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PHASE II ENVIRONMENTAL SITE ASSESSMENT

PART OF LOT 15, CONCESSION 1, SOUTH OF GREY RD. 19 & CROSSWINDS BLVD., TOWN OF BLUE MOUNTAINS, ONTARIO

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Project Address:	Part of Lot 15, Concession 1, South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, Ontario
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GLOSSARY OF ACRONYMS

asl:	Above Sea Level
bgs:	Below Ground Surface
BTEX:	Benzene, Toluene, Ethylbenzene and Xylenes
CALA:	Canadian Association for Laboratory Accreditation
COPC:	Contaminant of Potential Concern
CSA:	Canadian Standards Association
EPA:	Environmental Protection Act
ESA:	Environmental Site Assessment
Hg:	Mercury
MECP:	Ministry of the Environment, Conservation and Parks
OCPs:	Organochlorine Pesticides
PAHs:	Polycyclic Aromatic (Polyaromatic) Hydrocarbons
PCBs:	Polychlorinated Biphenyls
pH:	potential of Hydrogen
PHC (F1-F4):	Petroleum Hydrocarbons (Fractions 1 to 4)
PID:	Photoionization Detector
PVC:	Polyvinyl Chloride
QA/QC:	Quality Assurance/Quality Control
RPD:	Relative Percent Difference
RSC:	Record of Site Condition
SCS:	Site Condition Standard
VOCs:	Volatile Organic Compounds

1. EXECUTIVE SUMMARY

Fisher Engineering Limited (Fisher) was retained by Bydem Enterprises Inc. to conduct a Phase II Environmental Site Assessment (ESA) of the property located at Part of Lot 15, Concession 1, South of Grey Road 19 & Crosswinds Boulevard, Town of Blue Mountains, Ontario, hereinafter referred to as the "Site". The current soil and groundwater investigation was carried out between November 13 and 27, 2023.

SITE DESCRIPTION

For the purposes of this report, Grey Road 19 is referenced to be in the east-west direction. The Site is located on the south side of Grey Road 19, approximately 620 m southeast of the intersection of Scenic Caves Road and Grey Road 19. The Site is bounded by a residential use property followed by residential buildings to the west, Grey Road 19 followed by residential buildings currently in development to the north, a pond, residential buildings and commercial use lands to the east, and undeveloped land to the south. The Site wraps around a residential use property at the north-central portion, in a "U" shape. The Site has an area of approximately 97,460 m^2.

The Site is vacant and largely undeveloped. A storage barn is located at the north portion of the Site and a storage shed is located at the north-central portion of the Site. A wetland is located at the southwest portion of the Site. Adjacent to the wetland, to the east and west, a Hazard Zone is present as per Zoning Bylaw 2018-65. According to this By-law, a Hazard Zone prohibits the construction of building structures, dumping of fill material or alteration to the existing grade. Two (2) water body branches converge into a water course at the southwest portion of the Site which traverses through the Site towards the northeast portion; the water course is inferred to be a tributary to Silver Creek that discharges into Georgian Bay. One (1) fill stockpile is present at the northwest portion of the Site.

PREVIOUS INVESTIGATION

Soil Engineers Ltd. conducted a Phase One ESA for the Site, as documented in the Phase I ESA report dated October 13, 2023. Based on the information gathered and observations made during that investigation, the report revealed evidence of potential environmental contamination

associated with current/previous on-Site activities. It was recommended that a Phase II ESA be conducted at the Site to address the environmental concerns.

In August 2023, Soil Engineers Ltd. conducted a Preliminary Test Pit Investigation at the Site. Five (5) test pits were assessed to facilitate a geotechnical assessment of the subsurface conditions in support of a proposed land purchase agreement. The test pits were excavated up to 2.2 m below prevailing grade. All test pits encountered at least 0.3 m of topsoil followed by silty clay till to termination depths.

CURRENT SOIL AND GROUNDWATER INVESTIGATION

The Phase II ESA was conducted as an environmental due diligence for a real estate transaction and future redevelopment of the Site with residential/commercial buildings. In the current investigation, eight (8) boreholes (MW1 to MW8) were advanced at the subject property to depths of up to 6.71 m below ground surface (bgs). In all boreholes, monitoring wells were installed to facilitate groundwater level monitoring and sampling. Additionally, a total of three (3) soil samples, including a field duplicate, were collected from the on-Site fill stockpile. The collection of groundwater samples for analysis was limited to the monitoring wells installed to assess potential impacts to the groundwater quality due to current and past on-Site activities, MW1 to MW4, whereas MW5 to MW8 were utilized strictly for geotechnical investigation purposes.

According to the Google Earth map layer from the Ontario Geological Survey for Surficial Geology, the Site is situated in an area characterized as Till: stone-poor, sandy silt to silty sand textured till on Paleozoic terrain, and beach ridges and near shore bars.

Groundwater static level measurement was taken at the monitoring well locations on November 27, 2023, and it was noted at depths ranging from 0.40 m bgs in MW3 to 5.83 m bgs in MW2. Two (2) of the monitoring wells, MW3 and MW6, indicated shallow water levels, while MW8 appeared to be dry. Based on the static water levels measured and elevations surveyed in the remaining five (5) monitoring wells, the local groundwater flow direction was determined to be northeast towards Georgian Bay.

A total of twenty-five (25) soil and ten (10) groundwater samples collected from the boreholes, stockpile, or monitoring wells were submitted to the laboratory for Metals, Petroleum Hydrocarbons (PHCs) in four fractions F1-F4 (including Benzene, Toluene, Ethylbenzene, Xylene (BTEX)), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Mercury (Hg), Organochlorine Pesticides (OCPs), potential of Hydrogen (pH), Chloride and/or

Sulphate analysis. Chloride and Sulphate were included in the soil and groundwater analysis; however, these are not considered to be environmental Contaminants of Potential Concern (COPC). The Chloride and Sulphate analytical data will be utilized for Geotechnical purposes, when required.

With regards to the potability status of the groundwater, the Town of Blue Mountain provides water to all connected properties, being supplied by the Thornbury Water Treatment Plant, with supplemental water supply from the Town of Collingwood through the Mountain Road Booster Station. For the purpose of assessing the soil and groundwater quality at the Site in accordance with the requirements for site assessment, under Part XV.1 of the EPA and O. Reg. 153/04, while considering that a wetland, Hazard Zones and a water body inferred to connect to Silver Creek are located on-Site, it is our intention to utilize the Background Site Condition Standards (SCS). Additionally, the potable groundwater SCS were utilized for discussion purposes, considering that a water well search has not been conducted for the Site and neighbouring properties.

The appropriate standards were identified as: Table 1, Full Depth Background SCS (Residential/Parkland/Institutional/Industrial/Commercial/Community property use for soil samples and All Types of Property Uses for groundwater samples) as contained in the MECP *Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*, April 15, 2011, hereinafter referred to as the "MECP Standards". The MECP Table 2 (Full Depth Generic SCS in a Potable Groundwater Condition – Residential/Parkland/Institutional Property Use for soil samples and All Types of Property Use for groundwater samples, medium-fine textured soil) was used for comparison purposes.

SOIL QUALITY

The results of chemical analysis indicated that all soil samples collected from the investigated boreholes and fill stockpile were in compliance with the applicable MECP Table 1 Full Depth Background SCS (Residential/Parkland/Institutional/Industrial/Commercial/Community property use) for the parameters tested.

GROUNDWATER QUALITY

The results of chemical analysis indicated that, out of the ten (10) groundwater samples submitted for analysis, one (1) sample recovered from MW2 was found to exceed the MECP Table 1 SCS for concentrations of Uranium. When compared to the MECP Table 2 SCS, the results of analysis

for the groundwater sample collected from MW2 were below the MECP SCS. The exceedance is summarized below:

- MW2 (screen interval 3.09-6.14 m bgs)
  Uranium: 17 ppb vs 8.9 (Table 1 SCS).

CONCLUSIONS AND RECOMMENDATIONS

Uranium in groundwater is not associated with current or former activities at the Site and may be associated with background soil conditions in the area and/or potential interference from suspended solids in the sample matrix. Considering that MW2 is located more than 30 m away from environmentally significant areas and from any water body, and should the buffer areas not to be developed, Table 2 SCS or Table 3 SCS (Full Depth Generic SCS in a Potable and Non-Potable Ground Water Condition, respectively) may apply to the remaining development Site, that would result in Uranium to be within the MECP Standard and that the Site is suitable for development for residential use.

2. INTRODUCTION

Fisher Engineering Limited (Fisher) was retained by Bydem Enterprises Inc. to conduct a Phase II Environmental Site Assessment (ESA) of the property located at Part of Lot 15, Concession 1, South of Grey Road 19 & Crosswinds Boulevard, Town of Blue Mountains, Ontario, hereinafter referred to as the "Site". The Phase II ESA was conducted as an environmental due diligence for a real estate transaction and future redevelopment of the Site with residential/ commercial buildings. The current soil and groundwater investigation was carried out between November 13 and 27, 2023.

3. BACKGROUND

3.1. Site Description

For the purposes of this report, Grey Road 19 is referenced to be in the east-west direction. The Site is located on the south side of Grey Road 19, approximately 620 m southeast of the intersection of Scenic Caves Road and Grey Road 19. The Site is bounded by a residential use property followed by residential buildings to the west, Grey Road 19 followed by residential buildings currently in development to the north, a pond, residential buildings and commercial use lands to the east, and undeveloped land to the south. The Site wraps around a residential use property at the north-central portion, in a "U" shape. The Site has an area of approximately 97,460 m^2. Refer to Appendix A for the Site Location Map (Figure A).

The Site is vacant and largely undeveloped. A storage barn is located at the north portion of the Site and a storage shed is located at the north-central portion of the Site. A wetland is located at the southwest portion of the Site. Adjacent to the wetland, to the east and west, a Hazard Zone is present as per Zoning Bylaw 2018-65. According to this By-law, a Hazard Zone prohibits the construction of building structures, dumping of fill material or alteration to the existing grade. Two (2) water body branches converge into a water course at the southwest portion of the Site which traverses through the Site towards the northeast portion; the water course is inferred to be a tributary to Silver Creek that discharges into Georgian Bay. One (1) fill stockpile is present at the northwest portion of the Site. Please refer to Appendix A for the Site Plan (Figure 1).

3.2. Existing Reports Review

The following previous reports were reviewed and used as a source of background information:

TABLE 1: Previous Reports	
Report Title:	Phase One Environmental Site Assessment, Due Diligence-Proposed Residential Development Part of Lot 15, Concession 1, South of Grey Road and Crosswinds Boulevard, Town of Blue Mountain
Prepared By:	Soil Engineers Ltd.
Date:	October 13, 2023
Findings and Conclusions	
Based on the information gathered and observations made during this investigation, the report revealed potential environmental concerns associated with on-Site activities. Environmental concerns were: • Potential fill material of unknown quality to the south of the barn located at the northern portion and at the northwest portion of the Site; • Presence of oil stain in south portion of the barn It was recommended that a Phase Two ESA be conducted to address the environmental concerns.	
Report Title:	Preliminary Test Pit Investigation Proposed Land Acquisition, Part of Lot 15, Concession 1, Town of the Blue Mountains
Prepared By:	Soil Engineers Ltd.
Date:	September 12, 2023
Findings and Conclusions	
In August 2023, Soil Engineers Ltd. conducted a Preliminary Test Pit Investigation for the Site. Five (5) test pits were assessed to facilitate a geotechnical assessment of the subsurface conditions in order to provide comment on the subsurface soil conditions in support of a proposed land purchase agreement. The test pits were excavated up to 2.2 m below prevailing grade. All test pits encountered at least 0.3 m of topsoil followed by silty clay till to termination depths.	

4. SCOPE OF WORK

The current Phase II ESA was conducted in general accordance with the Canadian Standards Association (CSA) Standard CAN/CSA-Z769-00 (reaffirmed 2018), *Phase II Environmental Site Assessment*, and in part with Ontario Regulation (O. Reg.) 153/04 (Records of Site Condition – Part XV.1 of the Environmental Protection Act, EPA), as amended. A Phase II ESA involves sampling and testing of materials considered, usually by the outcome of a Phase I ESA or other investigation, to be possible instances of environmental contamination. The project, as carried out, fulfills the scope of a “Reconnaissance” type investigation in which conditions are previously unknown, and the aim is to establish whether any environmental contamination is present. Normal environmental assessment protocol reserves a detailed investigation for a subsequent phase if the reconnaissance survey indicates a requirement for further contaminant delineation.

The scope of this work generally consisted of the following:

- **Field Program -** Clearance of underground utilities and advancement of eight (8) boreholes to depths of up to 6.71 m below ground surface (bgs) or resistance, and installation of groundwater monitoring wells in all boreholes. Additionally, three (3) soil grab samples were collected from the stockpile at the northwestern portion of the Site.
- **Laboratory Testing Program -** Recovery and analysis of selected soil samples from the stockpile, and soil and groundwater samples from the boreholes / groundwater monitoring wells for Metals, Petroleum Hydrocarbons (PHC) Fraction 1 to 4 (F1-F4), Benzene, Toluene, Ethylbenzene, Xylenes (collectively "BTEX"), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Mercury (Hg), Organochlorine Pesticides (OCPs), pH, Chloride and/or Sulphate.
- **Data Evaluation -** Comparison of results of chemical analyses with the applicable Ministry of the Environment, Conservation and Parks (MECP) Standards.
- **Reporting -** Provision of final engineering report detailing findings of performed works, and any further recommendations.

As conducted, the present investigation may lack information or analytical work that are specific requirements for filing a Record of Site Condition (RSC) under Part XV.1 of the EPA and O. Reg. 153/04, as amended. Therefore, if filing of a RSC is necessary, the property owner or its agent should undertake complementary investigations required under the RSC filing process.

5. INVESTIGATION METHODOLOGY

5.1. General

The subsurface soil and groundwater investigation (Phase II ESA) was carried out between November 13 and 27, 2023 to address the potential environmental concerns identified at the Site. The field work was conducted by Mohit Mavani of Fisher who directed drilling and sampling operations, and assured proper chain of custody procedures for the recovered soil and groundwater samples.

In the current investigation, eight (8) boreholes (MW1 to MW8) were advanced in the investigated property to depths of up to 6.71 m bgs. In all boreholes, monitoring wells were installed to facilitate groundwater level monitoring and sampling. Additionally, a total of three (3) stockpile soil samples, including a field duplicate, were collected from the on-Site fill stockpile on November 14, 2023.

5.2. Site Preparation

Site preparation included the location of public underground services by referring to the respective utilities: Enbridge Gas, Town of Blue Mountain Sewer and Water, Hydro One, Rogers, and Bell Canada to avoid potential disruptions to the utilities during the drilling. The drilling work was conducted following receipt of clearance from all utilities for the given borehole locations.

5.3. Borehole Drilling

Eight (8) boreholes (MW1 to MW8) were advanced at the Site between November 13 and 14, 2023. Exterior borehole drilling was carried out using a track-mounted Diedrich D-50 drilling rig. The boreholes were extended to depths of up to 6.71 m. No bedrock was encountered. Additionally, three (3) stockpile soil samples, including a field duplicate, were collected on November 14, 2023, to depths of 0.3 m below stockpile surface, using a stainless-steel trowel.

The borehole locations were selected by an initial rationale as being the most likely locations of contamination. The stockpile soil samples were selected based on spatial representation of the stockpile. Refer to the attached Site Plan with Borehole and Monitoring Well Locations (Figure 1 in Appendix A) and the table below for description of borehole and stockpile sampling locations rationale.

TABLE 2: Borehole and Stockpile Sampling Location Rationale

Borehole No.	Borehole Location and Reason
MW1	Evaluate soil and groundwater quality for: • Imported fill material of unknown quality on-Site; • Potential historical use of pesticides from inferred agricultural use
MW2	Evaluate soil and groundwater quality for: • Historical storage of motor oil in metal trailer

TABLE 2: Borehole and Stockpile Sampling Location Rationale	
Borehole No.	Borehole Location and Reason
MW3	Evaluate soil and groundwater quality for: • Storage of machinery within storage barn; • Storage of miscellaneous materials and previously observed staining within storage barn; • Potential historical use of pesticides from inferred agricultural use
MW4	Evaluate soil and groundwater quality for: • General characterization of environmental quality
MW5	Evaluate soil quality for: • General characterization of environmental quality; • Potential historical use of pesticides from inferred agricultural use
MW6	Evaluate soil quality for: • General characterization of environmental quality; • Potential historical use of pesticides from inferred agricultural use
MW7	Evaluate soil quality for: • General characterization of environmental quality
MW8	Evaluate soil quality for: • General characterization of environmental quality
TP1 to TP2	Evaluate soil quality of fill stockpile

Fisher had retained Terra Firma Environmental Services Ltd. (Terra Firma) as the drilling contractor. Terra Firma maintains licensure for drilling (Water Well Drillers, Environmental Protection Act, Well Contractor License No. 6946) as required by the MECP, and conducted drilling and soil sampling works in accordance with CAN/CSA Standard CAN/CSA-Z769-00 (reaffirmed 2018) and the Ontario Ministry of Environment and Energy (MOEE, currently MECP) *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*, December 1996, and in compliance with Occupational Health and Safety regulations.

The intrusive subsurface investigation was conducted by means of solid stem auger boreholes advancement through the subsoil, and a 50 mm diameter split spoon sampler driven 600 mm into subsoil by a 65 kg hammer, falling 760 mm, collecting soil samples at a maximum of 0.76 m interval and at stratigraphic boundaries.

5.3.1. Soil Sampling and Screening

Soil samples were collected and handled in accordance with generally accepted sampling and handling procedures used by the environmental consulting industry. For guidance, these practices rely on the 1996 MOEE publication *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*. To minimize the potential for cross-contamination between soil samples, the split spoon sampler used to collect soil samples from the boreholes was brushed clean of soil and then washed in municipal water containing phosphate free detergent, rinsed in municipal water and then rinsed with distilled water. As well, new disposable nitrile gloves and a cleaned stainless-steel trowel were used during each sampling event to remove the soil cores from the sampler and to transfer the samples into re-sealable plastic bags and/or glass jars.

Through each soil sample, the lithology and esthetic evidence of impacts (debris, staining and odours) were recorded as part of field Quality Control (QC) procedures. Additionally, each sample was screened in the field for headspace vapour concentration (combustible soil vapour and total organic vapour) using the 10.6 eV lamp MiniRae 2000 Photoionization Detector (PID) calibrated to 100 parts per million (ppm) Isobutylene. The samples were kept out of direct sunlight during field storage. The headspace monitoring was performed on the samples as a preliminary screening for analysis.

Selection of soil samples to be submitted for laboratory analysis are based on the headspace vapour concentration, physical evidence of odours/staining, apparent water table and/or proximity to potential contaminant sources. If no odours/staining are noted in the soil samples, the samples with the highest field screening measurement (i.e., highest headspace vapour concentration) are selected for laboratory analysis or at depths where Contaminants of Potential Concern (COPCs) are expected. Soil samples from the boreholes selected for potential chemical analysis of organic parameters were placed directly into laboratory supplied glass jars at the time of sampling, labeled and packed with minimal headspace. Samples were kept in coolers provided with cold packs during field storage and transportation to Fisher Environmental Laboratories and ALS Global for analysis.

One (1) field duplicate soil sample from boreholes and one (1) field duplicate soil sample from the stockpile were submitted to the laboratory for analysis for Quality Assurance/Quality Control (QA/QC) purposes.

5.4. Monitoring Well Installation

Eight (8) monitoring wells were installed on the Site in accordance with O. Reg. 903. The wells were constructed of 52 mm inner diameter (ID) Polyvinyl Chloride (PVC) pipes, which were pre-cleaned at the factory and delivered to the Site in sealed plastic bags. The portion below and/or intersecting the groundwater table was constructed of a similar diameter machine-slotted screen to permit future measurement of water levels and the collection of groundwater samples. Further construction details of the monitoring wells are provided on the “Log of Boreholes” attached in Appendix B.

5.4.1. Groundwater Monitoring and Sampling

Groundwater static level measurement in the newly installed monitoring wells was conducted on November 27, 2023. Elevation survey was also conducted on November 27, 2023. The collection of groundwater samples for analysis was limited to the monitoring wells installed to assess potential impacts to the groundwater quality due to current and past on-Site activities, MW1 to MW4, whereas MW5 to MW8 were utilized strictly for geotechnical investigation purposes.

Prior to sampling, the newly installed monitoring wells were developed by purging three (3) to five (5) well volumes of groundwater from each well to remove any water and/or drilling fluids added during drilling/installation and any fine-grained material from around the screened interval, to ensure that the sampling of “fresh” formation water was free of visible sediment. Development is also intended to establish good hydraulic connection between the well screen and the surrounding aquifer material, so that any future samples collected at the monitoring well can be considered representative of the subsurface conditions.

Groundwater samples were collected and handled in accordance with generally accepted sampling and handling procedures used by the environmental consulting industry. For guidance, these practices rely on the 1996 MOEE publication *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*.

Groundwater sampling in the installed monitoring wells was conducted on November 27, 2023 using bailers, where single-use (disposable) bailers are slowly lowered into the water column, allowed to fill, and removed.

Laboratory supplied sample containers were used to collect groundwater samples which were labeled, stored in coolers provided with cold packs during field storage and transportation to Fisher Environmental Laboratories and ALS Global for analysis.

Two (2) field duplicate groundwater samples were submitted to the laboratory for analysis for QA/QC purposes.

5.5. Residue Management Procedures

Drilling-generated wastes of soil and groundwater were handled in accordance with applicable laws. Soil cuttings remained following the sampling process and purged water from well development and groundwater sampling were collected in labeled 205-L steel drums and stored on-Site for future disposal by the owner of the Site.

5.6. Selection of Analytical Samples and Parameters

Selection of samples for environmental analysis was based on appearance, headspace vapour concentrations, odour, expectations of Site conditions, and proximity of potential contaminant sources.

Twenty-two (22) soil samples collected from the boreholes were submitted to the laboratory for Metals, PHC (F1-F4), BTEX, VOCs, PAHs, Hg, OCPs, pH, Chloride and/or Sulphate analysis. Three (3) soil samples collected from the stockpile were submitted to the laboratory for Metals, PHC (F1-F4), BTEX, VOCs, PAHs, Hg and pH analysis. Ten (10) groundwater samples collected from the four (4) newly installed monitoring wells, MW1 to MW4, were submitted to the laboratory for Metals, PHC (F1-F4), BTEX, VOCs, PAHs, Hg, OCPs, Chloride and Sulphate analysis. One (1) trip blank water sample was submitted to the laboratory for VOCs analysis. Chloride and Sulphate were included in the soil and groundwater analysis, however these are not considered to be environmental COPCs. The Chloride and Sulphate analytical data will be utilized for Geotechnical purposes, when required.

The analytical parameters selection and rationale are summarized below.

TABLE 3: Rationale for Analytical Parameter	
Parameter	Description
Metals	Various metallic elements can cause adverse environmental effects at relatively low concentrations. Such metals are associated with industrial activities and/or the use of fill materials of unknown quality, both historic and current, and it is common practice to include Metals analysis in subsurface soil investigations. Seventeen (17) soil samples from boreholes, three (3) soil samples from the stockpile, and five (5) groundwater samples collected at the Site were submitted for Metal analysis.
PHC (F1-F4), BTEX	PHCs and BTEX are components of gasoline, diesel and other petroleum products for which soil quality guidelines have been developed. These compounds are widely utilized and often included in the evaluation of a Site's overall subsurface condition. Seventeen (17) soil samples from boreholes, three (3) soil samples from the stockpile, and five (5) groundwater samples collected at the Site were submitted for PHC (F1-F4) and BTEX analysis.
VOCs	VOCs are any volatile compound of carbon, excluding methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, and exempt compounds. VOCs are included in gasoline, diesel, crude oil, lubricant, waste oil, adhesive, paint, stain, solvents, resin, monomer, and/or any other material containing VOCs. Note that VOC analysis includes BTEX parameters. Seventeen (17) soil samples from boreholes, three (3) soil samples from the stockpile, and five (5) groundwater samples collected at the Site were submitted for VOC analysis. One (1) trip blank water sample was submitted for VOC analysis.
PAHs	PAHs are associated with coal and furnace ash, and/or the use of fill materials of unknown quality. Thirteen (13) soil samples from boreholes, three (3) soil samples from the stockpile, and five (5) groundwater samples collected at the Site were submitted for PAH analysis.
Hg	Hg is associated with industrial activities and/or the use of fill materials of unknown quality, both historic and current. Hg can readily combine with chlorine, sulfur, and other elements, and subsequently weather to form inorganic salts. Thirteen (13) soil samples from boreholes, three (3) soil samples from the stockpile, and five (5) groundwater samples collected at the Site were submitted for Hg analysis.
OCPs	Agricultural Pesticides are mixtures of substances intended for preventing, destroying or mitigating the effects of any pest that may adversely affect the growth and/or productivity of any agricultural product. Pesticide residues may enter streams through run-off and pose dangers to animals and plants in the aquatic habitat. Generally, most Pesticides have short half-lives; however, persistent Pesticides such as DDT may bioaccumulate, move through the food chain and eventually be ingested by and adversely affect birds, wild animals and domestic livestock.

TABLE 3: Rationale for Analytical Parameter	
Parameter	Description
	Five (5) soil samples from boreholes and five (5) groundwater samples collected at the Site were submitted for OCP analysis.
pH	Soil pH is referred to as the "acidity" of the soil. When the soil pH is too "acid" (low pH) or too "alkaline" (high pH), nutrients present in the soil become locked-up or unavailable. Thirteen (13) soil samples from boreholes and three (3) soil samples from the stockpile collected at the Site were submitted for pH analysis.

6. RESULTS

6.1. Subsurface Conditions

6.1.1. Geology

Based on the elevation data for the Site obtained from Google Earth, the ground surface elevation at the western portion of the property is approximately 223 m above sea level (asl) and at the eastern portion of the property is approximately 219 m asl. The wetland at the southwest portion of the Site is at an approximate elevation of 221 m asl.

According to the Google Earth map layer from the Ontario Geological Survey for Surficial Geology, the Site is situated in an area characterized as Till: stone-poor, sandy silt to silty sand textured till on Paleozoic terrain, and beach ridges and near shore bars.

On the basis of the boreholes completed, topsoil was encountered at all borehole locations followed by sandy silt / silty sand till. A description of the subsurface conditions encountered at the borehole locations is presented in Appendix B - Log of Boreholes.

6.1.2. Hydrogeology

On November 27, 2023, groundwater static levels were measured from the eight (8) newly installed monitoring wells. One (1) of the monitoring wells, MW8, appeared to be dry. The groundwater static level measurements are summarized in the table below:

TABLE 4: Groundwater Static Level Measurements				
Location	Well Depth, m bgs	Groundwater Static Level, m bgs (November 27, 2023)	Ground Surface Elevation*, m asl	Groundwater Elevation, m asl
MW1	6.34	4.94	223.723	218.783
MW2	6.14	5.83	224.305	218.475
MW3	4.12	0.40	223.216	222.816
MW4	6.23	3.14	220.774	217.634
MW5	6.32	2.98	220.723	217.743
MW6	6.08	0.95	223.482	222.532
MW7	6.19	4.86	223.579	218.719
MW8	6.16	NA	223.510	NA

*Ground surface elevation measurement at each groundwater monitoring well is referenced to an off-Site transformer concrete pad located on the north side of Grey Road 19, having an elevation of 225 m asl.

Groundwater generally flows from areas of high hydraulic head towards areas of low hydraulic head. To assess the direction of groundwater movement, the hydraulic head is measured at each well location. This is accomplished by taking water level measurements and referencing them to a known benchmark to determine their elevation. Water level measurements having higher elevations suggest greater hydraulic head. Conversely, lower elevations of the water table are indicative of a lesser hydraulic head.

Groundwater static level measurement was taken at the monitoring well locations on November 27, 2023, and it was noted at depths ranging from 0.40 m bgs in MW3 to 5.83 m bgs in MW2. Two (2) of the monitoring wells, MW3 and MW6, indicated shallow water levels, while MW8 appeared to be dry. Based on the static water levels measured and elevations surveyed in the remaining five (5) monitoring wells, the local groundwater flow direction was determined to be northeast towards Georgian Bay. Refer to the Site Plan with Groundwater Flow Direction (Figure 2 in Appendix A).

The localized shallow groundwater flow direction may be influenced by the presence of underground utilities, variations in vertical and horizontal stratigraphy, depth of wells' screened intervals and/or well trauma.

6.1.3. Head Space Combustible Vapours

A 10.6 eV lamp MiniRae 2000 PID calibrated to 100 ppm Isobutylene was used to measure combustible vapours in the soil samples. Relatively low vapour concentrations were read during the soil sampling and all soil samples had concentrations of 5 ppm or less, indicating no evidence of impact from volatile organics. The headspace readings for all collected soil samples are shown on the Log of Boreholes attached in Appendix B of this report.

6.1.4. Visual Olfactory Soil / Groundwater Quality

During the borehole-drilling program, the following visual/olfactory observations were made:

- Topsoil was encountered at all borehole locations, extending up to 0.76 m bgs;
- The stockpile soil samples generally consisted of sandy silt with trace clay and gravel;
- No odours were noted in any collected soil or groundwater samples;
- No free product, film or sheen was observed on the surface of groundwater collected from the monitoring wells.

6.2. Soil and Groundwater Standards

The MECP presents Soil and Groundwater Standards, under the Publication *Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*, April 15, 2011. These standards present soil and groundwater criteria, which have been developed with regard to toxicological data. They are levels at and below which no environmental or safety concerns, or adverse conditions, are anticipated for environments or persons with average sensitivity.

The Site has been used for agricultural or other purposes, and it is our understanding that the property is proposed to be redeveloped into commercial/residential land use.

With regards to the potability status of the groundwater, the Town of Blue Mountain provides water to all connected properties, being supplied by the Thornbury Water Treatment Plant, with supplemental water supply from the Town of Collingwood through the Mountain Road Booster Station. For the purpose of assessing the soil and groundwater quality at the Site in accordance with the requirements for site assessment, under Part XV.1 of the EPA and O. Reg. 153/04, while considering that a wetland, Hazard Zones and a water body inferred to connect to Silver Creek

are located on-Site, it is our intention to utilize a background Site Condition Standard (SCS). Additionally, the potable groundwater SCS were utilized for discussion purposes, considering that a water well search has not been conducted for the Site and neighbouring properties.

As specified by O. Reg. 153/04, "coarse textured soil is defined as material having more than 50 percent (by mass) of particles that are 75 μm or larger in mean diameter. Materials having more than 50 percent (by mass) of particles that are smaller than 75 μm in mean diameter are medium and fine textured soils." “When at least 1/3 of the soil at the property, measured by volume, consists of coarse textured soil, the standard for coarse textured soil shall apply. In any other case, the standard for medium and fine textured soil may be applied”.

A grain size analysis was completed on four (4) soil samples:

- BH1, 1.53-1.98 m bgs: 54.8% clay and silt, 36.4% sand, 8.8% gravel;
- BH1, 3.05-3.51 m bgs: 64.2% clay and silt, 30.9% sand, 4.8% gravel;
- BH5, 1.53-1.98 m bgs: 73.7% clay and silt, 25.2% sand, 1.1% gravel;
- BH5, 3.05-3.51 m bgs: 72.5% clay and silt, 22.4% sand, 5.1% gravel.

Based on the grain size analysis, a medium-fine textured soil condition has been applied.

Thirteen (13) soil samples collected from the boreholes and three (3) soil samples collected from the stockpile were submitted to the laboratory for pH analysis (refer to Section 6.3). The result of pH for the submitted soil samples were found to be within the recommended range of 5 to 9 (for surface samples) or 5 to 11 (for subsurface samples).

The appropriate standards were identified as: Table 1: Full Depth Background SCS (Residential/Parkland/Institutional/Industrial/Commercial/Community property use for soil samples and All Types of Property Uses for groundwater samples) as contained in the MECP *Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*, April 15, 2011, hereinafter referred to as the “MECP Standards”. Table 2 (Full Depth Generic SCS in a Potable Groundwater Condition – Residential/Parkland/Institutional Property Use for soil samples and All Types of Property Use for groundwater samples, medium-fine textured soil) was used for comparison purposes.

The criteria values are presented with the results of analysis in the last column of the Certificates of Analysis (Appendix C).

6.3. Analytical Results

Recovered soil and groundwater samples were submitted to Fisher Environmental Laboratories in Markham, Ontario and ALS Global in Waterloo, Ontario for analysis. As a Canadian Association for Laboratory Accreditation (CALA) registered analytical facility for both laboratories, QA/QC procedures were maintained consistent with CALA requirements and standard laboratory practices. The laboratories ensured that analytical sub-samples were, by appearance, representative of the whole sample as collected in the field.

A total of twenty-five (25) soil and ten (10) groundwater samples collected from the boreholes, stockpile, or monitoring wells were submitted to the laboratory for Metals, PHCs (including BTEX and PHC F1-F4), VOCs, PAHs, Hg, OCPs, pH, Chloride and/or Sulphate analysis. Chloride and Sulphate were included in the soil and groundwater analysis; however, it is not considered to be environmental COPCs. The Chloride and Sulphate analytical data will be utilized for Geotechnical purposes, when required. A copy of the Laboratory Certificates of Analysis is provided in Appendix C. Results of the chemical analyses are summarized in the following table:

TABLE 5: Overview of Laboratory Analytical Results

Borehole/ Monitoring Well Number	Sample Depth / Screen Interval (m bgs)	Lab Sample ID	Parameters Analyzed	Compliant with MECP Standards
Borehole and Stockpile Soil (Lab No. 23-2117) – Report Date November 21, 2023 Borehole Soil (Lab No. WT2337623) – Report Date November 21, 2023				
MW1	0.00-0.61	23-2117-1	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range
		WT2337623-001	OCPs	Yes
MW1	0.76-1.37	23-2117-2	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range

TABLE 5: Overview of Laboratory Analytical Results				
Borehole/ Monitoring Well Number	Sample Depth / Screen Interval (m bgs)	Lab Sample ID	Parameters Analyzed	Compliant with MECP Standards
MW2	0.00-0.61	23-2117-3	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range
MW2	6.10-6.71	23-2117-4	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
MW3	0.08-0.61	23-2117-5	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range
		WT2337623-002	OCPs	Yes
MW3	0.76-1.37	23-2117-6	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range
MW4	0.00-0.61	23-2117-7	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range
MW4	6.10-6.71	23-2117-8	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes

TABLE 5: Overview of Laboratory Analytical Results				
Borehole/ Monitoring Well Number	Sample Depth / Screen Interval (m bgs)	Lab Sample ID	Parameters Analyzed	Compliant with MECP Standards
MW5	0.00-0.61	23-2117-9	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range
		WT2337623-003	OCPs	Yes
MW5	0.76-1.37	23-2117-10	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range
MW5 Duplicate	0.76-1.37	23-2117-11	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range
MW6	0.00-0.61	23-2117-12	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range
		WT2337623-004	OCPs	Yes
MW6 Duplicate	0.00-0.61	WT2337623-005	OCPs	Yes
MW6	4.57-5.18	23-2117-13	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes

TABLE 5: Overview of Laboratory Analytical Results				
Borehole/ Monitoring Well Number	Sample Depth / Screen Interval (m bgs)	Lab Sample ID	Parameters Analyzed	Compliant with MECP Standards
MW7	0.00-0.61	23-2117-14	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range
MW7	0.76-1.37	23-2117-15	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range
MW8	0.00-0.61	23-2117-16	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range
MW8	6.10-6.71	23-2117-17	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
TP1	0.00-0.30	23-2117-18	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range

TABLE 5: Overview of Laboratory Analytical Results				
Borehole/ Monitoring Well Number	Sample Depth / Screen Interval (m bgs)	Lab Sample ID	Parameters Analyzed	Compliant with MECP Standards
TP2	0.00-0.30	23-2117-19	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range
TP2 Duplicate	0.00-0.30	23-2117-20	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
			pH	Within range
Groundwater (Lab No. 23-2173) – Report Date December 5, 2023 **Groundwater (Lab No. WT2338818) – Report Date November 30, 2023**				
MW1	3.29-6.34	23-2173-1	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
		WT2338818-001	OCPs	Yes
MW2	3.09-6.14	23-2173-2	Metals	No
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
		WT2338818-002	OCPs	Yes

TABLE 5: Overview of Laboratory Analytical Results				
Borehole/ Monitoring Well Number	Sample Depth / Screen Interval (m bgs)	Lab Sample ID	Parameters Analyzed	Compliant with MECP Standards
MW3	1.07-4.12	23-2173-3	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
		WT2338818-003	OCPs	Yes
MW3 Duplicate	1.07-4.12	23-2173-4	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
		WT2338818-004	OCPs	Yes
MW4	3.18-6.23	23-2173-5	Metals	Yes
			PHC (F1-F4)	Yes
			VOCs	Yes
			PAHs	Yes
			Hg	Yes
		WT2338818-005	OCPs	Yes
Trip Blank	NA	23-2173-6	VOCs	Yes

6.3.1. Soil Quality

The results of chemical analysis indicated that all soil samples collected from the boreholes and stockpile were within the applicable MECP Standards.

Refer to the Site Plan with analytical program in soil samples (Figure 3 in Appendix A).

6.3.2. Groundwater Quality

The results of chemical analysis indicated that, out of the ten (10) groundwater samples submitted for analysis, one (1) sample recovered from MW2 was found to exceed the MECP Table 1 SCS for concentrations of Uranium. When compared to the MECP Table 2 SCS, the results of analysis

for the groundwater sample collected from MW2 were below the MECP SCS. A trip blank water sample was below laboratory detection limits for VOCs parameters. A summary of the groundwater analysis findings is as follows:

TABLE 6: Summary of Groundwater Exceedances

Sample ID	Screen Interval (m bgs)	Contaminants of Concern	Parameter Analyzed	Concentration (ppb)	MECP Standard (ppb)
MW2	3.29-6.34	Metals	Uranium	17	Table 1: 8.9 Table 2: 20

Note: ppb = parts per billion.

Refer to the Site Plan with MECP Standards Exceedances for groundwater samples (Figure 4.1 in Appendix A).

6.4. Quality Assurance/Quality Control

A chain of custody form was filled out for all samples prior to submitting to the laboratory. The chain of custody documented movement from selection of the sample to receipt at the laboratory and provided sample identification, requested analysis, and condition of samples upon arrival at the laboratory.

The laboratory checks randomly selected samples for Quality Assurance. Generally, one (1) sample for every twenty (20) samples submitted is selected for Quality Assurance checks. For each parameter, there is an acceptable upper and lower limit for the measured concentration of the parameter. Measured concentrations of analyzed samples must fall within the upper and lower acceptable limits in order for the sample to be valid. If the result exceeds the upper or lower acceptable limits, the sample must be re-analyzed.

Based on Quality Assurance Reports provided by Fisher Environmental Laboratories and ALS Global, measured concentrations in soil and groundwater samples were within the acceptable limits for QC. Copies of the QA/QC Reports for Metals, PHC (F1-F4), BTEX, PAHs, VOCs, Hg, OCPs, pH, Chloride and Sulphate in soil and/or groundwater are included with the Certificates of Analysis in Appendix C.

The QA/QC program also includes the collection of field duplicate samples for laboratory analysis as follows:

- One (1) field duplicate soil sample of MW5 (0.76-1.37 m bgs), analyzed for Metals, PHC (F1-F4), BTEX, VOCs, PAHs, Hg and pH;
- One (1) field duplicate soil sample of TP2 (0.00-0.30 m bgs), analyzed for Metals, PHC (F1-F4), BTEX, VOCs, PAHs, Hg, and pH;
- One (1) field duplicate soil sample of MW6 (0.00-0.61 m bgs), analyzed for OCPs;
- One (1) field duplicate groundwater sample of MW3, analyzed for Metals, PHC (F1-F4), BTEX, VOCs, PAHs, Hg, Chloride, and Sulphate; and
- One (1) field duplicate groundwater sample of MW3, analyzed for OCPs.

Relative percent differences (RPDs) were calculated for the field duplicate samples. Quantitative correlation was not calculable for the analytical results of the field duplicate samples and their corresponding sample pairs with reported concentrations equal to or less than five times the reportable detection limits.

Acceptable correlation was observed between all analytical results for the field duplicate soil and groundwater samples, and the field QA/QC is considered to be acceptable.

7. SUMMARY AND CONCLUSIONS

Fisher carried out a Phase II Environmental Site Assessment of the property located at Part of Lot 15, Concession 1, South of Grey Road 19 & Crosswinds Boulevard, Town of Blue Mountains, Ontario. The current soil and groundwater investigation was carried out between November 13 and 27, 2023.

In the current investigation, eight (8) boreholes were drilled and completed as groundwater monitoring wells. Additionally, soil samples were collected from a stockpile. A total of twenty-five (25) soil and ten (10) groundwater samples collected from the boreholes, stockpile, or monitoring wells were submitted to the laboratory for Metals, PHCs (including BTEX and PHC F1-F4), VOCs, PAHs, Hg, OCPs, pH, Chloride and/or Sulphate analysis. Chloride and Sulphate were included in the soil and groundwater analysis; however, these are not considered to be environmental Contaminants of Potential Concern (COPC). The Chloride and Sulphate analytical data will be utilized for Geotechnical purposes, when required.

The results of chemical analysis indicated that all soil samples collected from the eight (8) boreholes and stockpile were in compliance with the MECP Table 1 Full Depth Background SCS (Residential/Parkland/Institutional/Industrial/Commercial/Community property use for soil samples for the parameters tested. For comparison purposes, all soil samples were in compliance with the MECP Table 2 (Full Depth Generic SCS in a Potable Groundwater Condition – Residential/Parkland/Institutional Property Use for soil samples, medium-fine textured soil).

The results of chemical analysis indicated that, out of the ten (10) groundwater samples submitted for analysis, one (1) sample recovered from MW2 was found to exceed the MECP Table 1 Full Depth Background SCS for All Types of Property Use for concentrations of Uranium. When compared to the MECP Table 2 (Full Depth Generic SCS in a Potable Groundwater Condition for All Types of Property Use, medium-fine textured soil), the results of analysis for the groundwater sample collected from MW2 were below the MECP SCS:

- MW2 (screen interval 3.09-6.14 m bgs)
  Uranium: 17 ppb vs 8.9 (Table 1 SCS).

Uranium in groundwater is not associated with current or former activities at the Site and may be associated with background soil conditions in the area and/or potential interference from suspended solids in the sample matrix. Considering that MW2 is located more than 30 m away from environmentally significant areas and from any water body, and should the buffer areas not

to be developed, Table 2 SCS or Table 3 SCS (Full Depth Generic SCS in a Potable and Non-Potable Ground Water Condition, respectively) may apply to the remaining development Site, that would result in Uranium to be within the MECP Standard and that the Site is suitable for development for residential use.

8. LIMITATIONS

This report was prepared for use by Bydem Enterprises Inc., and is based on the work as described in the Scope of Work. The conclusions presented in this report reflect existing Site conditions within the scope of this assignment.

No investigation method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. It can only reduce the possibility to an acceptable level. Professional judgment was exercised in gathering and analyzing the information obtained and the formulation of the conclusions and recommendations. Like all professional persons rendering advice, we do not act as absolute insurers of the conclusions reached, but commit ourselves to care and competence in reaching those conclusions. In instances where Phase II ESA is conducted without the completion of a recent Phase I ESA, it is noted that test locations are based on a cursory review of current site operations. In such instances, knowledge of historical and/or neighboring property use data may be significantly limited. No warranty, whether expressed or implied, is included or intended in this report.

The scope of services performed may not be appropriate for the purposes of other users. This report should not be used in contexts other than pertaining to the evaluation of the property at the current time. Written authorization must be obtained from Fisher Engineering Limited prior to use by any other parties, or any future use of this document or its findings, conclusions, or recommendations represented herein. Any use which a third party makes of this report, or any reliance on or decisions made on the basis of it, are the responsibility of the third parties. Fisher Engineering Limited accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Fisher Engineering Limited notes that the work conducted at the Site may not fully satisfy the MECP requirements for the purpose of filling a Record of Site Condition (RSC). Should a RSC be required, then additional investigations should be conducted at the Site.

9. QUALIFICATIONS OF ASSESSOR

The field works for this assessment were conducted by Mr. Mohit Mavani. The field work supervision and report preparation for this assessment were conducted by Mr. Kerry Tam, who has been trained and has 10 years of experience in conducting Phase II ESAs in accordance with the CSA Standard. Mr. Kerry Tam has conducted more than 100 Phase II ESAs for commercial/industrial/residential clients and government agencies and is routinely engaged in this field.

As a Qualified Person who conducts and supervises Phase II ESAs, Mr. David Fisher, president of Fisher Engineering Limited, is a senior Managerial and Environmental Engineering Specialist with over 30 years of progressive, innovative experience in the Petrochemical and Environmental Engineering Industry. Mr. Fisher is responsible for the development and management of a progressive environmental consulting engineering company specializing in environmental site assessments and remediation, geotechnical and hydrogeological investigations, tank removals, PCB waste treatment, land reclamation, recycling, hazardous waste disposal, and associated laboratory analytical practices.

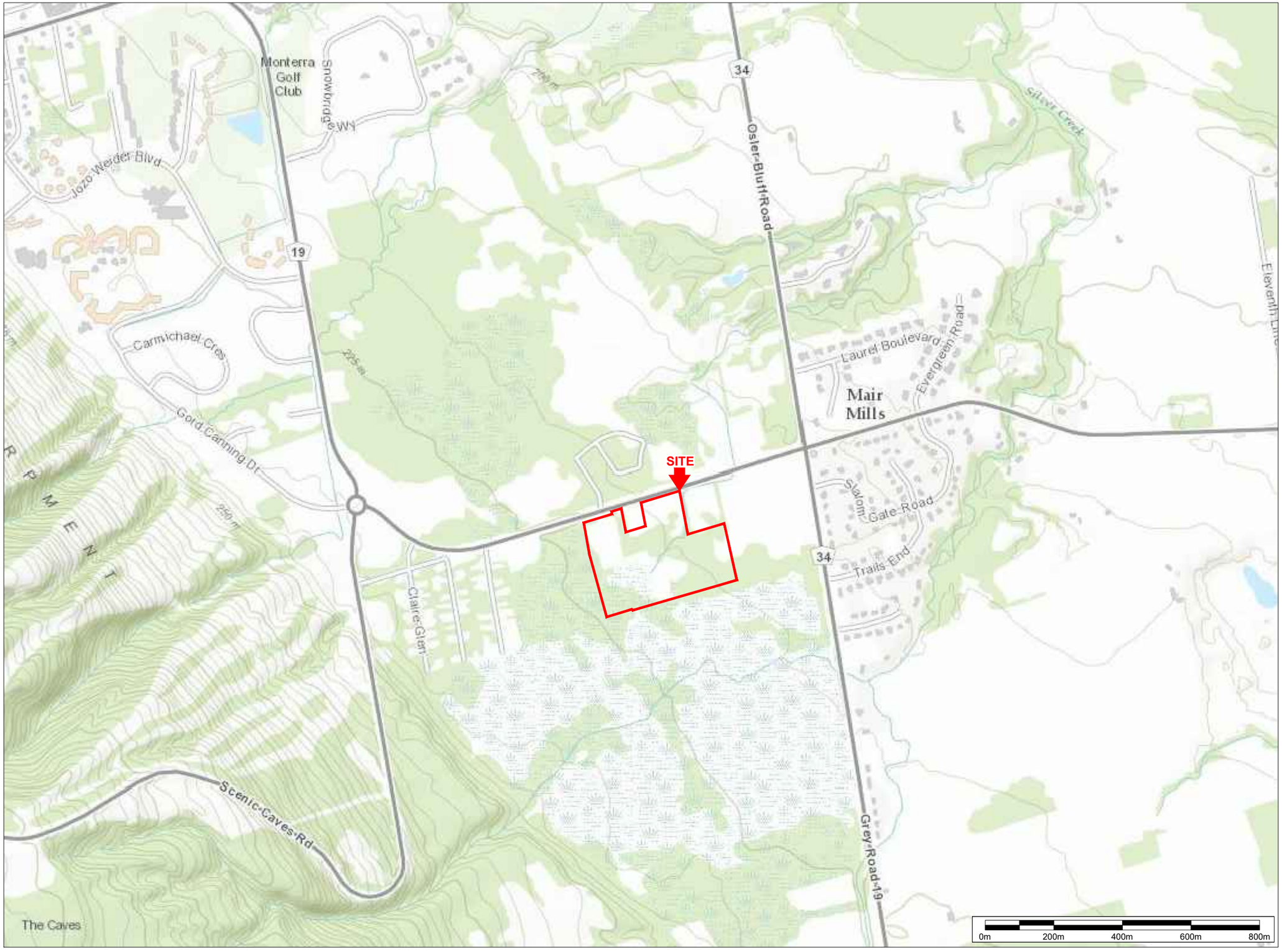
Fisher Engineering Limited has been established as a team of engineers and consultants since 1989, and continues to develop a strong, wide client base. The company is staffed with personnel holding graduate or postgraduate qualifications at the Markham headquarters, as well as specialist associates offering a broad range of expertise and knowledge in environmental consulting. With a background in the petroleum industry, extensive experience has been gained in the prevention and cleanup of contamination in air, water and soil.

10. REFERENCES

The Phase II ESA was conducted in accordance with the applicable Regulations, Guidelines, Policies, Standards, Protocols and Objectives administrated by the Ontario Ministry of the Environment, Conservation and Parks (MECP). Specific reference is made to the following:

- Canadian Standards Association (CSA) Standard CAN/CSA Z769-00 (reaffirmed 2018), *Phase II Environmental Site Assessment*;
- Environmental Protection Act (EPA), R.S.O. 1990, Chapter E. 19, as amended;
- *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*, Ministry of the Environment and Energy, December 1996;
- Ontario Regulation 153/04 (Records of Site Condition – Part XV.1 of the EPA), as amended;
- *Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act*, Ministry of the Environment, dated April 15, 2011;
- The Ontario Water Resources Act – R.R.O. 1990, Regulation 903 – Amended to O. Reg. 128.03, August 2003;
- Town of Blue Mountain Water Services;
- Google Earth;
- Ontario Geological Survey Google Earth map layer Surficial Geology;
- *Phase One Environmental Site Assessment, Due Diligence-Proposed Residential Development Part of Lot 15, Concession 1, South of Grey Road and Crosswinds Boulevard, Town of Blue Mountain, Soil Engineers Ltd., October 13, 2023;*
- *Preliminary Test Pit Investigation Proposed Land Acquisition, Part of Lot 15, Concession 1, Town of the Blue Mountains, Soil Engineers Ltd., September 12, 2023.*

APPENDIX A – FIGURES



FISHER ENGINEERING

400 Esna Park Dr., #15
Markham, Ontario
L3R 3K2

Tel: 905 475-7755

NORTH

N

LEGEND

PROJECT NAME AND ADDRESS

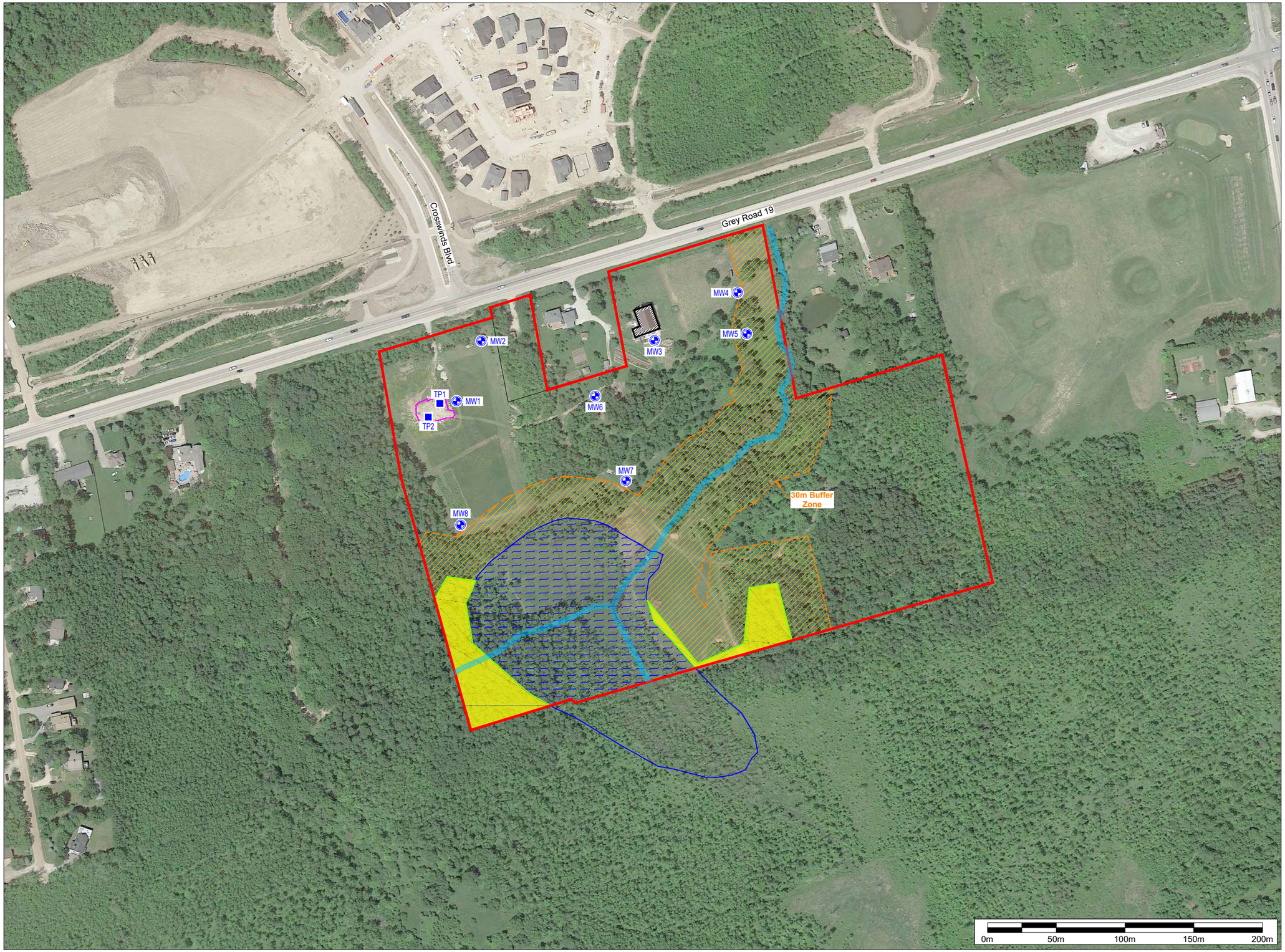
PHASE II ESA

Part of Lot 15, Concession 1, South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

FIGURE A:

SITE LOCATION MAP

PROJECT NO.	SHEET NO.
FE 23-13472	A
DATE: 7 December 2023	
SCALE: AS SHOWN	



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NORTH

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LEGEND

- SUBJECT SITE BOUNDARY
- BUILDING FOOTPRINT
- BOREHOLE WITH MONITORING WELL LOCATION
- STOCKPILE SAMPLE
- WETLAND
- 30m BUFFER ZONE
- FILL STOCKPILE
- WATER BODY
- HAZARD ZONE AS PER ZONING BY-LAW 2018-65

PROJECT NAME AND ADDRESS

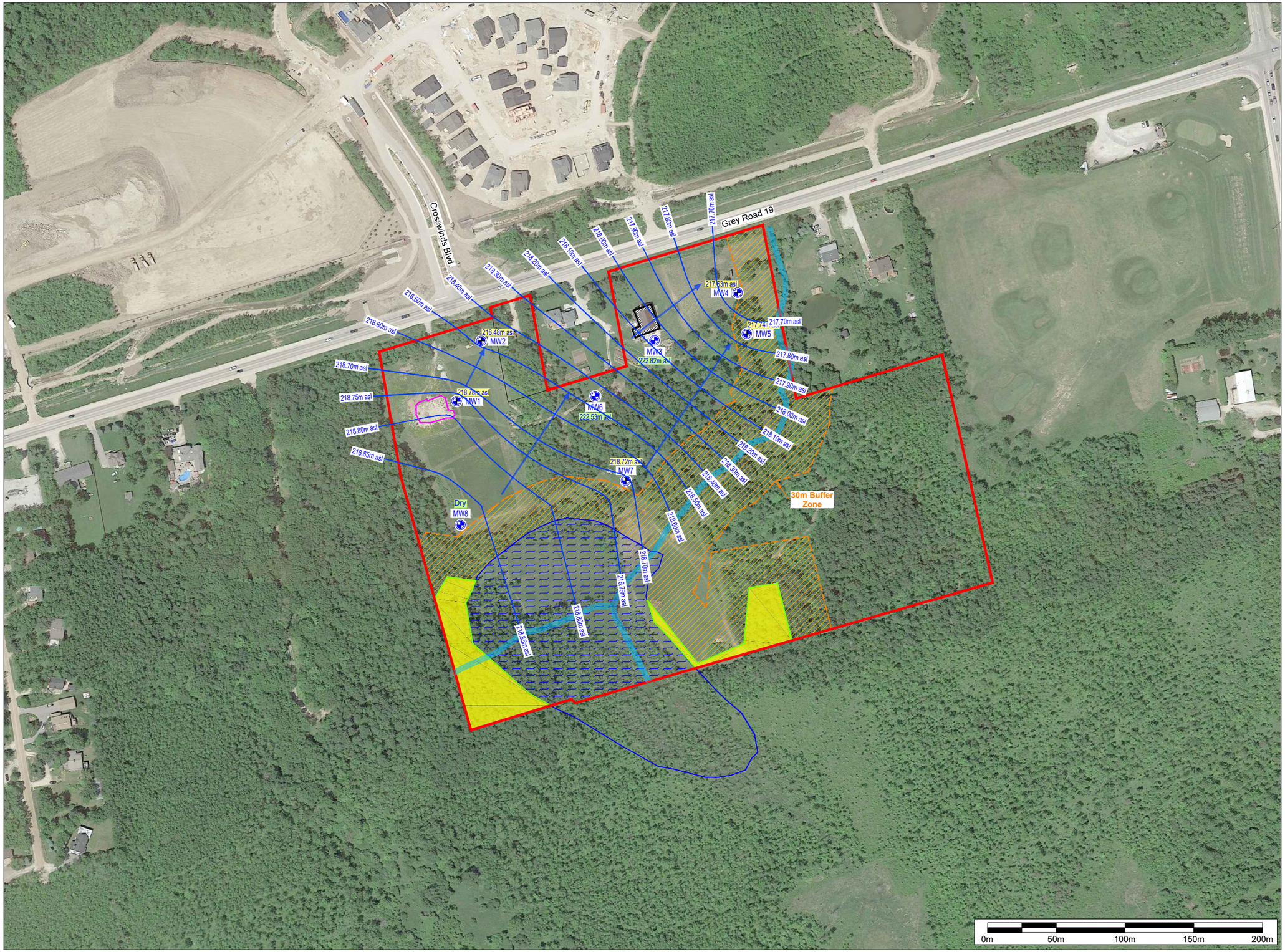
PHASE II ESA

Part of Lot 15, Concession 1, South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

FIGURE 1:

SITE PLAN SHOWING BOREHOLES AND MONITORING WELLS LOCATIONS

PROJECT NO.	SHEET NO.
FE 23-13472	1
DATE: 7 December 2023	
SCALE: AS SHOWN	



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NORTH

N

LEGEND

- SUBJECT SITE BOUNDARY
- BUILDING FOOTPRINT
- BOREHOLE WITH MONITORING WELL LOCATION
- WETLAND
- 30m BUFFER ZONE
- FILL STOCKPILE
- WATER BODY
- HAZARD ZONE AS PER ZONING BY-LAW 2018-65
- GROUNDWATER FLOW DIRECTION
- GROUNDWATER ELEVATION CONTOUR 27 November 2023
- 218.78m asl GROUNDWATER ELEVATION ON 27 November 2023
- 222.53m asl GROUNDWATER ELEVATION THAT WAS NOT CONSIDERED FOR THE FLOW DIRECTION CALCULATION

PROJECT NAME AND ADDRESS

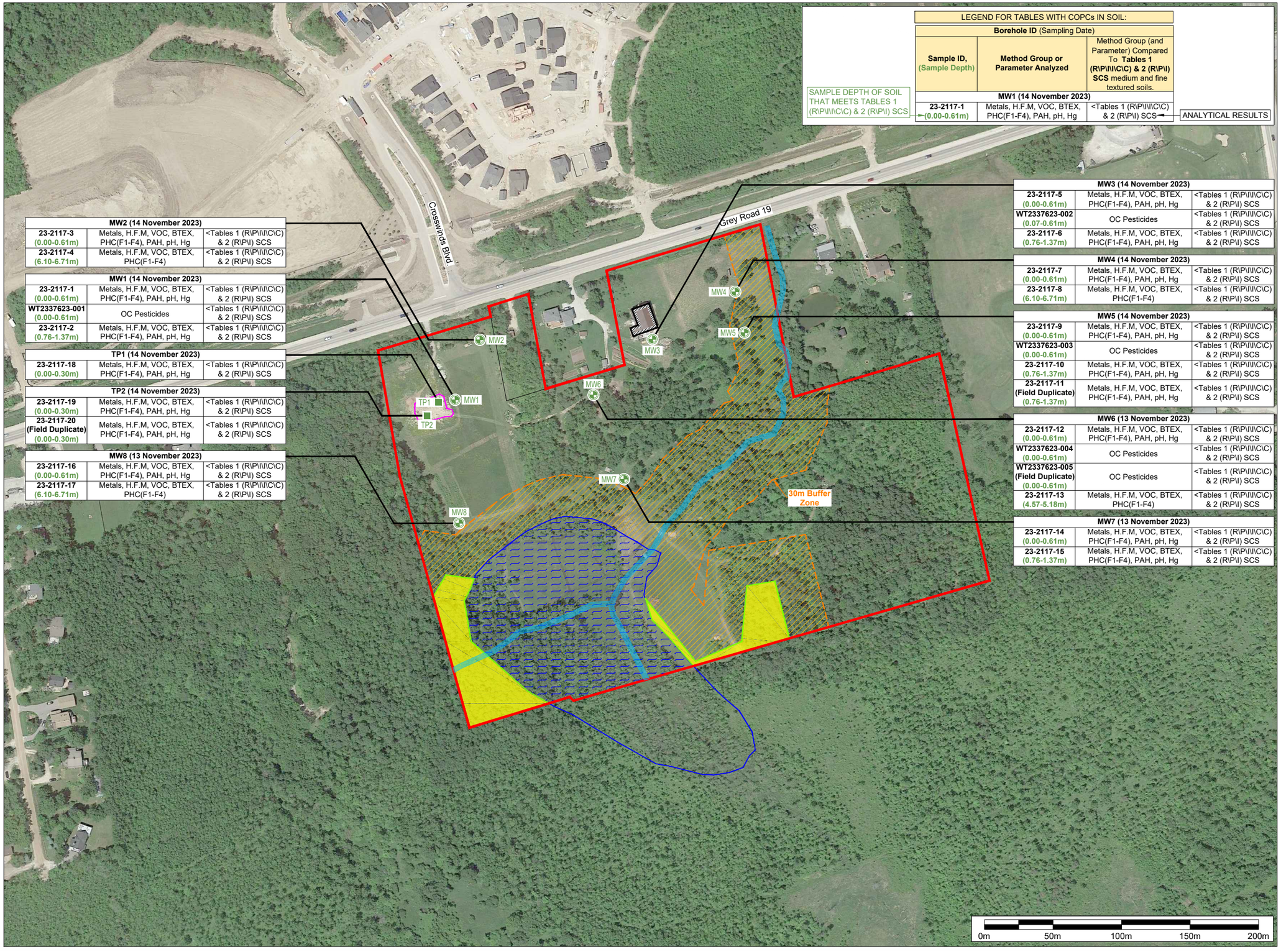
PHASE II ESA

Part of Lot 15, Concession 1, South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

FIGURE 2:

SITE PLAN SHOWING BOREHOLES AND MONITORING WELLS LOCATIONS

PROJECT NO.	SHEET NO.
FE 23-13472	2
DATE: 7 December 2023	
SCALE: AS SHOWN	



LEGEND FOR TABLES WITH COPCs IN SOIL:

Borehole ID (Sampling Date)		
Sample ID, (Sample Depth)	**Method Group or Parameter Analyzed**	Method Group (and Parameter) Compared To **Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS** medium and fine textured soils.
MW1 (14 November 2023)		
23-2117-1 (0.00-0.61m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS

SAMPLE DEPTH OF SOIL THAT MEETS TABLES 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS

ANALYTICAL RESULTS

MW2 (14 November 2023)		
23-2117-3 (0.00-0.61m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS
23-2117-4 (6.10-6.71m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4)	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS

MW1 (14 November 2023)		
23-2117-1 (0.00-0.61m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS
WT2337623-001 (0.00-0.61m)	OC Pesticides	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS
23-2117-2 (0.76-1.37m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS

TP1 (14 November 2023)		
23-2117-18 (0.00-0.30m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS

TP2 (14 November 2023)		
23-2117-19 (0.00-0.30m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS
23-2117-20 (Field Duplicate) (0.00-0.30m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS

MW8 (13 November 2023)		
23-2117-16 (0.00-0.61m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS
23-2117-17 (6.10-6.71m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4)	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS

MW3 (14 November 2023)		
23-2117-5 (0.00-0.61m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS
WT2337623-002 (0.07-0.61m)	OC Pesticides	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS
23-2117-6 (0.76-1.37m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS

MW4 (14 November 2023)		
23-2117-7 (0.00-0.61m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS
23-2117-8 (6.10-6.71m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4)	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS

MW5 (14 November 2023)		
23-2117-9 (0.00-0.61m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS
WT2337623-003 (0.00-0.61m)	OC Pesticides	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS
23-2117-10 (0.76-1.37m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS
23-2117-11 (Field Duplicate) (0.76-1.37m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS

MW6 (13 November 2023)		
23-2117-12 (0.00-0.61m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS
WT2337623-004 (0.00-0.61m)	OC Pesticides	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS
WT2337623-005 (Field Duplicate) (0.00-0.61m)	OC Pesticides	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS
23-2117-13 (4.57-5.18m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4)	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS

MW7 (13 November 2023)		
23-2117-14 (0.00-0.61m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS
23-2117-15 (0.76-1.37m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, pH, Hg	<Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS

FISHER ENGINEERING

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Markham, Ontario
L3R 3K2

Tel: 905 475-7755

NORTH

N

LEGEND

- SUBJECT SITE BOUNDARY
- BUILDING FOOTPRINT
- BOREHOLE WITH MONITORING WELL LOCATION THAT MEETS **Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS**
- STOCKPILE SAMPLE LOCATION THAT MEETS **Tables 1 (R\P\I\II\C\C) & 2 (R\P\I) SCS**
- WETLAND
- 30m BUFFER ZONE
- FILL STOCKPILE
- WATER BODY
- HAZARD ZONE AS PER ZONING BY-LAW 2018-65

PROJECT NAME AND ADDRESS

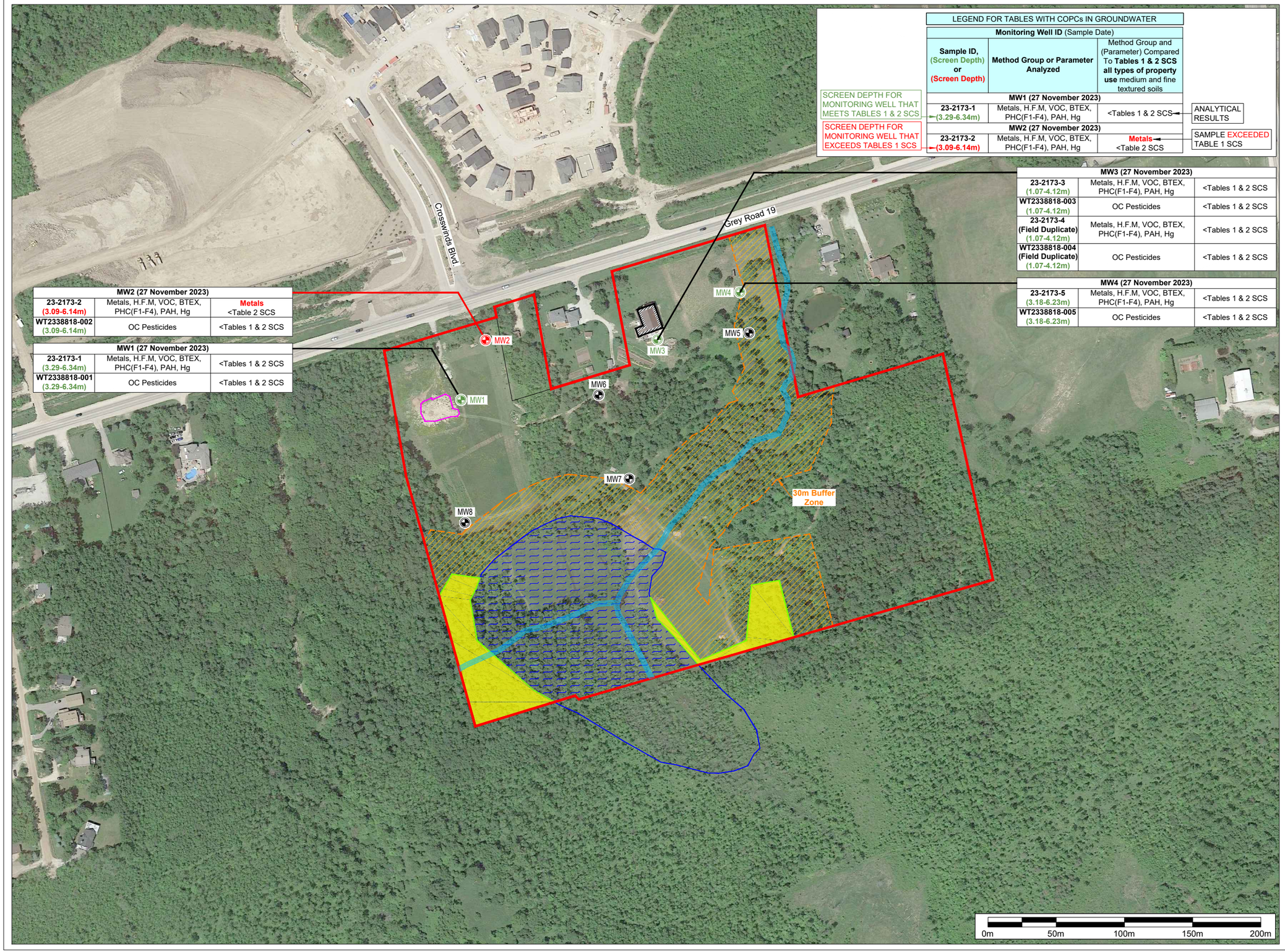
PHASE II ESA

Part of Lot 15, Concession 1, South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

FIGURE 3:

ANALYTICAL PROGRAM WITH ALL COPCs TESTED IN SOIL

PROJECT NO.	SHEET NO.
FE 23-13472	3
DATE: 7 December 2023	
SCALE: AS SHOWN	



LEGEND FOR TABLES WITH COPCs IN GROUNDWATER

Monitoring Well ID (Sample Date)		
Sample ID, (Screen Depth) **or** (Screen Depth)	**Method Group or Parameter Analyzed**	Method Group and (Parameter) Compared To **Tables 1 & 2 SCS all types of property use** medium and fine textured soils
MW1 (27 November 2023)		
23-2173-1 (3.29-6.34m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, Hg	<Tables 1 & 2 SCS
MW2 (27 November 2023)		
23-2173-2 (3.09-6.14m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, Hg	**Metals** <Table 2 SCS

SCREEN DEPTH FOR MONITORING WELL THAT MEETS TABLES 1 & 2 SCS

SCREEN DEPTH FOR MONITORING WELL THAT EXCEEDS TABLES 1 SCS

ANALYTICAL RESULTS

SAMPLE EXCEEDED TABLE 1 SCS

MW3 (27 November 2023)		
23-2173-3 (1.07-4.12m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, Hg	<Tables 1 & 2 SCS
WT2338818-003 (1.07-4.12m)	OC Pesticides	<Tables 1 & 2 SCS
23-2173-4 (Field Duplicate) (1.07-4.12m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, Hg	<Tables 1 & 2 SCS
WT2338818-004 (Field Duplicate) (1.07-4.12m)	OC Pesticides	<Tables 1 & 2 SCS

MW4 (27 November 2023)		
23-2173-5 (3.18-6.23m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, Hg	<Tables 1 & 2 SCS
WT2338818-005 (3.18-6.23m)	OC Pesticides	<Tables 1 & 2 SCS

MW2 (27 November 2023)		
23-2173-2 (3.09-6.14m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, Hg	**Metals** <Table 2 SCS
WT2338818-002 (3.09-6.14m)	OC Pesticides	<Tables 1 & 2 SCS

MW1 (27 November 2023)		
23-2173-1 (3.29-6.34m)	Metals, H.F.M, VOC, BTEX, PHC(F1-F4), PAH, Hg	<Tables 1 & 2 SCS
WT2338818-001 (3.29-6.34m)	OC Pesticides	<Tables 1 & 2 SCS

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NORTH

LEGEND

- SUBJECT SITE BOUNDARY
- BUILDING FOOTPRINT
- MONITORING WELL LOCATION THAT MEETS **Tables 1 & 2 SCS**
- MONITORING WELL LOCATION THAT EXCEEDS **Table 1 SCS**
- MONITORING WELL LOCATION THAT WAS NOT SAMPLED AS PART OF THE PHASE II ESA
- WETLAND
- 30m BUFFER ZONE
- FILL STOCKPILE
- WATER BODY
- HAZARD ZONE AS PER ZONING BY-LAW 2018-65

PROJECT NAME AND ADDRESS

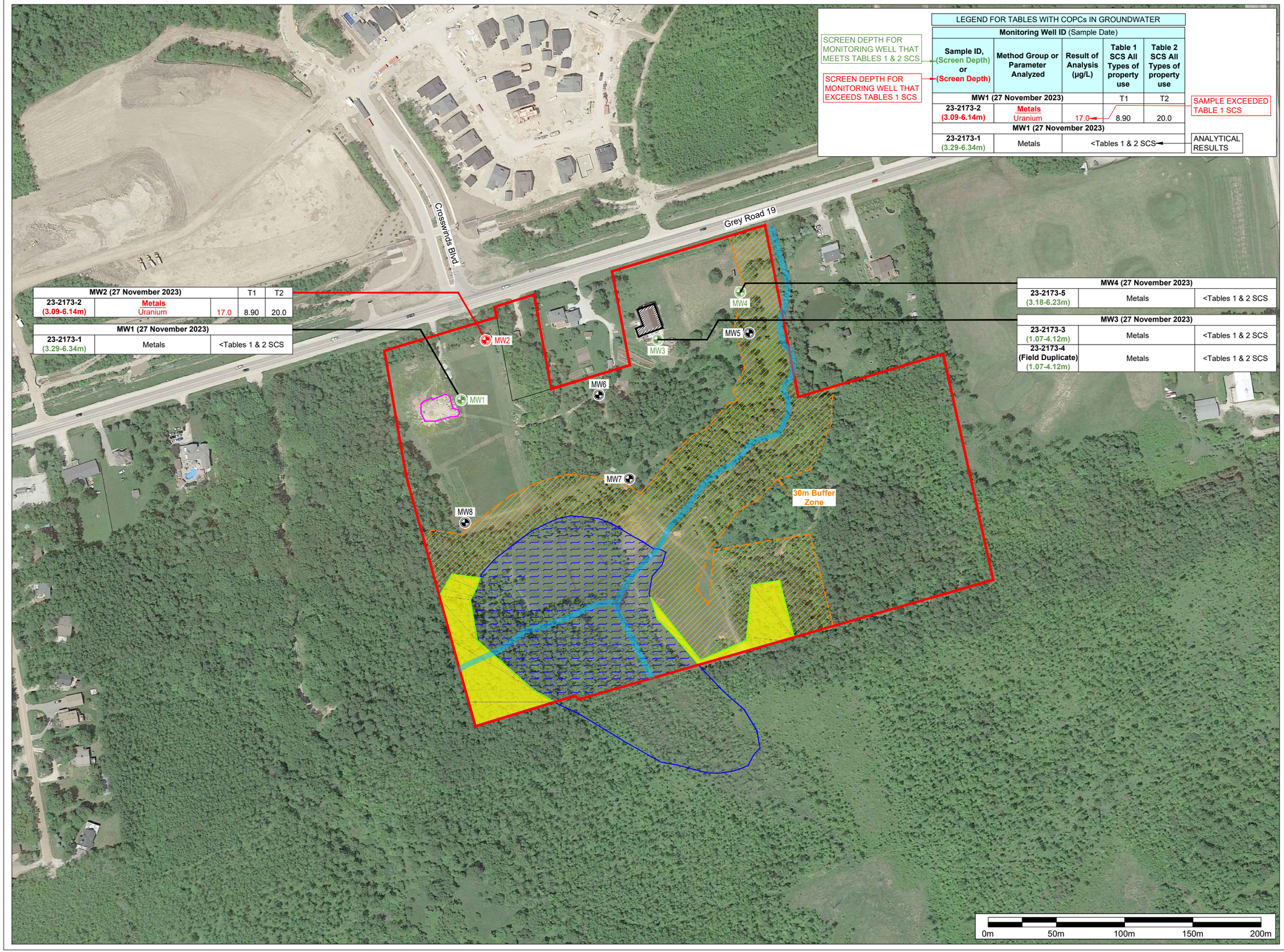
PHASE II ESA

Part of Lot 15, Concession 1, South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

FIGURE 4:

ANALYTICAL PROGRAM WITH ALL COPCs TESTED IN GROUNDWATER

PROJECT NO.	SHEET NO.
FE 23-13472	4
DATE: 7 December 2023	
SCALE: AS SHOWN	



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NORTH

N

LEGEND

- SUBJECT SITE BOUNDARY
- BUILDING FOOTPRINT
- MONITORING WELL LOCATION THAT MEETS **Tables 1 & 2 SCS**
- MONITORING WELL LOCATION THAT EXCEEDS **Table 1 SCS**
- MONITORING WELL LOCATION THAT WAS NOT SAMPLED AS PART OF THE PHASE II ESA
- WETLAND
- 30m BUFFER ZONE
- FILL STOCKPILE
- WATER BODY
- HAZARD ZONE AS PER ZONING BY-LAW 2018-65

PROJECT NAME AND ADDRESS

PHASE II ESA

Part of Lot 15, Concession 1, South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

FIGURE 4.1:

ANALYTICAL PROGRAM WITH EXCEEDANCES OF METALS IN GROUNDWATER

PROJECT NO.	SHEET NO.
FE 23-13472	4.1
DATE: 7 December 2023	
SCALE: AS SHOWN	

APPENDIX B – LOG OF BOREHOLES

FISHER ENGINEERING

LOG OF BOREHOLE

NO. MW1 SHEET. 1 of 1

PROJECT NO.: FE# 23-13472/73

PROJECT NAME: GEOTECHNICAL & PHASE II ESA

LOCATION: South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

DRILLING METHOD: Morooka, Solid Stem

DRILLING DATE: 14 November, 2023

DEPTH (feet)	DEPTH (meters)	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	LAB ID	Type NO.	"N" VALUE
				223.72			
0	0	TOPSOIL: Dark brown clayey silt, trace rootlets, moist		0.30 / 223.42	23-2117-1	SS-1	9
2	1	FILL (Disturbed soil): Grey and light brown clayey silt, some fine sand, wet			23-2117-2	SS-2	25
4				1.52 / 222.20			
6	2	SANDY CLAYEY SILT TILL: Brown to greyish brown, trace gravel, moist, hard				SS-3	36
8						SS-4	47
10	3	CLAYEY SILT TILL: Grey, trace gravel, trace fine sand, moist, hard		3.05 / 220.67		SS-5	48
12	4						
14							
16	5					SS-6	35
18		SILTY SAND: Grey, trace gravel, trace clay, wet, very dense		5.49 / 218.23			
20	6					SS-7	100+
22	7	End of borehole at 6.55m		6.55 / 217.17			
24							
26	8						
28							
30	9						
32							
34	10						

PENETRATION TESTING (SPT) ▲ 20 40 60 80

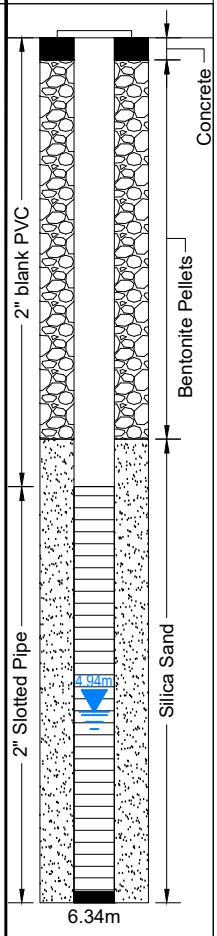
SHEAR STRENGTH (Kpa) ✚ 40 80 120 160

VAPOUR READING (ppm) □ 20 40 60 80

MOISTURE CONTENT (%) ● 10 20 30 40

<2.0 <2.0 <2.0 <2.0 <2.0 <2.0

PIEZOMETER OR WELL CONSTRUCTION



Groundwater Depth (m): on completion: Dry/ On November 27, 2023: 4.94m

DRAWN: T.L. LOGGED: M.M. CHECKED: C.W.

FISHER ENGINEERING

LOG OF BOREHOLE

NO. MW2 SHEET. 1 of 1

PROJECT NO.: FE# 23-13472/73

PROJECT NAME: GEOTECHNICAL & PHASE II ESA

LOCATION: South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

DRILLING METHOD: Morooka, Solid Stem

DRILLING DATE: 14 November, 2023

DEPTH (feet)	DEPTH (meters)	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	LAB ID	Type NO.	"N" VALUE
				224.31			
0	0	TOPSOIL: Dark brown clayey silt, trace rootlets		0.15 / 224.16	23-2117-3	SS-1	16
2		FILL: Brown sandy silt, some clay, trace gravel, moist		0.76 / 223.55			
4	1	CLAYEY SILT TILL: Grey to brown, trace gravel, trace fine sand, moist, hard				SS-2	38
6	2					SS-3	40
8						SS-4	41
10	3	SILTY CLAY TILL: Grey, trace gravel, moist, very stiff to hard		3.05 / 221.26		SS-5	32
12	4						
14							
16	5					SS-6	26
18							
20	6				23-2117-4	AG-7	
22	7	End of borehole at 6.71m		6.71 / 217.60			
24							
26	8						
28							
30	9						
32	10						
34							

PENETRATION TESTING (SPT) ▲ 20 40 60 80

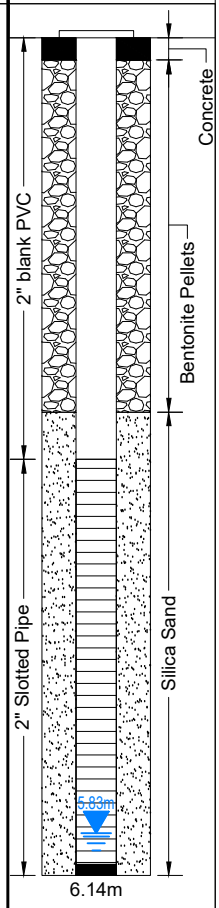
SHEAR STRENGTH (Kpa) ✚ 40 80 120 160

VAPOUR READING (ppm) □ 20 40 60 80

MOISTURE CONTENT (%) ● 10 20 30 40

<2.0 (SS-1) <2.0 (SS-2) <2.0 (SS-3) <2.0 (SS-4) <2.0 (SS-5) <2.0 (SS-6) <2.0 (AG-7)

PIEZOMETER OR WELL CONSTRUCTION



Groundwater Depth (m): on completion: Dry/ On November 27, 2023: 5.83m

DRAWN: T.L. LOGGED: M.M. CHECKED: C.W.

FISHER ENGINEERING

LOG OF BOREHOLE

NO. MW3 SHEET. 1 of 1

PROJECT NO.: FE# 23-13472/73

PROJECT NAME: GEOTECHNICAL & PHASE II ESA

LOCATION: South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

DRILLING METHOD: Morooka, Solid Stem

DRILLING DATE: 14 November, 2023

DEPTH (feet)	DEPTH (meters)	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	LAB ID	Type NO.	"N" VALUE
				223.22			
0	0	~76mm CONCRETE					
		FILL: Brown silt to sandy silt, trace gravel, wet			23-2117-5	SS-1	0
4	1				23-2117-6	SS-2	17
				1.52 / 221.70			
6	2	SILTY SAND: Brown, very fine sand, trace clay, trace gravel, moist, dense to very dense				SS-3	34
8						SS-4	89
10	3					SS-5	49
12				3.81 / 219.41			
14	4	SANDY SILT TILL: Grey, trace clay, trace gravel, moist, very dense					
16	5					SS-6	68
				5.03 / 218.19			
		End of borehole at 5.03m					
18							
20	6						
22	7						
24							
26	8						
28							
30	9						
32							
34	10						

PENETRATION TESTING (SPT) ▲ 20 40 60 80

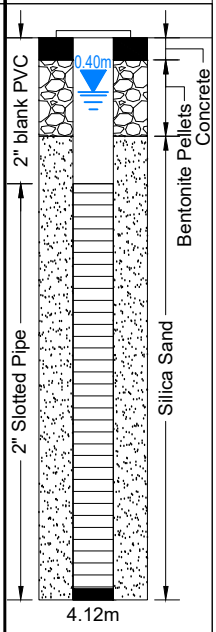
SHEAR STRENGTH (Kpa) ✚ 40 80 120 160

VAPOUR READING (ppm) □ 20 40 60 80

MOISTURE CONTENT (%) ● 10 20 30 40

<2.0 <2.0 <2.0 <2.0 <2.0 <2.0

PIEZOMETER OR WELL CONSTRUCTION



Groundwater Depth (m): on completion: Dry/ On November 27, 2023: 0.40m

DRAWN: T.L. LOGGED: M.M. CHECKED: C.W.

FISHER ENGINEERING

LOG OF BOREHOLE

NO. MW4 SHEET. 1 of 1

PROJECT NO.: FE# 23-13472/73

PROJECT NAME: GEOTECHNICAL & PHASE II ESA

LOCATION: South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

DRILLING METHOD: Morooka, Solid Stem

DRILLING DATE: 14 November, 2023

DEPTH (feet)	DEPTH (meters)	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	LAB ID	Type NO.	"N" VALUE
				220.77			
0	0	TOPSOIL		0.15 / 220.62			
		FILL: Grey and brown silty sand, trace gravel, moist			23-2117-7	SS-1	16
2				0.76 / 220.01			
	1	SANDY CLAYEY SILT TILL: Brown, trace gravel, moist, very stiff to hard				SS-2	20
4							
6	2					SS-3	39
8						SS-4	67
10	3			3.05 / 217.72			
		CLAYEY SILT TILL: Grey, trace gravel, trace fine sand, moist, hard				SS-5	45
12	4						
14							
16	5					SS-6	45
18				5.49 / 215.28			
		SILTY SAND: Grey, trace clay, wet, dense					
20	6				23-2117-8	SS-7	33
				6.55 / 214.22			
22	7	End of borehole at 6.55m					
24							
26	8						
28							
30	9						
32							
34	10						

PENETRATION TESTING (SPT) ▲ 20 40 60 80

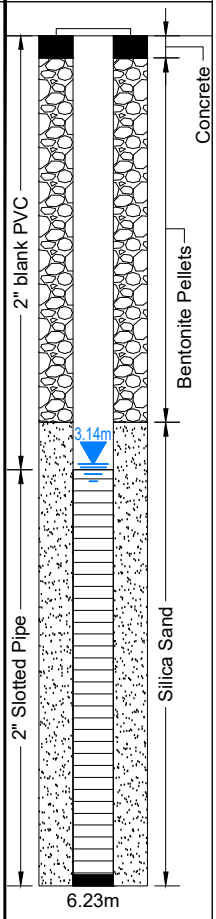
SHEAR STRENGTH (Kpa) ✚ 40 80 120 160

VAPOUR READING (ppm) □ 20 40 60 80

MOISTURE CONTENT (%) ● 10 20 30 40

<2.0 (all samples)

PIEZOMETER OR WELL CONSTRUCTION



Groundwater Depth (m): on completion: 6.10m/ On November 27, 2023: 3.14m

DRAWN: T.L. LOGGED: M.M. CHECKED: C.W.

FISHER ENGINEERING

LOG OF BOREHOLE

NO. MW5 SHEET. 1 of 1

PROJECT NO.: FE# 23-13472/73

PROJECT NAME: GEOTECHNICAL & PHASE II ESA

LOCATION: South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

DRILLING METHOD: Morooka, Solid Stem

DRILLING DATE: 14 November, 2023

DEPTH (feet)	DEPTH (meters)	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	LAB ID	Type NO.	"N" VALUE
				220.72			
0	0	TOPSOIL: Dark brown clayey silt, trace rootlets		0.15 / 220.57	23-2117-9	SS-1	6
2	1	FILL: Grey and brown clayey silt, disturbed, some fine sand, trace gravel, moist			23-2117-10 / 23-2117-11 (DUP)	SS-2	27
4				1.52 / 219.20			
6	2	SANDY CLAYEY SILT TILL: Brown, trace gravel, moist, very dense				SS-3	55
8		CLAYEY SILT TILL: Grey, trace gravel, trace fine sand, moist, hard		2.29 / 218.43		SS-4	47
10	3					SS-5	51
12	4						
14							
16	5					SS-6	43
18		SILTY SAND: Grey, trace clay, wet, dense		5.49 / 215.23			
20	6					SS-7	37
22	7	End of borehole at 6.55m		6.55 / 214.17			
24							
26	8						
28							
30	9						
32	10						
34							

PENETRATION TESTING (SPT) ▲ 20 40 60 80

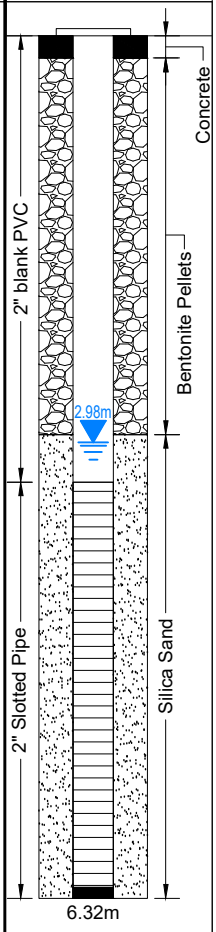
SHEAR STRENGTH (Kpa) ✚ 40 80 120 160

VAPOUR READING (ppm) □ 20 40 60 80

MOISTURE CONTENT (%) ● 10 20 30 40

<2.0

PIEZOMETER OR WELL CONSTRUCTION



Groundwater Depth (m): on completion: 6.10m / On November 27, 2023: 2.98m

DRAWN: T.L. LOGGED: M.M. CHECKED: C.W.

FISHER ENGINEERING

LOG OF BOREHOLE

NO. MW6 SHEET. 1 of 1

PROJECT NO.: FE# 23-13472/73

PROJECT NAME: GEOTECHNICAL & PHASE II ESA

LOCATION: South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

DRILLING METHOD: Morooka, Solid Stem

DRILLING DATE: 13 November, 2023

DEPTH (feet)	DEPTH (meters)	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	LAB ID	Type NO.	"N" VALUE
				223.48			
0	0	TOPSOIL: Dark brown clayey silt, trace sand, rootlets		0.15 / 223.33	23-2117-12	SS-1	8
2		FILL: Brown clayey silt, some sand, trace gravel		0.76 / 222.72			
4	1	SANDY CLAYEY SILT TILL: Greyish brown, trace gravel, moist, hard				SS-2	43
6	2					SS-3	44
8				2.44 / 221.04		SS-4	50
10	3	CLAYEY SILT TILL: Grey, trace gravel, trace fine sand, moist, hard				SS-5	36
12	4						
14							
16	5				23-2117-13	SS-6	42
18							
20	6					SS-7	59
22	7	End of borehole at 6.55m		6.55 / 216.93			
24							
26	8						
28							
30	9						
32							
34	10						

PENETRATION TESTING (SPT) ▲ 20 40 60 80

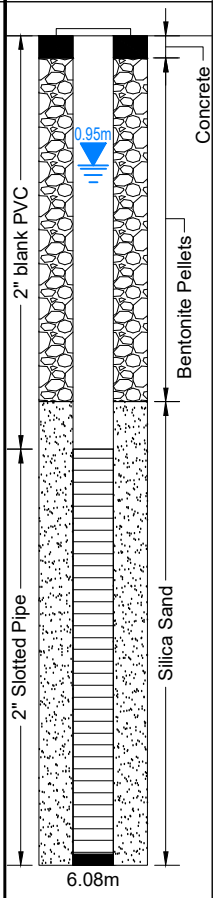
SHEAR STRENGTH (Kpa) ✚ 40 80 120 160

VAPOUR READING (ppm) □ 20 40 60 80

MOISTURE CONTENT (%) ● 10 20 30 40

SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7
<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0

PIEZOMETER OR WELL CONSTRUCTION



Groundwater Depth (m): on completion: Dry/ On November 27, 2023: 0.95m

DRAWN: T.L. LOGGED: M.M. CHECKED: C.W.

FISHER ENGINEERING

LOG OF BOREHOLE

NO. MW7 SHEET. 1 of 1

PROJECT NO.: FE# 23-13472/73

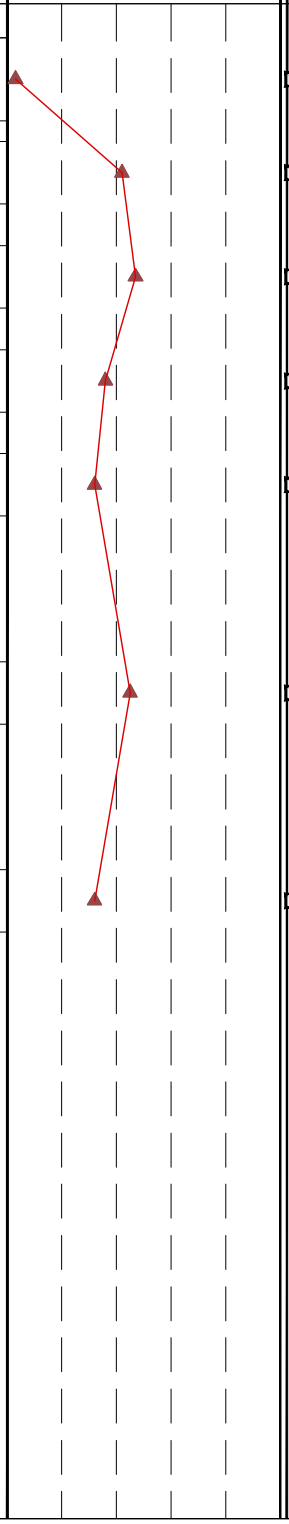
PROJECT NAME: GEOTECHNICAL & PHASE II ESA

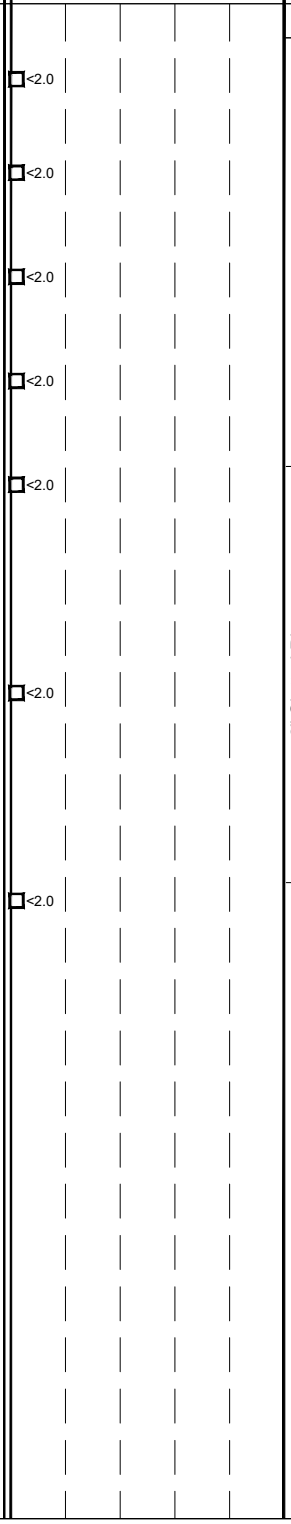
LOCATION: South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

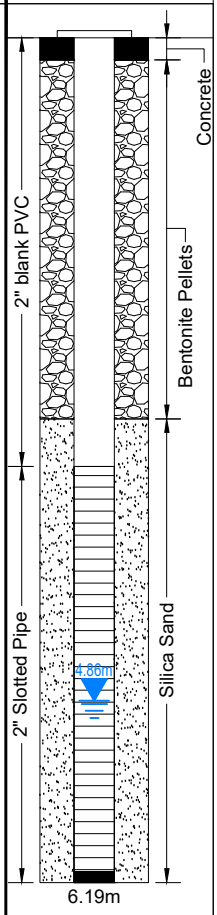
DRILLING METHOD: Morooka, Solid Stem

DRILLING DATE: 13 November, 2023

DEPTH (feet)	DEPTH (meters)	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	LAB ID	Type NO.	"N" VALUE
				223.58			
0	0	TOPSOIL: Dark brown clayey silt, rootlets		0.15 / 223.43			
		FILL: Grey and brown clayey silt, some sand, trace bricks, trace gravel, moist			23-2117-14	SS-1	3
2	1			0.76 / 222.82			
		SANDY CLAYEY SILT TILL: Greyish brown, trace gravel, moist, hard			23-2117-15	SS-2	42
4							
6	2					SS-3	47
8						SS-4	36
10	3			3.05 / 220.53			
		CLAYEY SILT TILL: Grey, trace gravel, trace fine sand, moist, hard				SS-5	32
12							
14	4						
16						SS-6	45
18	5						
20		Sand seam @6.40m to 6.55m				SS-7	32
	6			6.55 / 217.03			
22		End of borehole at 6.55m					
24	7						
26							
28	8						
30	9						
32							
34	10						







Groundwater Depth (m): on completion: Dry/ On November 27, 2023: 4.86m

DRAWN: T.L. | LOGGED: M.M. | CHECKED: C.W.

FISHER ENGINEERING

LOG OF BOREHOLE

NO. MW8 SHEET. 1 of 1

PROJECT NO.: FE# 23-13472/73

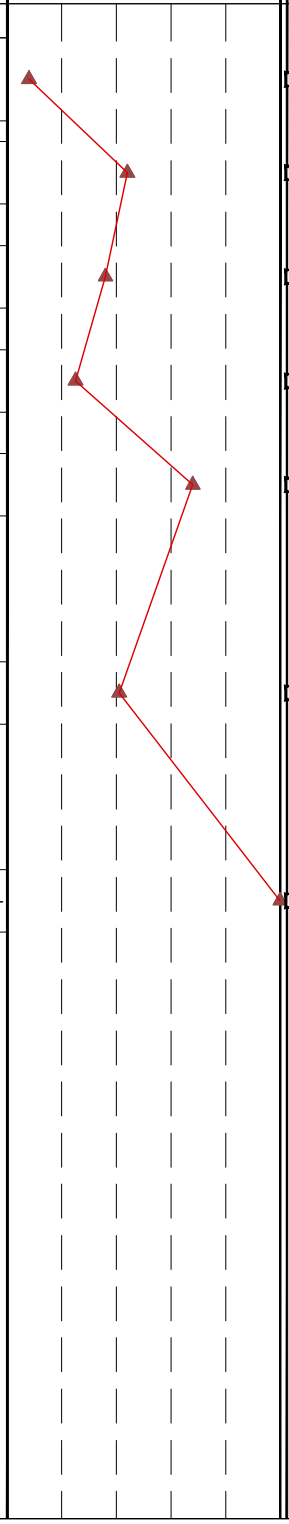
PROJECT NAME: GEOTECHNICAL & PHASE II ESA

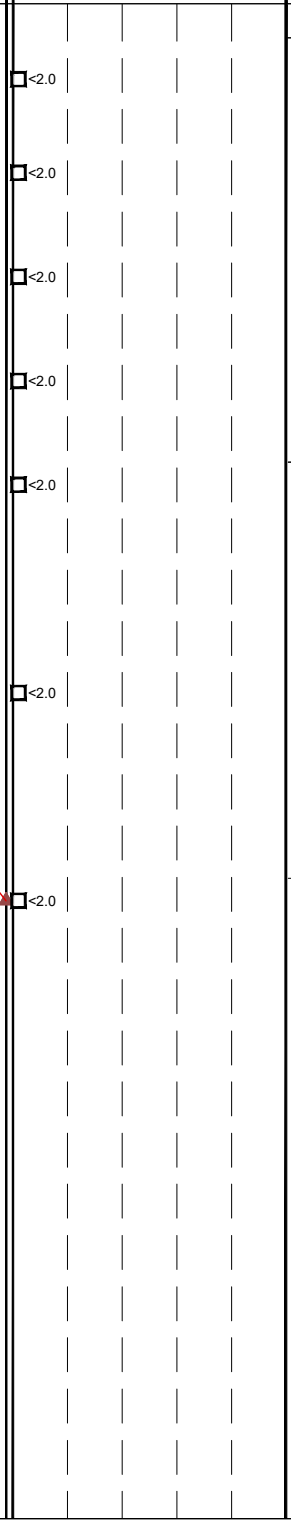
LOCATION: South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

DRILLING METHOD: Morooka, Solid Stem

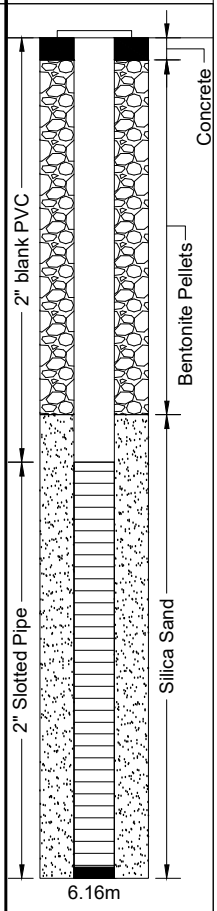
DRILLING DATE: 13 November, 2023

DEPTH (feet)	DEPTH (meters)	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	LAB ID	Type NO.	"N" VALUE
				223.51			
0	0	TOPSOIL: Dark brown clayey silt, trace rootlets, moist		0.30 / 223.21	23-2117-16	SS-1	8
2		FILL: Grey and brown sandy clayey silt, trace gravel, moist		0.76 / 222.75			
4	1	SANDY CLAYEY SILT TILL: Grey, trace gravel, trace rock pieces, moist, very stiff to hard				SS-2	44
6	2					SS-3	36
8		Sand seam @2.29m to 2.59m				SS-4	25
10	3					SS-5	68
12							
14	4			4.57 / 218.94			
16	5	SILTY SAND: Brown to grey, trace gravel, wet, dense to very dense				SS-6	41
18							
20	6	Grey @6.10m			23-2117-17	SS-7	100+
22	7	End of borehole at 6.71m		6.71 / 216.80			
24							
26	8						
28							
30	9						
32							
34	10						





PIEZOMETER OR WELL CONSTRUCTION



Groundwater Depth (m): on completion: 6.10m/ On November 27, 2023: Dry

DRAWN: T.L. LOGGED: M.M. CHECKED: C.W.

FISHER ENGINEERING

LOG OF BOREHOLE

NO. TP1 SHEET. 1 of 1

PROJECT NO.: FE# 23-13472/73

PROJECT NAME: GEOTECHNICAL & PHASE II ESA

LOCATION: South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

DRILLING METHOD: Stainless Steel Trowel

DRILLING DATE: 14 November, 2023

DEPTH (feet)	DEPTH (meters)	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: LAB ID	SAMPLES: Type NO.	SAMPLES: "N" VALUE	PENETRATION TESTING (SPT) ▲ 20 40 60 80 / SHEAR STRENGTH (Kpa) ✚ 40 80 120 160	VAPOUR READING (ppm) □ 20 40 60 80 / MOISTURE CONTENT (%) ● 10 20 30 40	PIEZOMETER OR WELL CONSTRUCTION
				N/A						
0	0	TOPSOIL: Dark brown, sandy silt, trace clay, trace gravel		0.30 / 99.70	23-2117-18				□ <2.0	
		End of test Pit at 0.30m								
2	1									
4										
6	2									
8										
10	3									
12										
14	4									
16										
18	5									
20										
22	6									
24										
26	7									
28										
30	8									
32										
34	9									
	10									

Groundwater Depth (m): on completion: N/A

DRAWN: T.L. LOGGED: M.M. CHECKED: C.W.

FISHER ENGINEERING

LOG OF BOREHOLE

NO. TP2 SHEET. 1 of 1

PROJECT NO.: FE# 23-13472/73

PROJECT NAME: GEOTECHNICAL & PHASE II ESA

LOCATION: South of Grey Rd. 19 & Crosswinds Blvd., Town of Blue Mountains, ON

DRILLING METHOD: Stainless Steel Trowel

DRILLING DATE: 14 November, 2023

DEPTH (feet)	DEPTH (meters)	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	SAMPLES: LAB ID	Type NO.	"N" VALUE	PENETRATION TESTING (SPT) ▲ 20 40 60 80 / SHEAR STRENGTH (Kpa) ✚ 40 80 120 160	VAPOUR READING (ppm) □ 20 40 60 80 / MOISTURE CONTENT (%) ● 10 20 30 40	PIEZOMETER OR WELL CONSTRUCTION
0	0			N/A						
		TOPSOIL: Dark brown, sandy silt, trace clay, trace gravel		0.30	23-2117-19				□<2.0	
		End of Test pit at 0.30m		99.70	23-2117-20 (DUP)					
2	1									
4										
6	2									
8										
10	3									
12										
14	4									
16										
18	5									
20										
22	6									
24										
26	7									
28										
30	8									
32										
34	9									
	10									

Groundwater Depth (m): on completion: N/A

DRAWN: T.L. LOGGED: M.M. CHECKED: C.W.

APPENDIX C – CERTIFICATES OF ANALYSIS

Project Name:	Geotechnical Investigation	***F.E. Lab #:***	23-991
Client:	Bydem Enterprises Inc.	***Date Sampled:***	14-Nov-2023
Project ID:	23-13473	***Date Received:***	21-Nov-2023
Location:	South of Grey Rd. 19 and Crosswinds Blvd. Blue Mountain, Ontario	***Date Reported:***	4-Dec-2023

Certificate of Analysis

Analyses	Matrix	Quantity	Testing Date	Method Reference
Moisture Content	Soil	14	21-Nov-23	ASTM D2216
Grain Size (Sieve Analysis)	Soil	4	01-Dec-23	LS-602
Grain Size (Hydrometer)	Soil	0	N.A.	LS-702
Atterberg test	Soil	0	N.A.	LS-703/704

Authorized by: Behnam Sayad-Pour

Behnam Sayad Pour Zanjani
Geo-Lab Supervisor

400 Esna Park Drive, Unit 15, Markham, ON L3R 3K2
Tel:(905) 475-7755 www.fishereng.com

Certificate of Analysis

Analysis Requested:	Moisture Content	***Sample Description:***	14 Soil Sample(s)

Sample Info	BH1 SS3	BH1 SS4	BH1 SS5	BH1 SS6	BH1 SS7	BH5 SS3
Sample Depth (m)	1.53-1.98	2.29-2.75	3.05-3.51	4.58-5.03	6.1-6.56	1.53-1.98
Moisture Content (%)	9.1	9.5	9.3	10.1	15.7	10.9

Sample Info	BH5 SS4	BH5 SS5	BH5 SS6	BH5 SS7	BH6 SS4	BH6 SS7
Sample Depth (m)	2.29-2.75	3.05-3.51	4.58-5.03	6.1-6.56	2.29-2.75	6.1-6.56
Moisture Content (%)	10.3	9.3	14.9	18.4	9.7	13.3

Sample Info	BH8 SS4	BH8 SS6				
Sample Depth (m)	2.29-2.75	4.58-5.03				
Moisture Content (%)	11.1	18.6				

Certificate of Analysis

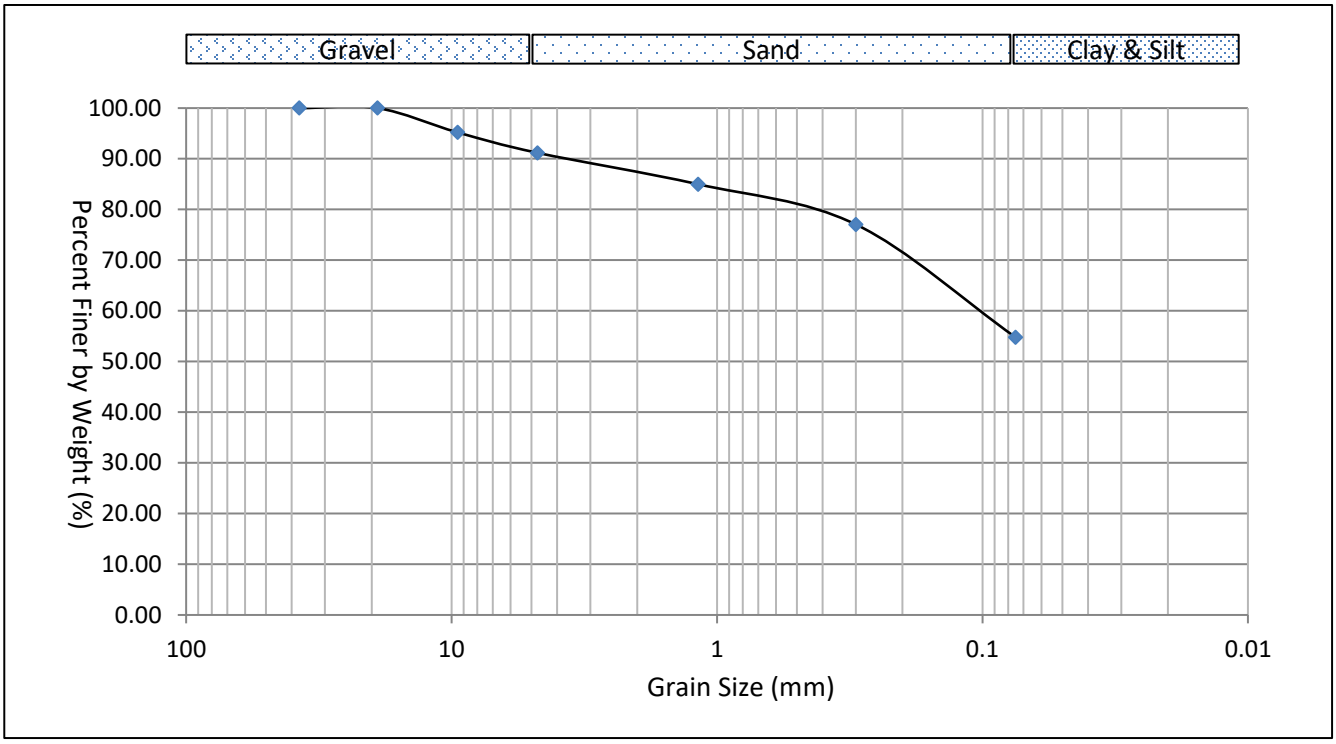
Analysis Requested:	Grain Size (Sieve Analysis)	***Sample Quantity:***	4	Soil Sample(s)

Sample Info	***23-1029 BH1 SS3***	***23-1030 BH1 SS5***	***23-1031 BH5 SS3***	***23-1032 BH5 SS5***		
Sample Depth (m)	***1.53-1.98***	***3.05-3.51***	***1.53-1.98***	***3.05-3.51***		
Grain Size (%)						
>19mm	0.0	0.0	0.0	0.0		
9.5mm-19mm	4.8	0.0	0.0	1.4		
4.75mm-9.5mm	4.0	4.8	1.1	3.7		
1.18mm-4.75mm	6.2	8.5	4.1	2.8		
300um-1.18mm	7.9	7.1	6.5	5.9		
75um-300um	22.3	15.3	14.6	13.7		
<75um	54.8	64.2	73.7	72.5		
Clay and Silt	**54.8**	**64.2**	**73.7**	**72.5**		
Sand	**36.4**	**30.9**	**25.2**	**22.4**		
Gravel	**8.8**	**4.8**	**1.1**	**5.1**		

Grain Size Distribution

Sample ID: 23-1029 BH1 SS3 (1.53-1.98m)

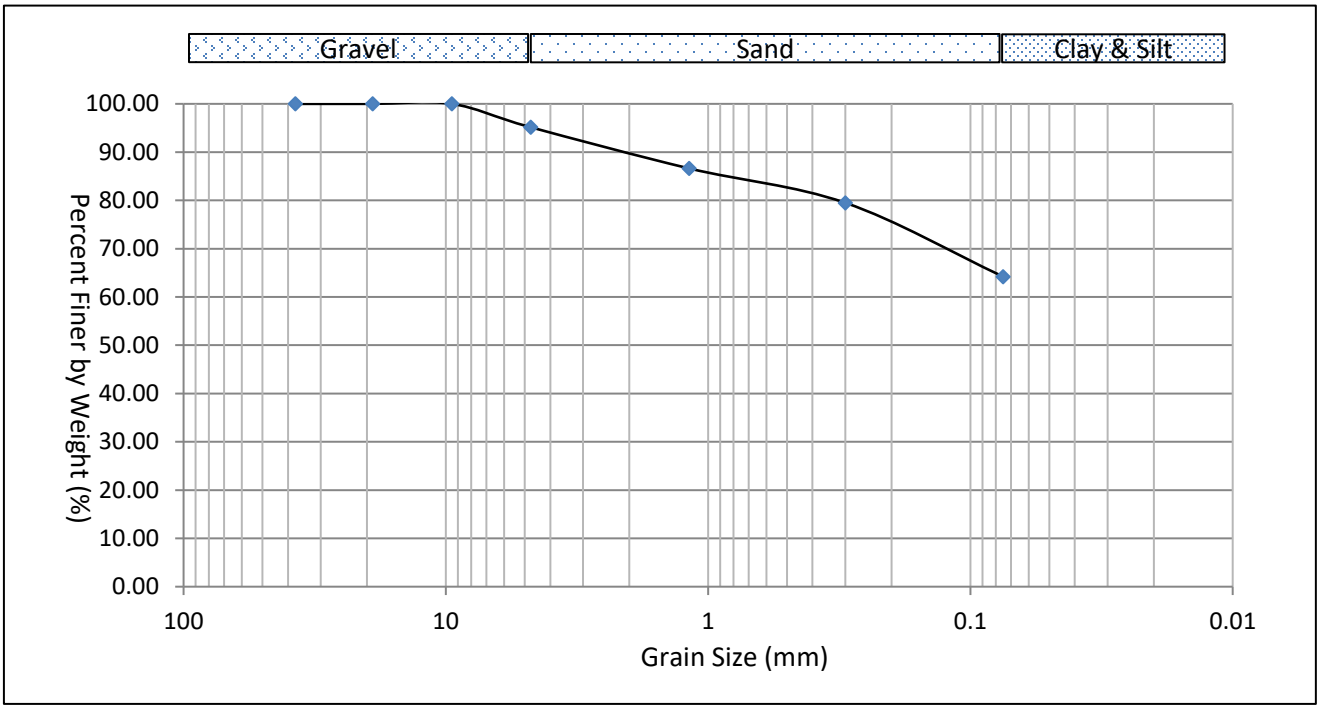
Gravel: 8.8% Sand: 36.4% Clay and Silt 54.8%



Grain Size Distribution

Sample ID: 23-1030 BH1 SS5 (3.05-3.51m)

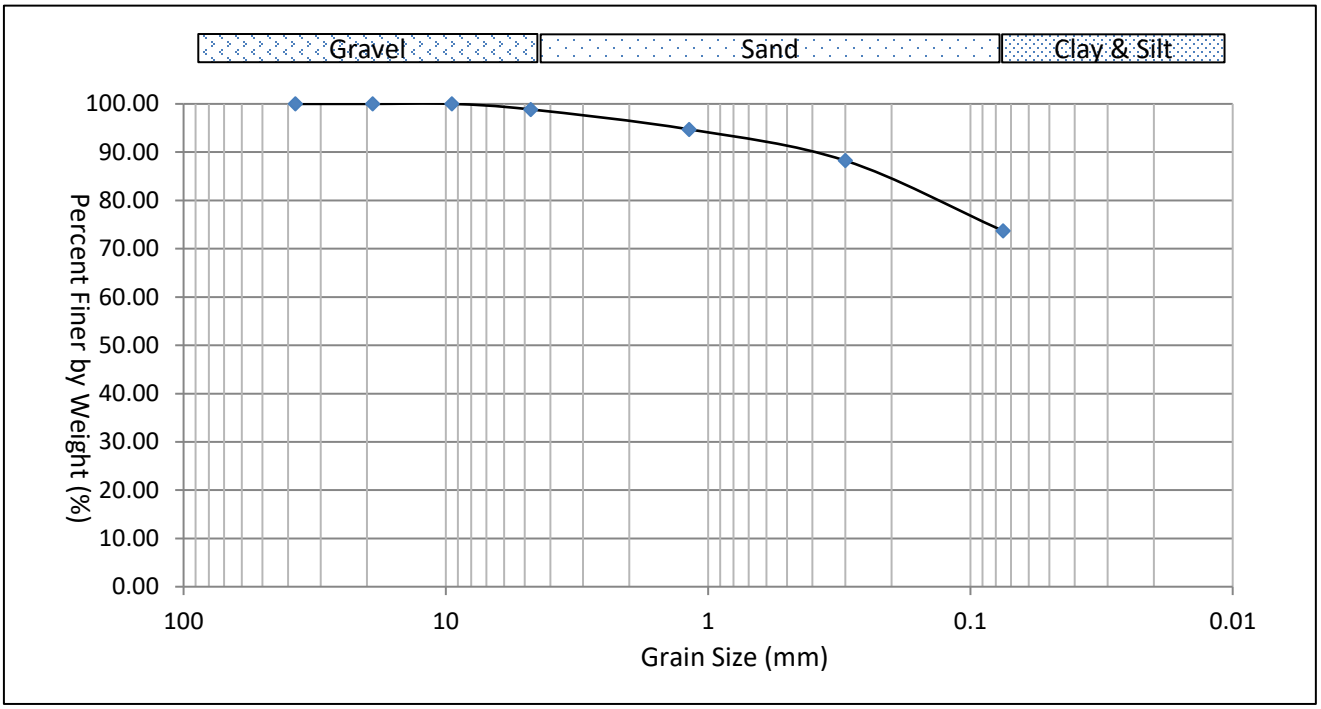
Gravel: 4.8% Sand: 30.9% Clay and Silt 64.2%



Grain Size Distribution

Sample ID: 23-1031 BH5 SS3 (1.53-1.98m)

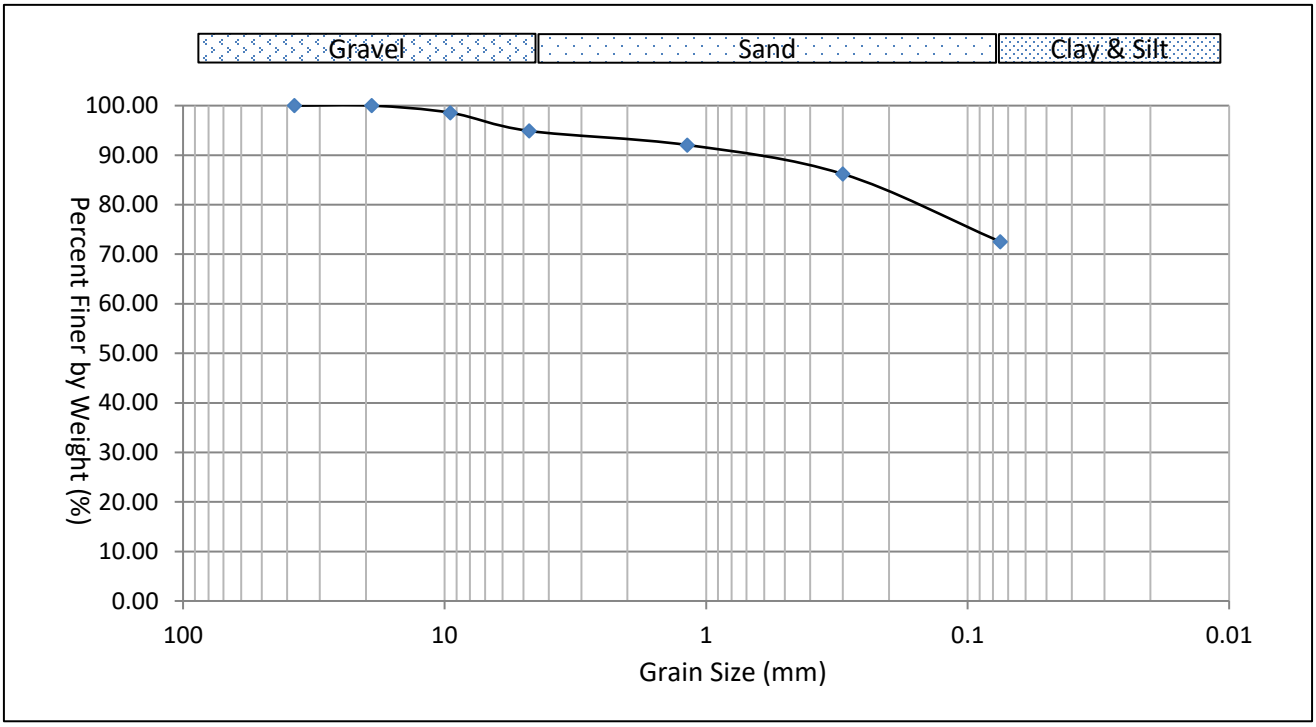
Gravel: 1.1% Sand: 25.2% Clay and Silt 73.7%



Grain Size Distribution

Sample ID: 23-1032 BH5 SS5 (3.05-3.51m)

Gravel: 5.1% Sand: 22.4% Clay and Silt 72.5%



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Client: Bydem Enterprises Inc.
Address: 156 Jozo Weider Boulevard, #9B
The Blue Mountains, ON
L9Y 0V2
Tel.: 416-460-7009
Email: pmondell19@hotmail.com
Attn.: Paul Mondell

F.E. Job #: 23-2117
Project Name: Phase II ESA
Project ID: FE-P 23-13472
Date Sampled: 13 & 14-Nov-2023
Date Received: 15-Nov-2023
Date Reported: 21-Nov-2023
Location: Grey Road & Crosswinds Boulevard
The Blue Mountains, ON

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Soil	20	17-Nov-23	20-Nov-23	Metals F-18	EPA 200.2/200.8
Mercury	Soil	16	17-Nov-23	20-Nov-23	Metals F-18	SM 3120-B
VOCs	Soil	20	16-Nov-23	17-Nov-23	VOCs F-14	SW-846, 8260C
PHCs (F1 & BTEX)	Soil	20	16-Nov-23	17-Nov-23	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Soil	20	21-Nov-23	21-Nov-23	PHCs F-7	CCME CWS
PAHs	Soil	16	20-Nov-23	21-Nov-23	PAHs F-4	SM 6410-B
pH	Soil	16	17-Nov-23	20-Nov-23	pH-EC-SAR F-16	SW-846, 9045D
Chloride	Soil	4	N/A	17-Nov-23	Chloride F-20	SM 4500-Cl-E
Sulphate	Soil	4	17-Nov-23	17-Nov-23	Sulphate F-21	SM 4500-SO_4
Moisture Content	Soil	20	N/A	16-Nov-23	Support Procedures F-99	Carter (1993)

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:

Roger Lin, Ph. D., C. Chem.
Laboratory Manager

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
Ronggen (Roger) Lin
CHEMIST

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-1*** MW01 0.00-0.61m	***23-2117-2*** MW01 0.76-1.37m	***23-2117-3*** MW02 0.00-0.61m	***23-2117-4*** MW02 6.10-6.71m	**Soil Standards [1]** Table 1 R/P/I/I/C/C	**Soil Standards [1]** Table 2 R/P/I
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	1.3	7.5
Arsenic	2.2	3.6	2.8	2.3	18	18
Barium	32	24	37	42	220	390
Beryllium	<2	<2	<2	<2	2.5	(5) 4
Boron	8.1	6.2	8.1	10	36	120
Cadmium	<1	<1	<1	<1	1.2	1.2
Chromium	20	12	17	21	70	160
Cobalt	8.1	7.5	7.7	8.2	21	22
Copper	19	19	16	20	92	(180) 140
Lead	<10	<10	<10	<10	120	120
Molybdenum	<2	<2	<2	<2	2.0	6.9
Nickel	22	20	20	21	82	(130) 100
Selenium	<1	<1	<1	<1	1.5	2.4
Silver	<0.5	<0.5	<0.5	<0.5	0.5	(25) 20
Thallium	<1	<1	<1	<1	1	1
Uranium	<1	<1	<1	<1	2.5	23
Vanadium	<10	15	21	22	86	86
Zinc	<30	<30	<30	<30	290	340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-5*** MW03 0.08-0.61m	***23-2117-6*** MW03 0.76-1.37m	***23-2117-7*** MW04 0.00-0.61m	***23-2117-8*** MW04 6.10-6.71m	**Soil Standards [1]** Table 1 R/P/I/I/C/C	**Soil Standards [1]** Table 2 R/P/I
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	1.3	7.5
Arsenic	3.4	3.3	1.5	2.8	18	18
Barium	14	14	13	8.8	220	390
Beryllium	<2	<2	<2	<2	2.5	(5) 4
Boron	<5	5.9	6.4	<5	36	120
Cadmium	<1	<1	<1	<1	1.2	1.2
Chromium	12	10	8.6	8.5	70	160
Cobalt	4.2	4.8	4.3	3.9	21	22
Copper	13	13	8.9	16	92	(180) 140
Lead	<10	<10	<10	<10	120	120
Molybdenum	<2	<2	<2	<2	2.0	6.9
Nickel	14	18	14	8.1	82	(130) 100
Selenium	<1	<1	<1	<1	1.5	2.4
Silver	<0.5	<0.5	<0.5	<0.5	0.5	(25) 20
Thallium	<1	<1	<1	<1	1	1
Uranium	<1	<1	<1	<1	2.5	23
Vanadium	16	13	10	14	86	86
Zinc	<30	<30	<30	<30	290	340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-9*** MW05 0.00-0.61m	***23-2117-10*** MW05 0.76-1.37m	***23-2117-11*** MW05 (Dup) 0.76-1.37m	***23-2117-12*** MW06 0.00-0.61m	**Soil Standards [1]** Table 1 R/P/I/I/C/C	Table 2 R/P/I
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	1.3	7.5
Arsenic	4.3	2.3	3.4	3.6	18	18
Barium	69	35	34	73	220	390
Beryllium	<2	<2	<2	<2	2.5	(5) 4
Boron	8.8	6.9	7.3	8.5	36	120
Cadmium	<1	<1	<1	<1	1.2	1.2
Chromium	28	19	18	22	70	160
Cobalt	11	6.3	6.4	9.0	21	22
Copper	16	17	16	26	92	(180) 140
Lead	<10	<10	<10	19	120	120
Molybdenum	<2	<2	<2	<2	2.0	6.9
Nickel	23	18	16	21	82	(130) 100
Selenium	<1	<1	<1	<1	1.5	2.4
Silver	<0.5	<0.5	<0.5	<0.5	0.5	(25) 20
Thallium	<1	<1	<1	<1	1	1
Uranium	<1	<1	<1	<1	2.5	23
Vanadium	32	20	21	31	86	86
Zinc	34	<30	<30	65	290	340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-13*** MW06 4.57-5.18m	***23-2117-14*** MW07 0.00-0.61m	***23-2117-15*** MW07 0.76-1.37m	***23-2117-16*** MW08 0.00-0.61m	**Soil Standards [1]** Table 1 R/P/I/I/C/C	Table 2 R/P/I
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	1.3	7.5
Arsenic	9.3	2.3	3.8	5.0	18	18
Barium	40	36	47	38	220	390
Beryllium	<2	<2	<2	<2	2.5	(5) 4
Boron	11	7.2	9.2	6.8	36	120
Cadmium	<1	<1	<1	<1	1.2	1.2
Chromium	18	16	14	14	70	160
Cobalt	9.1	6.4	7.8	7.8	21	22
Copper	19	14	16	19	92	(180) 140
Lead	<10	<10	<10	<10	120	120
Molybdenum	<2	<2	<2	<2	2.0	6.9
Nickel	23	18	16	18	82	(130) 100
Selenium	<1	<1	<1	<1	1.5	2.4
Silver	<0.5	<0.5	<0.5	<0.5	0.5	(25) 20
Thallium	<1	<1	<1	<1	1	1
Uranium	<1	<1	<1	<1	2.5	23
Vanadium	25	23	20	18	86	86
Zinc	31	<30	<30	33	290	340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-17*** MW08 6.10-6.71m	***23-2117-18*** TP-1 0.00-0.30m	***23-2117-19*** TP-2 0.00-0.30m	***23-2117-20*** TP-2 (Dup) 0.00-0.30m	**Soil Standards [1]** Table 1 R/P/I/I/C/C	Table 2 R/P/I
	Concentration (µg/g)					
Metals in Soil						
Antimony	<1	<1	<1	<1	1.3	7.5
Arsenic	3.0	4.3	4.5	4.7	18	18
Barium	7.0	28	24	23	220	390
Beryllium	<2	<2	<2	<2	2.5	(5) 4
Boron	<5	8.4	7.6	8.0	36	120
Cadmium	<1	<1	<1	<1	1.2	1.2
Chromium	8.7	12	11	11	70	160
Cobalt	4.0	7.0	7.0	6.6	21	22
Copper	6.5	17	18	17	92	(180) 140
Lead	<10	<10	<10	<10	120	120
Molybdenum	<2	<2	<2	<2	2.0	6.9
Nickel	7.8	14	15	13	82	(130) 100
Selenium	<1	<1	<1	<1	1.5	2.4
Silver	<0.5	<0.5	<0.5	<0.5	0.5	(25) 20
Thallium	<1	<1	<1	<1	1	1
Uranium	<1	<1	<1	<1	2.5	23
Vanadium	15	19	19	18	86	86
Zinc	<30	<30	<30	<30	290	340

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	Blank	RL	CRM	AR	MS	AR
	(µg/g)		(µg/g)		Recovery (%)	
Metals in Soil						
Antimony	<1	1	1.7	0-10	100	70-130
Arsenic	<1	1	87	25-125	100	70-130
Barium	<5	5	224	149-281	83	70-130
Beryllium	<2	2	0.7	0-5	88	70-130
Boron	<5	5	8	5-20	95	70-130
Cadmium	<1	1	2.2	0-5	90	70-130
Chromium	<5	5	32	14-54	80	70-130
Cobalt	<2	2	11	9-15	79	70-130
Copper	<5	5	193	139-243	91	70-130
Lead	<10	10	139	68-184	96	70-130
Molybdenum	<2	2	2.4	0-5	86	70-130
Nickel	<5	5	53	33-75	86	70-130
Selenium	<1	1	1.2	0-5	91	70-130
Silver	<0.5	0.5	0.9	0-5	87	70-130
Thallium	<1	1	0.4	0-5	98	70-130
Uranium	<1	1	1.3	0-5	95	70-130
Vanadium	<10	10	40	17-51	85	70-130
Zinc	<30	30	462	337-597	88	70-130

LEGEND:

RL - Reporting Limit

CRM = Certified Reference Material

MS - Matrix Spike (in case the original sample contains >30ppm, the matrix spike is no longer reliable, the data of reagent spike are entered instead)

AR - Acceptable Range

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Soil						
Antimony	11.1	0-30				
Arsenic	0.4	0-30				
Barium	1.0	0-30				
Beryllium	2.0	0-30				
Boron	0.3	0-30				
Cadmium	0.0	0-30				
Chromium	1.0	0-30				
Cobalt	0.9	0-30				
Copper	8.6	0-30				
Lead	2.6	0-30				
Molybdenum	18.2	0-30				
Nickel	1.8	0-30				
Selenium	0.0	0-30				
Silver	0.0	0-30				
Thallium	0.0	0-30				
Uranium	3.0	0-30				
Vanadium	0.7	0-30				
Zinc	4	0-30				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-1*** MW01 0.00-0.61m	***23-2117-2*** MW01 0.76-1.37m	***23-2117-3*** MW02 0.00-0.61m	***23-2117-5*** MW03 0.08-0.61m	Soil Standards [1] Table 1 R/P/I/I/C/C	Soil Standards [1] Table 2 R/P/I
	Concentration (µg/g)					
Mercury in Soil	<0.1	<0.1	<0.1	<0.1	0.27	(1.8) 0.27

Parameter	***23-2117-6*** MW03 0.76-1.37m	***23-2117-7*** MW04 0.00-0.61m	***23-2117-9*** MW05 0.00-0.61m	***23-2117-10*** MW05 0.76-1.37m	Soil Standards [1] Table 1 R/P/I/I/C/C	Soil Standards [1] Table 2 R/P/I
	Concentration (µg/g)					
Mercury in Soil	<0.1	<0.1	<0.1	<0.1	0.27	(1.8) 0.27

Parameter	***23-2117-11*** MW05 (Dup) 0.76-1.37m	***23-2117-12*** MW06 0.00-0.61m	***23-2117-14*** MW07 0.00-0.61m	***23-2117-15*** MW07 0.76-1.37m	Soil Standards [1] Table 1 R/P/I/I/C/C	Soil Standards [1] Table 2 R/P/I
	Concentration (µg/g)					
Mercury in Soil	<0.1	<0.1	<0.1	<0.1	0.27	(1.8) 0.27

Parameter	***23-2117-16*** MW08 0.00-0.61m	***23-2117-18*** TP-1 0.00-0.30m	***23-2117-19*** TP-2 0.00-0.30m	***23-2117-20*** TP-2 (Dup) 0.00-0.30m	Soil Standards [1] Table 1 R/P/I/I/C/C	Soil Standards [1] Table 2 R/P/I
	Concentration (µg/g)					
Mercury in Soil	<0.1	<0.1	<0.1	<0.1	0.27	(1.8) 0.27

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);
( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
Mercury in Soil	<0.1	0.1	104	80-120	88	70-130

Parameter	Duplicate	AR				
	RPD (%)					
Mercury in Soil	6.1	0-30				

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike (in case the original sample contains >30ppm, the matrix spike is no longer reliable, the data of reagent spike are entered instead)
AR - Acceptable Range
RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	*23-2117-1* MW01 0.00-0.61m	*23-2117-2* MW01 0.76-1.37m	*23-2117-3* MW02 0.00-0.61m	*23-2117-4* MW02 6.10-6.71m	Soil Standards [1] Table 1 R/P/I/I/C/C	Soil Standards [1] Table 2 R/P/I
	Concentration (µg/g)					
VOCs in Soil						
Acetone	<0.5	<0.5	<0.5	<0.5	0.5	(28) 16
Benzene	<0.02	<0.02	<0.02	<0.02	0.02	(0.17) 0.21
Bromodichloromethane	<0.05	<0.05	<0.05	<0.05	0.05	(1.9) 1.5
Bromoform	<0.05	<0.05	<0.05	<0.05	0.05	(0.26) 0.27
Bromomethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Carbon Tetrachloride	<0.05	<0.05	<0.05	<0.05	0.05	(0.12) 0.05
Chlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(2.7) 2.4
Chloroform	<0.05	<0.05	<0.05	<0.05	0.05	(0.18) 0.05
Dibromochloromethane	<0.05	<0.05	<0.05	<0.05	0.05	(2.9) 2.3
1,2-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(1.7) 1.2
1,3-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(6) 4.8
1,4-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(0.097) 0.083
Dichlorodifluoromethane	<0.05	<0.05	<0.05	<0.05	0.05	(25) 16
1,1-Dichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(0.6) 0.47
1,2-Dichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
1,1-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	0.05
c-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(2.5) 1.9
t-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(0.75) 0.084
1,2-Dichloropropane	<0.05	<0.05	<0.05	<0.05	0.05	(0.085) 0.05
1,3-Dichloropropene (cis-+trans-)	<0.05	<0.05	<0.05	<0.05	0.05	(0.081) 0.05
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	0.05	(1.6) 1.1
Ethylene Dibromide	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Hexane (n)	<0.05	<0.05	<0.05	<0.05	0.05	(34) 2.8
Methyl Ethyl Ketone	<0.5	<0.5	<0.5	<0.5	0.5	(44) 16
Methyl Isobutyl Ketone	<0.5	<0.5	<0.5	<0.5	0.5	(4.3) 1.7
Methyl tert-butyl Ether	<0.05	<0.05	<0.05	<0.05	0.05	(1.4) 0.75
Methylene Chloride	<0.05	<0.05	<0.05	<0.05	0.05	(0.96) 0.1
Styrene	<0.05	<0.05	<0.05	<0.05	0.05	(2.2) 0.7
1,1,1,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(0.05) 0.058
1,1,2,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Tetrachloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(2.3) 0.28
Toluene	<0.2	<0.2	<0.2	<0.2	0.2	(6) 2.3
1,1,1-Trichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(3.4) 0.38
1,1,2-Trichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Trichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(0.52) 0.061
Trichlorofluoromethane	<0.05	<0.05	<0.05	<0.05	0.25	(5.8) 4
Vinyl Chloride	<0.02	<0.02	<0.02	<0.02	0.02	(0.022) 0.02
Xylenes	<0.05	<0.05	<0.05	<0.05	0.05	(25) 3.1
Surrogate Recovery (%)						
Dibromofluoromethane	102	101	100	99	50-140	
Toluene-d8	84	84	77	79	50-140	
4-Bromofluorobenzene	126	119	121	117	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-5*** MW03 0.08-0.61m	***23-2117-6*** MW03 0.76-1.37m	***23-2117-7*** MW04 0.00-0.61m	***23-2117-8*** MW04 6.10-6.71m	Soil Standards [1] Table 1 R/P/I/I/C/C	Soil Standards [1] Table 2 R/P/I
	Concentration (µg/g)					
VOCs in Soil						
Acetone	<0.5	<0.5	<0.5	<0.5	0.5	(28) 16
Benzene	<0.02	<0.02	<0.02	<0.02	0.02	(0.17) 0.21
Bromodichloromethane	<0.05	<0.05	<0.05	<0.05	0.05	(1.9) 1.5
Bromoform	<0.05	<0.05	<0.05	<0.05	0.05	(0.26) 0.27
Bromomethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Carbon Tetrachloride	<0.05	<0.05	<0.05	<0.05	0.05	(0.12) 0.05
Chlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(2.7) 2.4
Chloroform	<0.05	<0.05	<0.05	<0.05	0.05	(0.18) 0.05
Dibromochloromethane	<0.05	<0.05	<0.05	<0.05	0.05	(2.9) 2.3
1,2-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(1.7) 1.2
1,3-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(6) 4.8
1,4-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(0.097) 0.083
Dichlorodifluoromethane	<0.05	<0.05	<0.05	<0.05	0.05	(25) 16
1,1-Dichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(0.6) 0.47
1,2-Dichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
1,1-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	0.05
c-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(2.5) 1.9
t-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(0.75) 0.084
1,2-Dichloropropane	<0.05	<0.05	<0.05	<0.05	0.05	(0.085) 0.05
1,3-Dichloropropene (cis-+trans-)	<0.05	<0.05	<0.05	<0.05	0.05	(0.081) 0.05
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	0.05	(1.6) 1.1
Ethylene Dibromide	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Hexane (n)	<0.05	<0.05	<0.05	<0.05	0.05	(34) 2.8
Methyl Ethyl Ketone	<0.5	<0.5	<0.5	<0.5	0.5	(44) 16
Methyl Isobutyl Ketone	<0.5	<0.5	<0.5	<0.5	0.5	(4.3) 1.7
Methyl tert-butyl Ether	<0.05	<0.05	<0.05	<0.05	0.05	(1.4) 0.75
Methylene Chloride	<0.05	<0.05	<0.05	<0.05	0.05	(0.96) 0.1
Styrene	<0.05	<0.05	<0.05	<0.05	0.05	(2.2) 0.7
1,1,1,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(0.05) 0.058
1,1,2,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Tetrachloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(2.3) 0.28
Toluene	<0.2	<0.2	<0.2	<0.2	0.2	(6) 2.3
1,1,1-Trichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(3.4) 0.38
1,1,2-Trichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Trichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(0.52) 0.061
Trichlorofluoromethane	<0.05	<0.05	<0.05	<0.05	0.25	(5.8) 4
Vinyl Chloride	<0.02	<0.02	<0.02	<0.02	0.02	(0.022) 0.02
Xylenes	<0.05	<0.05	<0.05	<0.05	0.05	(25) 3.1
Surrogate Recovery (%)						
Dibromofluoromethane	98	98	96	97	50-140	
Toluene-d8	80	87	81	76	50-140	
4-Bromofluorobenzene	117	117	115	113	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-9*** MW05 0.00-0.61m	***23-2117-10*** MW05 0.76-1.37m	***23-2117-11*** MW05 (Dup) 0.76-1.37m	***23-2117-12*** MW06 0.00-0.61m	Soil Standards [1] Table 1 R/P/I/I/C/C	Soil Standards [1] Table 2 R/P/I
	Concentration (µg/g)					
VOCs in Soil						
Acetone	<0.5	<0.5	<0.5	<0.5	0.5	(28) 16
Benzene	<0.02	<0.02	<0.02	<0.02	0.02	(0.17) 0.21
Bromodichloromethane	<0.05	<0.05	<0.05	<0.05	0.05	(1.9) 1.5
Bromoform	<0.05	<0.05	<0.05	<0.05	0.05	(0.26) 0.27
Bromomethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Carbon Tetrachloride	<0.05	<0.05	<0.05	<0.05	0.05	(0.12) 0.05
Chlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(2.7) 2.4
Chloroform	<0.05	<0.05	<0.05	<0.05	0.05	(0.18) 0.05
Dibromochloromethane	<0.05	<0.05	<0.05	<0.05	0.05	(2.9) 2.3
1,2-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(1.7) 1.2
1,3-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(6) 4.8
1,4-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(0.097) 0.083
Dichlorodifluoromethane	<0.05	<0.05	<0.05	<0.05	0.05	(25) 16
1,1-Dichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(0.6) 0.47
1,2-Dichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
1,1-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	0.05
c-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(2.5) 1.9
t-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(0.75) 0.084
1,2-Dichloropropane	<0.05	<0.05	<0.05	<0.05	0.05	(0.085) 0.05
1,3-Dichloropropene (cis-+trans-)	<0.05	<0.05	<0.05	<0.05	0.05	(0.081) 0.05
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	0.05	(1.6) 1.1
Ethylene Dibromide	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Hexane (n)	<0.05	<0.05	<0.05	<0.05	0.05	(34) 2.8
Methyl Ethyl Ketone	<0.5	<0.5	<0.5	<0.5	0.5	(44) 16
Methyl Isobutyl Ketone	<0.5	<0.5	<0.5	<0.5	0.5	(4.3) 1.7
Methyl tert-butyl Ether	<0.05	<0.05	<0.05	<0.05	0.05	(1.4) 0.75
Methylene Chloride	<0.05	<0.05	<0.05	<0.05	0.05	(0.96) 0.1
Styrene	<0.05	<0.05	<0.05	<0.05	0.05	(2.2) 0.7
1,1,1,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(0.05) 0.058
1,1,2,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Tetrachloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(2.3) 0.28
Toluene	<0.2	<0.2	<0.2	<0.2	0.2	(6) 2.3
1,1,1-Trichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(3.4) 0.38
1,1,2-Trichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Trichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(0.52) 0.061
Trichlorofluoromethane	<0.05	<0.05	<0.05	<0.05	0.25	(5.8) 4
Vinyl Chloride	<0.02	<0.02	<0.02	<0.02	0.02	(0.022) 0.02
Xylenes	<0.05	<0.05	<0.05	<0.05	0.05	(25) 3.1
Surrogate Recovery (%)						
Dibromofluoromethane	97	98	97	98	50-140	
Toluene-d8	79	83	69	76	50-140	
4-Bromofluorobenzene	116	118	115	119	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-13*** MW06 4.57-5.18m	***23-2117-14*** MW07 0.00-0.61m	***23-2117-15*** MW07 0.76-1.37m	***23-2117-16*** MW08 0.00-0.61m	Soil Standards [1] Table 1 R/P/I/I/C/C	Soil Standards [1] Table 2 R/P/I
	Concentration (µg/g)					
VOCs in Soil						
Acetone	<0.5	<0.5	<0.5	<0.5	0.5	(28) 16
Benzene	<0.02	<0.02	<0.02	<0.02	0.02	(0.17) 0.21
Bromodichloromethane	<0.05	<0.05	<0.05	<0.05	0.05	(1.9) 1.5
Bromoform	<0.05	<0.05	<0.05	<0.05	0.05	(0.26) 0.27
Bromomethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Carbon Tetrachloride	<0.05	<0.05	<0.05	<0.05	0.05	(0.12) 0.05
Chlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(2.7) 2.4
Chloroform	<0.05	<0.05	<0.05	<0.05	0.05	(0.18) 0.05
Dibromochloromethane	<0.05	<0.05	<0.05	<0.05	0.05	(2.9) 2.3
1,2-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(1.7) 1.2
1,3-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(6) 4.8
1,4-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(0.097) 0.083
Dichlorodifluoromethane	<0.05	<0.05	<0.05	<0.05	0.05	(25) 16
1,1-Dichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(0.6) 0.47
1,2-Dichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
1,1-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	0.05
c-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(2.5) 1.9
t-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(0.75) 0.084
1,2-Dichloropropane	<0.05	<0.05	<0.05	<0.05	0.05	(0.085) 0.05
1,3-Dichloropropene (cis-+trans-)	<0.05	<0.05	<0.05	<0.05	0.05	(0.081) 0.05
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	0.05	(1.6) 1.1
Ethylene Dibromide	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Hexane (n)	<0.05	<0.05	<0.05	<0.05	0.05	(34) 2.8
Methyl Ethyl Ketone	<0.5	<0.5	<0.5	<0.5	0.5	(44) 16
Methyl Isobutyl Ketone	<0.5	<0.5	<0.5	<0.5	0.5	(4.3) 1.7
Methyl tert-butyl Ether	<0.05	<0.05	<0.05	<0.05	0.05	(1.4) 0.75
Methylene Chloride	<0.05	<0.05	<0.05	<0.05	0.05	(0.96) 0.1
Styrene	<0.05	<0.05	<0.05	<0.05	0.05	(2.2) 0.7
1,1,1,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(0.05) 0.058
1,1,2,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Tetrachloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(2.3) 0.28
Toluene	<0.2	<0.2	<0.2	<0.2	0.2	(6) 2.3
1,1,1-Trichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(3.4) 0.38
1,1,2-Trichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Trichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(0.52) 0.061
Trichlorofluoromethane	<0.05	<0.05	<0.05	<0.05	0.25	(5.8) 4
Vinyl Chloride	<0.02	<0.02	<0.02	<0.02	0.02	(0.022) 0.02
Xylenes	<0.05	<0.05	<0.05	<0.05	0.05	(25) 3.1
Surrogate Recovery (%)						
Dibromofluoromethane	99	94	100	96	50-140	
Toluene-d8	78	106	100	97	50-140	
4-Bromofluorobenzene	121	122	126	123	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	*23-2117-17* MW08 6.10-6.71m	*23-2117-18* TP-1 0.00-0.30m	*23-2117-19* TP-2 0.00-0.30m	*23-2117-20* TP-2 (Dup) 0.00-0.30m	Soil Standards [1] Table 1 R/P/I/I/C/C	Table 2 R/P/I
	Concentration (µg/g)					
VOCs in Soil						
Acetone	<0.5	<0.5	<0.5	<0.5	0.5	(28) 16
Benzene	<0.02	<0.02	<0.02	<0.02	0.02	(0.17) 0.21
Bromodichloromethane	<0.05	<0.05	<0.05	<0.05	0.05	(1.9) 1.5
Bromoform	<0.05	<0.05	<0.05	<0.05	0.05	(0.26) 0.27
Bromomethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Carbon Tetrachloride	<0.05	<0.05	<0.05	<0.05	0.05	(0.12) 0.05
Chlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(2.7) 2.4
Chloroform	<0.05	<0.05	<0.05	<0.05	0.05	(0.18) 0.05
Dibromochloromethane	<0.05	<0.05	<0.05	<0.05	0.05	(2.9) 2.3
1,2-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(1.7) 1.2
1,3-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(6) 4.8
1,4-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	0.05	(0.097) 0.083
Dichlorodifluoromethane	<0.05	<0.05	<0.05	<0.05	0.05	(25) 16
1,1-Dichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(0.6) 0.47
1,2-Dichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
1,1-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	0.05
c-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(2.5) 1.9
t-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(0.75) 0.084
1,2-Dichloropropane	<0.05	<0.05	<0.05	<0.05	0.05	(0.085) 0.05
1,3-Dichloropropene (cis-+trans-)	<0.05	<0.05	<0.05	<0.05	0.05	(0.081) 0.05
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	0.05	(1.6) 1.1
Ethylene Dibromide	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Hexane (n)	<0.05	<0.05	<0.05	<0.05	0.05	(34) 2.8
Methyl Ethyl Ketone	<0.5	<0.5	<0.5	<0.5	0.5	(44) 16
Methyl Isobutyl Ketone	<0.5	<0.5	<0.5	<0.5	0.5	(4.3) 1.7
Methyl tert-butyl Ether	<0.05	<0.05	<0.05	<0.05	0.05	(1.4) 0.75
Methylene Chloride	<0.05	<0.05	<0.05	<0.05	0.05	(0.96) 0.1
Styrene	<0.05	<0.05	<0.05	<0.05	0.05	(2.2) 0.7
1,1,1,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(0.05) 0.058
1,1,2,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Tetrachloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(2.3) 0.28
Toluene	<0.2	<0.2	<0.2	<0.2	0.2	(6) 2.3
1,1,1-Trichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	(3.4) 0.38
1,1,2-Trichloroethane	<0.05	<0.05	<0.05	<0.05	0.05	0.05
Trichloroethylene	<0.05	<0.05	<0.05	<0.05	0.05	(0.52) 0.061
Trichlorofluoromethane	<0.05	<0.05	<0.05	<0.05	0.25	(5.8) 4
Vinyl Chloride	<0.02	<0.02	<0.02	<0.02	0.02	(0.022) 0.02
Xylenes	<0.05	<0.05	<0.05	<0.05	0.05	(25) 3.1
Surrogate Recovery (%)						
Dibromofluoromethane	97	95	94	98	50-140	
Toluene-d8	106	94	90	106	50-140	
4-Bromofluorobenzene	117	119	123	118	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
VOCs in Soil						
Acetone	<0.5	0.5	94	50-140	114	50-140
Benzene	<0.02	0.02	117	60-130	108	50-140
Bromodichloromethane	<0.05	0.05	113	50-140	105	50-140
Bromoform	<0.05	0.05	96	60-130	103	50-140
Bromomethane	<0.05	0.05	90	50-140	108	50-140
Carbon Tetrachloride	<0.05	0.05	115	60-130	115	50-140
Chlorobenzene	<0.05	0.05	127	60-130	105	50-140
Chloroform	<0.05	0.05	115	60-130	114	50-140
Dibromochloromethane	<0.05	0.05	128	60-130	104	50-140
1,2-Dichlorobenzene	<0.05	0.05	71	60-130	105	50-140
1,3-Dichlorobenzene	<0.05	0.05	75	60-130	110	50-140
1,4-Dichlorobenzene	<0.05	0.05	72	60-130	109	50-140
Dichlorodifluoromethane	<0.05	0.05	110	50-140	104	50-140
1,1-Dichloroethane	<0.05	0.05	116	60-130	105	50-140
1,2-Dichloroethane	<0.05	0.05	112	60-130	107	50-140
1,1-Dichloroethylene	<0.05	0.05	102	60-130	108	50-140
c-1,2-Dichloroethylene	<0.05	0.05	114	60-130	107	50-140
t-1,2-Dichloroethylene	<0.05	0.05	116	60-130	117	50-140
1,2-Dichloropropane	<0.05	0.05	115	60-130	106	50-140
1,3-Dichloropropene (cis-+trans-)	<0.05	0.05	108	60-130	110	50-140
Ethylbenzene	<0.05	0.05	113	60-130	110	50-140
Ethylene Dibromide	<0.05	0.05	123	60-130	104	50-140
Hexane (n)	<0.05	0.05	71	60-130	73	50-140
Methyl Ethyl Ketone	<0.5	0.5	89	50-140	107	50-140
Methyl Isobutyl Ketone	<0.5	0.5	90	50-140	109	50-140
Methyl tert-butyl Ether	<0.05	0.05	115	60-130	127	50-140
Methylene Chloride	<0.05	0.05	113	60-130	115	50-140
Styrene	<0.05	0.05	118	60-130	106	50-140
1,1,1,2-Tetrachloroethane	<0.05	0.05	123	60-130	104	50-140
1,1,2,2-Tetrachloroethane	<0.05	0.05	84	60-130	109	50-140
Tetrachloroethylene	<0.05	0.05	111	60-130	103	50-140
Toluene	<0.2	0.2	115	60-130	108	50-140
1,1,1-Trichloroethane	<0.05	0.05	119	60-130	112	50-140
1,1,2-Trichloroethane	<0.05	0.05	112	60-130	105	50-140
Trichloroethylene	<0.05	0.05	117	60-130	106	50-140
Trichlorofluoromethane	<0.05	0.05	124	50-140	110	50-140
Vinyl Chloride	<0.02	0.02	119	50-140	79	50-140
Xylenes	<0.05	0.05	120	60-130	117	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Dibromofluoromethane	93	60-140	101	60-140	95	60-140
Toluene-d8	94	60-140	81	60-140	100	60-140
4-Bromofluorobenzene	89	60-140	105	60-140	97	60-140

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
VOCs in Soil						
Acetone	0.0	0-50				
Benzene	0.0	0-50				
Bromodichloromethane	0.0	0-50				
Bromoform	0.0	0-50				
Bromomethane	0.0	0-50				
Carbon Tetrachloride	0.0	0-50				
Chlorobenzene	0.0	0-50				
Chloroform	0.0	0-50				
Dibromochloromethane	0.0	0-50				
1,2-Dichlorobenzene	0.0	0-50				
1,3-Dichlorobenzene	0.0	0-50				
1,4-Dichlorobenzene	0.0	0-50				
Dichlorodifluoromethane	0.0	0-50				
1,1-Dichloroethane	0.0	0-50				
1,2-Dichloroethane	0.0	0-50				
1,1-Dichloroethylene	0.0	0-50				
c-1,2-Dichloroethylene	0.0	0-50				
t-1,2-Dichloroethylene	0.0	0-50				
1,2-Dichloropropane	0.0	0-50				
1,3-Dichloropropene (cis-+trans-)	0.0	0-50				
Ethylbenzene	17	0-50				
Ethylene Dibromide	0.0	0-50				
Hexane (n)	0.0	0-50				
Methyl Ethyl Ketone	0.0	0-50				
Methyl Isobutyl Ketone	0.0	0-50				
Methyl tert-butyl Ether	0.0	0-50				
Methylene Chloride	0.0	0-50				
Styrene	0.0	0-50				
1,1,1,2-Tetrachloroethane	0.0	0-50				
1,1,2,2-Tetrachloroethane	0.0	0-50				
Tetrachloroethylene	0.0	0-50				
Toluene	7.6	0-50				
1,1,1-Trichloroethane	0.0	0-50				
1,1,2-Trichloroethane	0.0	0-50				
Trichloroethylene	0.0	0-50				
Trichlorofluoromethane	0.0	0-50				
Vinyl Chloride	0.0	0-50				
Xylenes	15	0-50				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Dibromofluoromethane	95	60-140				
Toluene-d8	79	60-140				
4-Bromofluorobenzene	113	60-140				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-1*** MW01 0.00-0.61m	***23-2117-2*** MW01 0.76-1.37m	***23-2117-3*** MW02 0.00-0.61m	***23-2117-4*** MW02 6.10-6.71m	**Soil Standards [1]** Table 1 R/P/I/I/C/C	Table 2 R/P/I
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02	<0.02	0.02	(0.17) 0.21
Toluene	<0.2	<0.2	<0.2	<0.2	0.2	(6) 2.3
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	0.05	(1.6) 1.1
Xylenes	<0.05	<0.05	<0.05	<0.05	0.05	(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10	<10	<10	25	(65) 55
F2 (C_{10} - C_{16})	<10	<10	<10	<10	10	(150) 98
F3 (C_{16} - C_{34})	<50	<50	<50	<50	240	(1300) 300
F4 (C_{34}-C_{50})	<50	<50	<50	<50	120	(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes		
Surrogate Recovery (%)						
Dibromofluoromethane	102	101	100	99	60-140	
Toluene-d8	84	84	77	79	60-140	
4-Bromofluorobenzene	126	119	121	117	60-140	

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-5*** MW03 0.08-0.61m	***23-2117-6*** MW03 0.76-1.37m	***23-2117-7*** MW04 0.00-0.61m	***23-2117-8*** MW04 6.10-6.71m	**Soil Standards [1]** Table 1 R/P/I/I/C/C	Table 2 R/P/I
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02	<0.02	0.02	(0.17) 0.21
Toluene	<0.2	<0.2	<0.2	<0.2	0.2	(6) 2.3
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	0.05	(1.6) 1.1
Xylenes	<0.05	<0.05	<0.05	<0.05	0.05	(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10	<10	<10	25	(65) 55
F2 (C_{10} - C_{16})	<10	<10	<10	<10	10	(150) 98
F3 (C_{16} - C_{34})	<50	<50	<50	<50	240	(1300) 300
F4 (C_{34}-C_{50})	<50	<50	<50	<50	120	(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes		
Surrogate Recovery (%)						
Dibromofluoromethane	98	98	96	97	60-140	
Toluene-d8	80	87	81	76	60-140	
4-Bromofluorobenzene	117	117	115	113	60-140	

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-9*** MW05 0.00-0.61m	***23-2117-10*** MW05 0.76-1.37m	***23-2117-11*** MW05 (Dup) 0.76-1.37m	***23-2117-12*** MW06 0.00-0.61m	**Soil Standards [1]** Table 1 R/P/I/I/C/C	Table 2 R/P/I
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02	<0.02	0.02	(0.17) 0.21
Toluene	<0.2	<0.2	<0.2	<0.2	0.2	(6) 2.3
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	0.05	(1.6) 1.1
Xylenes	<0.05	<0.05	<0.05	<0.05	0.05	(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10	<10	<10	25	(65) 55
F2 (C_{10} - C_{16})	<10	<10	<10	<10	10	(150) 98
F3 (C_{16} - C_{34})	<50	<50	<50	<50	240	(1300) 300
F4 (C_{34}-C_{50})	<50	<50	<50	<50	120	(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes		
Surrogate Recovery (%)						
Dibromofluoromethane	97	98	97	98	60-140	
Toluene-d8	79	83	69	76	60-140	
4-Bromofluorobenzene	116	118	115	119	60-140	

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-13*** MW06 4.57-5.18m	***23-2117-14*** MW07 0.00-0.61m	***23-2117-15*** MW07 0.76-1.37m	***23-2117-16*** MW08 0.00-0.61m	**Soil Standards [1]** Table 1 R/P/I/I/C/C	Table 2 R/P/I
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02	<0.02	0.02	(0.17) 0.21
Toluene	<0.2	<0.2	<0.2	<0.2	0.2	(6) 2.3
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	0.05	(1.6) 1.1
Xylenes	<0.05	<0.05	<0.05	<0.05	0.05	(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10	<10	<10	25	(65) 55
F2 (C_{10} - C_{16})	<10	<10	<10	<10	10	(150) 98
F3 (C_{16} - C_{34})	<50	<50	<50	<50	240	(1300) 300
F4 (C_{34}-C_{50})	<50	<50	<50	<50	120	(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes		
Surrogate Recovery (%)						
Dibromofluoromethane	99	94	100	96	60-140	
Toluene-d8	78	106	100	97	60-140	
4-Bromofluorobenzene	121	122	126	123	60-140	

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-17*** MW08 6.10-6.71m	***23-2117-18*** TP-1 0.00-0.30m	***23-2117-19*** TP-2 0.00-0.30m	***23-2117-20*** TP-2 (Dup) 0.00-0.30m	**Soil Standards [1]** Table 1 R/P/I/I/C/C	Table 2 R/P/I
	Concentration (µg/g)					
BTEX in Soil						
Benzene	<0.02	<0.02	<0.02	<0.02	0.02	(0.17) 0.21
Toluene	<0.2	<0.2	<0.2	<0.2	0.2	(6) 2.3
Ethylbenzene	<0.05	<0.05	<0.05	<0.05	0.05	(1.6) 1.1
Xylenes	<0.05	<0.05	<0.05	<0.05	0.05	(25) 3.1
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	<10	<10	<10	25	(65) 55
F2 (C_{10} - C_{16})	<10	<10	<10	<10	10	(150) 98
F3 (C_{16} - C_{34})	<50	<50	<50	<50	240	(1300) 300
F4 (C_{34}-C_{50})	<50	<50	<50	<50	120	(5600) 2800
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes		
Surrogate Recovery (%)						
Dibromofluoromethane	97	95	94	98	60-140	
Toluene-d8	106	94	90	106	60-140	
4-Bromofluorobenzene	117	119	123	118	60-140	

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
BTEX in Soil						
Benzene	<0.02	0.02	117	60-130	108	50-140
Toluene	<0.2	0.2	115	60-130	108	50-140
Ethylbenzene	<0.05	0.05	113	60-130	110	50-140
Xylenes	<0.05	0.05	120	60-130	117	50-140
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	<10	10	115	80-120	108	60-140
F2 (C_{10} - C_{16})	<10	10	112	80-120	106	60-140
F3 (C_{16} - C_{34})	<50	50	111	80-120	100	60-140
F4 (C_{34}-C_{50})	<50	50	110	80-120	101	60-140
Surrogates						
Parameter	**Blank**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Dibromofluoromethane	93	60-140	101	60-140	95	60-140
Toluene-d8	94	60-140	81	60-140	100	60-140
4-Bromofluorobenzene	89	60-140	105	60-140	97	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

BTEX should be subtracted from F_1, Naphthalene from F_2 and selected PAHs from F_3 if BTEX/PAHs are analyzed, then report $F_{1\text{-BTEX}}$, $F_{2\text{-Naph.}}$ and $F_{3\text{-PAH}}$. nC_{50} response factor was within 70% of nC_{10}+nC_{16}+nC_{34} average.

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Soil						
Benzene	0.0	0-50				
Toluene	7.6	0-50				
Ethylbenzene	17	0-50				
Xylenes	15	0-50				
PHCs (F_1-F_4) in Soil						
$F1_{-BTEX}$ (C_6 - C_{10})	1.3	0-30				
F2 (C_{10} - C_{16})	0.0	0-30				
F3 (C_{16} - C_{34})	0.0	0-30				
F4 (C_{34}-C_{50})	0.0	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Dibromofluoromethane	95	60-140				
Toluene-d8	79	60-140				
4-Bromofluorobenzene	113	60-140				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-1*** MW01 0.00-0.61m	***23-2117-2*** MW01 0.76-1.37m	***23-2117-3*** MW02 0.00-0.61m	***23-2117-5*** MW03 0.08-0.61m	**Soil Standards [1]** Table 1 R/P/I/I/C/C	Table 2 R/P/I
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05	<0.05	0.09	(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	0.59	(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05		
Acenaphthylene	<0.05	<0.05	<0.05	<0.05	0.093	(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05	<0.05	0.072	(29) 7.9
Fluorene	<0.05	<0.05	<0.05	<0.05	0.12	(69) 62
Phenanthrene	<0.05	<0.05	<0.05	<0.05	0.69	(7.8) 6.2
Anthracene	<0.05	<0.05	<0.05	<0.05	0.16	(0.74) 0.67
Fluoranthene	<0.05	<0.05	<0.05	<0.05	0.56	0.69
Pyrene	<0.05	<0.05	<0.05	<0.05	1.0	78
Benz [a] anthracene	<0.05	<0.05	<0.05	<0.05	0.36	(0.63) 0.5
Chrysene	<0.05	<0.05	<0.05	<0.05	2.8	(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.47	0.78
Benzo [k] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.48	0.78
Benzo [a] pyrene	<0.05	<0.05	<0.05	<0.05	0.3	0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1	<0.1	<0.1	0.23	(0.48) 0.38
Dibenz [a,h] anthracene	<0.1	<0.1	<0.1	<0.1	0.1	0.1
Benzo [g,h,i] perylene	<0.1	<0.1	<0.1	<0.1	0.68	(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	117	116	96	140	50-140	
Phenanthrene-d10	126	134	99	130	50-140	
Chrysene-d12	68	87	51	76	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-6*** MW03 0.76-1.37m	***23-2117-7*** MW04 0.00-0.61m	***23-2117-9*** MW05 0.00-0.61m	***23-2117-10*** MW05 0.76-1.37m	**Soil Standards [1]** Table 1 R/P/I/I/C/C	Table 2 R/P/I
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05	<0.05	0.09	(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	0.59	(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05		
Acenaphthylene	<0.05	<0.05	<0.05	<0.05	0.093	(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05	<0.05	0.072	(29) 7.9
Fluorene	<0.05	<0.05	<0.05	<0.05	0.12	(69) 62
Phenanthrene	<0.05	<0.05	<0.05	<0.05	0.69	(7.8) 6.2
Anthracene	<0.05	<0.05	<0.05	<0.05	0.16	(0.74) 0.67
Fluoranthene	<0.05	<0.05	<0.05	<0.05	0.56	0.69
Pyrene	<0.05	<0.05	<0.05	<0.05	1.0	78
Benz [a] anthracene	<0.05	<0.05	<0.05	<0.05	0.36	(0.63) 0.5
Chrysene	<0.05	<0.05	<0.05	<0.05	2.8	(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.47	0.78
Benzo [k] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.48	0.78
Benzo [a] pyrene	<0.05	<0.05	<0.05	<0.05	0.3	0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1	<0.1	<0.1	0.23	(0.48) 0.38
Dibenz [a,h] anthracene	<0.1	<0.1	<0.1	<0.1	0.1	0.1
Benzo [g,h,i] perylene	<0.1	<0.1	<0.1	<0.1	0.68	(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	133	116	139	118	50-140	
Phenanthrene-d10	140	112	132	116	50-140	
Chrysene-d12	92	76	87	71	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-11*** MW05 (Dup) 0.76-1.37m	***23-2117-12*** MW06 0.00-0.61m	***23-2117-14*** MW07 0.00-0.61m	***23-2117-15*** MW07 0.76-1.37m	**Soil Standards [1]** Table 1 R/P/I/I/C/C	Table 2 R/P/I
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05	<0.05	0.09	(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	0.59	(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05		
Acenaphthylene	<0.05	<0.05	<0.05	<0.05	0.093	(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05	<0.05	0.072	(29) 7.9
Fluorene	<0.05	<0.05	<0.05	<0.05	0.12	(69) 62
Phenanthrene	<0.05	<0.05	<0.05	<0.05	0.69	(7.8) 6.2
Anthracene	<0.05	<0.05	<0.05	<0.05	0.16	(0.74) 0.67
Fluoranthene	<0.05	<0.05	<0.05	<0.05	0.56	0.69
Pyrene	<0.05	<0.05	<0.05	<0.05	1.0	78
Benz [a] anthracene	<0.05	<0.05	<0.05	<0.05	0.36	(0.63) 0.5
Chrysene	<0.05	<0.05	<0.05	<0.05	2.8	(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.47	0.78
Benzo [k] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.48	0.78
Benzo [a] pyrene	<0.05	<0.05	<0.05	<0.05	0.3	0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1	<0.1	<0.1	0.23	(0.48) 0.38
Dibenz [a,h] anthracene	<0.1	<0.1	<0.1	<0.1	0.1	0.1
Benzo [g,h,i] perylene	<0.1	<0.1	<0.1	<0.1	0.68	(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	119	106	110	126	50-140	
Phenanthrene-d10	122	120	118	127	50-140	
Chrysene-d12	75	79	72	69	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-16*** MW08 0.00-0.61m	***23-2117-18*** TP-1 0.00-0.30m	***23-2117-19*** TP-2 0.00-0.30m	***23-2117-20*** TP-2 (Dup) 0.00-0.30m	**Soil Standards [1]** Table 1 R/P/I/I/C/C	Table 2 R/P/I
	Concentration (µg/g)					
PAHs in Soil						
Naphthalene	<0.05	<0.05	<0.05	<0.05	0.09	(0.75) 0.6
2-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05	0.59	(3.4) 0.99
1-Methylnaphthalene	<0.05	<0.05	<0.05	<0.05		
Acenaphthylene	<0.05	<0.05	<0.05	<0.05	0.093	(0.17) 0.15
Acenaphthene	<0.05	<0.05	<0.05	<0.05	0.072	(29) 7.9
Fluorene	<0.05	<0.05	<0.05	<0.05	0.12	(69) 62
Phenanthrene	<0.05	<0.05	<0.05	<0.05	0.69	(7.8) 6.2
Anthracene	<0.05	<0.05	<0.05	<0.05	0.16	(0.74) 0.67
Fluoranthene	<0.05	<0.05	<0.05	<0.05	0.56	0.69
Pyrene	<0.05	<0.05	<0.05	<0.05	1.0	78
Benz [a] anthracene	<0.05	<0.05	<0.05	<0.05	0.36	(0.63) 0.5
Chrysene	<0.05	<0.05	<0.05	<0.05	2.8	(7.8) 7
Benzo [b] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.47	0.78
Benzo [k] fluoranthene	<0.05	<0.05	<0.05	<0.05	0.48	0.78
Benzo [a] pyrene	<0.05	<0.05	<0.05	<0.05	0.3	0.3
Indeno [1,2,3-cd] pyrene	<0.1	<0.1	<0.1	<0.1	0.23	(0.48) 0.38
Dibenz [a,h] anthracene	<0.1	<0.1	<0.1	<0.1	0.1	0.1
Benzo [g,h,i] perylene	<0.1	<0.1	<0.1	<0.1	0.68	(7.8) 6.6
Surrogate Recovery (%)						
Naphthalene-d8	117	108	111	110	50-140	
Phenanthrene-d10	122	83	114	114	50-140	
Chrysene-d12	66	53	62	65	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards; Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (**R/P/I/I/C/C**);

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition. Residential/Parkland/Institutional Property Use (**R/P/I**);

( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
PAHs in Soil						
Naphthalene	<0.05	0.05	109	50-140	109	50-140
2-Methylnaphthalene	<0.05	0.05	104	50-140	99	50-140
1-Methylnaphthalene	<0.05	0.05	125	50-140	119	50-140
Acenaphthylene	<0.05	0.05	91	50-140	91	50-140
Acenaphthene	<0.05	0.05	108	50-140	105	50-140
Fluorene	<0.05	0.05	103	50-140	100	50-140
Phenanthrene	<0.05	0.05	94	50-140	83	50-140
Anthracene	<0.05	0.05	91	50-140	108	50-140
Fluoranthene	<0.05	0.05	98	50-140	98	50-140
Pyrene	<0.05	0.05	98	50-140	91	50-140
Benz [a] anthracene	<0.05	0.05	93	50-140	78	50-140
Chrysene	<0.05	0.05	95	50-140	80	50-140
Benzo [b] fluoranthene	<0.05	0.05	108	50-140	99	50-140
Benzo [k] fluoranthene	<0.05	0.05	105	50-140	96	50-140
Benzo [a] pyrene	<0.05	0.05	72	50-140	63	50-140
Indeno [1,2,3-cd] pyrene	<0.1	0.1	69	50-140	78	50-140
Dibenz [a,h] anthracene	<0.1	0.1	57	50-140	51	50-140
Benzo [g,h,i] perylene	<0.1	0.1	76	50-140	61	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Naphthalene-d8	111	50-140	113	50-140	103	50-140
Phenanthrene-d10	117	50-140	96	50-140	91	50-140
Chrysene-d12	60	50-140	137	50-140	137	50-140

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
PAHs in Soil						
Naphthalene	0.0	0-40				
2-Methylnaphthalene	0.0	0-40				
1-Methylnaphthalene	0.0	0-40				
Acenaphthylene	0.0	0-40				
Acenaphthene	0.0	0-40				
Fluorene	0.0	0-40				
Phenanthrene	0.0	0-40				
Anthracene	0.0	0-40				
Fluoranthene	0.0	0-40				
Pyrene	0.0	0-40				
Benz [a] anthracene	0.0	0-40				
Chrysene	0.0	0-40				
Benzo [b] fluoranthene	0.0	0-40				
Benzo [k] fluoranthene	0.0	0-40				
Benzo [a] pyrene	0.0	0-40				
Indeno [1,2,3-cd] pyrene	0.0	0-40				
Dibenz [a,h] anthracene	0.0	0-40				
Benzo [g,h,i] perylene	0.0	0-40				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Naphthalene-d8	110	50-140				
Phenanthrene-d10	121	50-140				
Chrysene-d12	78	50-140				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-1*** MW01 0.00-0.61m	***23-2117-2*** MW01 0.76-1.37m	***23-2117-3*** MW02 0.00-0.61m	***23-2117-5*** MW03 0.08-0.61m	***23-2117-6*** MW03 0.76-1.37m	**Soil Standards** *
pH *(pH unit)*	7.52	7.81	7.78	8.84	7.93	(5-11) 5-9

Parameter	***23-2117-7*** MW04 0.00-0.61m	***23-2117-9*** MW05 0.00-0.61m	***23-2117-10*** MW05 0.76-1.37m	***23-2117-11*** MW05 (Dup) 0.76-1.37m	***23-2117-12*** MW06 0.00-0.61m	**Soil Standards** *
pH *(pH unit)*	7.90	7.86	8.02	8.06	7.63	(5-11) 5-9

Parameter	***23-2117-14*** MW07 0.00-0.61m	***23-2117-15*** MW07 0.76-1.37m	***23-2117-16*** MW08 0.00-0.61m	***23-2117-18*** TP-1 0.00-0.30m	***23-2117-19*** TP-2 0.00-0.30m	**Soil Standards** *
pH *(pH unit)*	7.84	8.09	7.65	7.76	7.53	(5-11) 5-9

Parameter	***23-2117-20*** TP-2 (Dup) 0.00-0.30m					**Soil Standards** *
pH *(pH unit)*	7.57					(5-11) 5-9

* Surface soil pH value from 5 - 9, Sub-surface soil pH value from 5-11.

QA/QC Report

Parameter	**LCS**	**AR**	**Duplicate**	**AR**		
	Absolute Difference *(pH Unit)*					
pH *(pH unit)*	7.05	6.90-7.20	0.16	<0.3		

LEGEND:
LCS - Laboratory Control Sample
AR - Acceptable Range

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-4*** MW02 6.10-6.71m	***23-2117-8*** MW04 6.10-6.71m	***23-2117-13*** MW06 4.57-5.18m	***23-2117-17*** MW08 6.10-6.71m		
	Concentration (µg/g)					
Chloride in Soil	<10	<10	<10	36		

< result obtained was below RL (Reporting Limit).

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**MS**	**AR**
	(µg/g)		**Recovery (%)**		**Recovery (%)**	
Chloride in Soil	<10	10	113	70-130	109	70-130

Parameter	**Duplicate**	**AR**				
	RPD (%)					
Chloride in Soil	3.1	0-20				

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range
RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-4*** MW02 6.10-6.71m	***23-2117-8*** MW04 6.10-6.71m	***23-2117-13*** MW06 4.57-5.18m	***23-2117-17*** MW08 6.10-6.71m		
Sulphate *(mg/kg)*	23	13	36	91		

< result obtained was below RL (Reporting Limit).

QA/QC Report

Parameter	**Blank**	**RL**	**LCS/Spike**	**AR**	**Duplicate**	**AR**
	(mg/kg)		**Recovery (%)**		**RPD (%)**	
Sulphate	<1	1	103	70-130	4	0-30

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, pH, Chloride, Sulphate
Sample Description:	20 Soil Sample(s)

Parameter	***23-2117-1*** MW01 0.00-0.61m	***23-2117-2*** MW01 0.76-1.37m	***23-2117-3*** MW02 0.00-0.61m	***23-2117-4*** MW02 6.10-6.71m	***23-2117-5*** MW03 0.08-0.61m	***23-2117-6*** MW03 0.76-1.37m
Moisture Content (%)	22.3	11.9	14.9	10.7	16.4	14.5

Parameter	***23-2117-7*** MW04 0.00-0.61m	***23-2117-8*** MW04 6.10-6.71m	***23-2117-9*** MW05 0.00-0.61m	***23-2117-10*** MW05 0.76-1.37m	***23-2117-11*** MW05 (Dup) 0.76-1.37m	***23-2117-12*** MW06 0.00-0.61m
Moisture Content (%)	7.8	16.7	17.2	11.2	10.3	11.4

Parameter	***23-2117-13*** MW06 4.57-5.18m	***23-2117-14*** MW07 0.00-0.61m	***23-2117-15*** MW07 0.76-1.37m	***23-2117-16*** MW08 0.00-0.61m	***23-2117-17*** MW08 6.10-6.71m	***23-2117-18*** TP-1 0.00-0.30m
Moisture Content (%)	13.4	14.5	10.2	11.4	13.9	16.4

Parameter	***23-2117-19*** TP-2 0.00-0.30m	***23-2117-20*** TP-2 (Dup) 0.00-0.30m				
Moisture Content (%)	17.2	19.5				

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**Duplicate**	**AR**
			Recovery (%)		**RPD (%)**	
Moisture Content (%)	<0.1	0.1	100	70-130	2.7	0-20

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
AR - Acceptable Range
RPD - Relative Percent Difference

FISHER ENVIRONMENTAL LABORATORY

T. 905 475-7755 x227 E. laboratory@fisherenvironmental.com
400 Esna Park Drive No. 15 • Markham, ON • L3R 3K2
Hours: 9AM - 5PM M-F
Call for Emergency Response

LAB JOB No: 23-2117

STANDARD LABORATORY REQUEST FORM: CHAIN OF CUSTODY

CLIENT INFORMATION

Name: Bydem Enterprises Inc.
Contact: Paul Mondell
Address: 156 John Weider Blvd. #9B
The Blue Mountains
L9Y 0V2
Email: pmondell19@hotmail.com
Fax: Fax results?
Phone: 416.460.7009 Email results?

PROJECT INFORMATION

Project Name: Grey Rd. 1 & Crosswinds Blvd. Town of Blue Mountains
Project ID: 23-13472
Sampled By: MM

BILLING INFORMATION

Purchase Order No:
Verbal Authorization:
Credit Card Type (e.g. MC/Visa/AMEX...):
Credit Card #:
Expiry Date: CVV

TURNAROUND TIME (TAT): Check ONE if all samples are the same/or see below.

STD - Standard (5-7 bus. days)	✓	Standard Charge	Reg. Business Hrs. 9am to 5pm. Samples received after 2pm are considered next day orders.
3D - Three-Day (72 hrs.)		+25%	SURCHARGES MAY APPLY. Custom quotations (if applicable) will be reflected on final billing. CALL for: Emergencies, Bulk Quotes, or other Questions.
SR - Semi Rush (48 hrs.)		+50%	
R - Rush (24 hrs.)		+75%	
SD - Same Day - 100%		+100%	

LAB SAMPLE ID	CLIENT'S SAMPLE ID AND DESCRIPTION	SAMPLING DATE/TIME	SAMPLE MATRIX	CONTAINER NO. and TYPE	TAT (Above)	ANALYSIS REQUESTED (Check or Specify) Metals	PHCs	VOCs	PAHs	PCBs	Hg	PH	Cl⁻	Sulphate	NOTES
1	MW01(0'-2')	14 Nov	Soil	Bags. Jar. 1	STD	✓	✓	✓	✓		✓	✓			
2	MW01(2.5'-4.5')	14Nov	Soil	"	"	✓	✓	✓	✓		✓	✓			
3	MW02(0'-2')	14Nov	"	"	"	✓	✓	✓	✓		✓	✓			
4	MW02(20'-22')	14Nov	"	"	"	✓	✓	✓					✓	✓	
5	MW03(3"-2')	14 Nov	"	"	"	✓	✓	✓	✓		✓	✓			
6	MW03(2.5'-4.5')	14 Nov	"	"	"	✓	✓	✓	✓		✓	✓			
7	MW04(0'-2')	14 Nov	"	"	"	✓	✓	✓	✓		✓	✓			
8	MW04(20'-22')	14Nov	"	"	"	✓	✓	✓					✓	✓	
9	MW05(0'-2')	14Nov	"	"	"	✓	✓	✓	✓		✓	✓			
10	MW05(2.5'-4.5')	14Nov	"	"	"	✓	✓	✓	✓		✓	-			

Relinquished by:
Name: (print) Mohit
Signature:
Date & Time: 15 Nov 23
Method of Shipment: Cooler

Client's Comments:

Regulatory Requirements:

Reg. 153
Table 1 / 2
☒ Residential / Parkland
☐ Industrial / Commercial
☐ Agricultural
Soil Texture ☐ Coarse ☐ Med/Fine

Sewer Use
☐ Sanitary
☐ Storm
Region _____

Reg. 558
☐ TCLP

Received by (Internal):
Name: Kan
Date & Time: 15-Nov-23

Laboratory Remarks:

FISHER ENVIRONMENTAL LABORATORY

T. 905 475-7755 x227 E. laboratory@fisherenvironmental.com
400 Esna Park Drive No. 15 • Markham, ON • L3R 3K2
Hours: 9AM - 5PM M-F
Call for Emergency Response

LAB JOB No: 232117

STANDARD LABORATORY REQUEST FORM: CHAIN OF CUSTODY

CLIENT INFORMATION

Name:
Contact:
Address:
Email:
Fax: Fax results?
Phone: Email results?

PROJECT INFORMATION

Project Name:
Project ID:
Sampled By:

TURNAROUND TIME (TAT): Check ONE if all samples are the same/or see below.

STD - Standard (5-7 bus. days)		Standard Charge	
3D - Three-Day (72 hrs.)		+25%	SURCHARGES MAY APPLY
SR - Semi Rush (48 hrs.)		+50%	Custom quotations (if applicable) will be reflected on final billing.
R - Rush (24 hrs.)		+75%	CALL for: Emergencies, Bulk Quotes, or other Questions.
SD - Same Day - 100%		+100%	

Reg. Business Hrs. 9am to 5pm. Samples received after 2pm are considered next day orders.

BILLING INFORMATION

Purchase Order No:
Verbal Authorization:
Credit Card Type (e.g. MC/Visa/AMEX...):
Credit Card #:
Expiry Date: CVV __ __ __

LAB SAMPLE ID	CLIENT'S SAMPLE ID AND DESCRIPTION	SAMPLING DATE/TIME	SAMPLE MATRIX	CONTAINER NO. and TYPE	TAT (Above)	ANALYSIS REQUESTED (Check or Specify) Metals	PHCs	VOCs	PAHs	PCBs	Hg	PH	CP	SWLP	NOTES
11	MW05 (2.5'-4.5') Dup	14 NOV	Soil	Jar + Bag	STD	✓	✓	✓	✓		✓	✓			
12	MW06 (0'-2')	13 NOV	Soil	"	"	✓	✓	✓	✓		✓	✓			
13	MW06 (15'-17')	"	"	"	"	✓	✓	✓					✓	✓	
14	MW07 (0'-2')	"	"	"	"	✓	✓	✓	✓		✓	✓			
15	MW07 (2.5'-4.5')	"	"	"	"	✓	✓	✓	✓		✓	✓			
16	MW08 (0'-2')	"	"	"	"	✓	✓	✓	✓		✓	✓			
17	MW08 (Qo'-2')	"	"	"	"	✓	✓	✓					✓	✓	
18	TP-1 (0'-1'ft)	14 NOV	"	Bag	"	✓	✓	✓	✓		✓	✓			
19	TP-2 (0'-1'ft)	"	"	Bag	"	✓	✓	✓	✓		✓	✓			
20	TP-2 (Dup)	"	"	"	"	✓	✓	✓	✓		✓	✓			

Relinquished by:

Name: (print) Mohit
Signature: Mw
Date & Time: 15 NOV '23
Method of Shipment: courier

Client's Comments:

Received by (Internal):

Name: KAN
Date & Time: 15 NOV 23

Laboratory Remarks: 6Z

Regulatory Requirements:

Reg. 153
Table 1/2
☑ Residential / Parkland
☐ Industrial / Commercial
☐ Agricultural
Soil Texture ☐ Coarse ☐ Med/Fine

Sewer Use
☐ Sanitary
☐ Storm
Region _____

Reg. 558
☐ TCLP

ALS Canada Ltd.

right solutions.
right partner.

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: **WT2337623**	Page	: 1 of 12
Client	: **Fisher Engineering Limited**	Laboratory	: ALS Environmental - Waterloo
Contact	: Marius Voinea	Account Manager	: Emily Hansen
Address	: 15-400 Esna Park Drive Markham ON Canada L3R 3K2	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 905 475 7755, Ext. 29	Telephone	: +1 519 886 6910
Project	: 23-13472	Date Samples Received	: 17-Nov-2023 11:00
PO	: ----	Date Analysis Commenced	: 20-Nov-2023
C-O-C number	: 20-1004888	Issue Date	: 21-Nov-2023 16:27
Sampler	: Mohit		
Site	: ----		
Quote number	: FISHER ENVIRONMENTAL - ALS 2022 STANDING OFFER		
No. of samples received	: 5		
No. of samples analysed	: 5		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Niral Patel		Centralized Prep, Waterloo, Ontario

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.
Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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

Key : LOR: Limit of Reporting (detection limit).

Unit	*Description*
%	percent
mg/kg	milligrams per kilogram

>: greater than.
<: less than.
Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .

Analytical Results

Sub-Matrix: **Soil/Solid**
(Matrix: **Soil/Solid**)

	Client sample ID	MW01 (0'-2')								
	Sampling date/time	14-Nov-2023 16:00								
Analyte	*Method/Lab*	*LOR*	*Unit*	WT2337623-001	**ON153/04 T1-RPIICC**	**ON153/04 T2-RPI-C**	**ON153/04 T2-RPI-F**	--	--	--
Physical Tests										
Moisture	E144/WT	0.25	%	15.5	--	--	--	--	--	--
Organochlorine Pesticides										
Aldrin	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Chlordane, cis- (alpha)	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
Chlordane, total	E660F/WT	0.030	mg/kg	<0.030	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Chlordane, trans- (gamma)	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDD, 2,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDD, 4,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDD, total	E660F/WT	0.030	mg/kg	<0.030	**0.05 mg/kg**	**3.3 mg/kg**	**3.3 mg/kg**	--	--	--
DDE, 2,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDE, 4,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDE, total	E660F/WT	0.030	mg/kg	<0.030	**0.05 mg/kg**	**0.26 mg/kg**	**0.33 mg/kg**	--	--	--
DDT, 2,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDT, 4,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDT, total	E660F/WT	0.030	mg/kg	<0.030	**1.4 mg/kg**	**1.4 mg/kg**	**1.4 mg/kg**	--	--	--
Dieldrin	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Endosulfan, alpha-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
Endosulfan, beta-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
Endosulfan, total	E660F/WT	0.030	mg/kg	<0.030	**0.04 mg/kg**	**0.04 mg/kg**	**0.04 mg/kg**	--	--	--
Endrin	E660F/WT	0.020	mg/kg	<0.020	**0.04 mg/kg**	**0.04 mg/kg**	**0.04 mg/kg**	--	--	--
Heptachlor epoxide	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Heptachlor	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.15 mg/kg**	**0.15 mg/kg**	--	--	--
Hexachlorobenzene	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.52 mg/kg**	**0.52 mg/kg**	--	--	--
Hexachlorobutadiene	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.012 mg/kg**	**0.014 mg/kg**	--	--	--
Hexachlorocyclohexane, gamma-	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.056 mg/kg**	**0.063 mg/kg**	--	--	--
Hexachloroethane	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.089 mg/kg**	**0.07 mg/kg**	--	--	--
Methoxychlor	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.13 mg/kg**	**0.13 mg/kg**	--	--	--
Decachlorobiphenyl	E660F/WT	0.1	%	60.6	--	--	--	--	--	--
Tetrachloro-m-xylene	E660F/WT	0.1	%	96.1	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T1-RPIICC	153 T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use
T2-RPI-C	153 T2-Soil-Res/Park/Inst. Property Use (Coarse)
T2-RPI-F	153 T2-Soil-Res/Park/Inst. Property Use (Fine)

Analytical Results

Sub-Matrix: **Soil/Solid**
(Matrix: **Soil/Solid**)

	Client sample ID	MW03 (3"-2')				
	Sampling date/time	14-Nov-2023 16:00				
Analyte	Method/Lab	LOR	Unit	WT2337623-002	ON153/04 T1-RPIICC	ON153/04 T2-RPI-C	ON153/04 T2-RPI-F	--	--	--
Physical Tests										
Moisture	E144/WT	0.25	%	16.6	--	--	--	--	--	--
Organochlorine Pesticides										
Aldrin	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Chlordane, cis- (alpha)	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
Chlordane, total	E660F/WT	0.030	mg/kg	<0.030	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Chlordane, trans- (gamma)	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDD, 2,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDD, 4,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDD, total	E660F/WT	0.030	mg/kg	<0.030	**0.05 mg/kg**	**3.3 mg/kg**	**3.3 mg/kg**	--	--	--
DDE, 2,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDE, 4,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDE, total	E660F/WT	0.030	mg/kg	<0.030	**0.05 mg/kg**	**0.26 mg/kg**	**0.33 mg/kg**	--	--	--
DDT, 2,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDT, 4,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDT, total	E660F/WT	0.030	mg/kg	<0.030	**1.4 mg/kg**	**1.4 mg/kg**	**1.4 mg/kg**	--	--	--
Dieldrin	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Endosulfan, alpha-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
Endosulfan, beta-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
Endosulfan, total	E660F/WT	0.030	mg/kg	<0.030	**0.04 mg/kg**	**0.04 mg/kg**	**0.04 mg/kg**	--	--	--
Endrin	E660F/WT	0.020	mg/kg	<0.020	**0.04 mg/kg**	**0.04 mg/kg**	**0.04 mg/kg**	--	--	--
Heptachlor epoxide	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Heptachlor	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.15 mg/kg**	**0.15 mg/kg**	--	--	--
Hexachlorobenzene	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.52 mg/kg**	**0.52 mg/kg**	--	--	--
Hexachlorobutadiene	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.012 mg/kg**	**0.014 mg/kg**	--	--	--
Hexachlorocyclohexane, gamma-	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.056 mg/kg**	**0.063 mg/kg**	--	--	--
Hexachloroethane	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.089 mg/kg**	**0.07 mg/kg**	--	--	--
Methoxychlor	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.13 mg/kg**	**0.13 mg/kg**	--	--	--
Decachlorobiphenyl	E660F/WT	0.1	%	89.7	--	--	--	--	--	--
Tetrachloro-m-xylene	E660F/WT	0.1	%	115	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T1-RPIICC	153 T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use
T2-RPI-C	153 T2-Soil-Res/Park/Inst. Property Use (Coarse)
T2-RPI-F	153 T2-Soil-Res/Park/Inst. Property Use (Fine)

Analytical Results

Sub-Matrix: **Soil/Solid**
(Matrix: **Soil/Solid**)

Analyte	Method/Lab	LOR	Unit	Client sample ID: MW05 (0'-2')	ON153/04 T1-RPIICC	ON153/04 T2-RPI-C	ON153/04 T2-RPI-F	--	--	--
				Sampling date/time: 14-Nov-2023 16:00						
				WT2337623-003						
Physical Tests										
Moisture	E144/WT	0.25	%	28.7	--	--	--	--	--	--
Organochlorine Pesticides										
Aldrin	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Chlordane, cis- (alpha)	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
Chlordane, total	E660F/WT	0.030	mg/kg	<0.030	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Chlordane, trans- (gamma)	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDD, 2,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDD, 4,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDD, total	E660F/WT	0.030	mg/kg	<0.030	**0.05 mg/kg**	**3.3 mg/kg**	**3.3 mg/kg**	--	--	--
DDE, 2,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDE, 4,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDE, total	E660F/WT	0.030	mg/kg	<0.030	**0.05 mg/kg**	**0.26 mg/kg**	**0.33 mg/kg**	--	--	--
DDT, 2,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDT, 4,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDT, total	E660F/WT	0.030	mg/kg	<0.030	**1.4 mg/kg**	**1.4 mg/kg**	**1.4 mg/kg**	--	--	--
Dieldrin	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Endosulfan, alpha-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
Endosulfan, beta-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
Endosulfan, total	E660F/WT	0.030	mg/kg	<0.030	**0.04 mg/kg**	**0.04 mg/kg**	**0.04 mg/kg**	--	--	--
Endrin	E660F/WT	0.020	mg/kg	<0.020	**0.04 mg/kg**	**0.04 mg/kg**	**0.04 mg/kg**	--	--	--
Heptachlor epoxide	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Heptachlor	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.15 mg/kg**	**0.15 mg/kg**	--	--	--
Hexachlorobenzene	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.52 mg/kg**	**0.52 mg/kg**	--	--	--
Hexachlorobutadiene	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.012 mg/kg**	**0.014 mg/kg**	--	--	--
Hexachlorocyclohexane, gamma-	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.056 mg/kg**	**0.063 mg/kg**	--	--	--
Hexachloroethane	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.089 mg/kg**	**0.07 mg/kg**	--	--	--
Methoxychlor	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.13 mg/kg**	**0.13 mg/kg**	--	--	--
Decachlorobiphenyl	E660F/WT	0.1	%	58.1	--	--	--	--	--	--
Tetrachloro-m-xylene	E660F/WT	0.1	%	83.1	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T1-RPIICC	153 T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use
T2-RPI-C	153 T2-Soil-Res/Park/Inst. Property Use (Coarse)
T2-RPI-F	153 T2-Soil-Res/Park/Inst. Property Use (Fine)

Analytical Results

Sub-Matrix: **Soil/Solid**
(Matrix: **Soil/Solid**)

Analyte	Method/Lab	LOR	Unit	Client sample ID: MW06 (0'-2')						
				Sampling date/time: 13-Nov-2023 16:00						
				WT2337623-004	ON153/04 T1-RPIICC	ON153/04 T2-RPI-C	ON153/04 T2-RPI-F	--	--	--
Physical Tests										
Moisture	E144/WT	0.25	%	15.2	--	--	--	--	--	--
Organochlorine Pesticides										
Aldrin	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Chlordane, cis- (alpha)	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
Chlordane, total	E660F/WT	0.030	mg/kg	<0.030	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Chlordane, trans- (gamma)	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDD, 2,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDD, 4,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDD, total	E660F/WT	0.030	mg/kg	<0.030	**0.05 mg/kg**	**3.3 mg/kg**	**3.3 mg/kg**	--	--	--
DDE, 2,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDE, 4,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDE, total	E660F/WT	0.030	mg/kg	<0.030	**0.05 mg/kg**	**0.26 mg/kg**	**0.33 mg/kg**	--	--	--
DDT, 2,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDT, 4,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDT, total	E660F/WT	0.030	mg/kg	<0.030	**1.4 mg/kg**	**1.4 mg/kg**	**1.4 mg/kg**	--	--	--
Dieldrin	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Endosulfan, alpha-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
Endosulfan, beta-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
Endosulfan, total	E660F/WT	0.030	mg/kg	<0.030	**0.04 mg/kg**	**0.04 mg/kg**	**0.04 mg/kg**	--	--	--
Endrin	E660F/WT	0.020	mg/kg	<0.020	**0.04 mg/kg**	**0.04 mg/kg**	**0.04 mg/kg**	--	--	--
Heptachlor epoxide	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Heptachlor	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.15 mg/kg**	**0.15 mg/kg**	--	--	--
Hexachlorobenzene	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.52 mg/kg**	**0.52 mg/kg**	--	--	--
Hexachlorobutadiene	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.012 mg/kg**	**0.014 mg/kg**	--	--	--
Hexachlorocyclohexane, gamma-	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.056 mg/kg**	**0.063 mg/kg**	--	--	--
Hexachloroethane	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.089 mg/kg**	**0.07 mg/kg**	--	--	--
Methoxychlor	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.13 mg/kg**	**0.13 mg/kg**	--	--	--
Decachlorobiphenyl	E660F/WT	0.1	%	65.9	--	--	--	--	--	--
Tetrachloro-m-xylene	E660F/WT	0.1	%	109	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T1-RPIICC	153 T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use
T2-RPI-C	153 T2-Soil-Res/Park/Inst. Property Use (Coarse)
T2-RPI-F	153 T2-Soil-Res/Park/Inst. Property Use (Fine)

Analytical Results

Sub-Matrix: **Soil/Solid**
(Matrix: **Soil/Solid**)

Analyte	Method/Lab	LOR	Unit	Client sample ID: MW06 DUP (0'-2')	ON153/04 T1-RPIICC	ON153/04 T2-RPI-C	ON153/04 T2-RPI-F	--	--	--
				Sampling date/time: 13-Nov-2023 16:00						
				WT2337623-005						
Physical Tests										
Moisture	E144/WT	0.25	%	11.5	--	--	--	--	--	--
Organochlorine Pesticides										
Aldrin	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Chlordane, cis- (alpha)	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
Chlordane, total	E660F/WT	0.030	mg/kg	<0.030	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Chlordane, trans- (gamma)	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDD, 2,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDD, 4,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDD, total	E660F/WT	0.030	mg/kg	<0.030	**0.05 mg/kg**	**3.3 mg/kg**	**3.3 mg/kg**	--	--	--
DDE, 2,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDE, 4,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDE, total	E660F/WT	0.030	mg/kg	<0.030	**0.05 mg/kg**	**0.26 mg/kg**	**0.33 mg/kg**	--	--	--
DDT, 2,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDT, 4,4'-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
DDT, total	E660F/WT	0.030	mg/kg	<0.030	**1.4 mg/kg**	**1.4 mg/kg**	**1.4 mg/kg**	--	--	--
Dieldrin	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Endosulfan, alpha-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
Endosulfan, beta-	E660F/WT	0.020	mg/kg	<0.020	--	--	--	--	--	--
Endosulfan, total	E660F/WT	0.030	mg/kg	<0.030	**0.04 mg/kg**	**0.04 mg/kg**	**0.04 mg/kg**	--	--	--
Endrin	E660F/WT	0.020	mg/kg	<0.020	**0.04 mg/kg**	**0.04 mg/kg**	**0.04 mg/kg**	--	--	--
Heptachlor epoxide	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.05 mg/kg**	**0.05 mg/kg**	--	--	--
Heptachlor	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.15 mg/kg**	**0.15 mg/kg**	--	--	--
Hexachlorobenzene	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.52 mg/kg**	**0.52 mg/kg**	--	--	--
Hexachlorobutadiene	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.012 mg/kg**	**0.014 mg/kg**	--	--	--
Hexachlorocyclohexane, gamma-	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.056 mg/kg**	**0.063 mg/kg**	--	--	--
Hexachloroethane	E660F/WT	0.010	mg/kg	<0.010	**0.01 mg/kg**	**0.089 mg/kg**	**0.07 mg/kg**	--	--	--
Methoxychlor	E660F/WT	0.020	mg/kg	<0.020	**0.05 mg/kg**	**0.13 mg/kg**	**0.13 mg/kg**	--	--	--
Decachlorobiphenyl	E660F/WT	0.1	%	61.6	--	--	--	--	--	--
Tetrachloro-m-xylene	E660F/WT	0.1	%	107	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T1-RPIICC	153 T1-Soil-Res/Park/Inst/Ind/Com/Commu Property Use
T2-RPI-C	153 T2-Soil-Res/Park/Inst. Property Use (Coarse)
T2-RPI-F	153 T2-Soil-Res/Park/Inst. Property Use (Fine)

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QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2337623**	Page	: 1 of 6
Client	: **Fisher Engineering Limited**	Laboratory	: ALS Environmental - Waterloo
Contact	: Marius Voinea	Account Manager	: Emily Hansen
Address	: 15-400 Esna Park Drive Markham ON Canada L3R 3K2	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 905 475 7755, Ext. 29	Telephone	: +1 519 886 6910
Project	: 23-13472	Date Samples Received	: 17-Nov-2023 11:00
PO	: ----	Issue Date	: 21-Nov-2023 16:27
C-O-C number	: 20-1004888		
Sampler	: Mohit		
Site	: ----		
Quote number	: FISHER ENVIRONMENTAL - ALS 2022 STANDING OFFER		
No. of samples received	: 5		
No. of samples analysed	: 5		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Organochlorine Pesticides : OCPs by GC-MS-MS or GC-MS										
Glass soil jar/Teflon lined cap [ON MECP]										
MW01 (0'-2')	E660F	14-Nov-2023	20-Nov-2023	60 days	6 days	✓	21-Nov-2023	40 days	1 days	✓
Organochlorine Pesticides : OCPs by GC-MS-MS or GC-MS										
Glass soil jar/Teflon lined cap [ON MECP]										
MW03 (3"-2')	E660F	14-Nov-2023	20-Nov-2023	60 days	6 days	✓	21-Nov-2023	40 days	1 days	✓
Organochlorine Pesticides : OCPs by GC-MS-MS or GC-MS										
Glass soil jar/Teflon lined cap [ON MECP]										
MW05 (0'-2')	E660F	14-Nov-2023	20-Nov-2023	60 days	6 days	✓	21-Nov-2023	40 days	1 days	✓
Organochlorine Pesticides : OCPs by GC-MS-MS or GC-MS										
Glass soil jar/Teflon lined cap [ON MECP]										
MW06 (0'-2')	E660F	13-Nov-2023	20-Nov-2023	60 days	7 days	✓	21-Nov-2023	40 days	1 days	✓
Organochlorine Pesticides : OCPs by GC-MS-MS or GC-MS										
Glass soil jar/Teflon lined cap [ON MECP]										
MW06 DUP (0'-2')	E660F	13-Nov-2023	20-Nov-2023	60 days	7 days	✓	21-Nov-2023	40 days	1 days	✓
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP]										
MW01 (0'-2')	E144	14-Nov-2023	----	----	----		20-Nov-2023	----	6 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP]										
MW03 (3"-2')	E144	14-Nov-2023	----	----	----		20-Nov-2023	----	6 days	

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] MW05 (0'-2')	E144	14-Nov-2023	----	----	----		20-Nov-2023	----	6 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] MW06 (0'-2')	E144	13-Nov-2023	----	----	----		20-Nov-2023	----	7 days	
Physical Tests : Moisture Content by Gravimetry										
Glass soil jar/Teflon lined cap [ON MECP] MW06 DUP (0'-2')	E144	13-Nov-2023	----	----	----		20-Nov-2023	----	7 days	

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Moisture Content by Gravimetry	E144	1244164	1	19	5.2	5.0	✓
OCPs by GC-MS-MS or GC-MS	E660F	1244245	1	5	20.0	5.0	✓
Laboratory Control Samples (LCS)							
Moisture Content by Gravimetry	E144	1244164	1	19	5.2	5.0	✓
OCPs by GC-MS-MS or GC-MS	E660F	1244245	1	5	20.0	5.0	✓
Method Blanks (MB)							
Moisture Content by Gravimetry	E144	1244164	1	19	5.2	5.0	✓
OCPs by GC-MS-MS or GC-MS	E660F	1244245	1	5	20.0	5.0	✓
Matrix Spikes (MS)							
OCPs by GC-MS-MS or GC-MS	E660F	1244245	1	5	20.0	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Moisture Content by Gravimetry	E144 ALS Environmental - Waterloo	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
OCPs by GC-MS-MS or GC-MS	E660F ALS Environmental - Waterloo	Soil/Solid	EPA 8270E (mod)	OCPs are analyzed by GC-MS-MS or GC-MS

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Pesticides, PCB, PAH, and Neutral Extractable Chlorinated Hydrocarbons Extraction	EP660 ALS Environmental - Waterloo	Soil/Solid	EPA 3570 (mod)	A homogenized subsample is extracted with organic solvents using a mechanical shaker.

ALS Canada Ltd.

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QUALITY CONTROL REPORT

Work Order	: **WT2337623**	Page	: 1 of 6
Client	: Fisher Engineering Limited	Laboratory	: ALS Environmental - Waterloo
Contact	: Marius Voinea	Account Manager	: Emily Hansen
Address	: 15-400 Esna Park Drive Markham ON Canada L3R 3K2	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	:	Telephone	: +1 519 886 6910
Project	: 23-13472	Date Samples Received	: 17-Nov-2023 11:00
PO	: ----	Date Analysis Commenced	: 20-Nov-2023
C-O-C number	: 20-1004888	Issue Date	: 21-Nov-2023 16:27
Sampler	: Mohit 905 475 7755, Ext. 29		
Site	: ----		
Quote number	: FISHER ENVIRONMENTAL - ALS 2022 STANDING OFFER		
No. of samples received	: 5		
No. of samples analysed	: 5		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Niral Patel		Waterloo Centralized Prep, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Soil/Solid**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1244164)											
WT2337623-001	MW01 (0'-2')	Moisture	----	E144	0.25	%	15.5	13.4	14.0%	20%	----
Organochlorine Pesticides (QC Lot: 1244245)											
WT2337623-001	MW01 (0'-2')	Aldrin	309-00-2	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Chlordane, cis- (alpha)	5103-71-9	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Chlordane, trans- (gamma)	5103-74-2	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		DDD, 2,4'-	53-19-0	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		DDD, 4,4'-	72-54-8	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		DDE, 2,4'-	3424-82-6	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		DDE, 4,4'-	72-55-9	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		DDT, 2,4'-	789-02-6	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		DDT, 4,4'-	50-29-3	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Dieldrin	60-57-1	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Endosulfan, alpha-	959-98-8	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Endosulfan, beta-	33213-65-9	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Endrin	72-20-8	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Heptachlor	76-44-8	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Heptachlor epoxide	1024-57-3	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----
		Hexachlorobenzene	118-74-1	E660F	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Hexachlorobutadiene	87-68-3	E660F	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Hexachlorocyclohexane, gamma-	58-89-9	E660F	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Hexachloroethane	67-72-1	E660F	0.010	mg/kg	<0.010	<0.010	0	Diff <2x LOR	----
		Methoxychlor	72-43-5	E660F	0.020	mg/kg	<0.020	<0.020	0	Diff <2x LOR	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1244164)						
Moisture	----	E144	0.25	%	<0.25	----
Organochlorine Pesticides (QCLot: 1244245)						
Aldrin	309-00-2	E660F	0.02	mg/kg	<0.020	----
Chlordane, cis- (alpha)	5103-71-9	E660F	0.02	mg/kg	<0.020	----
Chlordane, trans- (gamma)	5103-74-2	E660F	0.02	mg/kg	<0.020	----
DDD, 2,4'-	53-19-0	E660F	0.02	mg/kg	<0.020	----
DDD, 4,4'-	72-54-8	E660F	0.02	mg/kg	<0.020	----
DDE, 2,4'-	3424-82-6	E660F	0.02	mg/kg	<0.020	----
DDE, 4,4'-	72-55-9	E660F	0.02	mg/kg	<0.020	----
DDT, 2,4'-	789-02-6	E660F	0.02	mg/kg	<0.020	----
DDT, 4,4'-	50-29-3	E660F	0.02	mg/kg	<0.020	----
Dieldrin	60-57-1	E660F	0.02	mg/kg	<0.020	----
Endosulfan, alpha-	959-98-8	E660F	0.02	mg/kg	<0.020	----
Endosulfan, beta-	33213-65-9	E660F	0.02	mg/kg	<0.020	----
Endrin	72-20-8	E660F	0.02	mg/kg	<0.020	----
Heptachlor	76-44-8	E660F	0.02	mg/kg	<0.020	----
Heptachlor epoxide	1024-57-3	E660F	0.02	mg/kg	<0.020	----
Hexachlorobenzene	118-74-1	E660F	0.01	mg/kg	<0.010	----
Hexachlorobutadiene	87-68-3	E660F	0.01	mg/kg	<0.010	----
Hexachlorocyclohexane, gamma-	58-89-9	E660F	0.01	mg/kg	<0.010	----
Hexachloroethane	67-72-1	E660F	0.01	mg/kg	<0.010	----
Methoxychlor	72-43-5	E660F	0.02	mg/kg	<0.020	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Soil/Solid**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1244164)									
Moisture	----	E144	0.25	%	50 %	99.2	90.0	110	----
Organochlorine Pesticides (QCLot: 1244245)									
Aldrin	309-00-2	E660F	0.02	mg/kg	0.01 mg/kg	70.5	50.0	150	----
Chlordane, cis- (alpha)	5103-71-9	E660F	0.02	mg/kg	0.01 mg/kg	87.5	50.0	150	----
Chlordane, trans- (gamma)	5103-74-2	E660F	0.02	mg/kg	0.01 mg/kg	107	50.0	150	----
DDD, 2,4'-	53-19-0	E660F	0.02	mg/kg	0.01 mg/kg	116	50.0	150	----
DDD, 4,4'-	72-54-8	E660F	0.02	mg/kg	0.01 mg/kg	101	50.0	150	----
DDE, 2,4'-	3424-82-6	E660F	0.02	mg/kg	0.01 mg/kg	100	50.0	150	----
DDE, 4,4'-	72-55-9	E660F	0.02	mg/kg	0.01 mg/kg	88.8	50.0	150	----
DDT, 2,4'-	789-02-6	E660F	0.02	mg/kg	0.01 mg/kg	54.4	50.0	150	----
DDT, 4,4'-	50-29-3	E660F	0.02	mg/kg	0.01 mg/kg	120	50.0	150	----
Dieldrin	60-57-1	E660F	0.02	mg/kg	0.01 mg/kg	95.0	50.0	150	----
Endosulfan, alpha-	959-98-8	E660F	0.02	mg/kg	0.01 mg/kg	99.6	50.0	150	----
Endosulfan, beta-	33213-65-9	E660F	0.02	mg/kg	0.01 mg/kg	84.0	50.0	150	----
Endrin	72-20-8	E660F	0.02	mg/kg	0.01 mg/kg	78.0	50.0	150	----
Heptachlor	76-44-8	E660F	0.02	mg/kg	0.01 mg/kg	72.9	50.0	150	----
Heptachlor epoxide	1024-57-3	E660F	0.02	mg/kg	0.01 mg/kg	88.1	50.0	150	----
Hexachlorobenzene	118-74-1	E660F	0.01	mg/kg	0.01 mg/kg	87.4	50.0	150	----
Hexachlorobutadiene	87-68-3	E660F	0.01	mg/kg	0.01 mg/kg	98.7	50.0	150	----
Hexachlorocyclohexane, gamma-	58-89-9	E660F	0.01	mg/kg	0.01 mg/kg	86.1	50.0	150	----
Hexachloroethane	67-72-1	E660F	0.01	mg/kg	0.01 mg/kg	77.7	50.0	150	----
Methoxychlor	72-43-5	E660F	0.02	mg/kg	0.01 mg/kg	116	50.0	150	----

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Soil/Solid**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Organochlorine Pesticides (QCLot: 1244245)										
WT2337623-001	MW01 (0'-2')	Aldrin	309-00-2	E660F	0.007 mg/kg	0.01 mg/kg	64.3	50.0	150	----
		Chlordane, cis- (alpha)	5103-71-9	E660F	0.006 mg/kg	0.01 mg/kg	54.9	50.0	150	----
		Chlordane, trans- (gamma)	5103-74-2	E660F	0.007 mg/kg	0.01 mg/kg	60.7	50.0	150	----
		DDD, 2,4'-	53-19-0	E660F	0.009 mg/kg	0.01 mg/kg	81.8	50.0	150	----
		DDD, 4,4'-	72-54-8	E660F	0.009 mg/kg	0.01 mg/kg	85.5	50.0	150	----
		DDE, 2,4'-	3424-82-6	E660F	0.007 mg/kg	0.01 mg/kg	62.5	50.0	150	----
		DDE, 4,4'-	72-55-9	E660F	0.007 mg/kg	0.01 mg/kg	62.1	50.0	150	----
		DDT, 2,4'-	789-02-6	E660F	0.012 mg/kg	0.01 mg/kg	112	50.0	150	----
		DDT, 4,4'-	50-29-3	E660F	0.011 mg/kg	0.01 mg/kg	103	50.0	150	----
		Dieldrin	60-57-1	E660F	0.007 mg/kg	0.01 mg/kg	63.0	50.0	150	----
		Endosulfan, alpha-	959-98-8	E660F	0.006 mg/kg	0.01 mg/kg	59.6	50.0	150	----
		Endosulfan, beta-	33213-65-9	E660F	0.008 mg/kg	0.01 mg/kg	73.5	50.0	150	----
		Endrin	72-20-8	E660F	0.007 mg/kg	0.01 mg/kg	66.4	50.0	150	----
		Heptachlor	76-44-8	E660F	0.008 mg/kg	0.01 mg/kg	68.2	50.0	150	----
		Heptachlor epoxide	1024-57-3	E660F	0.006 mg/kg	0.01 mg/kg	54.1	50.0	150	----
		Hexachlorobenzene	118-74-1	E660F	0.008 mg/kg	0.01 mg/kg	73.2	50.0	150	----
		Hexachlorobutadiene	87-68-3	E660F	0.010 mg/kg	0.01 mg/kg	90.2	50.0	150	----
		Hexachlorocyclohexane, gamma-	58-89-9	E660F	0.007 mg/kg	0.01 mg/kg	67.8	50.0	150	----
		Hexachloroethane	67-72-1	E660F	0.008 mg/kg	0.01 mg/kg	74.1	50.0	150	----
		Methoxychlor	72-43-5	E660F	0.013 mg/kg	0.01 mg/kg	122	50.0	150	----

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 1004000

Pa

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Environmental Division Waterloo

Work Order Reference

WT2337623

Telephone : +1 519 886 6910

Report To	Contact and company name below will appear on the final report
Company:	fisher engineering.
Contact:	murius vipond
Phone:	
	Company address below will appear on the final report
Street:	
City/Province:	
Postal Code:	
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☑ YES ☐ NO
Company:	
Contact:	

Reports / Recipients

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

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

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

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: murius@fisherenv.com.

Email 2:

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: Murius@fisherenv.com.

Email 2:

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge mini

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge min

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge min

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge mini

☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. A may apply to rush requests on weekends, statutory holidays and nc

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, pleas

Project Information

ALS Account # / Quote #: 2023 - standing offer

Job #: 23-13472

PO / AFE:

LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: PO#:

Major/Minor Code: Routing Code:

Requisitioner:

Location:

ALS Lab Work Order # (ALS use only):

ALS Contact: Hamsen Emmily Sampler: Monit

Analysis Request

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

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	OC, pesticides	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	MW01 (0' - 2')	14 NOV	4:00pm	Soil	1	X			
	MW03 (3' - 5')	14 NOV				X			
	MW05 (0' - 2')	14 NOV				X			
	MW06 (0' - 2')	13 NOV				X			
	MW06 DUP. (0' - 2')	13 NOV.				X			

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

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

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

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

O. reg 153/04 Table 1 SCS RPI & Table 2 SCS RPI

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☑ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				0.3			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
Monit	15 NOV '23	4:00

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
	11/17/23	1100

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 FRONT

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

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

SOL-805 EC

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FAX: 905 475-7718
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Client: Bydem Enterprises Inc.
Address: 156 Jozo Weider Boulevard, #9B
The Blue Mountains, ON
L9Y 0V2
Tel.: 416-460-7009
Email: pmondell19@hotmail.com
Attn.: Paul Mondell

F.E. Job #: 23-2173
Project Name: Phase II ESA
Project ID: FE-P 23-13472
Date Sampled: 27-Nov-2023
Date Received: 28-Nov-2023
Date Reported: 5-Dec-2023
Location: Grey Road & Crosswinds Boulevard
The Blue Mountains, ON

Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Metals	Water	5	N/A	30-Nov-23	Metals F-18	EPA 200.2/200.8
Mercury	Water	5	30-Nov-23	30-Nov-23	Metals F-18	EPA 200.2/200.8
VOCs	Water	6	N/A	29-Nov-23	VOCs F-14	SW-846, 8260C
PHCs (F1 & BTEX)	Water	5	N/A	29-Nov-23	PHCs F-7	CCME CWS
PHCs (F2 - F4)	Water	5	28-Nov-23	28-Nov-23	PHCs F-7	CCME CWS
PAHs	Water	5	30-Nov-23	30-Nov-23	PAHs F-4	SM 6410B
Chloride	Water	5	N/A	29-Nov-23	Chloride F-20	SM 4500-Cl-E
Sulphate	Water	5	N/A	29-Nov-23	Sulphate F-21	SM 4500-SO_4

Fisher Engineering Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

Authorized by:

Roger Lin, Ph. D., C. Chem.
Laboratory Manager

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
Ronggen (Roger) Lin
CHEMIST

Results related only to the items tested

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, Chloride, Sulphate
Sample Description:	6 Water Sample(s)

Parameter	***23-2173-1*** MW1	***23-2173-2*** MW2	***23-2173-3*** MW3	***23-2173-4*** MW3 Duplicate	**Ground Water Standards** [1]	
					Table 1	**Table 2**
	Concentration (µg/L)					
Metals in Water						
Antimony	<0.5	<0.5	<0.5	<0.5	1.5	6
Arsenic	<1	<1	<1	<1	13	25
Barium	224	207	13	13	610	1,000
Beryllium	<0.5	<0.5	<0.5	<0.5	0.5	4
Boron	81	50	43	40	1,700	5,000
Cadmium	<0.5	<0.5	<0.5	<0.5	0.5	2.7
Chromium	<10	<10	<10	<10	11	50
Cobalt	<1	1.2	<1	<1	3.8	3.8
Copper	<5	<5	<5	<5	5	87
Lead	<1	<1	<1	<1	1.9	10
Molybdenum	3.9	2.3	<0.5	<0.5	23	70
Nickel	4.2	5.6	4.7	3.8	14	100
Selenium	<5	<5	<5	<5	5	10
Silver	<0.3	<0.3	<0.3	<0.3	0.3	1.5
Thallium	<0.5	<0.5	<0.5	<0.5	0.5	2
Uranium	7.8	**17**	<2	<2	8.9	20
Vanadium	2.0	3.9	1.5	1.3	3.9	6.2
Zinc	13	<5	<5	<5	160	1,100

< result obtained was below RL (Reporting Limit).

Bold and Highlighted in Green: Result exceeds limit noted **only** in **Table 1** Ground Water Standard.

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.
Table 1: Full Depth Background Site Condition Standards.
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.
All Types of Property Use.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, Chloride, Sulphate
Sample Description:	6 Water Sample(s)

Parameter	***23-2173-5*** MW4				**Ground Water Standards [1]**	
					Table 1	**Table 2**
	Concentration (µg/L)					
Metals in Water						
Antimony	<0.5				1.5	6
Arsenic	<1				13	25
Barium	114				610	1,000
Beryllium	<0.5				0.5	4
Boron	126				1,700	5,000
Cadmium	<0.5				0.5	2.7
Chromium	<10				11	50
Cobalt	<1				3.8	3.8
Copper	<5				5	87
Lead	<1				1.9	10
Molybdenum	5.0				23	70
Nickel	2.0				14	100
Selenium	<5				5	10
Silver	<0.3				0.3	1.5
Thallium	<0.5				0.5	2
Uranium	2.0				8.9	20
Vanadium	1.7				3.9	6.2
Zinc	48				160	1,100

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

All Types of Property Use.

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/L)		Recovery (%)		Recovery (%)	
Metals in Water						
Antimony	<0.5	0.5	106	80-120	100	70-130
Arsenic	<1	1	103	80-120	98	70-130
Barium	<2	2	100	80-120	96	70-130
Beryllium	<0.5	0.5	99	80-120	95	70-130
Boron	<10	10	100	80-120	107	70-130
Cadmium	<0.5	0.5	101	80-120	93	70-130
Chromium	<10	10	103	80-120	84	70-130
Cobalt	<1	1	102	80-120	81	70-130
Copper	<5	5	104	80-120	77	70-130
Lead	<1	1	103	80-120	96	70-130
Molybdenum	<0.5	0.5	98	80-120	95	70-130
Nickel	<1	1	103	80-120	78	70-130
Selenium	<5	5	100	80-120	100	70-130
Silver	<0.3	0.3	94	80-120	73	70-130
Thallium	<0.5	0.5	102	80-120	97	70-130
Uranium	<2	2	100	80-120	98	70-130
Vanadium	<0.5	0.5	104	80-120	87	70-130
Zinc	<5	5	99	80-120	92	70-130

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike (in case the original sample contains >100ppb, the matrix spike is no longer reliable, the data of reagent spike are entered instead)
AR - Acceptable Range

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
Metals in Water						
Antimony	8.3	0-20				
Arsenic	0.0	0-20				
Barium	0.3	0-20				
Beryllium	0.0	0-20				
Boron	1.7	0-20				
Cadmium	15.4	0-20				
Chromium	15.5	0-20				
Cobalt	1.7	0-20				
Copper	0.0	0-20				
Lead	9.5	0-20				
Molybdenum	3.2	0-20				
Nickel	4.4	0-20				
Selenium	0.0	0-20				
Silver	0.0	0-20				
Thallium	0.0	0-20				
Uranium	0.9	0-20				
Vanadium	19.0	0-20				
Zinc	5.9	0-20				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, Chloride, Sulphate
Sample Description:	6 Water Sample(s)

Parameter	***23-2173-1*** MW1	***23-2173-2*** MW2	***23-2173-3*** MW3	***23-2173-4*** MW3 Duplicate	**Ground Water Standards [1]**	
					Table 1	**Table 2**
	Concentration (µg/g)					
Mercury in Water	<0.1	<0.1	<0.1	<0.1	0.1	(1) 0.29

Parameter	***23-2173-5*** MW4				**Ground Water Standards [1]**	
					Table 1	**Table 2**
	Concentration (µg/g)					
Mercury in Water	<0.1				0.1	(1) 0.29

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**MS**	**AR**
	(µg/g)		**Recovery (%)**		**Recovery (%)**	
Mercury in Water	<0.1	0.1	100	80-120	130	70-130

Parameter	**Duplicate**	**AR**				
	RPD (%)					
Mercury in Water	0.0	0-30				

LEGEND:

RL - Reporting Limit

LCS - Laboratory Control Sample

MS - Matrix Spike (in case the original sample contains >100ppb, the matrix spike is no longer reliable, the data of reagent spike are entered instead)

AR - Acceptable Range

RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, Chloride, Sulphate
Sample Description:	6 Water Sample(s)

Parameter	***23-2173-1*** MW1	***23-2173-2*** MW2	***23-2173-3*** MW3	***23-2173-4*** MW3 Duplicate	**Ground Water Standards [1]**	
					Table 1	**Table 2**
	Concentration (µg/L)					
VOCs in Water						
Acetone	<30	<30	<30	<30	2700	2700
Benzene	<0.5	<0.5	<0.5	<0.5	0.5	5
Bromodichloromethane	<2	<2	<2	<2	2	16
Bromoform	<5	<5	<5	<5	5	25
Bromomethane	<0.5	<0.5	<0.5	<0.5	0.89	0.89
Carbon Tetrachloride	<0.2	<0.2	<0.2	<0.2	0.2	(5) 0.79
Chlorobenzene	<0.5	<0.5	<0.5	<0.5	0.5	30
Chloroform	<1	<1	<1	<1	2	(22) 2.4
Dibromochloromethane	<2	<2	<2	<2	2	25
1,2-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	0.5	3
1,3-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	0.5	59
1,4-Dichlorobenzene	<0.5	<0.5	<0.5	<0.5	0.5	1
Dichlorodifluoromethane	<2	<2	<2	<2	590	590
1,1-Dichloroethane	<0.5	<0.5	<0.5	<0.5	0.5	5
1,2-Dichloroethane	<0.5	<0.5	<0.5	<0.5	0.5	(5) 1.6
1,1-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	0.5	(14) 1.6
c-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	1.6	(17) 1.6
t-1,2-Dichloroethylene	<0.5	<0.5	<0.5	<0.5	1.6	(17) 1.6
1,2-Dichloropropane	<0.5	<0.5	<0.5	<0.5	0.5	5
1,3-Dichloropropene (cis-+trans-)	<0.5	<0.5	<0.5	<0.5	0.5	0.5
Ethylbenzene	<0.5	<0.5	<0.5	<0.5	0.5	2.4
Ethylene Dibromide	<0.2	<0.2	<0.2	<0.2	0.2	0.2
Hexane (n)	<5	<5	<5	<5	5	(520) 51
Methyl Ethyl Ketone	<20	<20	<20	<20	400	1800
Methyl Isobutyl Ketone	<20	<20	<20	<20	640	640
Methyl tert-butyl Ether	<2	<2	<2	<2	15	15
Methylene Chloride	<5	<5	<5	<5	5	50
Styrene	<0.5	<0.5	<0.5	<0.5	0.5	5.4
1,1,1,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5	1.1	1.1
1,1,2,2-Tetrachloroethane	<0.5	<0.5	<0.5	<0.5	0.5	1
Tetrachloroethylene	<0.5	<0.5	<0.5	<0.5	0.5	(17) 1.6
Toluene	<0.5	<0.5	<0.5	<0.5	0.8	24
1,1,1-Trichloroethane	<0.5	<0.5	<0.5	<0.5	0.5	200
1,1,2-Trichloroethane	<0.5	<0.5	<0.5	<0.5	0.5	(5) 4.7
Trichloroethylene	<0.5	<0.5	<0.5	<0.5	0.5	(5) 1.6
Trichlorofluoromethane	<5	<5	<5	<5	150	150
Vinyl Chloride	<0.5	<0.5	<0.5	<0.5	0.5	(1.7) 0.5
Xylenes	<0.5	<0.5	<0.5	<0.5	72	300
Surrogate Recovery (%)						
Dibromofluoromethane	113	120	123	125	50-140	
Toluene-d8	86	91	94	85	50-140	
4-Bromofluorobenzene	101	103	102	103	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, Chloride, Sulphate
Sample Description:	6 Water Sample(s)

Parameter	***23-2173-5*** MW4	***23-2173-6*** Trip Blank			Ground Water Standards [1]	
					Table 1	Table 2
	Concentration (µg/L)					
VOCs in Water						
Acetone	<30	<30			2700	2700
Benzene	<0.5	<0.5			0.5	5
Bromodichloromethane	<2	<2			2	16
Bromoform	<5	<5			5	25
Bromomethane	<0.5	<0.5			0.89	0.89
Carbon Tetrachloride	<0.2	<0.2			0.2	(5) 0.79
Chlorobenzene	<0.5	<0.5			0.5	30
Chloroform	<1	<1			2	(22) 2.4
Dibromochloromethane	<2	<2			2	25
1,2-Dichlorobenzene	<0.5	<0.5			0.5	3
1,3-Dichlorobenzene	<0.5	<0.5			0.5	59
1,4-Dichlorobenzene	<0.5	<0.5			0.5	1
Dichlorodifluoromethane	<2	<2			590	590
1,1-Dichloroethane	<0.5	<0.5			0.5	5
1,2-Dichloroethane	<0.5	<0.5			0.5	(5) 1.6
1,1-Dichloroethylene	<0.5	<0.5			0.5	(14) 1.6
c-1,2-Dichloroethylene	<0.5	<0.5			1.6	(17) 1.6
t-1,2-Dichloroethylene	<0.5	<0.5			1.6	(17) 1.6
1,2-Dichloropropane	<0.5	<0.5			0.5	5
1,3-Dichloropropene (cis-+trans-)	<0.5	<0.5			0.5	0.5
Ethylbenzene	<0.5	<0.5			0.5	2.4
Ethylene Dibromide	<0.2	<0.2			0.2	0.2
Hexane (n)	<5	<5			5	(520) 51
Methyl Ethyl Ketone	<20	<20			400	1800
Methyl Isobutyl Ketone	<20	<20			640	640
Methyl tert-butyl Ether	<2	<2			15	15
Methylene Chloride	<5	<5			5	50
Styrene	<0.5	<0.5			0.5	5.4
1,1,1,2-Tetrachloroethane	<0.5	<0.5			1.1	1.1
1,1,2,2-Tetrachloroethane	<0.5	<0.5			0.5	1
Tetrachloroethylene	<0.5	<0.5			0.5	(17) 1.6
Toluene	<0.5	<0.5			0.8	24
1,1,1-Trichloroethane	<0.5	<0.5			0.5	200
1,1,2-Trichloroethane	<0.5	<0.5			0.5	(5) 4.7
Trichloroethylene	<0.5	<0.5			0.5	(5) 1.6
Trichlorofluoromethane	<5	<5			150	150
Vinyl Chloride	<0.5	<0.5			0.5	(1.7) 0.5
Xylenes	<0.5	<0.5			72	300
Surrogate Recovery (%)						
Dibromofluoromethane	125	126			50-140	
Toluene-d8	85	102			50-140	
4-Bromofluorobenzene	107	113			50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

All Types of Property Use. ( ) Standard value in brackets applies to medium and fine textured soils.

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(ug/L)		Recovery (%)		Recovery (%)	
VOCs in Water						
Acetone	<30	30	81	50-140	115	50-140
Benzene	<0.5	0.5	87	60-130	104	50-140
Bromodichloromethane	<2	2	85	50-140	95	50-140
Bromoform	<5	5	91	60-130	110	50-140
Bromomethane	<0.5	0.5	111	50-140	108	50-140
Carbon Tetrachloride	<0.2	0.2	101	60-130	84	50-140
Chlorobenzene	<0.5	0.5	96	60-130	102	50-140
Chloroform	<1	1	122	60-130	93	50-140
Dibromochloromethane	<2	2	74	60-130	101	50-140
1,2-Dichlorobenzene	<0.5	0.5	114	60-130	83	50-140
1,3-Dichlorobenzene	<0.5	0.5	128	60-130	78	50-140
1,4-Dichlorobenzene	<0.5	0.5	112	60-130	74	50-140
Dichlorodifluoromethane	<2	2	98	50-140	84	50-140
1,1-Dichloroethane	<0.5	0.5	104	60-130	87	50-140
1,2-Dichloroethane	<0.5	0.5	75	60-130	98	50-140
1,1-Dichloroethylene	<0.5	0.5	112	60-130	109	50-140
c-1,2-Dichloroethylene	<0.5	0.5	112	60-130	113	50-140
t-1,2-Dichloroethylene	<0.5	0.5	78	60-130	95	50-140
1,2-Dichloropropane	<0.5	0.5	78	60-130	83	50-140
1,3-Dichloropropene (cis-+trans-)	<0.5	0.5	106	60-130	116	50-140
Ethylbenzene	<0.5	0.5	117	60-130	78	50-140
Ethylene Dibromide	<0.2	0.2	113	60-130	112	50-140
Hexane (n)	<5	5	71	60-130	73	50-140
Methyl Ethyl Ketone	<20	20	103	50-140	117	50-140
Methyl Isobutyl Ketone	<20	20	110	50-140	102	50-140
Methyl tert-butyl Ether	<2	2	107	60-130	80	50-140
Methylene Chloride	<5	5	103	60-130	96	50-140
Styrene	<0.5	0.5	105	60-130	91	50-140
1,1,1,2-Tetrachloroethane	<0.5	0.5	101	60-130	98	50-140
1,1,2,2-Tetrachloroethane	<0.5	0.5	92	60-130	121	50-140
Tetrachloroethylene	<0.5	0.5	123	60-130	103	50-140
Toluene	<0.5	0.5	94	60-130	85	50-140
1,1,1-Trichloroethane	<0.5	0.5	103	60-130	109	50-140
1,1,2-Trichloroethane	<0.5	0.5	97	60-130	104	50-140
Trichloroethylene	<0.5	0.5	118	60-130	103	50-140
Trichlorofluoromethane	<5	5	87	50-140	94	50-140
Vinyl Chloride	<0.5	0.5	81	50-140	93	50-140
Xylenes	<0.5	0.5	118	60-130	93	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Dibromofluoromethane	102	60-140	119	60-140	89	60-140
Toluene-d8	98	60-140	71	60-140	90	60-140
4-Bromofluorobenzene	116	60-140	118	60-140	75	60-140

LEGEND:

RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
VOCs in Water						
Acetone	0.0	0-30				
Benzene	0.0	0-30				
Bromodichloromethane	0.0	0-30				
Bromoform	0.0	0-30				
Bromomethane	0.0	0-30				
Carbon Tetrachloride	0.0	0-30				
Chlorobenzene	0.0	0-30				
Chloroform	0.0	0-30				
Dibromochloromethane	0.0	0-30				
1,2-Dichlorobenzene	0.0	0-30				
1,3-Dichlorobenzene	0.0	0-30				
1,4-Dichlorobenzene	0.0	0-30				
Dichlorodifluoromethane	0.0	0-30				
1,1-Dichloroethane	0.0	0-30				
1,2-Dichloroethane	0.0	0-30				
1,1-Dichloroethylene	0.0	0-30				
c-1,2-Dichloroethylene	0.0	0-30				
t-1,2-Dichloroethylene	0.0	0-30				
1,2-Dichloropropane	0.0	0-30				
1,3-Dichloropropene (cis-+trans-)	0.0	0-30				
Ethylbenzene	0.0	0-30				
Ethylene Dibromide	0.0	0-30				
Hexane (n)	0.0	0-30				
Methyl Ethyl Ketone	0.0	0-30				
Methyl Isobutyl Ketone	0.0	0-30				
Methyl tert-butyl Ether	0.0	0-30				
Methylene Chloride	0.0	0-30				
Styrene	0.0	0-30				
1,1,1,2-Tetrachloroethane	0.0	0-30				
1,1,2,2-Tetrachloroethane	0.0	0-30				
Tetrachloroethylene	0.0	0-30				
Toluene	0.0	0-30				
1,1,1-Trichloroethane	0.0	0-30				
1,1,2-Trichloroethane	0.0	0-30				
Trichloroethylene	0.0	0-30				
Trichlorofluoromethane	0.0	0-30				
Vinyl Chloride	0.0	0-30				
Xylenes	0.0	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Dibromofluoromethane	86	60-140				
Toluene-d8	88	60-140				
4-Bromofluorobenzene	62	60-140				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, Chloride, Sulphate
Sample Description:	6 Water Sample(s)

Parameter	***23-2173-1*** MW1	***23-2173-2*** MW2	***23-2173-3*** MW3	***23-2173-4*** MW3 Duplicate	**Ground Water Standards [1]**	
					Table 1	**Table 2**
	Concentration (µg/L)					
BTEX in Water						
Benzene	<0.5	<0.5	<0.5	<0.5	0.5	5
Toluene	<0.5	<0.5	<0.5	<0.5	0.8	24
Ethylbenzene	<0.5	<0.5	<0.5	<0.5	0.5	2.4
Xylenes	<0.5	<0.5	<0.5	<0.5	72	300
PHCs (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	<25	<25	<25	<25	420	750
F2 (C_{10} - C_{16})	<100	<100	<100	<100	150	150
F3 (C_{16} - C_{34})	<100	<100	<100	<100	500	500
F4 (>C_{34})	<100	<100	<100	<100	500	500
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes	Yes	Yes	Yes		
Surrogate Recovery (%)						
Dibromofluoromethane	113	120	123	125	60-140	
Toluene-d8	86	91	94	85	60-140	
4-Bromofluorobenzene	101	103	102	103	60-140	

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

All Types of Property Use.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, Chloride, Sulphate
Sample Description:	6 Water Sample(s)

Parameter	***23-2173-5*** MW4				Ground Water Standards [1]	
					Table 1	Table 2
	Concentration (µg/L)					
BTEX in Water						
Benzene	<0.5				0.5	5
Toluene	<0.5				0.8	24
Ethylbenzene	<0.5				0.5	2.4
Xylenes	<0.5				72	300
PHCs (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	<25				420	750
F2 (C_{10} - C_{16})	<100				150	150
F3 (C_{16} - C_{34})	<100				500	500
F4 (>C_{34})	<100				500	500
Chromatogram descends to baseline by nC50 ? (Yes/No)	Yes					
Surrogate Recovery (%)						
Dibromofluoromethane	125				60-140	
Toluene-d8	85				60-140	
4-Bromofluorobenzene	107				60-140	

F_{4G} (gravimetric heavy hydrocarbons) cannot be added to the C_6 to C_{50} hydrocarbons.

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

All Types of Property Use.

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(ug/L)		Recovery (%)		Recovery (%)	
BTEX in Water						
Benzene	<0.5	0.5	87	60-130	104	50-140
Toluene	<0.5	0.5	94	60-130	85	50-140
Ethylbenzene	<0.5	0.5	117	60-130	79	50-140
Xylenes	<0.5	0.5	118	60-130	93	50-140
PHC (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	<25	25	85	60-140	114	60-140
F2 (C_{10} - C_{16})	<100	100	88	60-140	118	60-140
F3 (C_{16} - C_{34})	<100	100	96	60-140	114	60-140
F4 (>C_{34})	<100	100	88	60-140	116	60-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Dibromofluoromethane	102	60-140	119	60-140	89	60-140
Toluene-d8	98	60-140	71	60-140	90	60-140
4-Bromofluorobenzene	116	60-140	118	60-140	75	60-140

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
BTEX in Water						
Benzene	0.0	0-30				
Toluene	0.0	0-30				
Ethylbenzene	0.0	0-30				
Xylenes	0.0	0-30				
PHC (F1-F4) in Water						
$F1_{-BTEX}$ (C_6 - C_{10})	0.0	0-30				
F2 (C_{10} - C_{16})	1.7	0-30				
F3 (C_{16} - C_{34})	5.7	0-30				
F4 (>C_{34})	2.0	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Dibromofluoromethane	86	60-140				
Toluene-d8	88	60-140				
4-Bromofluorobenzene	62	60-140				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, Chloride, Sulphate
Sample Description:	6 Water Sample(s)

Parameter	***23-2173-1*** MW1	***23-2173-2*** MW2	***23-2173-3*** MW3	***23-2173-4*** MW3 Duplicate	**Ground Water Standards [1]**	
					Table 1	**Table 2**
	Concentration (µg/L)					
PAHs in Water						
Naphthalene	<2	<2	<2	<2	7	11
2-Methylnaphthalene	<1	<1	<1	<1	2	3.2
1-Methylnaphthalene	<1	<1	<1	<1		
Acenaphthylene	<1	<1	<1	<1	1	1
Acenaphthene	<1	<1	<1	<1	4.1	4.1
Fluorene	<0.5	<0.5	<0.5	<0.5	120	120
Phenanthrene	<0.1	<0.1	<0.1	<0.1	0.1	1
Anthracene	<0.1	<0.1	<0.1	<0.1	0.1	2.4
Fluoranthene	<0.4	<0.4	<0.4	<0.4	0.4	0.41
Pyrene	<0.2	<0.2	<0.2	<0.2	0.2	4.1
Benz [a] anthracene	<0.2	<0.2	<0.2	<0.2	0.2	1
Chrysene	<0.1	<0.1	<0.1	<0.1	0.1	0.1
Benzo [b] fluoranthene	<0.1	<0.1	<0.1	<0.1	0.1	0.1
Benzo [k] fluoranthene	<0.1	<0.1	<0.1	<0.1	0.1	0.1
Benzo [a] pyrene	<0.01	<0.01	<0.01	<0.01	0.01	0.01
Indeno [1,2,3-cd] pyrene	<0.2	<0.2	<0.2	<0.2	0.2	0.2
Dibenz [a,h] anthracene	<0.2	<0.2	<0.2	<0.2	0.2	0.2
Benzo [g,h,i] perylene	<0.2	<0.2	<0.2	<0.2	0.2	0.2
Surrogate Recovery (%)						
Naphthalene-d8	51	62	84	68	50-140	
Phenanthrene-d10	50	76	81	76	50-140	
Chrysene-d12	68	74	117	96	50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

All Types of Property Use.

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, Chloride, Sulphate
Sample Description:	6 Water Sample(s)

Parameter	***23-2173-5*** MW4				**Ground Water Standards [1]**	
					Table 1	**Table 2**
	Concentration (µg/L)					
PAHs in Water						
Naphthalene	<2				7	11
2-Methylnaphthalene	<1				2	3.2
1-Methylnaphthalene	<1					
Acenaphthylene	<1				1	1
Acenaphthene	<1				4.1	4.1
Fluorene	<0.5				120	120
Phenanthrene	<0.1				0.1	1
Anthracene	<0.1				0.1	2.4
Fluoranthene	<0.4				0.4	0.41
Pyrene	<0.2				0.2	4.1
Benz [a] anthracene	<0.2				0.2	1
Chrysene	<0.1				0.1	0.1
Benzo [b] fluoranthene	<0.1				0.1	0.1
Benzo [k] fluoranthene	<0.1				0.1	0.1
Benzo [a] pyrene	<0.01				0.01	0.01
Indeno [1,2,3-cd] pyrene	<0.2				0.2	0.2
Dibenz [a,h] anthracene	<0.2				0.2	0.2
Benzo [g,h,i] perylene	<0.2				0.2	0.2
Surrogate Recovery (%)						
Naphthalene-d8	55				50-140	
Phenanthrene-d10	52				50-140	
Chrysene-d12	66				50-140	

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

All Types of Property Use.

QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/L)		Recovery (%)		Recovery (%)	
PAHs in Water						
Naphthalene	<2	2	89	50-140	88	50-140
2-Methylnaphthalene	<1	1	79	50-140	77	50-140
1-Methylnaphthalene	<1	1	86	50-140	84	50-140
Acenaphthylene	<1	1	64	50-140	64	50-140
Acenaphthene	<1	1	73	50-140	74	50-140
Fluorene	<0.5	0.5	95	50-140	95	50-140
Phenanthrene	<0.1	0.1	117	50-140	113	50-140
Anthracene	<0.1	0.1	66	50-140	60	50-140
Fluoranthene	<0.4	0.4	81	50-140	83	50-140
Pyrene	<0.2	0.2	81	50-140	82	50-140
Benz [a] anthracene	<0.2	0.2	89	50-140	89	50-140
Chrysene	<0.1	0.1	92	50-140	92	50-140
Benzo [b] fluoranthene	<0.1	0.1	86	50-140	88	50-140
Benzo [k] fluoranthene	<0.1	0.1	86	50-140	88	50-140
Benzo [a] pyrene	<0.01	0.01	85	50-140	85	50-140
Indeno [1,2,3-cd] pyrene	<0.2	0.2	132	50-140	133	50-140
Dibenz [a,h] anthracene	<0.2	0.2	105	50-140	103	50-140
Benzo [g,h,i] perylene	<0.2	0.2	97	50-140	98	50-140
Surrogates						
Parameter	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**	**Recovery (%)**	**AR**
Naphthalene-d8	82	50-140	68	50-140	71	50-140
Phenanthrene-d10	105	50-140	81	50-140	86	50-140
Chrysene-d12	88	50-140	62	50-140	66	50-140

LEGEND:
RL - Reporting Limit
LCS - Laboratory Control Sample
MS - Matrix Spike
AR - Acceptable Range

QA/QC Report

Parameter	Duplicate	AR				
	RPD (%)					
PAHs in Water						
Naphthalene	0.0	0-30				
2-Methylnaphthalene	0.0	0-30				
1-Methylnaphthalene	0.0	0-30				
Acenaphthylene	0.0	0-30				
Acenaphthene	0.0	0-30				
Fluorene	0.0	0-30				
Phenanthrene	0.0	0-30				
Anthracene	0.0	0-30				
Fluoranthene	0.0	0-30				
Pyrene	0.0	0-30				
Benz [a] anthracene	0.0	0-30				
Chrysene	0.0	0-30				
Benzo [b] fluoranthene	0.0	0-30				
Benzo [k] fluoranthene	0.0	0-30				
Benzo [a] pyrene	0.0	0-30				
Indeno [1,2,3-cd] pyrene	0.0	0-30				
Dibenz [a,h] anthracene	0.0	0-30				
Benzo [g,h,i] perylene	0.0	0-30				
Surrogates						
Parameter	**Recovery (%)**	**AR**				
Naphthalene-d8	69	50-140				
Phenanthrene-d10	68	50-140				
Chrysene-d12	100	50-140				

LEGEND:
AR - Acceptable Range
RPD - Relative Percent Difference

Certificate of Analysis

Analysis Requested:	Metals, Mercury, VOCs, PHCs, PAHs, Chloride, Sulphate
Sample Description:	6 Water Sample(s)

Parameter	***23-2173-1*** MW1	***23-2173-2*** MW2	***23-2173-3*** MW3	***23-2173-4*** MW3 Duplicate	**Ground Water Standards [1]**	
					Table 1	**Table 2**
	Concentration (µg/L)					
Chloride in Water	7,000	11,000	7,000	14,000	790,000	790,000
Sulfate in Water	5,300	26,000	<1,000	<1,000	N/A	N/A

Parameter	***23-2173-5*** MW4				**Ground Water Standards [1]**	
					Table 1	**Table 2**
	Concentration (µg/L)					
Chloride in Water	18,000				790,000	790,000
Sulfate in Water	<1,000				N/A	N/A

< result obtained was below RL (Reporting Limit).

[1] MOE - Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011.

Table 1: Full Depth Background Site Condition Standards.

Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition.

All Types of Property Use.

QA/QC Report

Parameter	**Blank**	**RL**	**LCS**	**AR**	**MS**	**AR**
	(µg/L)		**Recovery (%)**		**Recovery (%)**	
Chloride in Water	<100	100	100	80-120	93	70-130
Sulfate in Water	<100	100	102	80-120	98	70-130

Parameter	**Duplicate**	**AR**				
	RPD (%)					
Chloride in Water	2.6	0-20				
Sulfate in Water	4.0	0-20				

LEGEND:

RL - Reporting Limit

LCS - Laboratory Control Sample

MS - Matrix Spike

AR - Acceptable Range

RPD - Relative Percent Difference

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laboratory@fisherenvironmental.com

LAB JOB #: 23-2173

CHAIN OF CUSTODY

CLIENT INFORMATION

Company: Bydem Enterprises Inc.
Contact: Paul Mondell
Address: 156 Jozo Weider Boulevard, #9B
The Blue Mountains, ON L9Y 0V2

Phone: 416-460-7009
Fax:
Email: pmondell19@hotmail.com

Email/Fax results? No

PROJECT INFORMATION

Project Name: Phase Two ESA
Grey Road & Crosswinds Boulevard
The Blue Mountains, ON
Project ID: 23-13472
Sampled By: NE

TURNAROUND TIME (TAT) REQUIRED

STD - Standard (5-7 working days)			Working Time: 8:00am-5:00pm
SR - Semi Rush (48 hours)	50%	Surcharges apply; Sample received after 2pm will be considered received the next business	
R - Rush (24 hours)	75%		
SD - Same Day - 100%	x 100%		

BILLING INFORMATION

Purchase Order #:
Verbal Authorization:
Credit Card (type):
Credit Card #:
Expiry Date:

LAB SAMPLE ID	CLIENT'S SAMPLE ID AND DESCRIPTION	SAMPLING DATE/TIME	SAMPLE MATRIX	CONTAINER # & TYPE	TAT (Above)	ANALYSIS REQUESTED (Check or Specify)									NOTES
						Metals	PHCs	VOCs	PAHs	Hg	Cl	SO4			
1	MW1	27-Nov-23	Water	Bottle, vial	STD	x	x	x	x	x	x	x			
2	MW2	27-Nov-23	Water	Bottle, vial	STD	x	x	x	x	x	↓	↓			
3	MW3	27-Nov-23	Water	Bottle, vial	STD	x	x	x	x	x	↓	↓			
4	MW3 Duplicate	27-Nov-23	Water	Bottle, vial	STD	x	x	x	x	x	↓	↓			
5	MW4	27-Nov-23	Water	Bottle, vial	STD	x	x	x	x	x	↓	↓			
6	Trip Blank	27-Nov-23	Water	Vial	STD			x							

Relinquished by:
Name: Nnamdi Ezeilo
Signature:
Date & Time: 28-Nov-23
Method of Shipment: Cooler

Received by:
Name:
Date & Time: Nov 28, 23

Client's Comments:

Laboratory Remarks:

Regulatory Requirements

O. Reg. 153
Table: **1 & 2**
☐ Residential / Parkland
☐ Industrial / Commercial
☐ Agricultural
Soil Texture
☒ Coarse ☐ Med/Fine

Sewer Use
☐ Sanitary
☐ Storm
Region _____

Reg. 558
☐ TCLP

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CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: **WT2338818**	Page	: 1 of 12
Client	: **Fisher Engineering Limited**	Laboratory	: ALS Environmental - Waterloo
Contact	: Marius Voinea	Account Manager	: Emily Hansen
Address	: 15-400 Esna Park Drive Markham ON Canada L3R 3K2	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 905 475 7755, Ext. 29	Telephone	: +1 519 886 6910
Project	: 23-13472 BLUE MOUNTAINS	Date Samples Received	: 28-Nov-2023 15:45
PO	: ----	Date Analysis Commenced	: 28-Nov-2023
C-O-C number	: ----	Issue Date	: 30-Nov-2023 14:51
Sampler	: NE		
Site	: ----		
Quote number	: FISHER ENVIRONMENTAL - ALS 2022 STANDING OFFER		
No. of samples received	: 5		
No. of samples analysed	: 5		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Guideline Comparison

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.
Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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

Key : LOR: Limit of Reporting (detection limit).

Unit	*Description*
µg/L	micrograms per litre

>: greater than.
<: less than.
Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .

Qualifiers

Qualifier	*Description*
SUR-ND	*Surrogate recovery marginally exceeded ALS DQO. Reported non-detect results for associated samples were deemed to be unaffected.*

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

Analyte	Method/Lab	LOR	Unit	Client sample ID: MW1 Sampling date/time: 27-Nov-2023 13:00 WT2338818-001	ON153/04 T1-GW-All	ON153/04 T2-GW-C-All	ON153/04 T2-GW-F-All	--	--	--
Organochlorine Pesticides										
Aldrin	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**0.35 µg/L**	**0.35 µg/L**	--	--	--
Chlordane, cis- (alpha)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Chlordane, total	E660F/WT	0.011	µg/L	<0.011	**0.06 µg/L**	**7 µg/L**	**7 µg/L**	--	--	--
Chlordane, trans- (gamma)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
DDD, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, total	E660F/WT	0.0060	µg/L	<0.0060	**1.8 µg/L**	**10 µg/L**	**10 µg/L**	--	--	--
DDE, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, total	E660F/WT	0.0060	µg/L	<0.0060	**10 µg/L**	**10 µg/L**	**10 µg/L**	--	--	--
DDT, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, total	E660F/WT	0.0060	µg/L	<0.0060	**0.05 µg/L**	**2.8 µg/L**	**2.8 µg/L**	--	--	--
Dieldrin	E660F/WT	0.0080	µg/L	<0.0080	**0.05 µg/L**	**0.35 µg/L**	**0.35 µg/L**	--	--	--
Endosulfan, alpha-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, beta-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, total	E660F/WT	0.010	µg/L	<0.010	**0.05 µg/L**	**1.5 µg/L**	**1.5 µg/L**	--	--	--
Endrin	E660F/WT	0.010	µg/L	<0.010	**0.05 µg/L**	**0.48 µg/L**	**0.48 µg/L**	--	--	--
Heptachlor epoxide	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**0.048 µg/L**	**0.048 µg/L**	--	--	--
Heptachlor	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**1.5 µg/L**	**1.5 µg/L**	--	--	--
Hexachlorobenzene	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**1 µg/L**	**1 µg/L**	--	--	--
Hexachlorobutadiene	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**0.44 µg/L**	**0.6 µg/L**	--	--	--
Hexachlorocyclohexane, gamma-	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**1.2 µg/L**	**1.2 µg/L**	--	--	--
Hexachloroethane	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**2.1 µg/L**	**2.1 µg/L**	--	--	--
Methoxychlor	E660F/WT	0.0080	µg/L	<0.0080	**0.05 µg/L**	**6.5 µg/L**	**6.5 µg/L**	--	--	--
Decachlorobiphenyl	E660F/WT	0.10	%	101	--	--	--	--	--	--
Tetrachloro-m-xylene	E660F/WT	0.10	%	89.4	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T1-GW-All	153 T1-Ground Water-All Types of Property Uses
T2-GW-C-All	153 T2-Ground Water (Coarse Soil)-All Types of Property Use
T2-GW-F-All	153 T2-Ground Water (Fine Soil)-All Types of Property Use

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

	Client sample ID	MW2			
	Sampling date/time	27-Nov-2023 13:30			
Analyte	Method/Lab	LOR	Unit	WT2338818-002	ON153/04 T1-GW-All	ON153/04 T2-GW-C-All	ON153/04 T2-GW-F-All	--	--	--
Organochlorine Pesticides										
Aldrin	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**0.35 µg/L**	**0.35 µg/L**	--	--	--
Chlordane, cis- (alpha)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Chlordane, total	E660F/WT	0.011	µg/L	<0.011	**0.06 µg/L**	**7 µg/L**	**7 µg/L**	--	--	--
Chlordane, trans- (gamma)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
DDD, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, total	E660F/WT	0.0060	µg/L	<0.0060	**1.8 µg/L**	**10 µg/L**	**10 µg/L**	--	--	--
DDE, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, total	E660F/WT	0.0060	µg/L	<0.0060	**10 µg/L**	**10 µg/L**	**10 µg/L**	--	--	--
DDT, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, total	E660F/WT	0.0060	µg/L	<0.0060	**0.05 µg/L**	**2.8 µg/L**	**2.8 µg/L**	--	--	--
Dieldrin	E660F/WT	0.0080	µg/L	<0.0080	**0.05 µg/L**	**0.35 µg/L**	**0.35 µg/L**	--	--	--
Endosulfan, alpha-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, beta-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, total	E660F/WT	0.010	µg/L	<0.010	**0.05 µg/L**	**1.5 µg/L**	**1.5 µg/L**	--	--	--
Endrin	E660F/WT	0.010	µg/L	<0.010	**0.05 µg/L**	**0.48 µg/L**	**0.48 µg/L**	--	--	--
Heptachlor epoxide	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**0.048 µg/L**	**0.048 µg/L**	--	--	--
Heptachlor	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**1.5 µg/L**	**1.5 µg/L**	--	--	--
Hexachlorobenzene	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**1 µg/L**	**1 µg/L**	--	--	--
Hexachlorobutadiene	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**0.44 µg/L**	**0.6 µg/L**	--	--	--
Hexachlorocyclohexane, gamma-	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**1.2 µg/L**	**1.2 µg/L**	--	--	--
Hexachloroethane	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**2.1 µg/L**	**2.1 µg/L**	--	--	--
Methoxychlor	E660F/WT	0.0080	µg/L	<0.0080	**0.05 µg/L**	**6.5 µg/L**	**6.5 µg/L**	--	--	--
Decachlorobiphenyl	E660F/WT	0.10	%	113	--	--	--	--	--	--
Tetrachloro-m-xylene	E660F/WT	0.10	%	94.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T1-GW-All	153 T1-Ground Water-All Types of Property Uses
T2-GW-C-All	153 T2-Ground Water (Coarse Soil)-All Types of Property Use
T2-GW-F-All	153 T2-Ground Water (Fine Soil)-All Types of Property Use

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

	Client sample ID	MW3			
	Sampling date/time	27-Nov-2023 13:50			

Analyte	Method/Lab	LOR	Unit	WT2338818-003	ON153/04 T1-GW-All	ON153/04 T2-GW-C-All	ON153/04 T2-GW-F-All	--	--	--
Organochlorine Pesticides										
Aldrin	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**0.35 µg/L**	**0.35 µg/L**	--	--	--
Chlordane, cis- (alpha)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Chlordane, total	E660F/WT	0.011	µg/L	<0.011	**0.06 µg/L**	**7 µg/L**	**7 µg/L**	--	--	--
Chlordane, trans- (gamma)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
DDD, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, total	E660F/WT	0.0060	µg/L	<0.0060	**1.8 µg/L**	**10 µg/L**	**10 µg/L**	--	--	--
DDE, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, total	E660F/WT	0.0060	µg/L	<0.0060	**10 µg/L**	**10 µg/L**	**10 µg/L**	--	--	--
DDT, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, total	E660F/WT	0.0060	µg/L	<0.0060	**0.05 µg/L**	**2.8 µg/L**	**2.8 µg/L**	--	--	--
Dieldrin	E660F/WT	0.0080	µg/L	<0.0080	**0.05 µg/L**	**0.35 µg/L**	**0.35 µg/L**	--	--	--
Endosulfan, alpha-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, beta-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, total	E660F/WT	0.010	µg/L	<0.010	**0.05 µg/L**	**1.5 µg/L**	**1.5 µg/L**	--	--	--
Endrin	E660F/WT	0.010	µg/L	<0.010	**0.05 µg/L**	**0.48 µg/L**	**0.48 µg/L**	--	--	--
Heptachlor epoxide	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**0.048 µg/L**	**0.048 µg/L**	--	--	--
Heptachlor	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**1.5 µg/L**	**1.5 µg/L**	--	--	--
Hexachlorobenzene	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**1 µg/L**	**1 µg/L**	--	--	--
Hexachlorobutadiene	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**0.44 µg/L**	**0.6 µg/L**	--	--	--
Hexachlorocyclohexane, gamma-	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**1.2 µg/L**	**1.2 µg/L**	--	--	--
Hexachloroethane	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**2.1 µg/L**	**2.1 µg/L**	--	--	--
Methoxychlor	E660F/WT	0.0080	µg/L	<0.0080	**0.05 µg/L**	**6.5 µg/L**	**6.5 µg/L**	--	--	--
Decachlorobiphenyl	E660F/WT	0.10	%	150 SUR-ND	--	--	--	--	--	--
Tetrachloro-m-xylene	E660F/WT	0.10	%	86.5	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T1-GW-All	153 T1-Ground Water-All Types of Property Uses
T2-GW-C-All	153 T2-Ground Water (Coarse Soil)-All Types of Property Use
T2-GW-F-All	153 T2-Ground Water (Fine Soil)-All Types of Property Use

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

	Client sample ID	MW3-DUPLICATE			
	Sampling date/time	27-Nov-2023 13:50			
Analyte	Method/Lab	LOR	Unit	WT2338818-004	ON153/04 T1-GW-All	ON153/04 T2-GW-C-All	ON153/04 T2-GW-F-All	--	--	--
Organochlorine Pesticides										
Aldrin	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**0.35 µg/L**	**0.35 µg/L**	--	--	--
Chlordane, cis- (alpha)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Chlordane, total	E660F/WT	0.011	µg/L	<0.011	**0.06 µg/L**	**7 µg/L**	**7 µg/L**	--	--	--
Chlordane, trans- (gamma)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
DDD, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, total	E660F/WT	0.0060	µg/L	<0.0060	**1.8 µg/L**	**10 µg/L**	**10 µg/L**	--	--	--
DDE, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, total	E660F/WT	0.0060	µg/L	<0.0060	**10 µg/L**	**10 µg/L**	**10 µg/L**	--	--	--
DDT, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, total	E660F/WT	0.0060	µg/L	<0.0060	**0.05 µg/L**	**2.8 µg/L**	**2.8 µg/L**	--	--	--
Dieldrin	E660F/WT	0.0080	µg/L	<0.0080	**0.05 µg/L**	**0.35 µg/L**	**0.35 µg/L**	--	--	--
Endosulfan, alpha-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, beta-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, total	E660F/WT	0.010	µg/L	<0.010	**0.05 µg/L**	**1.5 µg/L**	**1.5 µg/L**	--	--	--
Endrin	E660F/WT	0.010	µg/L	<0.010	**0.05 µg/L**	**0.48 µg/L**	**0.48 µg/L**	--	--	--
Heptachlor epoxide	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**0.048 µg/L**	**0.048 µg/L**	--	--	--
Heptachlor	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**1.5 µg/L**	**1.5 µg/L**	--	--	--
Hexachlorobenzene	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**1 µg/L**	**1 µg/L**	--	--	--
Hexachlorobutadiene	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**0.44 µg/L**	**0.6 µg/L**	--	--	--
Hexachlorocyclohexane, gamma-	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**1.2 µg/L**	**1.2 µg/L**	--	--	--
Hexachloroethane	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**2.1 µg/L**	**2.1 µg/L**	--	--	--
Methoxychlor	E660F/WT	0.0080	µg/L	<0.0080	**0.05 µg/L**	**6.5 µg/L**	**6.5 µg/L**	--	--	--
Decachlorobiphenyl	E660F/WT	0.10	%	126	--	--	--	--	--	--
Tetrachloro-m-xylene	E660F/WT	0.10	%	78.2	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T1-GW-All	153 T1-Ground Water-All Types of Property Uses
T2-GW-C-All	153 T2-Ground Water (Coarse Soil)-All Types of Property Use
T2-GW-F-All	153 T2-Ground Water (Fine Soil)-All Types of Property Use

Analytical Results

Sub-Matrix: **Water**
(Matrix: **Water**)

	Client sample ID	MW4			
	Sampling date/time	27-Nov-2023 14:30			
Analyte	Method/Lab	LOR	Unit	WT2338818-005	ON153/04 T1-GW-All	ON153/04 T2-GW-C-All	ON153/04 T2-GW-F-All	--	--	--
Organochlorine Pesticides										
Aldrin	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**0.35 µg/L**	**0.35 µg/L**	--	--	--
Chlordane, cis- (alpha)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Chlordane, total	E660F/WT	0.011	µg/L	<0.011	**0.06 µg/L**	**7 µg/L**	**7 µg/L**	--	--	--
Chlordane, trans- (gamma)	E660F/WT	0.0080	µg/L	<0.0080	--	--	--	--	--	--
DDD, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, total	E660F/WT	0.0060	µg/L	<0.0060	**1.8 µg/L**	**10 µg/L**	**10 µg/L**	--	--	--
DDE, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, total	E660F/WT	0.0060	µg/L	<0.0060	**10 µg/L**	**10 µg/L**	**10 µg/L**	--	--	--
DDT, 2,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, 4,4'-	E660F/WT	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, total	E660F/WT	0.0060	µg/L	<0.0060	**0.05 µg/L**	**2.8 µg/L**	**2.8 µg/L**	--	--	--
Dieldrin	E660F/WT	0.0080	µg/L	<0.0080	**0.05 µg/L**	**0.35 µg/L**	**0.35 µg/L**	--	--	--
Endosulfan, alpha-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, beta-	E660F/WT	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, total	E660F/WT	0.010	µg/L	<0.010	**0.05 µg/L**	**1.5 µg/L**	**1.5 µg/L**	--	--	--
Endrin	E660F/WT	0.010	µg/L	<0.010	**0.05 µg/L**	**0.48 µg/L**	**0.48 µg/L**	--	--	--
Heptachlor epoxide	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**0.048 µg/L**	**0.048 µg/L**	--	--	--
Heptachlor	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**1.5 µg/L**	**1.5 µg/L**	--	--	--
Hexachlorobenzene	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**1 µg/L**	**1 µg/L**	--	--	--
Hexachlorobutadiene	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**0.44 µg/L**	**0.6 µg/L**	--	--	--
Hexachlorocyclohexane, gamma-	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**1.2 µg/L**	**1.2 µg/L**	--	--	--
Hexachloroethane	E660F/WT	0.0080	µg/L	<0.0080	**0.01 µg/L**	**2.1 µg/L**	**2.1 µg/L**	--	--	--
Methoxychlor	E660F/WT	0.0080	µg/L	<0.0080	**0.05 µg/L**	**6.5 µg/L**	**6.5 µg/L**	--	--	--
Decachlorobiphenyl	E660F/WT	0.10	%	121	--	--	--	--	--	--
Tetrachloro-m-xylene	E660F/WT	0.10	%	90.0	--	--	--	--	--	--

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Please refer to the Accreditation section for an explanation of analyte accreditations.

No Breaches Found

Key:

ON153/04	Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
T1-GW-All	153 T1-Ground Water-All Types of Property Uses
T2-GW-C-All	153 T2-Ground Water (Coarse Soil)-All Types of Property Use
T2-GW-F-All	153 T2-Ground Water (Fine Soil)-All Types of Property Use

Chain of Custody (COC) / Analytical Request Form

COC Number: 22 -

Page 1 of 1

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Environmental Division Waterloo

Work Order Reference

WT2338818

Telephone : +1 519 886 6910

Report To	Contact and company name below will appear on the final report
Company:	FISHER ENGINEERING LIMITED
Contact:	MARIUS VOINEA
Phone:	905-475-7755
	Company address below will appear on the final report
Street:	400 ESNA PARK DR., UNIT 15
City/Province:	MARKHAM, ON
Postal Code:	L3R 3K2
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	
Contact:	

Reports / Recipients

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

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

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

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax: marius@fishereng.com

Email 2:

Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax:

Email 2:

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minir

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge mini

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge mini

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge mini

☐ Same day [E2] if received by 10am M-S - 200% rush surcharg

Additional fees may apply to rush requests on weeken

Date and Time Required for all E&P TATs:

For all tests with rush TATs requested, please

Project Information

ALS Client Code / QUOTE #: 2023 STANDING OFFER

Job / Project #: 23-13472 BLUE MOUNTAINS

PO / AFE:

LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: PO#:

Major/Minor Code: Routing Code:

Requisitioner:

Location:

ALS Lab Work Order # (ALS use only):

ALS Contact: EMILY HANSEN **Sampler:** NE

Analysis Re

Indicate Filtered (F), Preserved (P) or Filtered a

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	OC PESTICIDES	SAMPLES ON HOLD	EXTENDED STORAGE REQUIF	SUSPECTED HAZARD (see no
	MW1	23-Nov-27	13:00	Groundwater	2	R			
	MW2	23-Nov-27	13:30	Groundwater	2	R			
	MW3	23-Nov-27	13:50	Groundwater	2	R			
	MW3-Duplicate	23-Nov-27	13:50	Groundwater	2	R			
	MW4	23-Nov-27	14:30	Groundwater	2	R			

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

Are samples taken from a Regulated DW System?

☐ YES ☐ NO

Are samples for human consumption/ use?

☐ YES ☐ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Ontario Regulation 153/04 - April 15, 2011 Standards (JUL, 2011)
Tables 1 and 2

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☑ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				2.3			

SHIPMENT RELEASE (client use)

Released by:	Nnamdi Ezeilo	Date:	28-Nov-23	Time:

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	FA	Date:	28 Nov 2023	Time:	3:45 pm

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

MAY 2023 FRONT

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

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

OR-533