633	p+m-Xylene	2022/07/10	93	50 - 140	94	50 - 140	<0.040	ug/g	NC	50
8100633	Toluene	2022/07/10	93	50 - 140	93	50 - 140	<0.020	ug/g	NC	50
8100633	Total Xylenes	2022/07/10					<0.040	ug/g	NC	50
8100656	a-Chlordane	2022/07/11	75	50 - 130	91	50 - 130	<0.0020	ug/g	NC	40
8100656	Aldrin	2022/07/11	75	50 - 130	76	50 - 130	<0.0020	ug/g	NC	40
8100656	Aroclor 1242	2022/07/11					<0.015	ug/g	NC	40
8100656	Aroclor 1248	2022/07/11					<0.015	ug/g	NC	40
8100656	Aroclor 1254	2022/07/11					<0.015	ug/g	NC	40
8100656	Aroclor 1260	2022/07/11					<0.015	ug/g	NC	40
8100656	Dieldrin	2022/07/11	99	50 - 130	99	50 - 130	<0.0020	ug/g	NC	40
8100656	Endosulfan I (alpha)	2022/07/11	81	50 - 130	81	50 - 130	<0.0020	ug/g	NC	40

BUREAU  
VERITAS

Bureau Veritas Job #: C2I6820

Report Date: 2022/07/20

## QUALITY ASSURANCE REPORT(CONT'D)

MTE Consultants Inc

Client Project #: 51124-100

Sampler Initials: KDH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8100656	Endosulfan II (beta)	2022/07/11	90	50 - 130	91	50 - 130	<0.0020	ug/g	NC	40
8100656	Endrin	2022/07/11	110	50 - 130	103	50 - 130	<0.0020	ug/g	NC	40
8100656	g-Chlordane	2022/07/11	75	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40
8100656	Heptachlor epoxide	2022/07/11	83	50 - 130	85	50 - 130	<0.0020	ug/g	NC	40
8100656	Heptachlor	2022/07/11	85	50 - 130	89	50 - 130	<0.0020	ug/g	NC	40
8100656	Hexachlorobenzene	2022/07/11	76	50 - 130	88	50 - 130	<0.0020	ug/g	NC	40
8100656	Hexachlorobutadiene	2022/07/11	77	50 - 130	91	50 - 130	<0.0020	ug/g	NC	40
8100656	Hexachloroethane	2022/07/11	59	50 - 130	70	50 - 130	<0.0020	ug/g	NC	40
8100656	Lindane	2022/07/11	72	50 - 130	75	50 - 130	<0.0020	ug/g	NC	40
8100656	Methoxychlor	2022/07/11	128	50 - 130	119	50 - 130	<0.0050	ug/g	NC	40
8100656	o,p-DDD	2022/07/11	92	50 - 130	90	50 - 130	<0.0020	ug/g	NC	40
8100656	o,p-DDE	2022/07/11	80	50 - 130	79	50 - 130	<0.0020	ug/g	NC	40
8100656	o,p-DDT	2022/07/11	94	50 - 130	86	50 - 130	<0.0020	ug/g	NC	40
8100656	p,p-DDD	2022/07/11	90	50 - 130	93	50 - 130	<0.0020	ug/g	NC	40
8100656	p,p-DDE	2022/07/11	82	50 - 130	79	50 - 130	<0.0020	ug/g	NC	40
8100656	p,p-DDT	2022/07/11	100	50 - 130	89	50 - 130	<0.0020	ug/g	NC	40
8101109	F2 (C10-C16 Hydrocarbons)	2022/07/11	91	60 - 130	94	80 - 120	<10	ug/g	NC	30
8101109	F3 (C16-C34 Hydrocarbons)	2022/07/11	93	60 - 130	94	80 - 120	<50	ug/g	NC	30
8101109	F4 (C34-C50 Hydrocarbons)	2022/07/11	96	60 - 130	95	80 - 120	<50	ug/g	NC	30
8101267	Hot Water Ext. Boron (B)	2022/07/12	103	75 - 125	97	75 - 125	<0.050	ug/g	14	40
8101785	Acid Extractable Antimony (Sb)	2022/07/11	90	75 - 125	95	80 - 120	<0.20	ug/g	NC	30
8101785	Acid Extractable Arsenic (As)	2022/07/11	95	75 - 125	95	80 - 120	<1.0	ug/g	0.81	30
8101785	Acid Extractable Barium (Ba)	2022/07/11	NC	75 - 125	94	80 - 120	<0.50	ug/g	1.2	30
8101785	Acid Extractable Beryllium (Be)	2022/07/11	96	75 - 125	95	80 - 120	<0.20	ug/g	0.36	30
8101785	Acid Extractable Boron (B)	2022/07/11	92	75 - 125	93	80 - 120	<5.0	ug/g	NC	30
8101785	Acid Extractable Cadmium (Cd)	2022/07/11	93	75 - 125	95	80 - 120	<0.10	ug/g	0.60	30
8101785	Acid Extractable Chromium (Cr)	2022/07/11	93	75 - 125	96	80 - 120	<1.0	ug/g	2.6	30
8101785	Acid Extractable Cobalt (Co)	2022/07/11	99	75 - 125	97	80 - 120	<0.10	ug/g	3.7	30
8101785	Acid Extractable Copper (Cu)	2022/07/11	86	75 - 125	96	80 - 120	<0.50	ug/g	4.1	30
8101785	Acid Extractable Lead (Pb)	2022/07/11	NC	75 - 125	98	80 - 120	<1.0	ug/g	12	30
8101785	Acid Extractable Mercury (Hg)	2022/07/11	86	75 - 125	92	80 - 120	<0.050	ug/g	2.3	30



BUREAU  
VERITAS

Bureau Veritas Job #: C2I6820

Report Date: 2022/07/20

## QUALITY ASSURANCE REPORT(CONT'D)

MTE Consultants Inc

Client Project #: 51124-100

Sampler Initials: KDH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8101785	Acid Extractable Molybdenum (Mo)	2022/07/11	95	75 - 125	97	80 - 120	<0.50	ug/g	6.6	30
8101785	Acid Extractable Nickel (Ni)	2022/07/11	94	75 - 125	97	80 - 120	<0.50	ug/g	2.0	30
8101785	Acid Extractable Selenium (Se)	2022/07/11	94	75 - 125	96	80 - 120	<0.50	ug/g	NC	30
8101785	Acid Extractable Silver (Ag)	2022/07/11	94	75 - 125	96	80 - 120	<0.20	ug/g	13	30
8101785	Acid Extractable Thallium (Tl)	2022/07/11	94	75 - 125	98	80 - 120	<0.050	ug/g	16	30
8101785	Acid Extractable Uranium (U)	2022/07/11	95	75 - 125	98	80 - 120	<0.050	ug/g	0.20	30
8101785	Acid Extractable Vanadium (V)	2022/07/11	96	75 - 125	97	80 - 120	<5.0	ug/g	1.8	30
8101785	Acid Extractable Zinc (Zn)	2022/07/11	NC	75 - 125	98	80 - 120	<5.0	ug/g	0.35	30
8103511	Hot Water Ext. Boron (B)	2022/07/13	97	75 - 125	103	75 - 125	<0.050	ug/g	8.0	40
8119424	Available (CaCl <sub>2</sub> ) pH	2022/07/20			100	97 - 103			0.47	N/A

N/A = Not Applicable

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

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

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

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

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

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

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

(1) Matrix spike exceeds acceptance limits, sample inhomogeneity suspected.



BUREAU  
VERITAS

Bureau Veritas Job #: C2I6820

Report Date: 2022/07/20

MTE Consultants Inc

Client Project #: 51124-100

Sampler Initials: KDH

## VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Ewa Pranjić, M.Sc., C.Chem, Scientific Specialist

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.





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

CHAIN OF

Page 1 of 1

06-Jul-22 11:25

Ronklin Gracian

C216820

ENV 1462

COC #:

C#882979-02-01

Ronklin Gracian

INVOICE TO:  
Company Name: #6868 MTE Consultants Inc  
Attention: Accounts Payable  
Address: 520 Bingham Centre Dr  
Kitchener ON N2B 3X9  
Tel: (519) 743-6500 Fax: (519) 743-6513  
Email: accounting@mte85.com

REPORT TO:  
Company Name: ~~\_\_\_\_\_~~ Spencer Buck  
Attention: ~~\_\_\_\_\_~~ KELVIN LEE  
Address: ~~\_\_\_\_\_~~  
Tel: ~~\_\_\_\_\_~~ Fax: KLee@mess.com  
Email: ~~\_\_\_\_\_~~ Shuck@mess.com

PROJECT INFORMATION:  
Quotation #: B90004  
P.O. #: ~~\_\_\_\_\_~~  
Project: ~~\_\_\_\_\_~~ 51124-100  
Project Name: ~~\_\_\_\_\_~~  
Site #: ~~\_\_\_\_\_~~  
Sampled By: KDH

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

Regulation 153 (2011)	Other Regulations	Special Instructions
<input type="checkbox"/> Table 1 <input type="checkbox"/> Table 2 <input type="checkbox"/> Table 3 <input type="checkbox"/> Table	<input checked="" type="checkbox"/> Res/Park <input type="checkbox"/> Ind/Comm <input type="checkbox"/> Agri/Other <input type="checkbox"/> Medium/Fine <input type="checkbox"/> Coarse <input type="checkbox"/> For RSC <input type="checkbox"/> CCME <input type="checkbox"/> Reg 558 <input type="checkbox"/> MISA <input type="checkbox"/> PWQO <input type="checkbox"/> Other	<input type="checkbox"/> Sanitary Sewer Bylaw <input type="checkbox"/> Storm Sewer Bylaw <input type="checkbox"/> Municipality <input type="checkbox"/> Reg 406 Table

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

Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix
1	BH201-22 0-2.5	2022 Jul 5	12:00	S
2	BH201-22 2.5-5		12:00	
3	BH201-22 0-2.5		12:00	
4	BH202-22 0.5-2.5		12:15	
5	BH202-22 2.5-5		12:15	
6	MW203-22 0.5-2.5		12:30	
7	MW203-22 2.5-5		12:30	
8	MW203-22 12.5-15		12:40	
9	MW203-22 17.5-20		12:45	
10				

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)
(KDH) Metals, As, Sb, Se PACs, BTEX Cr VI, Hg, BTHWS PCBs OCs HOLD

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

Regular (Standard) TAT:  
(will be applied if Rush TAT is not specified):  
Standard TAT = 5-7 Working days for most tests.

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)  
Date Required: Time Required: ☐

Rush Confirmation Number: (call lab for #)

* RELINQUISHED BY: (Signature/Print) KAY HARVEY	Date: (YY/MM/DD) 08/07/06	Time 9:00	RECEIVED BY: (Signature/Print) [Signature]	Date: (YY/MM/DD) 08/07/06	Time 11:15	# jars used and not submitted	Laboratory Use Only		
						Time Sensitive	Temperature (°C) on Reel 10/10	Custody Seal Present Intact	Yes No

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

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

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

White: Bureau Veritas Yellow: Client

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

Bureau Veritas Canada (2019) Inc.



**BUREAU**  
**VERITAS**

Bureau Veritas Job #: C2I6820

Report Date: 2022/07/20

MTE Consultants Inc

Client Project #: 51124-100

Sampler Initials: KDH

**Exceedance Summary Table – Reg153/04 T3-Soil/Ind-F/M**  
**Result Exceedances**

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						



Your Project #: 51124-100  
Your C.O.C. #: 887140-01-01

**Attention: Spencer Buck**

MTE Consultants Inc  
520 Bingham Centre Dr  
Kitchener, ON  
CANADA N2B 3X9

**Report Date: 2022/07/14**  
Report #: R7210810  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C2I9830**

**Received: 2022/07/08, 13:10**

Sample Matrix: Water  
# Samples Received: 2

Analyses	Date		Date Analyzed	Laboratory Method	Analytical Method
	Quantity	Extracted			
1,3-Dichloropropene Sum	2	N/A	2022/07/12		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2022/07/13	2022/07/13	CAM SOP-00316	CCME PHC-CWS m
Polychlorinated Biphenyl in Water	1	2022/07/10	2022/07/11	CAM SOP-00309	EPA 8082A m
Volatile Organic Compounds and F1 PHCs	2	N/A	2022/07/11	CAM SOP-00230	EPA 8260C m

**Remarks:**

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

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

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



Your Project #: 51124-100  
Your C.O.C. #: 887140-01-01

**Attention: Spencer Buck**

MTE Consultants Inc  
520 Bingemans Centre Dr  
Kitchener, ON  
CANADA N2B 3X9

**Report Date: 2022/07/14**  
Report #: R7210810  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C2I9830**

**Received: 2022/07/08, 13:10**

Encryption Key

Ronklin Gracian  
Project Manager  
14 Jul 2022 17:21:16

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Ronklin Gracian, Project Manager

Email: Ronklin.Gracian@bureauveritas.com

Phone# (905)817-5752

=====

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.  
For Service Group specific validation please refer to the Validation Signature Page.



BUREAU  
VERITAS

Bureau Veritas Job #: C2I9830

Report Date: 2022/07/14

MTE Consultants Inc

Client Project #: 51124-100

Sampler Initials: KDH

### O.REG 153 PCBS (WATER)

Bureau Veritas ID		TCP352		
Sampling Date				
COC Number		887140-01-01		
	<b>UNITS</b>	<b>MW203-22</b>	<b>RDL</b>	<b>QC Batch</b>
<b>PCBs</b>				
Aroclor 1242	ug/L	<0.05	0.05	8100755
Aroclor 1248	ug/L	<0.05	0.05	8100755
Aroclor 1254	ug/L	<0.05	0.05	8100755
Aroclor 1260	ug/L	<0.05	0.05	8100755
Total PCB	ug/L	<0.05	0.05	8100755
<b>Surrogate Recovery (%)</b>				
Decachlorobiphenyl	%	101		8100755
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



BUREAU  
VERITAS

Bureau Veritas Job #: C2I9830  
Report Date: 2022/07/14

MTE Consultants Inc  
Client Project #: 51124-100  
Sampler Initials: KDH

### O.REG 153 VOCs BY HS & F1-F4 (WATER)

Bureau Veritas ID		TCP352	TCQ048		
Sampling Date					
COC Number		887140-01-01	887140-01-01		
	UNITS	MW203-22	MW1203-22	RDL	QC Batch
<b>Calculated Parameters</b>					
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	0.50	8098334
<b>Volatile Organics</b>					
Acetone (2-Propanone)	ug/L	<10	<10	10	8100516
Benzene	ug/L	<0.17	<0.17	0.17	8100516
Bromodichloromethane	ug/L	<0.50	<0.50	0.50	8100516
Bromoform	ug/L	<1.0	<1.0	1.0	8100516
Bromomethane	ug/L	<0.50	<0.50	0.50	8100516
Carbon Tetrachloride	ug/L	<0.20	<0.20	0.20	8100516
Chlorobenzene	ug/L	<0.20	<0.20	0.20	8100516
Chloroform	ug/L	<0.20	<0.20	0.20	8100516
Dibromochloromethane	ug/L	<0.50	<0.50	0.50	8100516
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	8100516
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	8100516
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	8100516
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	1.0	8100516
1,1-Dichloroethane	ug/L	<0.20	<0.20	0.20	8100516
1,2-Dichloroethane	ug/L	<0.50	<0.50	0.50	8100516
1,1-Dichloroethylene	ug/L	<0.20	<0.20	0.20	8100516
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	8100516
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	8100516
1,2-Dichloropropane	ug/L	<0.20	<0.20	0.20	8100516
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	0.30	8100516
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	0.40	8100516
Ethylbenzene	ug/L	<0.20	<0.20	0.20	8100516
Ethylene Dibromide	ug/L	<0.20	<0.20	0.20	8100516
Hexane	ug/L	<1.0	<1.0	1.0	8100516
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	2.0	8100516
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	10	8100516
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	5.0	8100516
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	0.50	8100516
Styrene	ug/L	<0.50	<0.50	0.50	8100516
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	8100516
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					

**O.REG 153 VOCs BY HS & F1-F4 (WATER)**

Bureau Veritas ID		TCP352	TCQ048		
Sampling Date					
COC Number		887140-01-01	887140-01-01		
	<b>UNITS</b>	<b>MW203-22</b>	<b>MW1203-22</b>	<b>RDL</b>	<b>QC Batch</b>
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	8100516
Tetrachloroethylene	ug/L	<0.20	<0.20	0.20	8100516
Toluene	ug/L	<0.20	<0.20	0.20	8100516
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	0.20	8100516
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	0.50	8100516
Trichloroethylene	ug/L	<0.20	<0.20	0.20	8100516
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	0.50	8100516
Vinyl Chloride	ug/L	<0.20	<0.20	0.20	8100516
p+m-Xylene	ug/L	<0.20	<0.20	0.20	8100516
o-Xylene	ug/L	<0.20	<0.20	0.20	8100516
Total Xylenes	ug/L	<0.20	<0.20	0.20	8100516
F1 (C6-C10)	ug/L	<25	<25	25	8100516
F1 (C6-C10) - BTEX	ug/L	<25	<25	25	8100516
<b>F2-F4 Hydrocarbons</b>					
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	100	8105780
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	200	8105780
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	200	8105780
Reached Baseline at C50	ug/L	Yes	Yes		8105780
<b>Surrogate Recovery (%)</b>					
o-Terphenyl	%	100	99		8105780
4-Bromofluorobenzene	%	95	84		8100516
D4-1,2-Dichloroethane	%	95	112		8100516
D8-Toluene	%	97	100		8100516
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					



BUREAU  
VERITAS

Bureau Veritas Job #: C2I9830  
Report Date: 2022/07/14

MTE Consultants Inc  
Client Project #: 51124-100  
Sampler Initials: KDH

## TEST SUMMARY

**Bureau Veritas ID:** TCP352  
**Sample ID:** MW203-22  
**Matrix:** Water

**Collected:**  
**Shipped:**  
**Received:** 2022/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8098334	N/A	2022/07/12	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8105780	2022/07/13	2022/07/13	Austin (Guochen) Zhang
Polychlorinated Biphenyl in Water	GC/ECD	8100755	2022/07/10	2022/07/11	Svitlana Shaula
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8100516	N/A	2022/07/11	Ancheol Jeong

**Bureau Veritas ID:** TCQ048  
**Sample ID:** MW1203-22  
**Matrix:** Water

**Collected:**  
**Shipped:**  
**Received:** 2022/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8098334	N/A	2022/07/12	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8105780	2022/07/13	2022/07/13	Austin (Guochen) Zhang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8100516	N/A	2022/07/11	Ancheol Jeong





## GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.0°C
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### O.REG 153 PCBS (WATER)

Polychlorinated Biphenyl in Water: Duplicate results exceeded RPD acceptance criteria. This may be due to the observed differences in the contents of the containers supplied.

**Results relate only to the items tested.**

BUREAU  
VERITAS

Bureau Veritas Job #: C2I9830

Report Date: 2022/07/14

## QUALITY ASSURANCE REPORT

MTE Consultants Inc

Client Project #: 51124-100

Sampler Initials: KDH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8100516	4-Bromofluorobenzene	2022/07/11	118	70 - 130	100	70 - 130	98	%		
8100516	D4-1,2-Dichloroethane	2022/07/11	102	70 - 130	79	70 - 130	101	%		
8100516	D8-Toluene	2022/07/11	99	70 - 130	100	70 - 130	97	%		
8100755	Decachlorobiphenyl	2022/07/11	96	60 - 130	102	60 - 130	102	%		
8105780	o-Terphenyl	2022/07/14	103	60 - 130	103	60 - 130	103	%		
8100516	1,1,1,2-Tetrachloroethane	2022/07/11	100	70 - 130	105	70 - 130	<0.50	ug/L	NC	30
8100516	1,1,1-Trichloroethane	2022/07/11	103	70 - 130	87	70 - 130	<0.20	ug/L	NC	30
8100516	1,1,2,2-Tetrachloroethane	2022/07/11	119	70 - 130	99	70 - 130	<0.50	ug/L	NC	30
8100516	1,1,2-Trichloroethane	2022/07/11	100	70 - 130	101	70 - 130	<0.50	ug/L	NC	30
8100516	1,1-Dichloroethane	2022/07/11	116	70 - 130	97	70 - 130	<0.20	ug/L	22	30
8100516	1,1-Dichloroethylene	2022/07/11	105	70 - 130	89	70 - 130	<0.20	ug/L	NC	30
8100516	1,2-Dichlorobenzene	2022/07/11	98	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
8100516	1,2-Dichloroethane	2022/07/11	96	70 - 130	69 (1)	70 - 130	<0.50	ug/L	NC	30
8100516	1,2-Dichloropropane	2022/07/11	95	70 - 130	90	70 - 130	<0.20	ug/L	NC	30
8100516	1,3-Dichlorobenzene	2022/07/11	97	70 - 130	102	70 - 130	<0.50	ug/L	NC	30
8100516	1,4-Dichlorobenzene	2022/07/11	99	70 - 130	116	70 - 130	<0.50	ug/L	NC	30
8100516	Acetone (2-Propanone)	2022/07/11	97	60 - 140	68	60 - 140	<10	ug/L	NC	30
8100516	Benzene	2022/07/11	93	70 - 130	85	70 - 130	<0.17	ug/L	NC	30
8100516	Bromodichloromethane	2022/07/11	101	70 - 130	85	70 - 130	<0.50	ug/L	NC	30
8100516	Bromoform	2022/07/11	98	70 - 130	101	70 - 130	<1.0	ug/L	NC	30
8100516	Bromomethane	2022/07/11	107	60 - 140	93	60 - 140	<0.50	ug/L	NC	30
8100516	Carbon Tetrachloride	2022/07/11	100	70 - 130	83	70 - 130	<0.20	ug/L	NC	30
8100516	Chlorobenzene	2022/07/11	98	70 - 130	103	70 - 130	<0.20	ug/L	NC	30
8100516	Chloroform	2022/07/11	100	70 - 130	84	70 - 130	<0.20	ug/L	NC	30
8100516	cis-1,2-Dichloroethylene	2022/07/11	102	70 - 130	107	70 - 130	<0.50	ug/L	NC	30
8100516	cis-1,3-Dichloropropene	2022/07/11	91	70 - 130	77	70 - 130	<0.30	ug/L	NC	30
8100516	Dibromochloromethane	2022/07/11	103	70 - 130	105	70 - 130	<0.50	ug/L	NC	30
8100516	Dichlorodifluoromethane (FREON 12)	2022/07/11	110	60 - 140	99	60 - 140	<1.0	ug/L	NC	30
8100516	Ethylbenzene	2022/07/11	92	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
8100516	Ethylene Dibromide	2022/07/11	97	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
8100516	F1 (C6-C10) - BTEX	2022/07/11					<25	ug/L	NC	30



**BUREAU**  
**VERITAS**

Bureau Veritas Job #: C2I9830

Report Date: 2022/07/14

## QUALITY ASSURANCE REPORT(CONT'D)

MTE Consultants Inc

Client Project #: 51124-100

Sampler Initials: KDH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8100516	F1 (C6-C10)	2022/07/11	100	60 - 140	99	60 - 140	<25	ug/L	NC	30
8100516	Hexane	2022/07/11	117	70 - 130	105	70 - 130	<1.0	ug/L	NC	30
8100516	Methyl Ethyl Ketone (2-Butanone)	2022/07/11	95	60 - 140	96	60 - 140	<10	ug/L	NC	30
8100516	Methyl Isobutyl Ketone	2022/07/11	90	70 - 130	74	70 - 130	<5.0	ug/L	NC	30
8100516	Methyl t-butyl ether (MTBE)	2022/07/11	108	70 - 130	87	70 - 130	<0.50	ug/L	NC	30
8100516	Methylene Chloride(Dichloromethane)	2022/07/11	123	70 - 130	100	70 - 130	<2.0	ug/L	NC	30
8100516	o-Xylene	2022/07/11	92	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
8100516	p+m-Xylene	2022/07/11	94	70 - 130	100	70 - 130	<0.20	ug/L	NC	30
8100516	Styrene	2022/07/11	98	70 - 130	104	70 - 130	<0.50	ug/L	NC	30
8100516	Tetrachloroethylene	2022/07/11	96	70 - 130	102	70 - 130	<0.20	ug/L	NC	30
8100516	Toluene	2022/07/11	91	70 - 130	97	70 - 130	<0.20	ug/L	NC	30
8100516	Total Xylenes	2022/07/11					<0.20	ug/L	NC	30
8100516	trans-1,2-Dichloroethylene	2022/07/11	124	70 - 130	99	70 - 130	<0.50	ug/L	NC	30
8100516	trans-1,3-Dichloropropene	2022/07/11	95	70 - 130	100	70 - 130	<0.40	ug/L	NC	30
8100516	Trichloroethylene	2022/07/11	106	70 - 130	111	70 - 130	<0.20	ug/L	4.1	30
8100516	Trichlorofluoromethane (FREON 11)	2022/07/11	108	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
8100516	Vinyl Chloride	2022/07/11	99	70 - 130	86	70 - 130	<0.20	ug/L	NC	30
8100755	Aroclor 1242	2022/07/11					<0.05	ug/L	NC	30
8100755	Aroclor 1248	2022/07/11					<0.05	ug/L	NC	30
8100755	Aroclor 1254	2022/07/11					<0.05	ug/L	NC	30
8100755	Aroclor 1260	2022/07/11	80	60 - 130	92	60 - 130	<0.05	ug/L	NC	30
8100755	Total PCB	2022/07/11	80	60 - 130	92	60 - 130	<0.05	ug/L	NC (2)	40
8105780	F2 (C10-C16 Hydrocarbons)	2022/07/13	104	60 - 130	95	60 - 130	<100	ug/L	NC	30
8105780	F3 (C16-C34 Hydrocarbons)	2022/07/13	103	60 - 130	103	60 - 130	<200	ug/L	NC	30



BUREAU  
VERITAS

Bureau Veritas Job #: C2I9830

Report Date: 2022/07/14

## QUALITY ASSURANCE REPORT(CONT'D)

MTE Consultants Inc

Client Project #: 51124-100

Sampler Initials: KDH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8105780	F4 (C34-C50 Hydrocarbons)	2022/07/13	100	60 - 130	96	60 - 130	<200	ug/L	NC	30

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference  $\leq 2 \times \text{RDL}$ ).

(1) The recovery was below the lower control limit. This may represent a low bias in some results for this specific analyte.

(2) POTENTIAL EXCEEDANCE FOR PARAMETER



BUREAU  
VERITAS

Bureau Veritas Job #: C2I9830

Report Date: 2022/07/14

MTE Consultants Inc

Client Project #: 51124-100

Sampler Initials: KDH

### VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

---

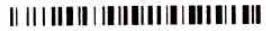
Cristina Carriere, Senior Scientific Specialist

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08-Jul-22 13:10

Ronklin Gracian



C2I9830

# Presence of Visible Particulate/Sediment

Maxxam Analytics

CAM FCD-01013/5

Page 1 of 1

When there is >1cm of visible particulate/sediment, the amount will be recorded in the field below

## Bottle Types

	Sample ID	All	Inorganics					Organics										Hydrocarbons								Volatiles				Other
			CrVI	CN	General	Hg	Metals (Diss.)	Organic 1 of 2	Organic 2 of 2	PCB 1 of 2	PCB 2 of 2	Pest/ Herb 1 of 2	Pest/ Herb 2 of 2	SVOC/ ABN 1 of 2	SVOC/ ABN 2 of 2	PAH 1 of 2	PAH 2 of 2	Dioxin /Furan	F1 Vial 1	F1 Vial 2	F1 Vial 3	F1 Vial 4	F2-F4 1 of 2	F2-F4 2 of 2	F4G	VOC Vial 1	VOC Vial 2	VOC Vial 3	VOC Vial 4	
1	MW203-22																													
2	MW1203-22																													
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														

Comments:

### Legend:

P	Suspended Particulate
TS	Trace Settled Sediment (just covers bottom of container or less)
S	Sediment greater than (>) Trace, but less than (<) 1 cm

Recorded By: (signature/print)

Rupinder Kaur / RUPINDER KAUR

2022/07/08



Bureau Veritas  
6740 Campbell Road, Mississauga, Ontario Canada L5N 2L8 Tel: (905) 817-5700 Toll-free 800-563-6266 Fax: (905) 817-5777 www.bvna.com

# CHAIN OF CUSTODY RECORD

Page 1 of 1

<b>INVOICE TO:</b>		<b>REPORT TO:</b>		<b>PROJECT INFORMATION:</b>		<b>Laboratory Use Only:</b>	
Company Name: #6868 MTE Consultants Inc		Company Name: Spencer Buck		Quotation #: B90004		Bureau Veritas Job #:	
Attention: Accounts Payable		Attention: Spencer Buck		P.O. #:		Bottle Order #:	
Address: 520 Bingham Centre Dr		Address:		Project: 51124-100		COC #:	
Kitchener ON N2B 3X9				Project Name:		Project Manager:	
Tel: (519) 743-6500 Fax: (519) 743-6513		Tel: (905) 639-2552 Ext: 2411 Fax:		Site #:		Ronklin Gracian	
Email: accounting@mte85.com		Email: sbuck@mte85.com		Sampled By: KDH		C887140-01-01	

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

<b>Regulation 153 (2011)</b>			<b>Other Regulations</b>			<b>Special Instructions</b>		
<input type="checkbox"/> Table 1	<input type="checkbox"/> Res/Park	<input type="checkbox"/> Medium/Fine	<input type="checkbox"/> CCME	<input type="checkbox"/> Sanitary Sewer Bylaw				
<input type="checkbox"/> Table 2	<input type="checkbox"/> Ind/Comm	<input type="checkbox"/> Coarse	<input type="checkbox"/> Reg 558	<input type="checkbox"/> Storm Sewer Bylaw				
<input type="checkbox"/> Table 3	<input type="checkbox"/> Agri/Other	<input type="checkbox"/> For RSC	<input type="checkbox"/> MISA	<input type="checkbox"/> Municipality				
<input type="checkbox"/> Table			<input type="checkbox"/> PWQO	<input type="checkbox"/> Reg 406 Table				
<input type="checkbox"/> Other								
Include Criteria on Certificate of Analysis (Y/N)?								
Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O Reg 153 PHCs+VOCs	O Reg 153 PCBs	
1	MW203-22	July 8 2022	9:30	GW		X	X	
2	MW1203-22	↓	↓	↓		X		
3								
4								
5								
6								
7								
8								
9								
10								

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

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

**Job Specific Rush TAT (if applies to entire submission)**  
Date Required: Time Required: ☐

Rush Confirmation Number: (call lab for #)

# of Bottles: Comments:

08-Jul-22 13:10  
Ronklin Gracian  
C2I9830  
ASR ENV-844

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	<b>Laboratory Use Only</b>	
KAY HARVEY	22/07/08	11:30	S. DIPKASINGH	22/07/08	13:10		Time Sensitive	Temperature (°C) on Receipt
							Intact	Custody Seal Present
								Yes No

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

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

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

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

White: Bureau Veritas Yellow: Client