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## **A REPORT TO**

**BEECHCROFT INVESTMENTS INC.**

## **PHASE TWO ENVIRONMENTAL SITE ASSESSMENT**

### **PROPOSED RESIDENTIAL DEVELOPMENT**

**63 AND 63A TRAFALGAR ROAD AND**

**PARTS OF LOTS 23 AND 24 IN CONCESSION 8**

**TOWN OF ERIN**

**Reference No. 2206-E054**

**January 5, 2023**

### **DISTRIBUTION**

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It should be noted that the information supplied in this report is not sufficient to obtain approval for disposal of excess soil or materials generated during construction.

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## 1.0 **EXECUTIVE SUMMARY**

Soil Engineers Ltd. (SEL) was retained by Beechcroft Investments Inc. to carry out a Phase Two Environmental Site Assessment (Phase Two ESA), as defined by Ontario Regulation (O. Reg.) 153/04, as amended made under Environmental Protection Act. The Phase Two ESA was conducted for properties which are municipally addressed as 63 and 63A Trafalgar Road and an adjacent property with no municipal address but with a legal address as parts of Lots 23 and 24 in Concession 8, in the Town of Erin, Ontario (hereinafter referred to as the 'subject site').

The purpose of the Phase Two ESA was to assess the soil and ground water quality at the subject site, as related to the Areas of Potential Environmental Concerns (APECs) identified in the SEL Phase One Environmental Site Assessment (Phase One ESA) for the subject site.

The Phase Two ESA field work was conducted at selected locations on the subject site. Soil and groundwater samples were collected and submitted for chemical analyses for contaminants of concern. The analytical results were compared with the Ministry of the Environment, Conservation and Parks (MECP) Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Residential/ Park/ Institutional property use for coarse textured soil (Table 2 Standards), as published in the "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" (EPA), dated April 15, 2011.

A review of the analytical test results of soil and groundwater samples indicated that the tested parameters at the test locations met the Table 2 Standards. Consequently, there are no contaminants identified at the subject site at a concentration above the applicable site condition standards (Table 2 Standards) during the Phase Two ESA.

Based on the findings of the Phase Two ESA, it is our opinion that the property is suitable for the proposed development. No further environmental investigation is recommended at this time.



## 2.0 INTRODUCTION

Soil Engineers Ltd. (SEL) was retained by Beechcroft Investments Inc. to carry out a Phase Two Environmental Site Assessment (Phase Two ESA), as defined by Ontario Regulation (O. Reg.) 153/04, as amended by O. Regs. 366/05, 66/08, 511/09, 245/10, 179/11, 269/11 and 333/13, herein referred to as O. Reg. 153/04 made under Environmental Protection Act (EPA). The Phase Two ESA was conducted for properties which are municipally addressed as 63 and 63A Trafalgar Road and an adjacent property with no municipal address but with a legal address as parts of Lots 23 and 24 in Concession 8, in the Town of Erin, Ontario (hereinafter referred to as the 'subject site').

The purpose of the Phase Two ESA was to determine the soil and groundwater quality at the subject site, as related to the potential environmental concerns identified in the SEL Phase One Environmental Site Assessment (Phase One ESA) for the subject site.

### 2.1 Site Description

The subject site, irregular in shape and approximately of 52.0779 hectares (ha) (128.7 acres (ac)) in area, consists of properties which are municipally addressed as 63 and 63A Trafalgar Road and an adjacent property with no municipal address but with a legal address as parts of Lots 23 and 24 in Concession 8, in the Town of Erin. The Property Identification Numbers (PINs) of the subject site are 71143-0296 (LT), and 71143-1190 (LT). The legal descriptions of the subject site from the parcel register are: "LT 23 W/S GUELPH ST PL 95 ERIN; LT 24 W/S GUELPH ST PL 95 ERIN; LT 18 E/S GUELPH ST PL 95 ERIN; LT 19 E/S GUELPH ST PL 95 ERIN; LT 20 E/S GUELPH ST PL 95 ERIN; LT 14 W/S MARKET ST PL 95 ERIN; LT 15 W/S MARKET ST PL 95 ERIN; LT 16 W/S MARKET ST PL 95 ERIN; LT 11 E/S MARKET ST PL 95 ERIN; LT 12 E/S MARKET ST PL 95 ERIN; PT LT 4 PL 95 ERIN ABUTTING RDAL BTN CON 7 & 8 AS IN DS14870; PT LT 17 E/S GUELPH ST PL 95 ERIN; PT LT 21 W/S GUELPH ST PL 95 ERIN; PT LT 22 W/S GUELPH ST PL 95 ERIN AS IN DS14410; PT LT 23 CON 8 ERIN AS IN DS14346 (FIRSTLY); ERIN" and "PT LT 24 CON 8 ERIN EXCEPT PTS 1-3, 61R2749 & PTS 1-3, 61R10780 & PART 1, 61R21973 DS7839, ROS383121, MS13509, ROS609336, ROS593071, ROS578501, RO756343,



ROS571915, ROS207666, RO770469, MS100081, MS76550, MS84705, MS647; ERIN; SUBJECT TO AN EASEMENT OVER PART 2, 61R21973 IN FAVOUR OF PART LOT 24 CONCESSION 8 ERIN, PART 1, 61R21973 AS IN WC653287”.

At the time of this assessment, the subject site was noted to be mainly being used for agricultural purposes with residential structures at the southwest portion of the subject site. The neighbouring properties consist of residential properties to the west and northwest, farm fields to the north, northeast and east, and commercial properties to the south and southwest of the subject site.

## 2.2 **Property Ownership**

This Phase Two ESA was commissioned to address the environmental concerns in accordance with our proposal, as approved by Ms. Uzo Rossouw, RPP, Director – Land Development, Beechcroft Investments Inc.

Beechcroft Investments Inc.  
20 Cachet Woods Court, Suite #6,  
Markham, ON  
L6C 3G1

Attention: Ms. Uzo Rossouw, RPP, Director – Land Development

## 2.3 **Current and Proposed Future Uses**

The subject site is mainly being used for agricultural purposes with residential structures at the southwest portion of the subject site. Residential development is proposed for the subject site. It is anticipated that the new development will be provided with municipal services meeting urban standards.



## 2.4 Applicable Site Condition Standards

SEL has selected the applicable regulatory standards from O. Reg. 153/04, as amended, made under the Environmental Protection Act (EPA), to assess the analytical data received from the submitted soil and groundwater samples. The following information was used to select the appropriate standard:

- The subject site is not considered to be sensitive based on the definition set forth in Ontario Regulation 153/04 as amended, as the property is not within/adjacent/part of an area of natural significance and the analytical testing indicated the pH of the tested surface soil sample is between 5 and 9 and subsurface soil sample is between 5 and 11.
- The property is not a shallow soil property, as the bedrock was not encountered within 2.0 metres (m) below ground surface (mbgs) during the investigation.
- No watercourse or water bodies are located at or within 30 metres (m) from the subject site.
- Based on the information obtained from the SEL Phase One ESA, there are records of water wells the subject site and at neighbouring properties within 250 m from the subject site boundaries.
- Full Depth Generic Site Condition criteria is to be used in this assessment.
- The intended property use of the subject site is residential.
- No grain size analysis has been performed and, therefore, coarse textured soils standards are automatically applied.

Based on the above information, the Ministry of the Environment, Conservation and Parks (MECP) Table 2, Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Residential/ Park/ Institutional property use for coarse textured soil (Table 2 Standards) as published in the “Soil, Groundwater, Sediment Standards for use under Part XV.1 of the Environmental Protection act” (EPA), April 15, 2011 has been selected for evaluating the environmental conditions at the subject site.



### 3.0 **BACKGROUND**

#### 3.1 **Physical Setting**

Based on the information obtained from the Phase One ESA, the general physical setting of the subject site is summarized below:

The subject site is located within rural residential areas within the Town of Erin. The neighbouring properties consist of residential properties to the west and northwest, farm fields to the north, northeast and east, and commercial properties to the south and southwest of the subject site.

According to the Surface Geology Map of the Phase One Study Area, the majority of the subject site is underlain by Glaciofluvial ice-contact deposits with materials documented as gravel and sand, minor till, includes esker, kame, end moraine, ice-marginal delta and subaqueous fan deposits. The eastern portion of the subject site is underlain by Glaciofluvial outwash deposits with the material described gravel and sand, includes, proglacial river and deltaic deposits. The Bedrock Geology Map shows the subject site is within Armabel Formation. The rock description was documented as sandstone, shale, dolostone, and siltstone. According to the Bedrock Topography Series, depth to bedrock in general vicinity of the subject site is approximately 26 metres below ground surface (mbgs).

The subject site is adjacent to a roadway (i.e. Trafalgar Road) at the southwest direction. The overall grade of the subject site generally descends to the southwesterly direction. A watershed map obtained from the Land Information Ontario (LIO), dated 2022, shows that the subject site is located within the Sixteen Mile Creek – Credit River Watershed.

Based on the review of the Ministry of the Natural Resources and Forestry (MNRF) and the LIO for listings of various classes of natural areas within the vicinity of the subject site, there are no Area of Natural Significance or watercourses at the subject site or within 30 m from the subject site boundaries. The subject site is not located in a Well-head Protection Area.



### 3.2 **Past Investigations**

The following Past Investigation Report was reviewed as part of this Phase Two ESA:

- Phase One Environmental Site Assessment (Phase One ESA), Proposed Residential Development, 63 and 63A Trafalgar Road and Parts of Lots 23 and 24 in Concession 8, Town of Erin, Reference No. 2206-E054, November 8, 2022.

The SEL Phase One ESA identified Potentially Contaminating Activities (PCAs) at the subject site and in the Phase One Study Area that may contribute to Areas of Potential Environmental Concerns (APECs) at the subject site, based on records review, interviews and site reconnaissance. The findings of the SEL Phase One ESA revealed the following APECs:

APEC 1: Potential use of pesticides during agricultural activities at majority of the subject site.

APEC 2: Historical aboveground storage tanks (ASTs) at northeast portion of basement of residential building located at southwest portion of the subject site.

APEC 3: Oil stains at the backyard of the residential building at the subject site.

APEC 4: One (1) registered underground storage tank (UST) at the property located at 63A Trafalgar Road, southwestern portion of the subject site

APEC 5: Historical railway tracks located adjacent to the south of the subject site

APEC 6: Historical railway tracks located adjacent to the south of the subject site

APEC 7: Presence of waste transfer station located to the northeast of the subject site

APEC 8: Presence of a gas station with USTs at the neighbouring property located about 15 m to the south of the subject site.

The locations of the PCAs and APECs are shown on Drawing Nos. 1 and 2, respectively.



## **SCOPE OF THE INVESTIGATION**

### **4.1 Overview of Site Investigation**

The purpose of this investigation (Phase Two ESA) was to assess the soil and groundwater quality at the subject site, as related to the potential environmental concerns raised in the findings of our Phase One ESA. This Phase Two ESA was conducted in general conformance with the CSA Standard Z769-00 (Reaffirmed in 2018) and O. Reg. 153/04, as amended.

The scope of work for this investigation includes:

- Locate the underground and overhead utilities.
- Carryout ground penetrating radar (GPR) survey to identify the registered UST surrounding the building at 63A Trafalgar Road.
- Advance twelve (12) boreholes (designated as BH1 to BH12) to depths ranging from 1.4 meter below ground surface (mbgs) to 7.9 mbgs and eight (8) hand-dug test pits (designated as TP1 to TP8) to depths of 0.3 mbgs.
- Collect representative soil samples from the sampling locations.
- Undertake field examination of the retrieved soil samples for visual and olfactory evidence of potential contamination.
- Undertake soil vapour measurements for the retrieved soil samples using a combustible gas detector (RKI Eagle) in methane elimination mode.
- Install eight (8) monitoring wells at BH1 to BH8 locations (designated at BH/MW1 to BH/MW8) for groundwater sampling, testing and monitoring.
- Carry out an analytical testing program on selected soil and groundwater samples including quality assurance and quality control (QA/QC) samples for one or more of the following parameters: Petroleum Hydrocarbons (PHCs), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Chlorophenols (CPs), Organochlorine Pesticides (OCs) and Metals and/or Inorganic parameters.
- Review analytical testing results of submitted soil and groundwater samples using





applicable Site Condition Standards.

- Prepare a Phase Two ESA report containing the findings of the investigation.

The rationale for the selection of sampling locations is presented in the Sampling and Analysis Plan, Appendix 'A'.

#### 4.2 **Media Investigated**

Based on the findings of the Phase One ESA, soil and groundwater media were investigated during the Phase Two ESA in accordance with the Sampling and Analysis Plan provided in Appendix 'A'. Sediment was not identified as potentially contaminated medium in the Phase One ESA. Consequently, no sediment investigation was conducted as part of this Phase Two ESA.

Boreholes were advanced using a flight auger (CME 55), Geoprobe (7822) and Pionjar at various locations at the subject site. Soil samples were retrieved from split spoon during drilling with flight auger and Pionjar while soil samples were retrieved from Shelby Tube during borehole drilling with Geoprobe. Soil samples were logged in the field and headspace vapour screening was conducted for all retrieved soil samples using a combustible gas detector (RKI Eagle) in methane elimination mode, calibrated with hexane and having a minimum detection level of 2 parts per million by volume (ppmv).

Groundwater monitoring wells were installed in eight (8) borehole locations (designated as BH/MW1 to BH/MW8). The monitoring wells were constructed using 50 millimeter (mm) diameter flush-joint threaded PVC monitoring well supplies. The wells were completed with 3.0 m in length water intake screens. Groundwater sampling was conducted using dedicated low-density polyethylene tubing and laboratory-supplied containers (prepared with preservative for the analyses that are being conducted).

#### 4.3 **Phase One Conceptual Site Model**

A plan, illustrating the features of the subject site and surrounding areas within 250 m from



the subject site boundaries including the locations of potentially contaminating activities (PCAs), is presented on Drawing No. 1.

4.4 **Deviations From Sampling and Analysis Plan**

No deviations from the sampling and analysis plan were encountered.

4.5 **Impediments**

No impediments were encountered during the investigation for the Phase Two ESA.



## 5.0 **INVESTIGATION METHOD**

### 5.1 **General**

The Phase Two ESA was carried out in accordance with the Sampling and Analysis Plan provided in Appendix 'A' and in accordance with the SEL Standard Operating Procedures (SOPs).

The investigation of the Phase Two ESA consisted of advancing twelve (12) boreholes and carrying out eight (8) hand-dug test pits, installation of eight (8) monitoring wells at the selected borehole locations, field measurements, monitoring, and collection of soil samples from the boreholes and test pits and groundwater samples from installed monitoring wells for chemical analyses. The soil and groundwater samples were assessed for potential contamination with respect to the APECs identified by the SEL Phase One ESA.

The sampling and decontamination procedures were conducted in accordance with the "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", May 1996, revised December 1996, as amended by O. Reg. 511/09.

Laboratory analytical methods, protocols and procedures were carried out in accordance with the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act", dated March 9, 2004, amended as of July 1, 2011, in accordance with O. Reg. 511/09 and O. Reg. 269/11.

### 5.2 **Drilling and Excavating**

Prior to the field work, the underground and overhead utilities were located and marked out by the representatives of the major utility companies as per Ontario One Call Program and a private locator (All Clear Locates). The location of the registered UST location was surveyed with electromagnetic wave (EM-31) and ground penetrating radar technique by Geophysics GPR International Inc. The survey carried out around accessible potential areas concluded that the areas scanned with the EM-31 did not reveal any anomalous targets that



could potentially indicate the presence of an underground storage tank.

The field work for the Phase Two ESA was conducted during November 16 and 22, 2022 period for boreholes (BH1 to BH12) up to maximum depths of 7.9 mbgs. A total of eight (8) test pits samples were collected on November 16, 2022. Additional boreholes were advanced at the subject site as part of concurrent Geotechnical Investigation (BH13 to BH17) during the period of November 23 and 25, 2023. The locations of the boreholes and test pits are shown in Drawing No. 2.

Boreholes were advanced using a conventional drilling rig (flight auger) equipped with a split spoon soil sampler (BH1 to BH9, BH13 to BH17) supplied by specialist contractor, DBW Drilling Limited; Pionjar (BH10) with split spoon and Geoprobe with Shelby Tube sampler (BH11 and BH12) supplied by a specialist drilling contractor, Kodiak Drilling. Soil samples retrieved from boreholes were recovered at regular intervals, either using a split spoon or Shelby Tube sampler, for soil vapour measurement, soil classification and visual and olfactory observations of potential contamination.

Drilling and sampling equipment such as drill rigs, augers, drill pipes, drilling rods, split-spoons and spade were decontaminated prior to initial use, between borehole locations and at the completion of drilling activities. The drilling equipments were manually scrubbed with a brush using a phosphate-free solution and power washed to remove any adhered soils, foreign material and potential contaminants. In addition, all sampling equipments were decontaminated prior to each usage.

The field work was monitored by SEL environmental personnel who recorded the findings and observations.

### 5.3 **Soil: Sampling**

Soil samples from the boreholes were retrieved continuously with Shelby Tube (BH11 and BH12) and with split spoon (BH1 to BH10). Prior to recovering a sample, the sampling equipment was brushed clean using a solution of phosphate-free detergent and distilled water,



and each discrete sample was handled by the sampler with new disposable gloves in order to avoid the risk of cross-contamination between the samples. Each soil sample was split with part of the sample sealed in a laboratory-prepared sampling media and stored in a cooler with ice, and the remainder of the sample sealed in a double sealable bag for vapour measurement and soil classification. A small amount of the soil sample was retrieved by a disposable 'T' shaped Terracore sampler and the soil samples from the Terracore sampler were stored in methanol vials for PHC Fraction F1 and VOCs analyses.

The subsoil conditions at the borehole locations indicated deposits of silty sand, silty sand till, silt, sand, sandy silt, gravelly sand, silty clay, clayey silt, sandy gravel at various depths and locations. Bedrock was not encountered during the Phase Two ESA investigation. Detailed descriptions of the encountered subsurface conditions are presented on the Borehole Logs provided in Appendix 'B'.

Generally the representative 'worst case' soil samples from each borehole to determine the maximum concentrations were selected and sent to the laboratory for chemical analyses, based on the soil vapour measurements and visual and olfactory observations. However, in absence of any evidence of elevated vapor or contamination/unusual observation, the soil samples were selected according to the contaminant of concerns (COCs) behavior (i.e. near the potential source for metals and PAHs, at the zone of water bearing for PHCs, and below the water table for VOCs).

#### 5.4 **Field Screening Measurements**

The headspace vapour concentrations were measured using a portable RKI Eagle gas detector, TYPE 101 (Serial Number: E091011) set to include combustible gases with the exception of methane (methane elimination mode), and having a minimum detection level of 2 ppmv. Prior to taking the measurements, the instrument was calibrated to hexane standards for both ppm and lower explosive limit (LEL) according to the instruction manual for the instrument. Our field personnel are trained by the supplier for the proper calibration procedure. The instrument is calibrated or tuned up by the supplier (Pine Environmental Services Inc.), seasonally.



The results of the soil vapour measurement are presented in the Borehole Logs attached in Appendix 'B'.

Representative worst case soil samples from each borehole were selected and sent to the laboratory for chemical analyses, based on the soil vapour measurements and visual and olfactory observations or COCs behavior for chemical analyses.

### 5.5 **Groundwater: Monitoring Well Installation**

During the Phase Two ESA, a total of eight (8) monitoring wells were installed at the subject site by DBW Drilling Ltd., an MECP approved licensed well contractor. The monitoring wells were constructed using 50 mm diameter PVC screen, 3.0 m in length in the boreholes. A PVC riser, capped at the top, was installed from the screen section above the top grade. A sand pack, consisting of clean silica sand, was placed around the screened zone with a bentonite seal placed above the sand pack. At each monitoring well location, the above ground risers were protected by steel monument casings that have been sealed into the ground with concrete. The monitoring well construction details are provided on the Borehole Logs in Appendix 'B' and in Table I.

The monitoring wells installed at the subject site were instrumented with dedicated low-density polyethylene tubing to facilitate well development, purging and sampling requirements.

Well development was performed following the advancement of wells on November 22 and 23, 2022. The monitoring wells were developed to remove any fluids that may have been introduced into the wells during drilling and to remove particles that may have become entrained in the wells and filter pack. Purging of three (3) well casing volumes of groundwater from each well was used for each well development. Purged water was collected and stored at the subject site for future disposal.



## 5.6 **Groundwater: Field Measurement of Water Quality Parameters**

Groundwater monitoring was conducted at the subject site on December 1, 2022. Water level measurements were taken using a water level meter (Dipper-T) equipped with a thermometer. Groundwater observations were recorded for colour, clarity, the presence or absence of any free product/surface sheen and any odours present during the development the wells and monitoring events. The water level measuring device was cleaned after each measurement using Alconox solution and water, followed by a distilled water rinse and a methanol rinse, in order to prevent cross-contamination between monitoring wells.

The records of water level measurements are presented in Table II.

## 5.7 **Groundwater: Sampling**

Groundwater sampling was conducted on November 22 and 23, 2022, after purging and allows the water at the wells to stabilize. The groundwater purging and sampling activities were carried out using dedicated low-density polyethylene tubing. Groundwater samples were collected into laboratory-supplied containers, prepared with preservative for the analysis being conducted.

The samples scheduled for analysis of metals were passed through a 0.45 micron filter as part of the groundwater sampling process.

## 5.8 **Sediment: Sampling**

Sediment was not assessed as part of this investigation.

## 5.9 **Analytical Testing**

The soil and groundwater samples were analysed by Bureau Veritas Laboratories (BV Labs) in Mississauga, Ontario. BV Labs are accredited by the Canadian Association for Laboratory Accreditation (CALA) in accordance with ISO/IEC 17025:2005 – “General Requirements for



the Competence of Testing and Calibration Laboratories” for all the parameters analysed during this investigation.

#### 5.10 **Residue Management Procedures**

There was no significant volume of excess soil generated from the field investigation. Groundwater purged from the monitoring wells was stored in containers, using a separate container for each well. The containers were clearly marked and stored temporarily at the subject site for later disposal.

#### 5.11 **Elevation Surveying**

The ground elevations of the borehole locations were surveyed using hand-held (Trimble Geoexplorer 7000 series) Global Navigation Satellite System measurement equipment. The equipment is capable of having vertical and horizontal accuracy of  $0.1 \pm \text{m}$ .

The elevations at the borehole and monitoring well locations are presented in Table II and the borehole/monitoring well logs in Appendix ‘B’.

#### 5.12 **Quality Assurance/Quality Control (QA/QC) Measures**

The soil and groundwater Sampling and Analysis Plan provided in Appendix ‘A’ was prepared and executed based on the findings of the Phase One ESA.

The Phase Two ESA was carried out in accordance with the Sampling and Analysis Plan and in accordance with the SEL Standard Operating Procedures (SOPs).

The sampling and decontamination procedures were conducted in accordance with the “Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario”, May 1996, revised December 1996, as amended by O. Reg. 511/09.

Laboratory analytical methods, protocols and procedures were carried out in accordance with





the “Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act”, dated March 9, 2004, amended as of July 1, 2011, in accordance with O. Reg. 511/09 and O. Reg. 269/11.

Field observations were made and documented in a field book in accordance with generally accepted practices and with the procedures developed and utilized by SEL.

SEL field sampling QA/QC protocols, applied to the investigation, are as follows:

- The collection of at least one field duplicate sample per 10 samples for every sampling medium (where three or more such samples are collected)
- Where volatile organic chemical analysis is required, the collection of discrete samples directly into laboratory-prepared sample vials and immediate placement into a cooler with ice to maintain the temperature at less than 10 °C for transport to the laboratory.
- The use of dedicated equipment (Bailers, Waterra tubing, etc.) for groundwater sampling at different monitors and the thorough cleaning of soil sampling equipment between sample sites.
- If trace organics in the collected samples are anticipated (organic chemicals with a concentration of less than 1 µg/g), precautions are made to avoid any possible cross-contamination (eliminating bare hand or latex glove contacts with the soil or water); soil sampling equipment used for the collection of trace organics are cleaned using a phosphate-free detergent and water, followed by a distilled water rinse and a methanol rinse between sampling sites.
- The inclusion of one trip blank for water samples per site (where three or more samples are collected) for VOC parameters; the bottles containing the trip blank are prepared by the laboratory; QA/QC samples are kept in the cooler on ice for the duration of the sampling event, and returned to the laboratory for analyses.

The results of the field duplicate and trip blank samples are discussed later in Section 6.9 of this report.



## 6.0 **REVIEW AND EVALUATION**

### 6.1 **Geology**

Detailed descriptions of the encountered subsoil conditions are presented on the Borehole Logs provided in Appendix 'B'. The subsoil conditions at the borehole locations indicate deposits of silty sand, silty sand till, silt, sand, sandy silt, gravelly sand, silty clay, clayey silt, sandy gravel at various depths and locations. No bedrock was encountered during the Phase Two ESA. The locations of cross sections for soil stratigraphy at the subject site are presented on Drawing No. 3. Geological Cross Sections, A-A' and B-B' are presented on Drawing No. 4.

The descriptions of the strata, encountered at the borehole locations, are briefly discussed below.

#### **Top Soil**

Top soil was encountered in most of the borehole locations, except BH10, thickness ranging from 0.05 m to 0.36 m.

#### **Gravelly Sand**

Gravelly sand deposits were encountered at borehole locations of BH2, BH3 and BH7 between 0.8 to 2.3 mbgs, at BH4 between 1.0 to 3.7 mbgs and at BH8 between 1.5 and 6.7 mbgs.

#### **Sand**

Sand deposits were encountered at borehole locations BH1 (between 0.8 and 3.0 mbgs), BH2 (between 2.3 and 6.8 mbgs), BH3 (between 2.3 and 5.3 mbgs), BH4 (between 0.5 and 1.0 mbgs), BH5 (between 0.8 and 3.8 mbgs), BH8 (between 0.7 and 1.5), BH9 (between 0.8 and 1.5 mbgs) and BH12 (between 0.1 and 0.8 mbgs, and 2.3 and 3.0 mbgs).

**Sandy Silt**

Sandy silt deposits were encountered at borehole locations BH6 (between 0.8 and 2.3 mbgs), BH7 (between 3.0 and 3.8 mbgs), BH11 (between 0.8 to 0.8 and 1.5 to 3.0 mbgs). For borehole BH10, the sandy silt deposit was encountered from the surface to the borehole termination depth of 1.4 mbgs.

**Silt**

Silt deposits were encountered between 0.15 to 0.8 mbgs at BH2 and BH3 locations, 0.8 to 1.5 mbgs at BH11 and BH12 locations, between 3.0 to 6.1 mbgs at BH1 location, 0.2 to 0.8 mbgs at BH5 location and between 0.1 to 0.8 and 3.8 to 5.3 mbgs at BH7 location.

**Silty Clay**

Silty clay deposit was encountered from 6.8, 5.3 and 5.3 to borehole termination depths of 7.9, 6.1 and 6.1 mbgs at borehole locations BH2, BH3 and BH7 respectively.

**Clayey silt**

A clayey silt deposit was encountered at BH5 location 3.8 mbgs to the termination depth, 5.3 mbgs, of the borehole.

**Silty Sand**

Silty sand deposits were encountered at borehole locations of BH1 (from 0.3 to 0.8 mbgs), BH7 (from 2.3 to 3.0 mbgs), BH9 (from 0.1 to 0.8 mbgs) and BH12 (from 1.5 to 2.3 mbgs).

**Silty Sand Till**

Deposits of silty sand till were encountered at borehole locations BH4 (from 3.7 to 6.6 mbgs)



and BH9 (between 1.5 and 4.6 mbgs).

### **Sandy Gravel**

Sandy gravels deposits were encountered at borehole locations BH6 and BH9 from 2.3 and 4.6 mbgs to termination depths of 5.0 and 6.8 mbgs respectively.

### **Hydrogeology**

Upon completion of drilling, the boreholes remained dry. However, based on the field observations and groundwater monitoring records (as indicated in the section below), shallow aquifer groundwater is present in sand, silt, silty clay, silty sand till, gravelly sand, sandy silt, sandy gravel, clayey silt deposits. This hydrogeologic unit at the subject site was investigated for the Phase Two ESA.

#### **6.2 Groundwater: Elevations and Flow Direction**

Eight (8) monitoring wells (designated as BH/MW1 to BH/MW8) were installed at borehole locations BH1 to BH8 during the field investigation for the Phase Two ESA from November 16 to 22, 2022. The monitoring wells were installed at depths of 4.65 to 7.76 mbgs at various borehole locations.

On December 1, 2022 during the groundwater monitoring event, water levels were recorded at depths of 4.79, 3.91, 3.79, 3.17, 4.29 and 5.83 mbgs in the monitoring wells BH/MW3, BH/MW4, BH/MW5, BH/MW6, BH/MW7 and BH/MW8, respectively. The corresponding water level elevations were recorded as 423.58, 423.72, 423.69, 440.47, 438.20 and 428.53 meters above sea level (masl) in BH/MW3, BH/MW4, BH/MW5, BH/MW6, BH/MW7 and BH/MW8, respectively. The BH/MW1, BH/MW2, BH/MW14 and BH/MW16 remained dry during this monitoring event and subsequent site visits..

The ground elevations of the borehole locations were surveyed using hand-held (Trimble Geoexplorer 7000 series) Global Navigation Satellite System measurement equipment. The



equipment is capable of having vertical and horizontal accuracy of  $0.1 \pm \text{m}$ . Water level measurements were taken using a water level meter (Dipper-T). The top of the well casings were used as a reference point to determine the groundwater elevation in the monitoring wells. The groundwater level measurements were considered as static elevations based on the monitoring well survey data. Shallow aquifer groundwater levels were used to determine the groundwater flow direction. Based on the groundwater monitoring records, the groundwater flow direction appears to be to the southerly direction in southern portion of the subject site and to the westerly direction in northern portion of the subject site. No free product or surface sheen was observed in any of the monitoring wells during the monitoring events.

The groundwater elevations measured in the monitoring wells are summarized in Table II. The shallow aquifer groundwater contours and interpreted ground water flow direction are shown on Drawing No. 5.

### 6.3 Groundwater: Hydraulic Gradients

Based on the groundwater records of the investigation, the horizontal hydraulic gradient for the investigated aquifer at the subject site is between 0.0024 and 0.0296 m/m (average 0.0142 m/m).

### 6.4 Coarse Soil Texture

No grain size analysis was conducted as part of this investigation.

### 6.5 Soil: Field Screening

Headspace vapour screening was conducted for all retrieved soil samples using a combustible gas detector (RKI Eagle) in methane elimination mode, calibrated with hexane and having a minimum detection level of 2 ppmv.

Soil vapour readings ranging from non-detect to 50 ppm were recorded for the soil samples collected at the subject site.



## 6.6 Soil Quality

A representative “worst case” soil sample from each sampling location was selected based on the soil vapour measurements and visual and olfactory observations. The selected soil samples were submitted to the laboratory for chemical analyses of PHCs, BTEX, VOCs, PAHs, OCs, CPs, and Metals and/or Inorganic parameters.

The soil test results were reviewed using the MECF Table 2, Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Residential/ Park/ Institutional property use for coarse textured soil (Table 2 Standards), as published in the “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act” (EPA), dated April 15, 2011.

Soil quality data containing results of the chemical analyses for the tested soil samples are presented in Table III. Maximum concentrations of the tested parameters in soil are presented in Table V.

A copy of the Certificate of Analysis for the soil samples is presented in Appendix ‘C’. The findings of the soil test results are summarized below.

### Organochlorine pesticides (OCs)

Nine (9) original soil samples and two (2) field duplicate sample were submitted for analyses of OCs. The test results indicated that the tested parameters in the soil samples at tested locations met the Table 2 Standards.

### Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene, Xylene (BTEX)

Twelve (12) original soil samples and one (1) field duplicate sample were submitted for analyses of PHCs and/or BTEX. The test results indicated that the tested parameters in the soil samples at tested locations met the Table 2 Standards.

**Volatile Organic Compounds (VOCs)**

Eight (8) original soil samples were submitted for analyses of VOCs. The test results indicated that the tested parameters in the soils at the tested locations met the Table 2 Standards.

**Polycyclic Aromatic Hydrocarbons (PAHs)**

Eight (8) original soil samples were submitted for analyses of PAHs. The test results indicate that the tested parameters in the soils at tested locations met the Table 2 Standards.

**Chlorophenols (CPs)**

One (1) original soil sample was submitted for analyses of CPs. The test results indicate that the tested parameters in the soils at tested locations met the Table 2 Standards.

**Metals and/or Inorganics**

A total of eighteen (18) original soil samples and two (2) field duplicate samples were submitted for analyses of Metals and/or Inorganic parameters. The test results indicate that the tested parameters in the soils at the tested locations met the Table 2 Standards.

**6.7 Groundwater Quality**

Groundwater samples collected from six (6) monitoring wells at the subject site were submitted to the laboratory for chemical analyses of PHCs, BTEX, VOCs, PAHs, OCs, CPs and Metals parameters. BH/MW1 and BH/MW2 remained dry during multiple site visits.

The groundwater test results were reviewed using Table 2, Full Depth Generic Site Condition Standards in a Potable Ground Water Condition all property use for coarse textured soil (Table 2 Standards), as published the “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act” (EPA), April 15, 2011.



Groundwater quality data containing results of the chemical analyses for the tested groundwater samples is presented in Table IV. Maximum concentrations of the tested parameters in groundwater are presented in Table VI.

The Certificates of Analyses for the groundwater samples are presented in Appendix 'D'.

The findings of the groundwater test results are summarized below:

#### **Petroleum Hydrocarbons (PHCs) and Benzene, Toluene, Ethylbenzene, Xylene (BTEX)**

Six (6) sets of original groundwater samples and one (1) field duplicate sample were submitted for analyses of PHCs and/or BTEX. The test results indicate the tested groundwater samples at tested locations met the Table 2 Standards.

#### **Volatile Organic Compounds (VOCs)**

Five (5) sets of original groundwater samples, one (1) field duplicate sample and one (1) tripblank were submitted for analyses of VOCs. The test results indicate the tested groundwater samples at tested locations met the Table 2 Standards.

#### **Polycyclic Aromatic Hydrocarbons (PAHs)**

Five (5) sets of original groundwater samples and one (1) field duplicate sample were submitted for analyses of PAHs. The test results indicate the tested groundwater samples at tested locations met the Table 2 Standards.

#### **Organochlorine pesticides (OCs)**

One (1) set of original groundwater sample was submitted for analyses of OC parameters. The test results indicate the tested groundwater samples at tested location met the Table 2 Standards.



**Chlorophenols (CPs)**

One (1) set of original groundwater sample was submitted for analyses of CPs. The test results indicate the tested groundwater samples at tested location met the Table 2 Standards.

**Metals**

Six (6) sets of original groundwater samples were submitted for analyses of Metals parameters. The test results indicate the tested groundwater samples at tested locations met the Table 2 Standards.

It is to be noted that BH/MW1 and BH/MW2 remained dry during Phase Two ESA field work and SEL subsequent site visits and therefore no groundwater samples collected at these two locations. Five monitoring wells (BH/MW1 to BH/MW5) were advanced to address the potential environmental concern related to railway tracks located southeastern portion of the subject site.

Soil samples collected from all five locations for COC related to railway tracks (located downgradient to the subject site) met the applicable site condition standards (Table 2 Standards) and groundwater samples collected from three out of five monitoring well locations (BH/MW3 to BH/MW5) for COC related to railway met the applicable site condition standards (Table 2 Standards). The concentration of tested parameters were either below the laboratory reported detection limits or well below the Table 2 Standards. Therefore, it is our opinion that concentration of COCs in groundwater at the two remaining monitoring well locations (BH/MW1 and BH/MW2) unlikely to exceed the Table 2 Standards.

**6.8 Sediment Quality**

Sediment was not assessed as part of this investigation.

**6.9 Quality Assurance and Quality Control (QA/QC) Results**



The Phase Two ESA was carried out in accordance with the Sampling and Analysis Plan and in accordance with the SEL SOPs.

The sampling and decontamination procedures were conducted in accordance with the “Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario”, May 1996, revised December 1996, as amended by O. Reg. 511/09.

Laboratory analytical methods, protocols and procedures were carried out in accordance with the “Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act”, dated March 9, 2004, amended as of July 1, 2011, in accordance with O. Reg. 511/09 and O. Reg. 269/11 (herein referred to as Analytical Protocol).

#### **6.9.1 Field Quality Assurance and Quality Control (QA/QC) Samples**

As part of the QA/QC program for the Phase Two ESA, QC samples in the form of field duplicate and trip blank samples were analysed. Field duplicate samples were collected in the field for OCs, BTEX, PHCs and Metals for soil and VOCs, PHCs, PAHs for groundwater. One (1) tripblank for VOCs was shipped with the batch of the groundwater samples submitted for analyses. Details of QC samples are presented in the table below.

#### **Field Duplicate**

A total of six (6) sets of field duplicate soil samples and three (3) set of field duplicate for groundwater samples were collected and submitted for chemical analyses. Details of the duplicate sampling and analysis are presented in the table below:

| <b>Duplicate Sample ID</b> | <b>Original Sample ID</b> | <b>Media</b> | <b>Test Conducted</b> |
|----------------------------|---------------------------|--------------|-----------------------|
| DupS1                      | TP1                       | Soil         | Metals, OCs           |
| DupS2                      | TP2                       | Soil         | OCs                   |
| DupS3                      | BH3/6                     | Soil         | Metals                |
| DupS4                      | BH12/4                    | Soil         | BTEX, PHCs            |



| Duplicate Sample ID | Original Sample ID | Media       | Test Conducted   |
|---------------------|--------------------|-------------|------------------|
| DupW1               | MW3                | Groundwater | PHCs, VOCs, PAHs |

The results of the analyses of the field duplicate samples were found to be generally similar to the results for the original samples and relative percent differences (RPDs) for the detectable tested parameters are within the acceptable range. However, the RPDs could not be calculated between the original and duplicate samples in the situation where the original and/or duplicate samples were below the reported laboratory detection limits.

### **Trip Blank**

One (1) trip blank sample set was submitted to the laboratory for analysis of VOCs. The trip blank sample was found to be below the reported laboratory detection limits.

There was no issue with the trip blank that was shipped with the batch of the groundwater samples submitted for analysis.

The Certificates of Analysis for the QA/QC samples are included in Appendices 'C' and 'D'.

### **6.9.2 Sample Handling in Accordance with the Analytical Protocol**

The samples analyzed as part of the Phase Two ESA were handled in accordance with the Analytical Protocol as per O. Reg. 153/04 with respect to holding time, preservation method, storage requirement and sample container type.

### **6.9.3 Certification of Results**

Based on the review of the QA/QC sample results for the soil and groundwater samples in this investigation, the Chain of Custody forms and the laboratory Certificates of Analysis, it is certified that:

- All Certificates of Analysis or Analytical Reports were received pursuant to Section



47(2) of O. Reg. 153/04, as amended, comply with Section 47(3) of O. Reg. 153/04, as amended.

- A Certificate of Analysis or Analytical Report was received for each sample submitted for analysis.
- Copies of all Certificates of Analysis are included in Appendices 'C' and 'D'.

#### 6.9.4 Data Validation

The Analytical Protocol establishes Acceptance Limits for use when assessing the reliability of data reported by analytical laboratories including maximum holding times for the storage of samples/sample extracts between collection and analysis, analytical methods, field and/or laboratory quality assurance samples, recovery ranges for spiked samples and surrogates, Reporting Detection Limits (RDLs, mandatory maximum method detection limits) and precision required when analyzing laboratory replicate and spiked samples.

The review of the data in the Certificate of Analysis indicates:

- All samples/sample extracts were analyzed within their applicable holding times using approved analytical methods.
- No tested parameters were detected in any laboratory blank samples.
- The RDLs were met for all tested parameters.
- The results of the laboratory duplicate samples are similar to the results for the original samples and relative percent differences for the detectable tested parameters are within the acceptable range.

#### 6.9.5 Data Quality Objectives

In conclusion, the overall quality of field data did not affect decision making and the overall objectives of the investigation were met.



## 6.10 Phase Two Conceptual Site Model

The Phase Two Conceptual Site Model was prepared based on the findings of the Phase One Environmental Site Assessment (Phase One ESA) and this Phase Two Environmental site Assessment (Phase Two ESA).

### 6.10.1 **Description and Assessment**

The subject site, irregular in shape and approximately of 52.0779 hectares (ha) (128.7 acres (ac)) in area, consists of properties which are municipally addressed as 63 and 63A Trafalgar Road and an adjacent property with no municipal address but with a legal address as parts of Lots 23 and 24 in Concession 8, in the Town of Erin The Property Identification Numbers (PINs) of the subject site are 71143-0296 (LT), and 71143-1190 (LT). The legal descriptions of the subject site from the parcel register are: “LT 23 W/S GUELPH ST PL 95 ERIN; LT 24 W/S GUELPH ST PL 95 ERIN; LT 18 E/S GUELPH ST PL 95 ERIN; LT 19 E/S GUELPH ST PL 95 ERIN; LT 20 E/S GUELPH ST PL 95 ERIN; LT 14 W/S MARKET ST PL 95 ERIN; LT 15 W/S MARKET ST PL 95 ERIN; LT 16 W/S MARKET ST PL 95 ERIN; LT 11 E/S MARKET ST PL 95 ERIN; LT 12 E/S MARKET ST PL 95 ERIN; PT LT 4 PL 95 ERIN ABUTTING RDAL BTN CON 7 & 8 AS IN DS14870; PT LT 17 E/S GUELPH ST PL 95 ERIN; PT LT 21 W/S GUELPH ST PL 95 ERIN; PT LT 22 W/S GUELPH ST PL 95 ERIN AS IN DS14410; PT LT 23 CON 8 ERIN AS IN DS14346 (FIRSTLY); ERIN” and “PT LT 24 CON 8 ERIN EXCEPT PTS 1-3, 61R2749 & PTS 1-3, 61R10780 & PART 1, 61R21973 DS7839, ROS383121, MS13509,ROS609336, ROS593071, ROS578501, RO756343, ROS571915, ROS207666, RO770469, MS100081, MS76550, MS84705, MS647; ERIN; SUBJECT TO AN EASEMENT OVER PART 2, 61R21973 IN FAVOUR OF PART LOT 24 CONCESSION 8 ERIN, PART 1, 61R21973 AS IN WC653287”.

#### 6.10.1.1 Areas where Potentially Contaminating Activity Has Occurred

The Phase One ESA identified Potentially Contaminating Activities (PCAs) at the subject site and in the Phase One Study Area based on records review, interview and site reconnaissance.



The locations of PCAs along with the corresponding list in Table 2 Schedule D of O. Reg. 153/04 are summarized below:

#### On-Site PCA

The following on-site PCAs are considered to have contributed to the Areas of Potential Environmental Concern (APECs) at the subject site.

- Potential use of pesticides as a part of agricultural activities at the majority of the subject site: #40 – Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications.
- Historical ASTs at basement of residential building at 63 Trafalgar Road and registered UST located at 63A Trafalgar Road at southwestern portion of the subject site. #28 – Gasoline and Associated Products Storage in Fixed Tanks
- Presence of oil stain on the ground at backyard of the residential building located at 63 Trafalgar Road. This is not listed in Table 2 of Schedule 'D' of O. Reg. 153/04:  
#Other – Oil Stain

#### Off-site PCAs

The following off-site PCAs are considered to have contributed to the Areas of Potential Environmental Concern (APECs) at the subject site.

- Historically railway tracks were located adjacent to the south of the subject site.  
#46 – Rail Yards, Track and Spurs.
- A gas station with USTs is located at 25 Main Street, approximately 15 m to the south of the subject site. #28 – Gasoline and Associated Products Storage in Fixed Tanks
- A waste transfer station is located approximately 180 m to the northeast of the subject site. #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners



The on-site PCAs and off-site PCAs were considered to have contributed to the Areas of Potential Environmental Concern (APECs) at the subject site.

However, the remaining off-site PCAs (namely, various auto services located at 28 Main St., waste disposal facility located at 9426 Wellington Side Rd, two (2) waste generators within Phase One Study Area) are not considered to have contributed to the APECs at the subject site due to their relative distances and/or location (down- or trans-gradient) from the subject site.

The locations of PCAs are shown on Drawing No. 1.

#### 6.10.1.2 Areas of Potential Environmental Concern

The following Areas of Potential Environmental Concern were identified at the subject site.

APEC 1: Potential use of pesticides during agricultural activities at majority of the subject site.

APEC 2: Historical aboveground storage tanks (ASTs) at northeast portion of basement of residential building located at southwest portion of the subject site.

APEC 3: Oil stains at the backyard of the residential building at the subject site.

APEC 4: One (1) registered underground storage tank (UST) at the property located at 63A Trafalgar Road, southwestern portion of the subject site

APEC 5: Historical railway tracks located adjacent to the south of the subject site

APEC 6: Historical railway tracks located adjacent to the south of the subject site

APEC 7: Presence of waste transfer station located to the northeast of the subject site

APEC 8: Presence of a gas station with USTs at the neighbouring property located about 15 m to the south of the subject site.

The locations of the APECs are shown on Drawing No. 2.



#### 6.10.1.3 Subsurface Structures and Utilities

At the time of the assessment, the subject site is comprised for farm fields with residential buildings at southwest portion of the subject site. Since no contaminants are found at the subject site at a concentration above the applicable site condition standard, no subsurface structures or utilities with the potential to affect contaminants distribution or transport are identified at the subject site.

#### 6.10.2 **Physical Setting**

##### 6.10.2.1 Stratigraphy

According to the Surface Geology Map of the area, majority of the subject site is underlain by Glaciofluvial ice-contact deposits with materials documented as gravel and sand, minor till, includes esker, kame, end moraine, ice-marginal delta and subaqueous fan deposits. The eastern portion of the subject site is underlain by Glaciofluvial outwash deposits with the material described gravel and sand, includes, proglacial river and deltaic deposits. The Bedrock Geology Map shows the subject site is within Armabel Formation. The rock description was documented as sandstone, shale, dolostone, and siltstone. According to the Bedrock Topography Series, depth to bedrock in general vicinity of the subject site is approximately 26 metres below ground surface (mbgs).

The field investigation for the Phase Two ESA consisted of advancing twelve (12) boreholes (designated as BH1 to BH12) to depths range from 1.4 to 7.9 mbgs and carrying out eight (8) test pits to maximum depths of 0.3 mbgs. The subsoil conditions at the borehole locations indicate deposits of silty sand, silty sand till, silt, sand, sandy silt, gravelly sand, silty clay, clayey silt, sandy gravel at various depths and locations. No bedrock was encountered during the Phase Two ESA.

The Sampling Location Plan is shown in Drawing No. 2. The locations of cross-sections for soil stratigraphy at the subject site are presented in Drawing No. 3. Geological Cross-sections A-A' and B-B' are presented in Drawing No. 4.





#### 6.10.2.2 Hydrogeological Characteristics

The subject site is located in a larger hydrogeological region known as the Southern Ontario Lowlands. A Watershed Map provided by the Land Information Ontario (LIO), shows the subject site is located within the Sixteen Mile Creek – Credit River Watershed.

A total of eight (8) monitoring wells were installed at the subject site during the field investigation for the Phase Two ESA. The monitoring wells were installed at the depths of 4.65 to 7.76 mbgs. Additional groundwater monitoring wells (BH/MW13 to BH/MW17) were installed as a part of concurrent Geotechnical Investigation at the subject site. Based on the groundwater records of Phase Two ESA monitoring wells and the Geotechnical Investigation monitoring wells, the groundwater flow direction appears to be southerly direction in southern portion of the subject site and to the westerly direction in northern portion of the subject site. The shallow aquifer groundwater contours and interpreted groundwater flow direction are shown on Drawing No. 5.

Based on the groundwater records of the investigation, the horizontal hydraulic gradient for the investigated aquifer at the subject site is between 0.0024 and 0.0296 m/m (average 0.0142 m/m).

#### 6.10.2.3 Approximate Depth to Bedrock

No bedrock was encountered at the subject site during the Phase Two ESA.

#### 6.10.2.4 Approximate Depth to Water Table

Based on the groundwater records encountered during the site investigation, depths to the water level in the monitoring wells at the subject site ranges from 3.17 to 5.83 mbgs on December 1, 2022. However, BH/MW1, BH/MW2, BH/MW14 and BH/MW16 remained dry during the groundwater monitoring event and subsequent SEL site visits.



#### 6.10.2.5 Section 35 and Section 41 or 43.1 of the Regulation

There are records of water wells located at the subject site and neighbouring properties within 250 m from the subject site boundaries. Therefore, Section 35 of the Regulation (Non-Potable Site Condition Standards) is not applicable to the subject site.

The subject site is not within/adjacent/part of an area of natural significance and the analytical testing indicated the analytical testing indicated the pH of the tested surface soil sample is between 5 and 9 and subsurface soil sample is between 5 and 11. Therefore, Section 41 of the regulation (Site Condition Standards, Environmental Sensitive Areas) is not applicable to the subject site.

The property is not a shallow soil property, as the bedrock was not encountered within 2.0 mbgs during the investigation. In addition, there is no water body within the subject site or within 30 m from the subject site boundaries. Therefore, Section 43.1 of the O. Reg. 153/04 (Site Condition Standards, Shallow Soil Property or Water Body) does not apply to the subject site.

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

The findings of our Phase One ESA and the field investigation of the Phase Two ESA did not indicate importation of fill material to the subject site. No soil has been brought to the subject site during the Phase Two ESA.

#### 6.10.2.7 Proposed Building and Other Structures

A residential development is being proposed for the subject site. It is anticipated that the new development will be provided with municipal services meeting urban standards. The locations of proposed buildings or any other structures are not known at the time of preparation of this Phase Two Conceptual Site Model.



### 6.10.3 Contamination In or Under the Phase Two Property

Based on the findings of the Phase One ESA, contaminants of potential concern in soil and groundwater with respect to the identified Areas of Potential Environmental Concern (APECs) at the subject site were assessed during the Phase Two ESA. The samples were selected from the locations and depths, where potentially the maximum concentration is expected, and to be representative of the full extents of the APECs at the subject site.

Based on the information obtained from the Phase One ESA, the Ministry of the Environment, Conservation and Parks (MECP) Table 2, Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Residential/ Park/ Institutional property use for coarse textures soil (Table 2 Standards), as published the “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act” (EPA), April 15, 2011, was selected for evaluating the environmental condition at the subject site.

#### 6.10.3.1 Area Where Contaminants are Present

Soil and groundwater samples were collected during the Phase Two ESA and submitted for chemical analyses of one or more of the following parameters: Petroleum Hydrocarbons (PHCs), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Chlorophenols (CPs), Organochlorine Pesticides (OCs), Metals, As, Sb, Se, Hg, Cr (VI), B-HWS, CN<sup>-</sup> and pH

A review of the analytical test results of soil and groundwater samples indicated that the tested samples for the tested parameters met the Table 2 Standards.

Consequently, there are no contaminants identified at the test locations at a concentration above the applicable site condition standards (Table 2 Standards) during the Phase Two ESA.

#### 6.10.3.2 Distribution of Contaminants

No contaminants were identified at the subject site at a concentration above applicable site



condition standards.

#### 6.10.3.3 Contaminant Medium

No contaminants were identified at the subject site at a concentration above applicable site condition standards.

#### 6.10.3.4 Reasons for Discharge

No contaminants were identified at the subject site at a concentration above applicable site condition standards.

#### 6.10.3.5 Migration of Contaminants

No contaminants were identified at the subject site at a concentration above applicable site condition standards.

#### 6.10.4 Potential Exposure Pathways and Receptors

Since no contaminants were identified at the subject site at a concentration above the applicable site condition standards (Table 2 Standards), no potential exposure pathways and receptors are identified.



## 7.0 CONCLUSIONS

The purpose of the Phase Two Environmental Site Assessment (Phase Two ESA) was to determine the soil and groundwater quality at the subject site, as related to the following Areas of Potential Environmental Concern (APECs) identified in our Phase One ESA and Phase Two ESA:

APEC 1: Potential use of pesticides during agricultural activities at majority of the subject site.

APEC 2: Historical aboveground storage tanks (ASTs) at northeast portion of basement of residential building located at southwest portion of the subject site.

APEC 3: Oil stains at the backyard of the residential building at the subject site.

APEC 4: One (1) registered underground storage tank (UST) at the property located at 63A Trafalgar Road, southwestern portion of the subject site

APEC 5: Historical railway tracks located adjacent to the south of the subject site

APEC 6: Historical railway tracks located adjacent to the south of the subject site

APEC 7: Presence of waste transfer station located to the northeast of the subject site

APEC 8: Presence of a gas station with USTs at the neighbouring property located about 15 m to the south of the subject site.

The findings of the field investigation and analytical results of the Phase Two ESA are summarized below:

- The field investigation for this Phase Two ESA consisted of carrying out eight (8) test pits (designated as TP1 to TP8) to maximum depths of 0.3 mbgs and advancing twelve (12) boreholes (designated as BH1 to BH12) at depths ranging from 1.4 to 7.9 mbgs.
- The subsoil conditions at the borehole locations indicate deposits of silty sand, silty sand till, silt, sand, sandy silt, gravelly sand, silty clay, clayey silt, sandy gravel at various depths and locations. No bedrock was encountered during the Phase Two



ESA investigation.

- The soil and groundwater samples retrieved from the boreholes, test pits and monitoring wells were examined for visual and olfactory evidence of potential contamination. No evidence of potential contamination was documented in any of the retrieved soil and groundwater samples.
- Headspace vapour screening was conducted for all retrieved soil samples using a combustible gas detector (RKI Eagle) in methane elimination mode, calibrated with hexane and having a minimum detection level of 2 parts per million by volume (ppmv). Headspace vapour readings ranging from non-detect to 50 ppmv were recorded in the soil samples retrieved from the sampling locations.
- Based on the soil vapour measurements and visual and/or olfactory observations, representative “worst case” soil samples were selected from each sampling location for chemical analyses of Petroleum Hydrocarbons (PHCs), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Chlorophenols (CPs), Organochlorine Pesticides (OCs) and Metals and/or Inorganic parameters.
- No visible sheen or odours were recorded in the groundwater at any of the monitoring wells installed at the subject site. Groundwater samples (including QA/QC samples) were collected from six (6) monitoring wells and were submitted for analysis of one or more of Petroleum Hydrocarbons (PHCs), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Chlorophenols (CPs), Organochlorine Pesticides (OCs) and Metals and/or Inorganic parameters. Two of the wells remained dry during Phase Two ESA field work and subsequent SEL site visits.
- As part of the Quality Assurance / Quality Control (QA/QC) program for the investigation, QC samples in the form of field duplicate and trip blank samples were analyzed. Field duplicate samples were collected in the field for OCs, BTEX, PHCs and Metals in soil and PHCs, VOCs and PAHs in groundwater. One (1) tripblank for VOCs was shipped with the batch of the groundwater samples submitted for analysis
- The analytical test results were reviewed using the Table 2, Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Residential/ Park/ Institutional property use for coarse textured soil (Table 2 Standards), as published



the "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" (EPA), April 15, 2011.

- The results of the analysis of the duplicate samples in general are similar to the results for the original samples. However, the RPDs could not be calculated between the original and duplicate samples in the situation where the original and/or duplicate samples were below the reported laboratory detection limit.
- The overall QA/QC results are considered reliable.

A review of the analytical test results of soil and groundwater samples indicated that the tested parameters at the test locations met the Table 2 Standards. Consequently, there are no contaminants identified at the subject site at a concentration above the applicable site condition standards (Table 2 Standards) during the Phase Two ESA.

Based on the findings of the Phase Two ESA, it is our opinion that the property is suitable for the proposed development. No further environmental investigation is recommended at this time.

#### SOIL ENGINEERS LTD.

  
1/5/2023

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## 8.0 **REFERENCES**

MECP. "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", May 1996, revised December 1996, as amended by O. Reg. 511/09.

MECP. "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act", dated March 9, 2004, amended as of July 1, 2011, in accordance with O. Reg. 511/09 and O. Reg. 269/11.

MECP. "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" (EPA), April 15, 2011.





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## **TABLES**

**Reference No. 2206-E054**

| Monitoring Well I.D. | Bottom of Monitoring Well (mbgs) | Screen Length (m) | Screen Interval (m) | Filter Pack (m) | Bentonite Plug (m) |
|----------------------|----------------------------------|-------------------|---------------------|-----------------|--------------------|
| BH/MW1               | 6.25                             | 3                 | 3.25 – 6.25         | 2.65 – 6.25     | 0 – 2.65           |
| BH/MW2               | 7.76                             | 3                 | 4.76 – 7.76         | 4.16 – 7.76     | 0 – 4.16           |
| BH/MW3               | 6.25                             | 3                 | 3.25 – 6.25         | 2.65 – 6.25     | 0 – 2.65           |
| BH/MW4               | 6.35                             | 3                 | 3.35 – 6.35         | 2.75 – 6.35     | 0 – 2.75           |
| BH/MW5               | 4.70                             | 3                 | 1.7 – 4.7           | 1.1 – 4.7       | 0 – 1.1            |
| BH/MW6               | 4.65                             | 3                 | 1.65 – 4.65         | 1.05 – 4.65     | 0 – 1.05           |
| BH/MW7               | 6.00                             | 3                 | 3 – 6               | 2.4 – 6         | 0 – 2.4            |
| BH/MW8               | 6.10                             | 3                 | 3.1 – 6.1           | 2.5 – 6.1       | 0 – 2.5            |
| BH/MW13              | 6.10                             | 3.1               | 3 – 6.1             | 2.4 – 6.1       | 0 – 2.4            |
| BH/MW14              | 6.10                             | 3.1               | 3 – 6.1             | 2.4 – 6.1       | 0 – 2.4            |
| BH/MW15              | 6.10                             | 3.1               | 3 – 6.1             | 2.4 – 6.1       | 0 – 2.4            |
| BH/MW16              | 4.60                             | 3.1               | 1.5 – 4.6           | 0.9 – 4.6       | 0 – 0.9            |
| BH/MW17              | 6.10                             | 3.1               | 3 – 6.1             | 2.4 – 6.1       | 0 – 2.4            |

Note: mbgs – meters below ground surface

Reference No. 2206-E054  
Table II – Water Levels

| Monitoring Well I.D. | Ground Elevation (masl) | Measured Groundwater Level |               | 01-Dec-22 |        |                       | Field Observations |      |
|----------------------|-------------------------|----------------------------|---------------|-----------|--------|-----------------------|--------------------|------|
|                      |                         | Depth (mbgs)               | Elevation (m) | Odour     | Colour | Sheen or Free Product |                    |      |
|                      |                         |                            |               |           |        |                       |                    |      |
| BH/MW1               | 430.87                  | Dry                        | Dry           | None      | -      | None                  |                    | None |
| BH/MW2               | 431.81                  | Dry                        | Dry           | None      | -      | None                  |                    | None |
| BH/MW3               | 428.37                  | 4.79                       | 423.58        | None      | -      | None                  |                    | None |
| BH/MW4               | 427.63                  | 3.91                       | 423.72        | None      | -      | None                  |                    | None |
| BH/MW5               | 427.48                  | 3.79                       | 423.69        | None      | -      | None                  |                    | None |
| BH/MW6               | 443.64                  | 3.17                       | 440.47        | None      | -      | None                  |                    | None |
| BH/MW7               | 442.49                  | 4.29                       | 438.20        | None      | -      | None                  |                    | None |
| BH/MW8               | 434.36                  | 5.83                       | 428.53        | None      | -      | None                  |                    | None |
| BH/MW13              | 433.89                  | 3.17                       | 430.72        | None      | -      | None                  |                    | None |
| BH/MW14              | 442.34                  | Dry                        | Dry           | None      | -      | None                  |                    | None |
| BH/MW15              | 438.00                  | 3.91                       | 434.09        | None      | -      | None                  |                    | None |
| BH/MW16              | 437.70                  | Dry                        | Dry           | None      | -      | None                  |                    | None |
| BH/MW17              | 435.55                  | 3.85                       | 431.70        | None      | -      | None                  |                    | None |

Note: mbgs = metres below ground surface  
masl = metres above sea level



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| Sample ID                 | TP1       | DUP51     | TP2       | TP3       | TP4       | TP5       | TP6       | TP7       | TP8       | BH1/5     | BH2/9     | BH3/6     | DUP53     | BH4/6     | BH5/6     | BH6/4     | BH7/6     | BH8/7     | BH10/1    | BH1/1     | Ontario Regulation 153/04 Table 2 RPI Standard** |
|---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------------------------------------|
| Laboratory ID             | UJ710     | UJ718     | UJ711     | UJ712     | UJ713     | UJ714     | UJ715     | UJ716     | UJ717     | UJ783     | UJ785     | UJ788     | UJ786     | UJ787     | UJ789     | UJ790     | UJ791     | UJ792     | UJ793     | UJ794     |                                                  |
| Bore Hole/TP No.          | TP1       | TP1       | TP2       | TP3       | TP4       | TP5       | TP6       | TP7       | TP8       | BH1       | BH2       | BH3       | BH3       | BH4       | BH5       | BH6       | BH7       | BH8       | BH10      | BH11      |                                                  |
| Depth (mbs)               | 0.0 - 0.3 | 0.0 - 0.3 | 0.0 - 0.3 | 0.0 - 0.3 | 0.0 - 0.3 | 0.0 - 0.3 | 0.0 - 0.3 | 0.0 - 0.3 | 0.0 - 0.3 | 3.0 - 3.6 | 6.1 - 6.7 | 3.8 - 4.4 | 3.8 - 4.4 | 3.8 - 4.4 | 3.8 - 4.4 | 2.3 - 2.9 | 3.8 - 4.4 | 4.6 - 5.2 | 0.0 - 0.7 | 0.0 - 0.6 |                                                  |
| Antimony                  | 0.2       | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | 0.38      | <0.20     | <0.20     | 7.5                                              |
| Arsenic                   | 1         | 4.2       | 4.1       | 4.3       | 4.4       | 4.3       | 7.4       | 6.7       | 6.7       | 1.9       | 1.8       | 3         | 2.5       | 1.7       | 1.9       | <1.0      | 1.5       | 4.4       | 1.7       | 2.7       | 18                                               |
| Barium                    | 0.5       | 48        | 47        | 53        | 33        | 31        | 45        | 46        | 41        | 44        | 11        | 9.3       | 9         | 36        | 37        | 12        | 27        | 12        | 17        | 37        | 390                                              |
| Beryllium                 | 0.2       | 0.43      | 0.42      | 0.36      | 0.36      | 0.32      | 0.33      | 0.33      | 0.32      | 0.34      | <0.20     | <0.20     | <0.20     | 0.24      | 0.26      | <0.20     | 0.25      | <0.20     | <0.20     | 0.26      | 4                                                |
| Boron (Hot Water Soluble) | 0.05      | 0.68      | 0.64      | 0.6       | 0.59      | 0.5       | 0.55      | 0.47      | 0.45      | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | 15                                               |
| Cadmium                   | 0.1       | 0.3       | 0.32      | 0.32      | 0.2       | 0.21      | 0.27      | 0.27      | 0.28      | <0.10     | 0.1       | 0.11      | <0.10     | 0.33      | 0.37      | <0.10     | <0.10     | 0.23      | 0.12      | 0.13      | 12                                               |
| Chromium                  | 1         | 14        | 17        | 15        | 13        | 12        | 13        | 13        | 13        | 15        | 4.9       | 7.4       | 6.7       | 11        | 12        | 5.5       | 11        | 7.4       | 9.9       | 10        | 160                                              |
| Chromium VI               | 0.18      | <0.18     | <0.18     | <0.18     | <0.18     | <0.18     | <0.18     | <0.18     | <0.18     | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | 8                                                |
| Cobalt                    | 0.1       | 4.8       | 4.7       | 5.2       | 4.4       | 4.2       | 3.8       | 4         | 3.9       | 6         | 1.8       | 3.2       | 3.2       | 4.6       | 4.7       | 2         | 4.4       | 4.3       | 3.4       | 3.6       | 22                                               |
| Copper                    | 0.5       | 10        | 9.5       | 10        | 12        | 11        | 10        | 16        | 15        | 14        | 8         | 18        | 16        | 13        | 11        | 6.8       | 11        | 27        | 13        | 10        | 140                                              |
| Lead                      | 1         | 20        | 20        | 20        | 17        | 14        | 13        | 17        | 16        | 5.9       | 4.6       | 8.5       | 7.9       | 27        | 28        | 2.9       | 4         | 57        | 7.5       | 19        | 120                                              |
| Mercury                   | 0.05      | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | 0.27                                             |
| Molybdenum                | 0.5       | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | 0.5       | <0.50     | <0.50     | <0.50     | 1.8       | <0.50     | <0.50     | 6.9                                              |
| Nickel                    | 0.5       | 8.7       | 8.7       | 9         | 8         | 6.5       | 7         | 7.2       | 7.3       | 12        | 3.9       | 6.2       | 5.1       | 9.1       | 9.4       | 4.2       | 8.7       | 9.9       | 6.8       | 6.6       | 100                                              |
| Selenium                  | 0.5       | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | <0.50     | 2.4                                              |
| Silver                    | 0.2       | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | <0.20     | 20                                               |
| Thallium                  | 0.05      | 0.1       | 0.088     | 0.097     | 0.077     | 0.075     | 0.069     | 0.08      | 0.086     | 0.081     | <0.050    | <0.050    | <0.050    | 0.085     | 0.096     | <0.050    | 0.052     | 0.16      | 0.066     | 0.062     | 1                                                |
| Vanadium                  | 5         | 31        | 32        | 39        | 37        | 32        | 32        | 32        | 33        | 24        | 10        | 20        | 16        | 19        | 20        | 12        | 20        | 10        | 23        | 23        | 86                                               |
| Zinc                      | 5         | 76        | 75        | 71        | 56        | 56        | 46        | 63        | 56        | 32        | 47        | 41        | 40        | 100       | 100       | 7.91      | 21        | 130       | 99        | 59        | 340                                              |
| pH (pH Units)             | -         | 6.97      | -         | -         | 7.1       | -         | 5.42      | -         | 6.32      | -         | -         | -         | -         | -         | 8.04      | 7.91      | 7.96      | -         | -         | -         | -                                                |
| Cyanide, Free             | 0.01      | <0.01     | <0.01     | <0.01     | <0.01     | <0.01     | <0.01     | <0.01     | <0.01     | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | 0.051                                            |
| Boron (Total)             | 5         | <5.0      | <5.0      | <5.0      | <5.0      | <5.0      | <5.0      | <5.0      | <5.0      | 6.5       | <5.0      | 5.5       | 5.5       | 5.3       | 5.7       | <5.0      | <5.0      | 12        | <5.0      | <5.0      | 120                                              |
| Uranium                   | 0.05      | 0.46      | 0.47      | 0.51      | 0.45      | 0.42      | 0.47      | 0.49      | 0.47      | 0.48      | 0.28      | 0.36      | 0.37      | 0.49      | 0.49      | 0.27      | 0.41      | 0.44      | 0.4       | 0.32      | 23                                               |

Analysis by Maxxam Analytics, all results in ppm (µg/g) unless otherwise stated

\* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

\*\* Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Residential/Industrial property use for coarse grain soil



## SOIL CHEMICAL ANALYSIS - Organochlorine Pesticides (OCs) Parameters

Project No. 2206-E054

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| Sample ID             | Sample Date | Laboratory ID | Bore Hole/TP No. | Depth (mbgs) | RDL*  | TP1       | DUPS1     | TP2       | DUPS2     | TP3       | TP4       | TP5       | TP6       | TP7       | TP8       | BH7/6     | Ontario Regulation 153/04 Table 2 RPI Standard** |
|-----------------------|-------------|---------------|------------------|--------------|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------------------------------------|
|                       |             |               |                  |              |       | 16-Nov-22 | UIJ718    | 16-Nov-22 | UIJ719    | 16-Nov-22 | UIJ713    | 16-Nov-22 | UIJ715    | 16-Nov-22 | UIJ716    | 22-Nov-22 |                                                  |
|                       |             |               |                  |              |       | TP1       | TP1       | TP2       | TP2       | TP3       | TP4       | TP5       | TP6       | TP7       | TP8       | BH7       |                                                  |
|                       |             |               |                  |              |       | 0.0 - 0.3 | 0.0 - 0.3 | 0.0 - 0.3 | 0.0 - 0.3 | 0.0 - 0.3 | 0.0 - 0.3 | 0.0 - 0.3 | 0.0 - 0.3 | 0.0 - 0.3 | 0.0 - 0.3 | 3.8 - 4.4 |                                                  |
| Aldrin                |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 0.05                                             |
| Chlordane (alpha)     |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | -                                                |
| Chlordane (gamma)     |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | -                                                |
| Chlordane (total)     |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 0.05                                             |
| o,p DDD               |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | -                                                |
| p,p-DDD               |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | -                                                |
| DDD (total)           |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 3.3                                              |
| o,p DDE               |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | -                                                |
| p,p-DDE               |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 0.0037    | 0.0026    | 0.0021    | <0.0020   | 0.26                                             |
| DDE (total)           |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 0.0037    | 0.0026    | 0.0021    | <0.0020   | -                                                |
| op-DDT                |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | -                                                |
| pp-DDT                |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 0.0023    | 0.0024    | <0.0020   | <0.0020   | -                                                |
| DDT (total)           |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 0.0023    | 0.0024    | <0.0020   | <0.0020   | 1.4                                              |
| Dieldrin              |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 0.05                                             |
| Endosulphan I         |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | -                                                |
| Endosulphan II        |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | -                                                |
| Total Endosulphan     |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 0.04                                             |
| Endrin                |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 0.04                                             |
| Heptachlor            |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 0.15                                             |
| Heptachlor Epoxide    |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 0.05                                             |
| Lindane               |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 0.056                                            |
| Methoxychlor          |             |               |                  |              | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 0.13                                             |
| Hexachlorobenzene     |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 0.52                                             |
| Hexachlorobutadiene   |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 0.012                                            |
| Hexachlorocyclohexane |             |               |                  |              | 0.002 | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | <0.0020   | 0.089                                            |

Analysis by Maxxam Analytics, all results in ppm (µg/g) unless otherwise stated

\* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

\*\* Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Residential/Park/Institutional property use for coarse grain soil



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| Sample ID                         | Sample Date | RDL*  | BH1/6     | BH2/10    | BH3/7     | BH4/7     | BH5/6     | BH6/7     | BH7/5     | BH8/8     | Ontario Regulation 153/04 Table 2 RPI Standard** |
|-----------------------------------|-------------|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------------------------------------|
| Laboratory ID                     |             |       | UIT864    | UIT856    | UIT859    | UIT873    | UIT862    | UIT8451   | UIT8455   | UIT8459   |                                                  |
| Bore Hole No.                     |             |       | BH1       | BH2       | BH3       | BH4       | BH5       | BH6       | BH7       | BH8       |                                                  |
| Depth (mbsg)                      |             |       | 3.8 - 4.4 | 6.8 - 7.4 | 4.6 - 5.2 | 4.6 - 5.2 | 3.8 - 4.4 | 4.6 - 5.2 | 3.0 - 3.6 | 5.3 - 5.9 |                                                  |
| Acetone                           |             | 0.49  | <0.49     | <0.49     | <0.49     | <0.49     | <0.49     | <0.49     | <0.49     | <0.49     | 16                                               |
| Benzene                           |             | 0.006 | <0.0060   | <0.0060   | <0.0060   | <0.0060   | <0.0060   | <0.0060   | <0.0060   | <0.0060   | 0.21                                             |
| Bromochloromethane                |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 1.5                                              |
| Bromoform                         |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.27                                             |
| Bromomethane                      |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.05                                             |
| Carbon Tetrachloride              |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.05                                             |
| Chlorobenzene                     |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 2.4                                              |
| Chloroform                        |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.05                                             |
| Dibromochloromethane              |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 2.3                                              |
| 1,2-Dichlorobenzene               |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 1.2                                              |
| 1,3-Dichlorobenzene               |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 4.8                                              |
| 1,4-Dichlorobenzene               |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.083                                            |
| 1,1-Dichloroethane                |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.47                                             |
| 1,1-Dichloroethene                |             | 0.049 | <0.049    | <0.049    | <0.049    | <0.049    | <0.049    | <0.049    | <0.049    | <0.049    | 0.05                                             |
| 1,1-Dichloroethyne                |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.05                                             |
| Cis-1,2-Dichloroethene            |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 1.9                                              |
| Trans-1,2-Dichloroethene          |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.084                                            |
| 1,2-Dichloropropane               |             | 0.03  | <0.030    | <0.030    | <0.030    | <0.030    | <0.030    | <0.030    | <0.030    | <0.030    | -                                                |
| Cis-1,3-Dichloropropylene         |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | -                                                |
| Trans-1,3-Dichloropropylene       |             | 0.01  | <0.010    | <0.010    | <0.010    | <0.010    | <0.010    | <0.010    | <0.010    | <0.010    | 1.1                                              |
| Ethylbenzene                      |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.05                                             |
| Ethylene Dibromide                |             | 0.4   | <0.40     | <0.40     | <0.40     | <0.40     | <0.40     | <0.40     | <0.40     | <0.40     | 16                                               |
| Methyl Ethyl Ketone               |             | 0.049 | <0.049    | <0.049    | <0.049    | <0.049    | <0.049    | <0.049    | <0.049    | <0.049    | 0.1                                              |
| Methylene Chloride                |             | 0.4   | <0.40     | <0.40     | <0.40     | <0.40     | <0.40     | <0.40     | <0.40     | <0.40     | 1.7                                              |
| Methyl Isobutyl Ketone            |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.75                                             |
| Methyl-t-Butyl Ether              |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.7                                              |
| Styrene                           |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.058                                            |
| 1,1,1,2-Tetrachloroethane         |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.05                                             |
| 1,1,2,2-Tetrachloroethane         |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 2.3                                              |
| Toluene                           |             | 0.02  | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | 0.28                                             |
| Tetrachloroethene                 |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.38                                             |
| 1,1,1-Trichloroethane             |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.05                                             |
| 1,1,2-Trichloroethane             |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.061                                            |
| Trichloroethene                   |             | 0.01  | <0.010    | <0.010    | <0.010    | <0.010    | <0.010    | <0.010    | <0.010    | <0.010    | 0.02                                             |
| Vinyl Chloride                    |             | 0.019 | <0.019    | <0.019    | <0.019    | <0.019    | <0.019    | <0.019    | <0.019    | <0.019    | -                                                |
| m-Xylene & p-Xylene               |             | 0.02  | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | -                                                |
| o-Xylene                          |             | 0.02  | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | 3.1                                              |
| Total Xylenes                     |             | 0.02  | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | 16                                               |
| Dichlorodifluoromethane           |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 2.8                                              |
| Hexane(n)                         |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 4                                                |
| Trichlorofluoromethane            |             | 0.04  | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 0.05                                             |
| 1,3-Dichloropropene (cis + trans) |             | 0.05  | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    | <0.050    |                                                  |

Analysis by Maxxam Analytics, all results in ppm (µg/g) unless otherwise stated

\* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

\*\* Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Residential/Park/Institutional property use for coarse grain soil

## SOIL CHEMICAL ANALYSIS - Petroleum Hydrocarbons (PHCs) Parameters

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| Sample ID               | BH1/5     | BH2/10    | BH3/7     | BH4/7     | BH5/6     | BH6/7     | BH7/5     | BH8/8     | BH9/8     | BH10/1    | BH11/1    | BH12/4    | DUP84     | Ontario Regulation<br>153/04 Table 2 RPI<br>Standard** |
|-------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------------------------------------------|
| Sample Date             | 16-Nov-22 | 16-Nov-22 | 17-Nov-22 | 18-Nov-22 | 18-Nov-22 | 22-Nov-22 | 22-Nov-22 | 22-Nov-22 | 22-Nov-22 | 22-Nov-22 | 22-Nov-22 | 22-Nov-22 | 22-Nov-22 |                                                        |
| Laboratory ID           | UIT863    | UIT856    | UIT859    | UIT873    | UIT862    | UIT862    | UIT862    | UIT862    | UIT862    | UIT862    | UIT862    | UIT862    | UIT862    |                                                        |
| Bore Hole No.           | BH1       | BH2       | BH3       | BH4       | BH5       | BH6       | BH7       | BH8       | BH9       | BH10      | BH11      | BH12      | BH12      |                                                        |
| Depth (mbgs)            | 3.0 - 3.6 | 6.8 - 7.4 | 4.6 - 5.2 | 4.6 - 5.2 | 3.8 - 4.4 | 4.6 - 5.0 | 3.0 - 3.6 | 5.3 - 5.9 | 5.3 - 5.9 | 0.0 - 0.7 | 0.0 - 0.6 | 2.3 - 2.9 | 2.3 - 2.9 |                                                        |
| Benzene                 | <0.020    | -         | -         | -         | -         | -         | -         | -         | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | 0.21                                                   |
| Toluene                 | <0.020    | -         | -         | -         | -         | -         | -         | -         | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | 2.3                                                    |
| Ethylbenzene            | <0.020    | -         | -         | -         | -         | -         | -         | -         | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | 1.1                                                    |
| m/p xylenes             | <0.040    | -         | -         | -         | -         | -         | -         | -         | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | -                                                      |
| o xylene                | <0.020    | -         | -         | -         | -         | -         | -         | -         | <0.020    | <0.020    | <0.020    | <0.020    | <0.020    | -                                                      |
| Total Xylenes           | <0.040    | -         | -         | -         | -         | -         | -         | -         | <0.040    | <0.040    | <0.040    | <0.040    | <0.040    | 3.1                                                    |
| F1 (C6-C10)             | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | 55                                                     |
| F1 (C6-C10) - BTEX      | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | 55                                                     |
| F2 (C10-C16)            | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | <10       | 98                                                     |
| F3 (C16-C34)            | <50       | <50       | <50       | <50       | <50       | <50       | <50       | <50       | <50       | <50       | 200       | <50       | <50       | 300                                                    |
| F4 (C34-C50)            | <50       | <50       | <50       | <50       | <50       | <50       | <50       | <50       | <50       | <50       | <50       | <50       | <50       | 2800                                                   |
| Reached Baseline at C50 | YES       | YES       | YES       | YES       | YES       | YES       | YES       | YES       | YES       | YES       | YES       | YES       | YES       | -                                                      |
| F4 Gravimetric          | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | -         | 2800                                                   |

Analysis by Maxxam Analytics, all results in ppm (µg/g) unless otherwise stated

\* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

\*\* Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Residential/Park/Institutional property use for coarse grain soil



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| Sample ID                 | RDL * | BH1/7     | BH2/10    | BH3/8     | BH4/8     | BH5/7     | BH6/7     | BH7/5     | BH8/8     | Ontario Regulation 153/04<br>Table 2 RPI Standard** |
|---------------------------|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------------------------------------------------|
| Sample Date               |       | 16-Nov-22 | 16-Nov-22 | 17-Nov-22 | 18-Nov-22 | 18-Nov-22 | 22-Nov-22 | 22-Nov-22 | 22-Nov-22 |                                                     |
| Laboratory ID             |       | UIT869    | UIT856    | UIT860    | UIT874    | UIT861    | UJM451    | UJM455    | UJM459    |                                                     |
| Bore Hole No.             |       | BH1       | BH2       | BH3       | BH4       | BH5       | BH6       | BH7       | BH8       |                                                     |
| Depth (mbgs)              |       | 4.6 - 5.2 | 6.8 - 7.4 | 5.3 - 5.9 | 5.3 - 5.9 | 4.6 - 5.2 | 4.6 - 5.0 | 3.0 - 3.6 | 5.3 - 5.9 |                                                     |
| Acenaphthene              | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 7.9                                                 |
| Acenaphthylene            | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 0.15                                                |
| Anthracene                | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 0.67                                                |
| Benzo(a)anthracene        | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 0.5                                                 |
| Benzo(a)pyrene            | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 0.3                                                 |
| Benzo(b)fluoranthene      | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 0.78                                                |
| Benzo(ghi)perylene        | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 6.6                                                 |
| Benzo(k)fluoranthene      | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 0.78                                                |
| Chrysene                  | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 7                                                   |
| Dibenzo(a,h)anthracene    | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 0.1                                                 |
| Fluoranthene              | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 0.69                                                |
| Fluorene                  | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 62                                                  |
| Indeno(1,2,3-cd)pyrene    | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 0.38                                                |
| 1-Methylnaphthalene       | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 0.99                                                |
| 2-Methylnaphthalene       | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 0.99                                                |
| Naphthalene               | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 0.6                                                 |
| Phenanthrene              | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 6.2                                                 |
| Pyrene                    | 0.005 | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | <0.0050   | 78                                                  |
| Methylnaphthalene, 2-(1-) | 0.071 | <0.0071   | <0.0071   | <0.0071   | <0.0071   | <0.0071   | <0.0071   | <0.0071   | <0.0071   | 0.99                                                |

Analysis by Maxxam Analytics, all results in ppm (µg/g) unless otherwise stated

\* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

\*\* Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Residential/Park/Institutional property use for coarse grain soil





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| Sample ID                                                                                                                                                                    | RDL* | BH6/6     | Ontario Regulation 153/04 Table 2 RPI<br>Standard** |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|-----------------------------------------------------|
| Sample Date                                                                                                                                                                  |      | 22-Nov-22 |                                                     |
| Laboratory ID                                                                                                                                                                |      | UJM450    |                                                     |
| Bore Hole No.                                                                                                                                                                |      | BH6       |                                                     |
| Depth (mbgs)                                                                                                                                                                 |      | 3.8 - 4.4 |                                                     |
| 2-Chlorophenol                                                                                                                                                               | 0.05 | <0.05     | 1.6                                                 |
| 2,4-Dichlorophenol                                                                                                                                                           | 0.05 | <0.05     | 0.19                                                |
| Pentachlorophenol                                                                                                                                                            | 0.05 | <0.05     | 0.1                                                 |
| 2,4,5-Trichlorophenol                                                                                                                                                        | 0.05 | <0.05     | 4.4                                                 |
| 2,4,6-Trichlorophenol                                                                                                                                                        | 0.05 | <0.05     | 2.1                                                 |
| Analysis by Maxxam Analytics, all results in ppm (µg/g) unless otherwise stated                                                                                              |      |           |                                                     |
| * Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.                                                                                   |      |           |                                                     |
| ** Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Residential/Park/Institutional property use for coarse grain soil |      |           |                                                     |



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| Sample ID<br>Laboratory ID<br>Bore Hole No.<br>Screen Depth (mbgs) | RDL* | MW3         | MW4         | MW5         | MW6         | MW7         | MW8         | Ontario Regulation<br>153/04 Table 2<br>Standards** |
|--------------------------------------------------------------------|------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------------------------------------|
|                                                                    |      | 22-Nov-2022 | 22-Nov-2022 | 22-Nov-2022 | 22-Nov-2022 | 23-Nov-2022 | 23-Nov-2022 |                                                     |
|                                                                    |      | UJT427      | UJT428      | UJT429      | UJT430      | UJW180      | UJW181      |                                                     |
|                                                                    |      | BH3         | BH4         | BH5         | BH6         | BH7         | BH8         |                                                     |
|                                                                    |      | 3.25 – 6.25 | 3.35 – 6.35 | 1.7 – 4.7   | 1.65 – 4.65 | 3.0 – 6.0   | 3.1 – 6.1   |                                                     |
| Antimony                                                           | 0.5  | <0.50       | 0.54        | <0.50       | <0.50       | 0.5         | <0.50       | 6                                                   |
| Arsenic                                                            | 1    | <1.0        | <1.0        | <1.0        | <1.0        | <1.0        | <1.0        | 25                                                  |
| Barium                                                             | 2    | 27          | 85          | 58          | 39          | 70          | 43          | 1000                                                |
| Beryllium                                                          | 0.4  | <0.40       | <0.40       | <0.40       | <0.40       | <0.40       | <0.40       | 4                                                   |
| Boron                                                              | 10   | <10         | 38          | 32          | 24          | 19          | 73          | 5000                                                |
| Cadmium                                                            | 0.09 | <0.090      | <0.090      | <0.090      | <0.090      | <0.090      | <0.090      | 2.7                                                 |
| Chromium                                                           | 5    | <5.0        | <5.0        | <5.0        | <5.0        | <5.0        | <5.0        | 50                                                  |
| Cobalt                                                             | 0.5  | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | 3.8                                                 |
| Copper                                                             | 0.9  | 1.2         | 1.1         | 1.5         | 2.6         | 2.5         | 3.4         | 87                                                  |
| Lead                                                               | 0.5  | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | 10                                                  |
| Molybdenum                                                         | 0.5  | <0.50       | 5.3         | 3.3         | 4.3         | 3.5         | 4.5         | 70                                                  |
| Nickel                                                             | 1    | <1.0        | <1.0        | <1.0        | <1.0        | <1.0        | 1.1         | 100                                                 |
| Selenium                                                           | 2    | <2.0        | <2.0        | <2.0        | <2.0        | <2.0        | <2.0        | 10                                                  |
| Silver                                                             | 0.09 | <0.090      | <0.090      | <0.090      | <0.090      | <0.090      | <0.090      | 1.5                                                 |
| Thallium                                                           | 0.05 | <0.050      | <0.050      | <0.050      | <0.050      | <0.050      | 0.052       | 2                                                   |
| Vanadium                                                           | 0.5  | <0.50       | 0.57        | <0.50       | <0.50       | <0.50       | <0.50       | 6.2                                                 |
| Zinc                                                               | 5    | <5.0        | <5.0        | <5.0        | <5.0        | <5.0        | <5.0        | 1100                                                |
| Uranium                                                            | 0.1  | 0.28        | 0.69        | 0.32        | 0.38        | 1.2         | 0.21        | 20                                                  |

Analysis by Bureau Veritas Laboratories, all results in ppm (µg/L) unless otherwise stated

\* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

\*\* Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for all types of property use



## GROUND WATER CHEMICAL ANALYSIS - Volatile Organic Compound (VOCs) Parameters

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| Sample ID<br>Sample Date<br>Laboratory ID<br>Bore Hole No.<br>Screen Depth (mbgs) | RDL * | MW3         | DUPW1       | MW4         | MW5         | MW6         | MW7         | TRIP BLANK  |       | Ontario Regulation 153/04<br>Table 2 Standards** |
|-----------------------------------------------------------------------------------|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|--------------------------------------------------|
|                                                                                   |       | 22-Nov-2022 | 22-Nov-2022 | 22-Nov-2022 | 22-Nov-2022 | 22-Nov-2022 | 23-Nov-2022 | 22-Nov-2022 |       |                                                  |
|                                                                                   |       | UJT427      | UJT432      | UJT428      | UJT429      | UJT430      | UJW180      | UJT433      |       |                                                  |
|                                                                                   |       | BH3         | BH3         | BH4         | BH5         | BH6         | BH7         | -           |       |                                                  |
|                                                                                   |       | 3.25 – 6.25 | 3.25 – 6.25 | 3.35 – 6.35 | 1.7 – 4.7   | 1.65 – 4.65 | 3.0 – 6.0   |             |       |                                                  |
| Acetone                                                                           | 10    | <10         | <10         | <10         | <10         | <10         | 29          | <10         | <10   | 2700                                             |
| Benzene                                                                           | 0.2   | <0.17       | <0.17       | 0.49        | 0.65        | 0.33        | <0.17       | <0.20       | <0.20 | 5                                                |
| Bromodichloromethane                                                              | 0.5   | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50 | 16                                               |
| Bromoform                                                                         | 1     | <1.0        | <1.0        | <1.0        | <1.0        | <1.0        | <1.0        | <1.0        | <1.0  | 25                                               |
| Bromomethane                                                                      | 0.5   | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50 | 0.89                                             |
| Carbon Tetrachloride                                                              | 0.19  | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.19       | <0.19 | 0.79                                             |
| Chlorobenzene                                                                     | 0.2   | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20 | 30                                               |
| Chloroform                                                                        | 0.2   | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20 | 2.4                                              |
| Dibromochloromethane                                                              | 0.5   | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50 | 25                                               |
| 1,2-Dichlorobenzene                                                               | 0.4   | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.40       | <0.40 | 3                                                |
| 1,3-Dichlorobenzene                                                               | 0.4   | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.40       | <0.40 | 59                                               |
| 1,4-Dichlorobenzene                                                               | 0.4   | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.40       | <0.40 | 1                                                |
| 1,1-Dichloroethane                                                                | 0.2   | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20 | 5                                                |
| 1,2-Dichloroethane                                                                | 0.49  | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.49       | <0.49 | 1.6                                              |
| 1,1-Dichloroethylene                                                              | 0.2   | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20 | 1.6                                              |
| Cis-1,2-Dichloroethylene                                                          | 0.5   | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50 | 1.6                                              |
| Trans-1,2-Dichloroethylene                                                        | 0.5   | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50 | 1.6                                              |
| 1,2-Dichloropropane                                                               | 0.2   | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20 | 5                                                |
| Cis-1,3-Dichloropropylene                                                         | 0.3   | <0.30       | <0.30       | <0.30       | <0.30       | <0.30       | <0.30       | <0.30       | <0.30 | NV                                               |
| Trans-1,3-Dichloropropylene                                                       | 0.4   | <0.40       | <0.40       | <0.40       | <0.40       | <0.40       | <0.40       | <0.40       | <0.40 | NV                                               |
| Ethylbenzene                                                                      | 0.2   | <0.20       | <0.20       | 0.22        | 0.27        | <0.20       | <0.20       | <0.20       | <0.20 | 2.4                                              |
| Ethylene Dibromide                                                                | 0.19  | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.19       | <0.19 | 0.2                                              |
| Methyl Ethyl Ketone                                                               | 10    | <10         | <10         | <10         | <10         | <10         | <10         | <10         | <10   | 1800                                             |
| Methylene Chloride                                                                | 2     | <2.0        | <2.0        | <2.0        | <2.0        | <2.0        | <2.0        | <2.0        | <2.0  | 50                                               |
| Methyl Isobutyl Ketone                                                            | 5     | <5.0        | <5.0        | <5.0        | <5.0        | <5.0        | <5.0        | <5.0        | <5.0  | 640                                              |
| Methyl-t-Butyl Ether                                                              | 0.5   | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50 | 15                                               |
| Styrene                                                                           | 0.4   | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.40       | <0.40 | 5.4                                              |
| 1,1,1,2-Tetrachloroethane                                                         | 0.5   | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50 | 1.1                                              |
| 1,1,2,2-Tetrachloroethane                                                         | 0.4   | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.40       | <0.40 | 1                                                |
| Toluene                                                                           | 0.2   | <0.20       | <0.20       | 1.1         | 1.1         | 0.68        | 0.33        | <0.20       | <0.20 | 24                                               |
| Tetrachloroethylene                                                               | 0.2   | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20 | 1.6                                              |
| 1,1,1-Trichloroethane                                                             | 0.2   | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20 | 200                                              |
| 1,1,2-Trichloroethane                                                             | 0.4   | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.40       | <0.40 | 4.7                                              |
| Trichloroethylene                                                                 | 0.2   | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20 | 1.6                                              |
| Vinyl Chloride                                                                    | 0.2   | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20       | <0.20 | 0.5                                              |
| m-Xylene & p-Xylene                                                               | 0.2   | <0.20       | <0.20       | 0.43        | 0.5         | 0.34        | <0.20       | <0.20       | <0.20 | NV                                               |
| o-Xylene                                                                          | 0.2   | <0.20       | <0.20       | 0.25        | 0.26        | <0.20       | <0.20       | <0.20       | <0.20 | NV                                               |
| Total Xylenes                                                                     | 0.2   | <0.20       | <0.20       | 0.68        | 0.76        | 0.34        | <0.20       | <0.20       | <0.20 | 300                                              |
| Dichlorodifluoromethane                                                           | 1     | <1.0        | <1.0        | <1.0        | <1.0        | <1.0        | <1.0        | <1.0        | <1.0  | 590                                              |
| Hexane(n)                                                                         | 1     | <1.0        | <1.0        | <1.0        | <1.0        | <1.0        | <1.0        | <1.0        | <1.0  | 51                                               |
| Trichlorofluoromethane                                                            | 0.5   | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50 | 150                                              |
| 1,3-Dichloropropene (cis + trans)                                                 | 0.5   | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50       | <0.50 | 0.5                                              |

Analysis by Bureau Veritas Laboratories, all results in ppm (µg/L) unless otherwise stated

\* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

\*\* Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for all types of property use

Analysis by Bureau Veritas Laboratories; all results in ppm (µg/L) unless otherwise stated

\* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

\*\* Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for all types of property use



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| Sample ID               | RDL* | MW3         | DUPW1       | MW4         | MW5         | MW6         | MW7         | MW8         | Ontario Regulation 153/04 Table 2 Standards** |
|-------------------------|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------------------------------|
| Sample Date             |      | 22-Nov-2022 | 22-Nov-2022 | 22-Nov-2022 | 22-Nov-2022 | 22-Nov-2022 | 23-Nov-2022 | 23-Nov-2022 |                                               |
| Laboratory ID           |      | UJT427      | UJT432      | UJT428      | UJT429      | UJT430      | UJT430      | UJT430      |                                               |
| Bore Hole No.           |      | BH3         | BH3         | BH4         | BH5         | BH6         | BH7         | BH8         |                                               |
| Screen Depth (mbgs)     |      | 3.25 – 6.25 | 3.25 – 6.25 | 3.35 – 6.35 | 1.7 – 4.7   | 1.65 – 4.65 | 3.0 – 6.0   | 3.1 – 6.1   |                                               |
| Benzene                 | -    | -           | -           | -           | -           | -           | -           | 0.34        | 5                                             |
| Toluene                 | -    | -           | -           | -           | -           | -           | -           | 0.44        | 24                                            |
| Ethylbenzene            | -    | -           | -           | -           | -           | -           | -           | <0.20       | 2.4                                           |
| m/p xylenes             | -    | -           | -           | -           | -           | -           | -           | <0.40       | NV                                            |
| o xylene                | -    | -           | -           | -           | -           | -           | -           | <0.20       | NV                                            |
| Total Xylenes           | -    | -           | -           | -           | -           | -           | -           | <0.40       | 300                                           |
| F1 (C6-C10)             | 25   | <25         | <25         | <25         | <25         | <25         | <25         | <25         | 750                                           |
| F1 (C6-C10) - BTEX      | 25   | <25         | <25         | <25         | <25         | <25         | <25         | <25         | 750                                           |
| F2 (C10-C16)            | 100  | <100        | <100        | <100        | <100        | <100        | <100        | <100        | 150                                           |
| F3 (C16-C34)            | 200  | <200        | <200        | <200        | <200        | <200        | <200        | <200        | 500                                           |
| F4 (C34-C50)            | 200  | <200        | <200        | <200        | <200        | <200        | <200        | <200        | 500                                           |
| Reached Baseline at C50 |      | YES         | YES         | YES         | YES         | YES         | YES         | YES         | NV                                            |
| F4 Gravimetric          | -    | -           | -           | -           | -           | -           | -           | -           | 500                                           |

Analysis by Bureau Veritas Laboratories, all results in ppm (µg/L) unless otherwise stated

\* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

\*\* Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for all types of property use



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| Sample ID                 | Sample Date | Laboratory ID | Bore Hole No. | Screen Depth (mbgs) | RDL * | MW3                                         | DUPW1                                       | MW4                                         | MW5                                       | MW6                                         | MW7                                       | Ontario Regulation 153/04 Table 2 Standards** |
|---------------------------|-------------|---------------|---------------|---------------------|-------|---------------------------------------------|---------------------------------------------|---------------------------------------------|-------------------------------------------|---------------------------------------------|-------------------------------------------|-----------------------------------------------|
|                           |             |               |               |                     |       | 22-Nov-2022<br>UJT427<br>BH3<br>3.25 – 6.25 | 22-Nov-2022<br>UJT432<br>BH3<br>3.25 – 6.25 | 22-Nov-2022<br>UJT428<br>BH4<br>3.35 – 6.35 | 22-Nov-2022<br>UJT429<br>BH5<br>1.7 – 4.7 | 22-Nov-2022<br>UJT430<br>BH6<br>1.65 – 4.65 | 23-Nov-2022<br>UJW180<br>BH7<br>3.0 – 6.0 |                                               |
| Acenaphthene              |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | <0.050                                      | <0.050                                    | 4.1                                           |
| Acenaphthylene            |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | <0.050                                      | <0.050                                    | 1                                             |
| Anthracene                |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | <0.050                                      | <0.050                                    | 2.4                                           |
| Benzo(a)anthracene        |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | <0.050                                      | <0.050                                    | 1                                             |
| Benzo(a)pyrene            |             |               |               |                     | 0.009 | <0.0090                                     | <0.0090                                     | <0.0090                                     | <0.0090                                   | <0.0090                                     | <0.0090                                   | 0.01                                          |
| Benzo(b,j)fluoranthene    |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | <0.050                                      | <0.050                                    | 0.1                                           |
| Benzo(ghi)perylene        |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | <0.050                                      | <0.050                                    | 0.2                                           |
| Benzo(k)fluoranthene      |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | <0.050                                      | <0.050                                    | 0.1                                           |
| Chrysene                  |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | <0.050                                      | <0.050                                    | 0.1                                           |
| Dibenzo(a,h)anthracene    |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | <0.050                                      | <0.050                                    | 0.2                                           |
| Fluoranthene              |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | <0.050                                      | <0.050                                    | 0.41                                          |
| Fluorene                  |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | <0.050                                      | <0.050                                    | 120                                           |
| Indeno(1,2,3-cd)pyrene    |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | <0.050                                      | <0.050                                    | 0.2                                           |
| 1-Methylnaphthalene       |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | 0.051                                       | <0.050                                    | 3.2                                           |
| 2-Methylnaphthalene       |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | 0.05                                        | <0.050                                    | 3.2                                           |
| Naphthalene               |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | <0.050                                      | <0.050                                    | 11                                            |
| Phenanthrene              |             |               |               |                     | 0.03  | <0.030                                      | <0.030                                      | <0.030                                      | <0.030                                    | <0.030                                      | <0.030                                    | 1                                             |
| Pyrene                    |             |               |               |                     | 0.05  | <0.050                                      | <0.050                                      | <0.050                                      | <0.050                                    | <0.050                                      | <0.050                                    | 4.1                                           |
| Methylnaphthalene, 2-(1-) |             |               |               |                     | 0.071 | <0.071                                      | <0.071                                      | <0.071                                      | <0.071                                    | 0.1                                         | <0.071                                    | 3.2                                           |

Analysis by Bureau Veritas Laboratories, all results in ppm (µg/L) unless otherwise stated

\* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

\*\* Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for all types of property use



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| Sample ID           |             | RDL * | MW6    |       | Ontario Regulation 153/04 Table 2<br>Standards** |
|---------------------|-------------|-------|--------|-------|--------------------------------------------------|
| Sample Date         | 22-Nov-2022 |       |        |       |                                                  |
| Laboratory ID       | UJT430      |       |        |       |                                                  |
| Bore Hole No.       | BH6         |       |        |       |                                                  |
| Screen Depth (mbgs) | 1.65 – 4.65 |       |        |       |                                                  |
| Aldrin              |             | 0.005 | <0.005 | 0.35  |                                                  |
| Chlordane (alpha)   |             | 0.005 | <0.005 | NV    |                                                  |
| Chlordane (gamma)   |             | 0.005 | <0.005 | NV    |                                                  |
| Chlordane (total)   |             | 0.005 | <0.005 | 7     |                                                  |
| o,p DDD             |             | 0.005 | <0.005 | NV    |                                                  |
| p,p-DDD             |             | 0.005 | <0.005 | NV    |                                                  |
| DDD (total)         |             | 0.005 | <0.005 | 10    |                                                  |
| o,p DDE             |             | 0.005 | <0.005 | NV    |                                                  |
| p,p-DDE             |             | 0.005 | <0.005 | NV    |                                                  |
| DDE (total)         |             | 0.005 | <0.005 | 10    |                                                  |
| op-DDT              |             | 0.005 | <0.005 | NV    |                                                  |
| pp-DDT              |             | 0.005 | <0.005 | NV    |                                                  |
| DDT (total)         |             | 0.005 | <0.005 | 2.8   |                                                  |
| Dieldrin            |             | 0.005 | <0.005 | 0.35  |                                                  |
| Endosulphan I       |             | 0.005 | <0.005 | NV    |                                                  |
| Endosulphan II      |             | 0.005 | <0.005 | NV    |                                                  |
| Total Endosulphan   |             | 0.005 | <0.005 | 1.5   |                                                  |
| Endrin              |             | 0.005 | <0.005 | 0.48  |                                                  |
| Heptachlor          |             | 0.005 | <0.005 | 1.5   |                                                  |
| Hepatchlor Epoxide  |             | 0.005 | <0.005 | 0.048 |                                                  |
| Lindane             |             | 0.003 | <0.003 | 1.2   |                                                  |
| Methoxychlor        |             | 0.01  | <0.01  | 6.5   |                                                  |
| Hexachlorobenzene   |             | 0.005 | <0.005 | 1     |                                                  |
| Hexachlorobutadiene |             | 0.009 | <0.009 | 0.44  |                                                  |
| Hexachloroethane    |             | 0.01  | <0.01  | 2.1   |                                                  |

Analysis by Bureau Veritas Laboratories, all results in ppm (µg/L) unless otherwise stated

\* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

\*\* Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for all types of property use

Analysis by Bureau Veritas Laboratories, all results in ppm (µg/L) unless otherwise stated

\* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

\*\* Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for all types of property use



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| Sample ID             | RDL * | MW6         | Ontario Regulation 153/04 Table 2 Standards** |
|-----------------------|-------|-------------|-----------------------------------------------|
| Sample Date           |       | 22-Nov-2022 |                                               |
| Laboratory ID         |       | UJT430      |                                               |
| Bore Hole No.         |       | BH6         |                                               |
| Screen Depth (mbgs)   |       | 1.65 – 4.65 |                                               |
| 2-Chlorophenol        | 0.1   | <0.1        | 8.9                                           |
| 2,4-Dichlorophenol    | 0.1   | <0.1        | 20                                            |
| Pentachlorophenol     | 0.1   | <0.1        | 30                                            |
| 2,4,5-Trichlorophenol | 0.1   | <0.1        | 8.9                                           |
| 2,4,6-Trichlorophenol | 0.1   | <0.1        | 2                                             |

Analysis by Bureau Veritas Laboratories, all results in ppm (µg/L) unless otherwise stated

\* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

\*\* Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for all types of property use

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**Table V – Maximum Concentration (Soil)**
**Summary of Metals and Inorganics**

| Parameter                 | Unit | Maximum Concentration | Sample ID | Sampling Depth (m) |
|---------------------------|------|-----------------------|-----------|--------------------|
| Antimony                  | ug/g | 0.38                  | BH8/7     | 4.6 - 5.2          |
| Arsenic                   | ug/g | 7.4                   | TP6       | 0.0 - 0.3          |
| Barium                    | ug/g | 53                    | TP2       | 0.0 - 0.3          |
| Beryllium                 | ug/g | 0.43                  | TP1       | 0.0 - 0.3          |
| Boron (Hot Water Soluble) | ug/g | 0.68                  | TP1       | 0.0 - 0.3          |
| Cadmium                   | ug/g | 0.37                  | BH5/6     | 3.8-4.4            |
| Chromium                  | ug/g | 17                    | TP2       | 0.0 - 0.3          |
| Chromium VI               | ug/g | <0.18                 | -         | -                  |
| Cobalt                    | ug/g | 6                     | BH1/5     | 3.0 - 3.6          |
| Copper                    | ug/g | 27                    | BH8/7     | 4.6 - 5.2          |
| Lead                      | ug/g | 57                    | BH8/7     | 4.6 - 5.2          |
| Mercury                   | ug/g | <0.05                 | -         | -                  |
| Molybdenum                | ug/g | 1.8                   | BH8/7     | 4.6 - 5.2          |
| Nickel                    | ug/g | 12                    | BH1/5     | 3.0 - 3.6          |
| Selenium                  | ug/g | <0.5                  | -         | -                  |
| Silver                    | ug/g | <0.2                  | -         | -                  |
| Thallium                  | ug/g | 0.16                  | BH8/7     | 4.6 - 5.2          |
| Vanadium                  | ug/g | 39                    | TP2       | 0.0 - 0.3          |
| Zinc                      | ug/g | 130                   | BH8/7     | 4.6 - 5.2          |
| pH (pH Units)             | -    | 8.04                  | BH5/6     | 3.8-4.4            |
| Cyanide, Free             | ug/g | <0.01                 | -         | -                  |
| Boron (Total)             | ug/g | 12                    | BH8/7     | 4.6 - 5.2          |
| Uranium                   | ug/g | 0.51                  | TP2       | 0.0 - 0.3          |





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**Table V – Maximum Concentration (Soil)****Summary of OCs**

| Parameter           | Unit | Maximum Concentration | Sample ID | Sampling Depth (m) |
|---------------------|------|-----------------------|-----------|--------------------|
| Aldrin              | ug/g | <0.002                | -         | -                  |
| Chlordane (alpha)   | ug/g | <0.002                | -         | -                  |
| Chlordane (gamma)   | ug/g | <0.002                | -         | -                  |
| Chlordane (total)   | ug/g | <0.002                | -         | -                  |
| o,p DDD             | ug/g | <0.002                | -         | -                  |
| p,p-DDD             | ug/g | <0.002                | -         | -                  |
| DDD (total)         | ug/g | <0.002                | -         | -                  |
| o,p DDE             | ug/g | <0.002                | -         | -                  |
| p,p-DDE             | ug/g | 0.0037                | TP6       | 0.0 - 0.3          |
| DDE (total)         | ug/g | 0.0037                | TP6       | 0.0 - 0.3          |
| op-DDT              | ug/g | <0.002                | -         | -                  |
| pp-DDT              | ug/g | 0.0024                | TP7       | 0.0 - 0.3          |
| DDT (total)         | ug/g | 0.0024                | TP7       | 0.0 - 0.3          |
| Dieldrin            | ug/g | <0.002                | -         | -                  |
| Endosulphan I       | ug/g | <0.002                | -         | -                  |
| Endosulphan II      | ug/g | <0.002                | -         | -                  |
| Total Endosulphan   | ug/g | <0.002                | -         | -                  |
| Endrin              | ug/g | <0.002                | -         | -                  |
| Heptachlor          | ug/g | <0.002                | -         | -                  |
| Heptachlor Epoxide  | ug/g | <0.002                | -         | -                  |
| Lindane             | ug/g | <0.002                | -         | -                  |
| Methoxychlor        | ug/g | <0.005                | -         | -                  |
| Hexachlorobenzene   | ug/g | <0.002                | -         | -                  |
| Hexachlorobutadiene | ug/g | <0.002                | -         | -                  |
| Hexachloroethane    | ug/g | <0.002                | -         | -                  |



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**Table V – Maximum Concentration (Soil)**

**Summary of VOCs**

| Parameter                   | Unit | Maximum Concentration | Sample ID | Sampling Depth (m) |
|-----------------------------|------|-----------------------|-----------|--------------------|
| Acetone                     | ug/g | <0.49                 | -         | -                  |
| Benzene                     | ug/g | <0.006                | -         | -                  |
| Bromodichloromethane        | ug/g | <0.04                 | -         | -                  |
| Bromoform                   | ug/g | <0.04                 | -         | -                  |
| Bromomethane                | ug/g | <0.04                 | -         | -                  |
| Carbon Tetrachloride        | ug/g | <0.04                 | -         | -                  |
| Chlorobenzene               | ug/g | <0.04                 | -         | -                  |
| Chloroform                  | ug/g | <0.04                 | -         | -                  |
| Dibromochloromethane        | ug/g | <0.04                 | -         | -                  |
| 1,2-Dichlorobenzene         | ug/g | <0.04                 | -         | -                  |
| 1,3-Dichlorobenzene         | ug/g | <0.04                 | -         | -                  |
| 1,4-Dichlorobenzene         | ug/g | <0.04                 | -         | -                  |
| 1,1-Dichloroethane          | ug/g | <0.04                 | -         | -                  |
| 1,2-Dichloroethane          | ug/g | <0.049                | -         | -                  |
| 1,1-Dichloroethylene        | ug/g | <0.04                 | -         | -                  |
| Cis-1,2-Dichloroethylene    | ug/g | <0.04                 | -         | -                  |
| Trans-1,2-Dichloroethylene  | ug/g | <0.04                 | -         | -                  |
| 1,2-Dichloropropane         | ug/g | <0.04                 | -         | -                  |
| Cis-1,3-Dichloropropylene   | ug/g | <0.03                 | -         | -                  |
| Trans-1,3-Dichloropropylene | ug/g | <0.04                 | -         | -                  |
| Ethylbenzene                | ug/g | <0.01                 | -         | -                  |
| Ethylene Dibromide          | ug/g | <0.04                 | -         | -                  |
| Methyl Ethyl Ketone         | ug/g | <0.4                  | -         | -                  |
| Methylene Chloride          | ug/g | <0.049                | -         | -                  |
| Methyl Isobutyl Ketone      | ug/g | <0.4                  | -         | -                  |
| Methyl-t-Butyl Ether        | ug/g | <0.04                 | -         | -                  |
| Styrene                     | ug/g | <0.04                 | -         | -                  |
| 1,1,1,2-Tetrachloroethane   | ug/g | <0.04                 | -         | -                  |



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**Table V – Maximum Concentration (Soil)****Summary of VOCs (continued)**

| Parameter                         | Unit | Maximum Concentration | Sample ID | Sampling Depth (m) |
|-----------------------------------|------|-----------------------|-----------|--------------------|
| 1,1,2,2-Tetrachloroethane         | ug/g | <0.04                 | -         | -                  |
| Toluene                           | ug/g | <0.02                 | -         | -                  |
| Tetrachloroethylene               | ug/g | <0.04                 | -         | -                  |
| 1,1,1-Trichloroethane             | ug/g | <0.04                 | -         | -                  |
| 1,1,2-Trichloroethane             | ug/g | <0.04                 | -         | -                  |
| Trichloroethylene                 | ug/g | <0.01                 | -         | -                  |
| Vinyl Chloride                    | ug/g | <0.019                | -         | -                  |
| m-Xylene & p-Xylene               | ug/g | <0.02                 | -         | -                  |
| o-Xylene                          | ug/g | <0.02                 | -         | -                  |
| Total Xylenes                     | ug/g | <0.02                 | -         | -                  |
| Dichlorodifluoromethane           | ug/g | <0.04                 | -         | -                  |
| Hexane(n)                         | ug/g | <0.04                 | -         | -                  |
| Trichlorofluoromethane            | ug/g | <0.04                 | -         | -                  |
| 1,3-Dichloropropene (cis + trans) | ug/g | <0.05                 | -         | -                  |



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**Table V – Maximum Concentration (Soil)**

**Summary of CCME F1-F4**

| Parameter          | Unit | Maximum Concentration | Sample ID | Sampling Depth (m) |
|--------------------|------|-----------------------|-----------|--------------------|
| Benzene            | ug/g | <0.02                 | -         | -                  |
| Toluene            | ug/g | <0.02                 | -         | -                  |
| Ethylbenzene       | ug/g | <0.02                 | -         | -                  |
| m/p xylenes        | ug/g | <0.04                 | -         | -                  |
| o xylene           | ug/g | <0.02                 | -         | -                  |
| Total Xylenes      | ug/g | <0.04                 | -         | -                  |
| F1 (C6-C10)        | ug/g | <10                   | -         | -                  |
| F1 (C6-C10) - BTEX | ug/g | <10                   | -         | -                  |
| F2 (C10-C16)       | ug/g | <10                   | -         | -                  |
| F3 (C16-C34)       | ug/g | 200                   | BH11/1    | 0.0 - 0.6          |
| F4 (C34-C50)       | ug/g | <50                   | -         | -                  |
| F4 Gravimetric     | ug/g | <-                    | -         | -                  |



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**Table V – Maximum Concentration (Soil)****Summary of PAHs**

| Parameter                 | Unit | Maximum Concentration | Sample ID | Sampling Depth (m) |
|---------------------------|------|-----------------------|-----------|--------------------|
| Acenaphthene              | ug/g | <0.005                | -         | -                  |
| Acenaphthylene            | ug/g | <0.005                | -         | -                  |
| Anthracene                | ug/g | <0.005                | -         | -                  |
| Benzo(a)anthracene        | ug/g | <0.005                | -         | -                  |
| Benzo(a)pyrene            | ug/g | <0.005                | -         | -                  |
| Benzo(b/j)fluoranthene    | ug/g | <0.005                | -         | -                  |
| Benzo(ghi)perylene        | ug/g | <0.005                | -         | -                  |
| Benzo(k)fluoranthene      | ug/g | <0.005                | -         | -                  |
| Chrysene                  | ug/g | <0.005                | -         | -                  |
| Dibenzo(a,h)anthracene    | ug/g | <0.005                | -         | -                  |
| Fluoranthene              | ug/g | <0.005                | -         | -                  |
| Fluorene                  | ug/g | <0.005                | -         | -                  |
| Indeno(1,2,3-cd)pyrene    | ug/g | <0.005                | -         | -                  |
| 1-Methylnaphthalene       | ug/g | <0.005                | -         | -                  |
| 2-Methylnaphthalene       | ug/g | <0.005                | -         | -                  |
| Naphthalene               | ug/g | <0.005                | -         | -                  |
| Phenanthrene              | ug/g | <0.005                | -         | -                  |
| Pyrene                    | ug/g | <0.005                | -         | -                  |
| Methylnaphthalene, 2-(1-) | ug/g | <0.071                | -         | -                  |

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**Table V – Maximum Concentration (Soil)**

**Summary of CPs**

| Parameter             | Unit | Maximum Concentration | Sample ID | Sampling Depth (m) |
|-----------------------|------|-----------------------|-----------|--------------------|
| 2-Chlorophenol        | ug/g | <0.05                 | -         | -                  |
| 2,4-Dichlorophenol    | ug/g | <0.05                 | -         | -                  |
| Pentachlorophenol     | ug/g | <0.05                 | -         | -                  |
| 2,4,5-Trichlorophenol | ug/g | <0.05                 | -         | -                  |
| 2,4,6-Trichlorophenol | ug/g | <0.05                 | -         | -                  |

**Project No.2206-E054**
**Table VI – Maximum Concentration (Groundwater)**
**Summary of Metals and Inorganics**

| Parameter  | Unit | Maximum Concentration | Sample ID | Screen Depth (m) |
|------------|------|-----------------------|-----------|------------------|
| Antimony   | µg/L | 0.54                  | MW4       | 3.35 – 6.35      |
| Arsenic    | µg/L | <1                    | -         | -                |
| Barium     | µg/L | 85                    | MW4       | 3.35 – 6.35      |
| Beryllium  | µg/L | <0.4                  | -         | -                |
| Boron      | µg/L | 73                    | MW8       | 3.1 – 6.1        |
| Cadmium    | µg/L | <0.09                 | -         | -                |
| Chromium   | µg/L | <5                    | -         | -                |
| Cobalt     | µg/L | <0.5                  | -         | -                |
| Copper     | µg/L | 3.4                   | MW8       | 3.1 – 6.1        |
| Lead       | µg/L | <0.5                  | -         | -                |
| Molybdenum | µg/L | 5.3                   | MW4       | 3.35 – 6.35      |
| Nickel     | µg/L | 1.1                   | MW8       | 3.1 – 6.1        |
| Selenium   | µg/L | <2                    | -         | -                |
| Silver     | µg/L | <0.09                 | -         | -                |
| Thallium   | µg/L | 0.052                 | MW8       | 3.1 – 6.1        |
| Vanadium   | µg/L | 0.57                  | MW4       | 3.35 – 6.35      |
| Zinc       | µg/L | <5                    | -         | -                |
| Uranium    | µg/L | 1.2                   | MW7       | 3.0 – 6.0        |

**Project No.2206-E054**
**Table VI – Maximum Concentration (Groundwater)**
**Summary of VOCs**

| Parameter                   | Unit | Maximum Concentration | Sample ID | Screen Depth (m) |
|-----------------------------|------|-----------------------|-----------|------------------|
| Acetone                     | µg/L | 29                    | MW7       | 3.0 – 6.0        |
| Benzene                     | µg/L | 0.65                  | MW5       | 1.7 – 4.7        |
| Bromodichloromethane        | µg/L | <0.5                  | -         | -                |
| Bromoform                   | µg/L | <1                    | -         | -                |
| Bromomethane                | µg/L | <0.5                  | -         | -                |
| Carbon Tetrachloride        | µg/L | <0.19                 | -         | -                |
| Chlorobenzene               | µg/L | <0.2                  | -         | -                |
| Chloroform                  | µg/L | <0.2                  | -         | -                |
| Dibromochloromethane        | µg/L | <0.5                  | -         | -                |
| 1,2-Dichlorobenzene         | µg/L | <0.4                  | -         | -                |
| 1,3-Dichlorobenzene         | µg/L | <0.4                  | -         | -                |
| 1,4-Dichlorobenzene         | µg/L | <0.4                  | -         | -                |
| 1,1-Dichloroethane          | µg/L | <0.2                  | -         | -                |
| 1,2-Dichloroethane          | µg/L | <0.49                 | -         | -                |
| 1,1-Dichloroethylene        | µg/L | <0.2                  | -         | -                |
| Cis-1,2-Dichloroethylene    | µg/L | <0.5                  | -         | -                |
| Trans-1,2-Dichloroethylene  | µg/L | <0.5                  | -         | -                |
| 1,2-Dichloropropane         | µg/L | <0.2                  | -         | -                |
| Cis-1,3-Dichloropropylene   | µg/L | <0.3                  | -         | -                |
| Trans-1,3-Dichloropropylene | µg/L | <0.4                  | -         | -                |
| Ethylbenzene                | µg/L | 0.27                  | MW5       | 1.7 – 4.7        |
| Ethylene Dibromide          | µg/L | <0.19                 | -         | -                |
| Methyl Ethyl Ketone         | µg/L | <10                   | -         | -                |
| Methylene Chloride          | µg/L | <2                    | -         | -                |
| Methyl Isobutyl Ketone      | µg/L | <5                    | -         | -                |
| Methyl-t-Butyl Ether        | µg/L | <0.5                  | -         | -                |
| Styrene                     | µg/L | <0.4                  | -         | -                |



**Project No.2206-E054**  
**Table VI – Maximum Concentration (Groundwater)**

**Summary of VOCs**

| Parameter                         | Unit | Maximum Concentration | Sample ID | Screen Depth (m) |
|-----------------------------------|------|-----------------------|-----------|------------------|
| 1,1,1,2-Tetrachloroethane         | µg/L | <0.5                  | -         | -                |
| 1,1,2,2-Tetrachloroethane         | µg/L | <0.4                  | -         | -                |
| Toluene                           | µg/L | 1.1                   | MW4       | 3.35 – 6.35      |
| Tetrachloroethylene               | µg/L | <0.2                  | -         | -                |
| 1,1,1-Trichloroethane             | µg/L | <0.2                  | -         | -                |
| 1,1,2-Trichloroethane             | µg/L | <0.4                  | -         | -                |
| Trichloroethylene                 | µg/L | <0.2                  | -         | -                |
| Vinyl Chloride                    | µg/L | <0.2                  | -         | -                |
| m-Xylene & p-Xylene               | µg/L | 0.5                   | MW5       | 1.7 – 4.7        |
| o-Xylene                          | µg/L | 0.26                  | MW5       | 1.7 – 4.7        |
| Total Xylenes                     | µg/L | 0.76                  | MW5       | 1.7 – 4.7        |
| Dichlorodifluoromethane           | µg/L | <1                    | -         | -                |
| Hexane(n)                         | µg/L | <1                    | -         | -                |
| Trichlorofluoromethane            | µg/L | <0.5                  | -         | -                |
| 1,3-Dichloropropene (cis + trans) | µg/L | <0.5                  | -         | -                |

**Project No.2206-E054**
**Table VI – Maximum Concentration (Groundwater)**
**Summary of CCME F1-F4**

| Parameter               | Unit | Maximum Concentration | Sample ID | Screen Depth (m) |
|-------------------------|------|-----------------------|-----------|------------------|
| Benzene                 | µg/L | 0.34                  | MW8       | 3.1 – 6.1        |
| Toluene                 | µg/L | 0.44                  | MW8       | 3.1 – 6.1        |
| Ethylbenzene            | µg/L | <-                    | -         | -                |
| m/p xylenes             | µg/L | <-                    | -         | -                |
| o xylene                | µg/L | <-                    | -         | -                |
| Total Xylenes           | µg/L | <-                    | -         | -                |
| F1 (C6-C10)             | µg/L | <25                   | -         | -                |
| F1 (C6-C10) - BTEX      | µg/L | <25                   | -         | -                |
| F2 (C10-C16)            | µg/L | <100                  | -         | -                |
| F3 (C16-C34)            | µg/L | <200                  | -         | -                |
| F4 (C34-C50)            | µg/L | <200                  | -         | -                |
| Reached Baseline at C50 | µg/L | <                     | -         | -                |
| F4 Gravimetric          | µg/L | <-                    | -         | -                |

**Project No.2206-E054**
**Table VI – Maximum Concentration (Groundwater)**
**Summary of PAHs**

| Parameter                 | Unit | Maximum Concentration | Sample ID | Screen Depth (m) |
|---------------------------|------|-----------------------|-----------|------------------|
| Acenaphthene              | µg/L | <0.05                 | -         | -                |
| Acenaphthylene            | µg/L | <0.05                 | -         | -                |
| Anthracene                | µg/L | <0.05                 | -         | -                |
| Benzo(a)anthracene        | µg/L | <0.05                 | -         | -                |
| Benzo(a)pyrene            | µg/L | <0.009                | -         | -                |
| Benzo(b/j)fluoranthene    | µg/L | <0.05                 | -         | -                |
| Benzo(ghi)perylene        | µg/L | <0.05                 | -         | -                |
| Benzo(k)fluoranthene      | µg/L | <0.05                 | -         | -                |
| Chrysene                  | µg/L | <0.05                 | -         | -                |
| Dibenzo(a,h)anthracene    | µg/L | <0.05                 | -         | -                |
| Fluoranthene              | µg/L | <0.05                 | -         | -                |
| Fluorene                  | µg/L | <0.05                 | -         | -                |
| Indeno(1,2,3-cd)pyrene    | µg/L | <0.05                 | -         | -                |
| 1-Methylnaphthalene       | µg/L | 0.051                 | MW6       | 1.65 – 4.65      |
| 2-Methylnaphthalene       | µg/L | 0.05                  | MW6       | 1.65 – 4.65      |
| Naphthalene               | µg/L | <0.05                 | -         | -                |
| Phenanthrene              | µg/L | <0.03                 | -         | -                |
| Pyrene                    | µg/L | <0.05                 | -         | -                |
| Methylnaphthalene, 2-(1-) | µg/L | 0.1                   | MW6       | 1.65 – 4.65      |

**Project No.2206-E054**  
**Table VI – Maximum Concentration (Groundwater)**

**Summary of CPs**

| Parameter             | Unit | Maximum Concentration | Sample ID | Screen Depth (m) |
|-----------------------|------|-----------------------|-----------|------------------|
| 2-Chlorophenol        | µg/L | <0.1                  | -         | -                |
| 2,4-Dichlorophenol    | µg/L | <0.1                  | -         | -                |
| Pentachlorophenol     | µg/L | <0.1                  | -         | -                |
| 2,4,5-Trichlorophenol | µg/L | <0.1                  | -         | -                |
| 2,4,6-Trichlorophenol | µg/L | <0.1                  | -         | -                |



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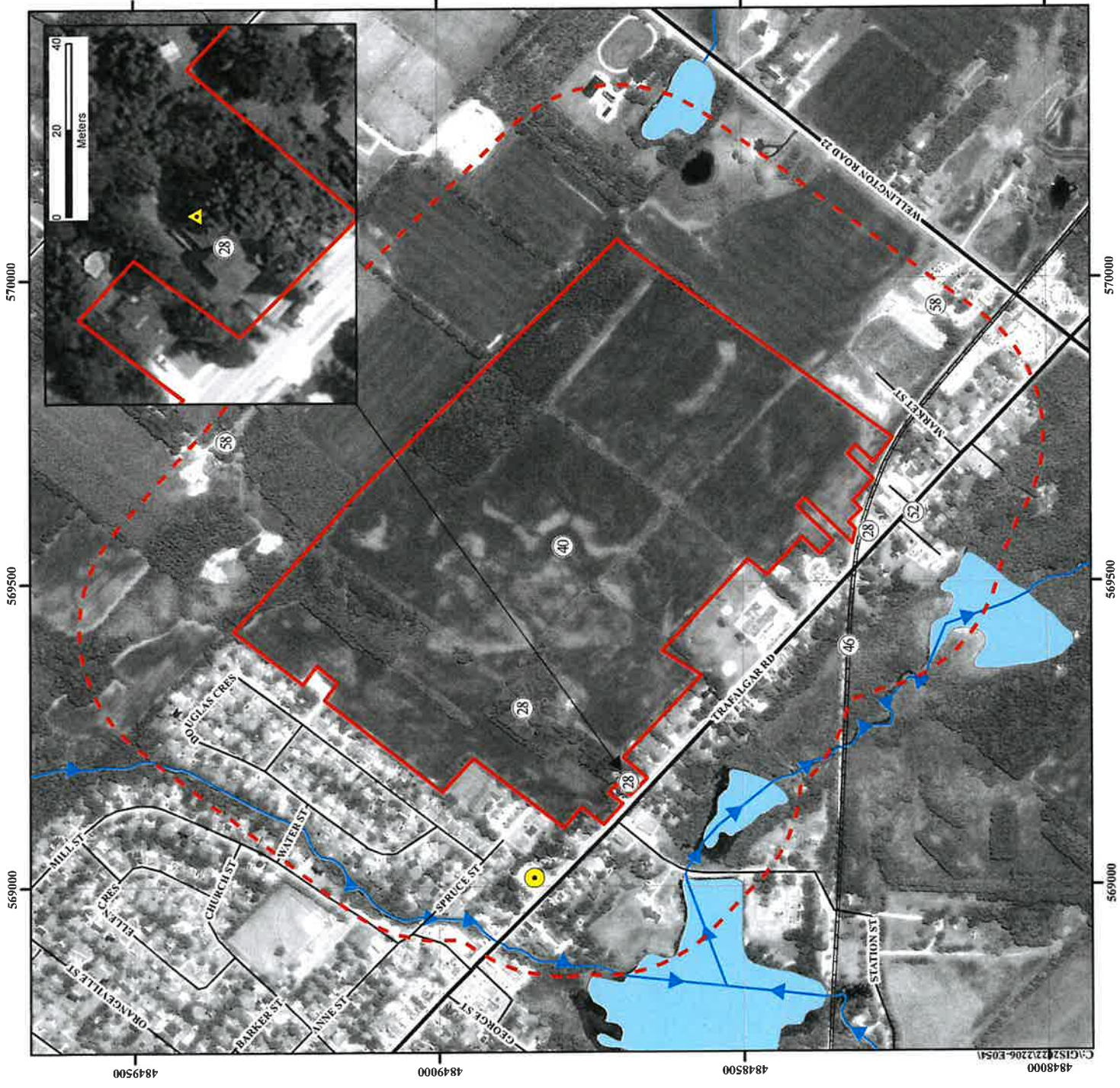
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## **DRAWINGS**

**Reference No. 2206-E054**



Subject Site

Phase One Study Area

Waterbody

Major Road

Local Road

Railway

**Potentially Contaminating Activities**

Gasoline and Associated Products Storage in Fixed Tanks

Pesticides (including Herbicides, Fungicides, and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage, and Large-Scale Applications

Rail Yards, Tracks, and Spurs

Storage, Maintenance, Fuelling and Repair of Equipment, Vehicles, and Material used to Maintain Transportation Systems

Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosolids as soil conditioners

**Additional Potential Sources of Contamination**

Other - Waste Generator

Other - Oil Stain

**Soil Engineers Ltd.**

Title: Site Location Plan

Project:  
Proposed Residential Development  
63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin

Reference No. 2206-E054

Date: January 3, 2022

Scale:  
0 45 90 180 270 360 450  
Metres

Drawing No. 1





**Legend**

- Subject Site
- Borehole
- Borehole with Monitoring Well
- Test Pit
- Waterbody
- Major Road
- Local Road
- Railway

**Areas of Potential Environmental Concern (APEC)**

- APEC 1
- APEC 2
- APEC 3
- APEC 4
- APEC 5
- APEC 6
- APEC 7
- APEC 8

**Soil Engineers Ltd.**

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**Title:** Sampling Location Plan

**Project:** Proposed Residential Development  
63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin

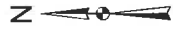
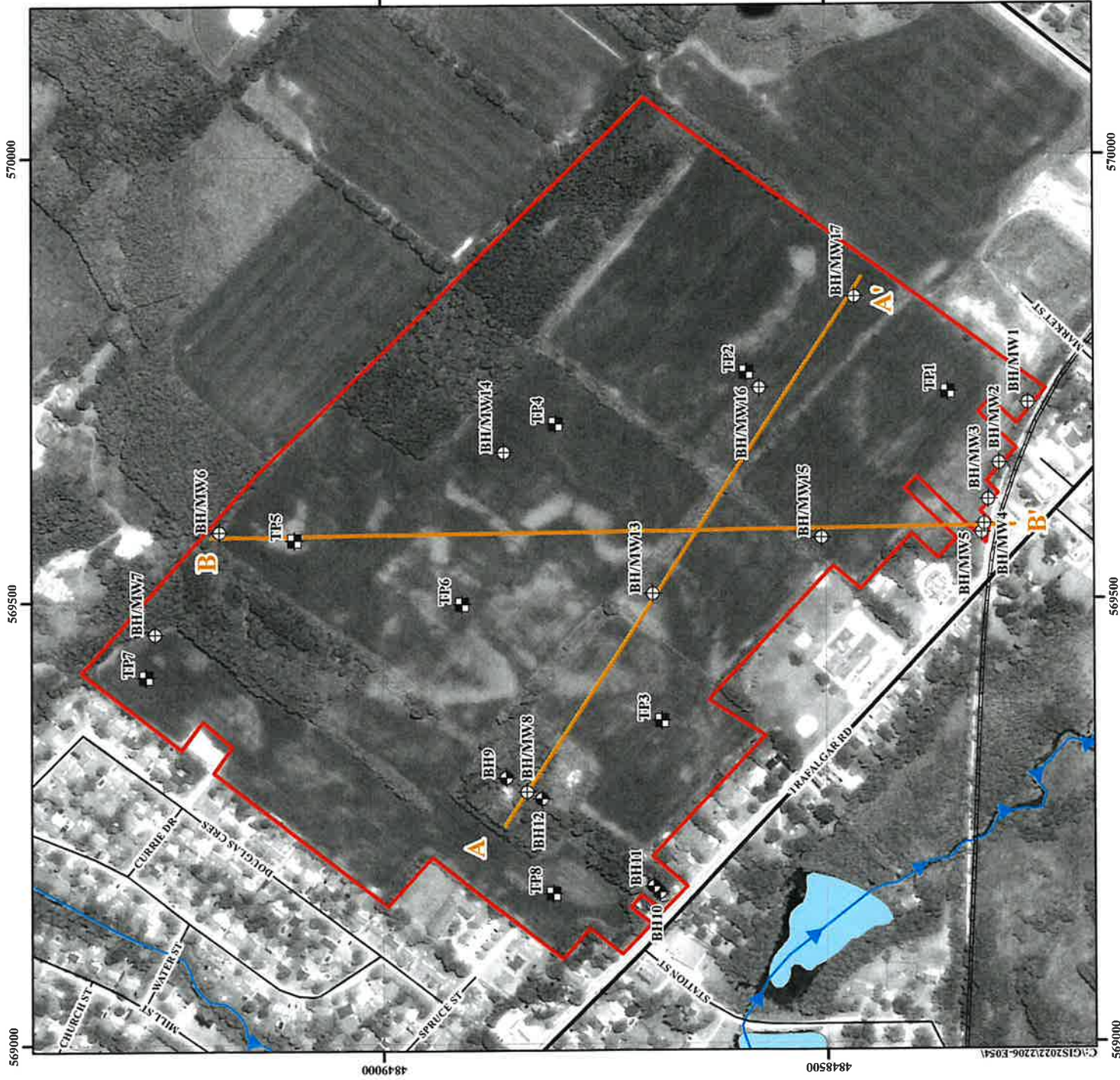
**Reference:** No. 2206-E054

**Date:** January 3, 2022

**Scale:** 0 25 50 75 100 125 150 175 200 225 250 275 300 325 350 Meters

**Drawing No. 2**





- Subject Site
- Borehole
- Borehole with Monitoring Well
- Test Pit
- Waterbody
- Major Road
- Local Road
- Railway
- Cross-Section Direction

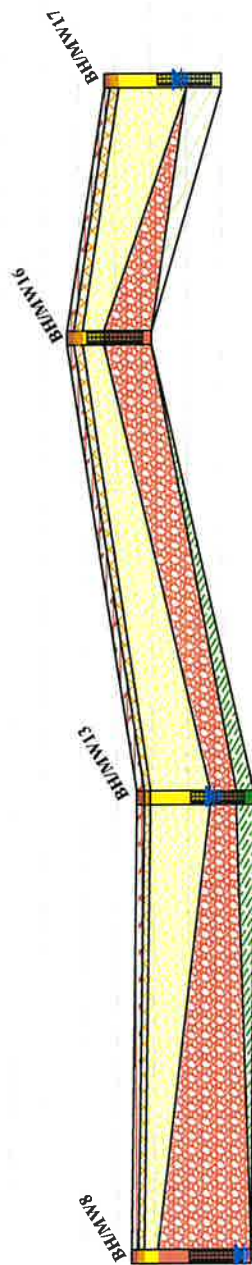


|                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------|
| Title: Cross-Section Key Plan                                                                                                      |
| Project:<br>Proposed Residential Development<br>63 and 63A Trafalgar Road<br>Parts of Lots 23 and 24, Concession 8<br>Town of Erin |
| Reference No. 2206-E054                                                                                                            |
| Date: January 3, 2022                                                                                                              |
| Scale:<br>0 30 60 120 180 240 300<br>Metres                                                                                        |
| Drawing No. 3                                                                                                                      |



Northwest  
A

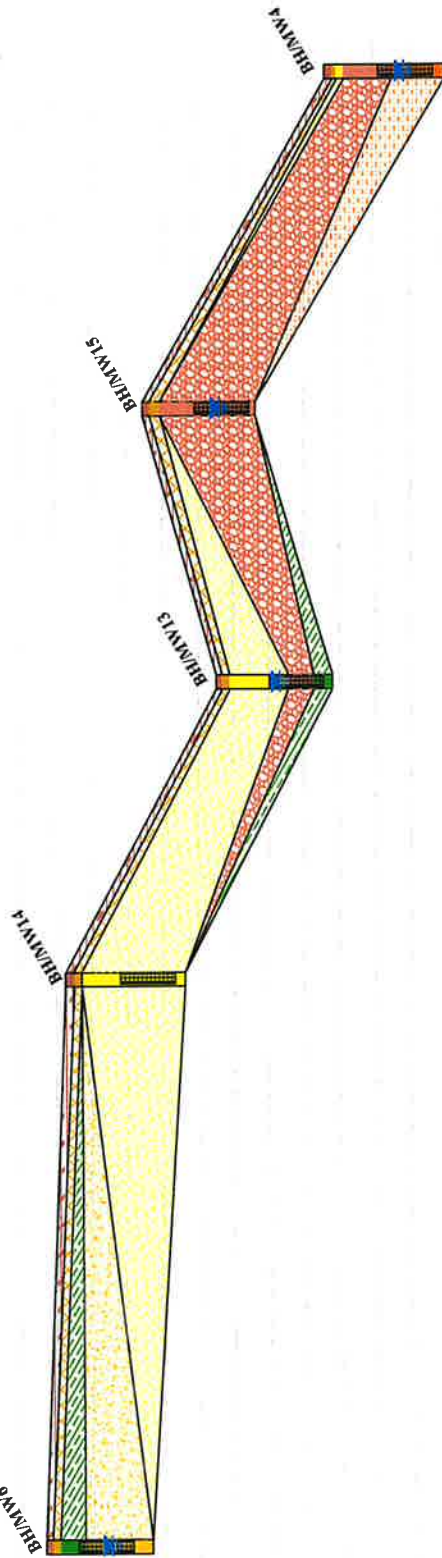
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445.0 m  
443.0 m  
441.0 m  
439.0 m  
437.0 m  
435.0 m  
433.0 m  
431.0 m  
429.0 m  
427.0 m  
425.0 m  
423.0 m  
421.0 m



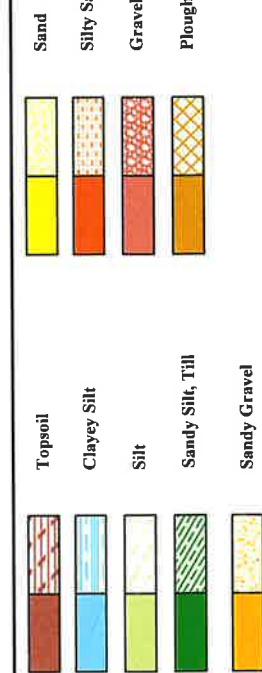
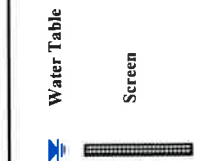
0.0 m  
200.0 m  
400.0 m  
600.0 m  
800.0 m  
Southeast  
A'

North  
B

Elevation (masl)  
445.0 m  
443.0 m  
441.0 m  
439.0 m  
437.0 m  
435.0 m  
433.0 m  
431.0 m  
429.0 m  
427.0 m  
425.0 m  
423.0 m  
421.0 m



0.0 m  
200.0 m  
400.0 m  
600.0 m  
800.0 m  
Southeast  
B'



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Title: Geological Cross-Sections A-A' and B-B'

Project: Proposed Residential Development  
63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin

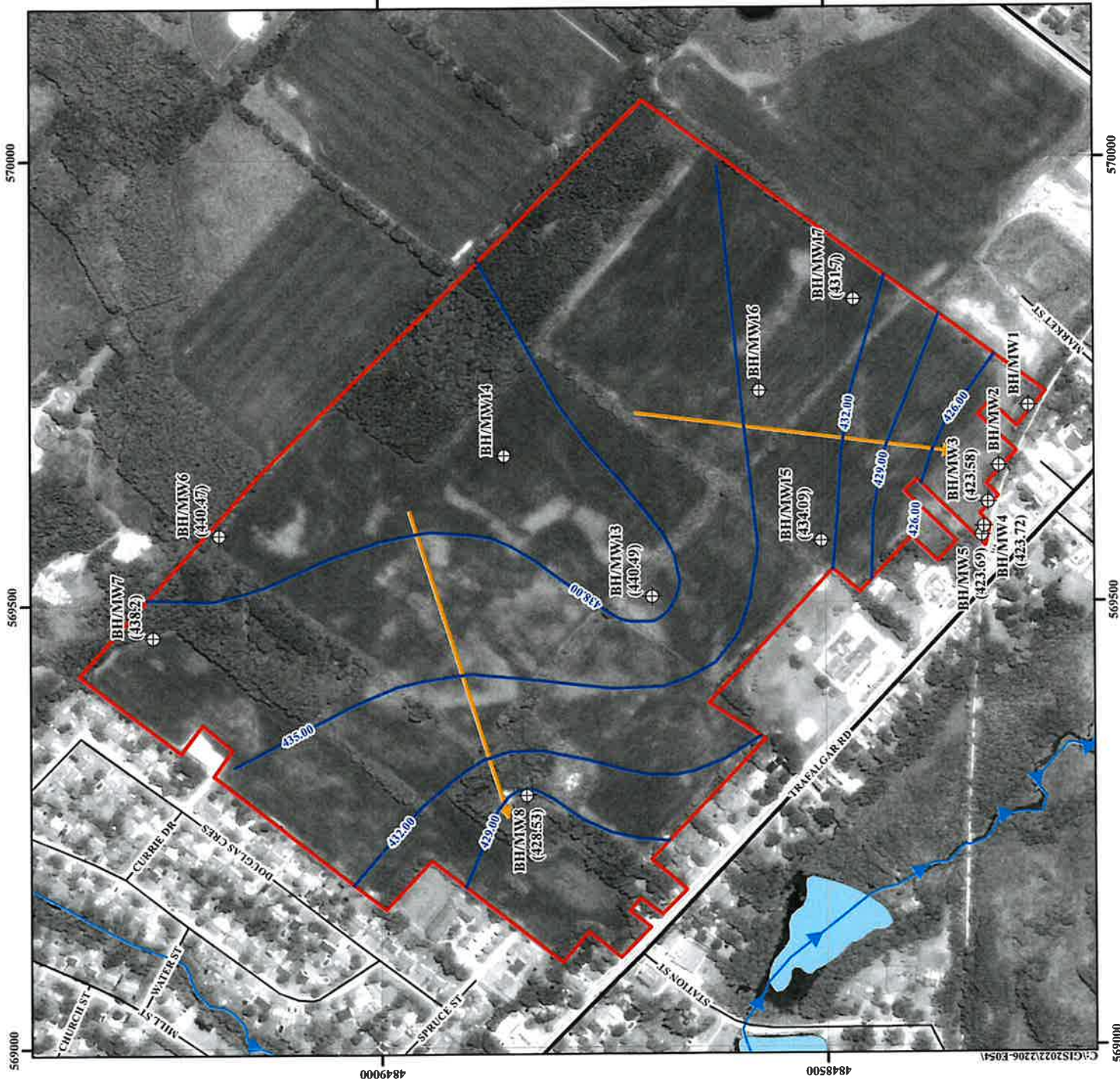
Reference No:  
2206-E054

Date:  
January 3, 2022

Scale: V  
1:200

Scale: H  
1:200

Drawing No.  
4



Subject Site

Borehole with Monitoring Well

Interpreted Shallow Groundwater Flow Direction

Groundwater Elevation Contour

Waterbody

Major Road

Local Road

(120.00) Groundwater Elevation (masl)



Title: Shallow Groundwater Contour Map

Project:  
Proposed Residential Development  
63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin

Reference No 2206-E054

Date: January 3, 2022

Scale:



Drawing No. 5

Source: Ontario Ministry of Natural Resources and Forestry  
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| FAX: (705) 721-7864 | FAX: (905) 542-2769 | FAX: (905) 725-1315 | FAX: (905) 881-8335 | FAX: (705) 684-8522 | FAX: (905) 725-1315 | FAX: (905) 542-27 |

## **APPENDIX 'A'**

### **SAMPLING AND ANALYSIS PLAN**

**Reference No. 2206-E054**



This Sampling and Analysis Plan is prepared for the Phase Two Environmental Site Assessment (Phase Two ESA), as defined by Ontario Regulation (O. Reg.) 153/04, as amended. The Phase Two ESA was conducted for properties which are municipally addressed as are located at 63 and 63A Trafalgar Road and an adjacent property with no municipal address but with a legal address as parts of Lots 23 and 24 in Concession 8, in the Town of Erin, Ontario (hereinafter referred to as the 'subject site'). The Sampling and Analysis Plan is based on the findings of our Phase One Environmental Site Assessment (Reference No. 2206-E054).

1) **OBJECTIVE**

The objective of the Phase Two ESA is to determine the soil and groundwater quality at the subject site, as related to the following Areas of Potential Environmental Concerns (APECs) at the subject site:

APEC 1: Potential use of pesticides during agricultural activities at majority of the subject site.

APEC 2: Historical aboveground storage tanks (ASTs) at northeast portion of basement of residential building located at southwest portion of the subject site.

APEC 3: Oil stains at the backyard of the residential building at the subject site.

APEC 4: One (1) registered underground storage tank (UST) at the property located at 63A Trafalgar Road, southwestern portion of the subject site

APEC 5: Historical railway tracks located adjacent to the south of the subject site

APEC 6: Historical railway tracks located adjacent to the south of the subject site

APEC 7: Presence of waste transfer station located to the northeast of the subject site

APEC 8: Presence of a gas station with USTs at the neighbouring property located about 15 m to the south of the subject site.

2) **SCOPE OF WORK**

The scope of work for the Phase Two ESA includes:





- Locate the underground and overhead utilities.
- Carryout ground penetrating radar (GPR) survey to identify the registered UST surrounding the building at 63A Trafalgar Road.
- Advance twelve (12) boreholes (designated as BH1 to BH12) to depths ranging from 1.4 meter below ground surface (mbgs) to 7.9 mbgs and eight (8) hand-dug test pits (designated as TP1 to TP8) to depths of 0.3 mbgs.
- Collect representative soil samples from the sampling locations.
- Undertake field examination of the retrieved soil samples for visual and olfactory evidence of potential contamination.
- Undertake soil vapour measurements for the retrieved soil samples using a combustible gas detector (RKI Eagle) in methane elimination mode.
- Install eight (8) monitoring wells at BH1 to BH8 locations (designated at BH/MW1 to BH/MW8) for groundwater sampling, testing and monitoring.
- Carry out an analytical testing program on selected soil and groundwater samples including quality assurance and quality control (QA/QC) samples for one or more of the following parameters: Petroleum Hydrocarbons (PHCs), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Chlorophenols (CPs), Organochlorine Pesticides (OCs) and Metals and/or Inorganic parameters.
- Review analytical testing results of submitted soil and groundwater samples using applicable Site Condition Standards.
- Prepare a Phase Two ESA report containing the findings of the investigation.

### 3) **RATIONALE FOR BOREHOLE LOCATIONS**

The rationale for the selection of the borehole and monitoring well locations is presented in the table below:

| Areas of Potential Environmental Concerns (APECs)                                     | Borehole / Monitoring Well ID. |
|---------------------------------------------------------------------------------------|--------------------------------|
| APEC 1: Potential use of pesticides during agricultural activities at majority of the | TP1 to TP8                     |



|                                                                                                                        |                                        |
|------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| subject site.                                                                                                          |                                        |
| APEC 2: Historical ASTs at northeast portion of basement of residential building at the subject site.                  | BH10                                   |
| APEC 3: Oil stains at the backyard of the residential building at the subject site.                                    | BH11                                   |
| APEC 4: Registered UST at 63A Trafalgar Road, southwestern portion of the subject site                                 | BH/MW8, BH9, BH12                      |
| APEC 5 and APEC 6: Historical railway tracks located adjacent south of the subject site                                | BH/MW1, BH/MW2, BH/MW3, BH/MW4, BH/MW5 |
| APEC 7: Presence of waste transfer station located northeast of the subject site                                       | BH/MW6, BH/MW7                         |
| APEC 8: Presence of a gas station with USTs at the neighbouring property located about 15 m south of the subject site. | BH/MW3, BH/MW4                         |

The BH/MW1 and BH/MW2 remain dry during this investigation. The location of proposed sampling locations for the Phase Two ESA is shown in Drawing No. 2.

#### 4) **SOIL AND GROUNDWATER SAMPLES (INCLUDING QA/QC SAMPLES)** **ANALYTICAL SCHEDULE**

A summary of soil and groundwater samples (including QA/QC samples) to be submitted is presented in the table below:

|                                                 | OCs | M &/or I | BTEX and PHCs | VOCs | PAHs | CP |
|-------------------------------------------------|-----|----------|---------------|------|------|----|
| <b>Soil Sample (Test Pits) (QA/QC Samples)</b>  |     |          |               |      |      |    |
| TP1 to TP8                                      | 8   | 8        | -             | -    | -    | -  |
| DUPS                                            | 2   | 1        | -             | -    | -    | -  |
| <b>Soil Samples (Boreholes) (QA/QC Samples)</b> |     |          |               |      |      |    |
| BH1                                             | -   | 1        | 1             | 1    | 1    | -  |
| BH2                                             | -   | 1        | 1             | 1    | 1    | -  |
| BH3                                             | -   | 1        | 1             | 1    | 1    | -  |
| BH4                                             | -   | 1        | 1             | 1    | 1    | -  |
| BH5                                             | -   | 1        | 1             | 1    | 1    | -  |
| BH6                                             | -   | 1        | 1             | 1    | 1    | 1  |
| BH7                                             | 1   | 1        | 1             | 1    | 1    | -  |
| BH8                                             | -   | 1        | 1             | 1    | 1    | -  |
| BH9                                             | -   | -        | 1             | -    | -    | -  |
| BH10                                            | -   | 1        | 1             | -    | -    | -  |
| BH11                                            | -   | 1        | 1             | -    | -    | -  |
| BH12                                            | -   | -        | 1             | -    | -    | -  |
| DUPS                                            | -   | 1        | 1             | -    | -    | -  |
| <b>Groundwater samples (QA/QC Samples)</b>      |     |          |               |      |      |    |
| BH/MW3                                          | -   | 1        | 1             | 1    | 1    | -  |



|            |   |   |   |   |   |   |
|------------|---|---|---|---|---|---|
| BH/MW4     | - | 1 | 1 | 1 | 1 | - |
| BH/MW5     | - | 1 | 1 | 1 | 1 | - |
| BH/MW6     | 1 | 1 | 1 | 1 | 1 | 1 |
| BH/MW7     | - | 1 | 1 | 1 | 1 | - |
| BH/MW8     | - | 1 | 1 | - | - | - |
| DUPW       | - | - | 1 | 1 | 1 | - |
| Trip Blank | - | - | - | 1 |   | - |

It should be noted that based on the analytical results of the submitted soil samples, if further activities of Phase Two ESA such as re-sampling and testing is required, additional samples from the area of interest will be submitted for analysis of contaminants of concern.

#### 5) **SOIL SAMPLING PROCEDURES**

Soil Engineers Ltd.'s (SEL) Standard Operation Procedures (SOPs) will be followed throughout the field investigation (sampling, decontamination of equipment, observation and documentation) including the field QA/QC program. SEL SOPs are presented in Section 7 of this sampling and analysis plan.

#### 6) **DATA QUALITY OBJECTIVES**

Sampling and decontamination procedures including QA/QC program should be carried out in accordance with:

- SEL SOPs, as presented in Section 7.
- The "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", May 1996, revised December 1996, as amended by O. Reg. 511/09.

Laboratory analytical methods, protocols and procedures should be carried out in accordance with the "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act", dated March 9, 2004, amended as of July 1, 2011, in accordance with O. Reg. 511/09 and O. Reg. 269/11.



## 7) **STANDARD OPERATING PROCEDURES (SOPs)**

### 7.1) **Borehole Drilling**

The purpose of borehole drilling is to provide access to subsurface soils at specified locations and depths. Soil borings also allow for installation of groundwater monitoring wells.

#### 7.1.1) **Underground Utilities**

Prior to drilling, the public utility service (One Call) and private utility services are contacted. The underground utility services are located and marked out in the field.

#### 7.1.2) **Drilling Methods**

Direct Push Drilling (i.e. Geoprobe, Powerprobe, Pionjar, etc.)

The direct push drilling machine is a hydraulically powered hammer/ram sampling device. The unit is designed so that the weight of the vehicle provides the majority of downward force. The hydraulics, with the aid of a percussion hammer, push lengths of specially modified 54 mm (2.125 inch) outside diameter (OD), hardened steel rod into the ground. The rod is advanced to target sampling depth is reached. The steel rod has been specially modified for specific types of sample collection.

#### Flight-Auger Drilling

The flight-auger drilling machine is a hydraulically powered feed and retract system that provides 28,275 pounds (12,826 kg) of retract force and 18,650 pounds (8,460 kg) of down pressure. The 183 cm (72 inch) stroke, hydraulic vertical drive system has no chains or cables which can stretch. It is equipped with solid or hollow-stem augers. It is extended to pre-determined sampling intervals using conventional drilling methods, at which time a decontaminated 51 mm split-spoon sampler is extended ahead of the lead auger to collect a soil





sample. The split-spoon sampler is then brought to surface and opened, exposing the soil core sample.

#### Hand Dug Test Pit

The hand-dug test pits were hand-dug using shovel. Prior to digging and sampling at each test pit location, the shovel was brushed clean using a solution of phosphate-free detergent and distilled water.

#### 7.1.3) Occupational Health and Safety

Prior to drilling, the site is inspected to ensure that no potentially hazardous material is present near/around the drilling area. Safety procedures are reviewed and a safety check of the equipment is conducted including locating the emergency stop button on the drill rig, checking personal protective equipment (hard hats, safety shoes, eye/ear protection), locating the first aid kit and confirming the location of the nearest hospital, and verifying the standard procedure in case of injury.

#### 7.1.4) Drilling Spoils

Excess soil generated during sampling and drilling procedure is stored at the site in metal barrels. If the analytical results indicate the soil is contaminated, a licensed disposal company is notified to collect the barrels of soil for proper disposal.

#### 7.1.5) Borehole Abandonment

After drilling, logging and/or sampling, boreholes will be backfilled by the method described below:

- Bentonite is thoroughly mixed into the grout within the specified percentage range. The tremie grout is usually placed into the hole; however, for selected boreholes (e.g., shallow



borings well above the water table) at certain sites, the grout may be allowed to free fall, taking care to ensure the grout does not bridge and form gaps or voids in the grout column.

- The volume of the borehole is calculated and compared to the grout volume used during grouting to aid in verifying that bridging did not occur.
- When using a tremie to place grout in the borehole, the bottom of the tremie is submerged into the grout column and withdrawn slowly as the hole fills with grout. If allowing the grout to free fall (and not using a tremie), the grout is poured slowly into the boring. The rise of the grout column is visually monitored or sounded with a weighted tape.
- If the method used to drill the boring utilized a drive casing, the casing is slowly extracted during grouting such that the bottom of the casing does not come above the top of the grout column.
- During the grouting process, no contaminating material (oil, grease, or fuels from gloves, pumps, hoses, et. al) is permitted to enter the grout mix and personnel wear personal protective equipment as specified in the Project Health and Safety Plan.
- Following grouting, barriers are placed over grouted boreholes as the grout is likely to settle in time, creating a physical hazard. Grouted boreholes typically require at least a second visit to 'top off' the hole.
- The surface hole condition should match the pre-drilling condition (asphalt, concrete, or smoothed flush with native surface), unless otherwise specified in the project work plans.

#### 7.1.6) Subsurface Obstruction

Where refusal to drilling occurs due to rock, foundation or underground services, the borehole is relocated within 2.0 m downstream from the original borehole location.



## 7.2) **Soil Sampling**

### 7.2.1) Introduction

Soil sampling is conducted in accordance with the “Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario, May 1996” as revised December 1996 (MOE Guidance Manual) and as amended by O. Reg. 366/05, 66/08, 511/09, 245/10, 179/11, 269/11 and 333/13. The sampling procedures are described herein.

### Drilling Rig Decontamination

#### Geoprobe

One-time use Shelby tube (thin-walled) samples are recovered from the boreholes in clear disposable PVC liners to prevent cross-contamination.

#### CME 55

Drilling equipment such as drill rigs, augers, drill pipes, drilling rods and split-spoons are decontaminated prior to initial use, between borehole locations and at the completion of drilling activities. The drilling equipment is manually scrubbed with a brush using a phosphate-free solution and thoroughly steam cleaned and/or power washed to remove any foreign material and potential contaminants.

In addition, the split-spoon sampler and any sub-sampling equipment is decontaminated prior to each usage. Various solutions are used for sampling equipment decontamination as described below:

- Phosphate-free soap solution (i.e., Alconox), tap water and distilled water are used for suspected petroleum hydrocarbon soil sampling.



- A reagent-grade methanol solution and distilled water are used for suspected VOCs soil sampling. The reinstatement waste is collected.
- Reagent-grade 10% nitric acid solution and distilled water are used for suspected metals soil sampling. The reinstatement waste will be collected.

#### 7.2.2) Sample Logging and Field Screening

Samples are typically collected at 1.5 m intervals in the overburden. Tactile examination of the samples is made to classify the soil, and a log is recorded for each borehole detailing the physical characteristics of the soil including colour, soil type, structure, and any observed staining or odour. The organic vapour readings, the moisture content of the samples as determined in the laboratory, the groundwater and cave-in levels measured at the time of investigation, and the groundwater monitoring well construction details are given on the borehole logs.

#### 7.2.3) Field Screening and Calibration Procedures

The soil samples are classified based on physical characteristics including colour, soil type, moisture, and visible observation of staining and/or odour. In addition, the organic vapour reading for each soil sample is determined using a gas detector. Based on the overall soil physical characteristics, representative soil samples are selected for chemical analysis.

The organic vapour readings are measured using a portable RKI Eagle gas detector, TYPE 101 (Serial Number: E091011) set to include all gases, and having a minimum detection of 2 ppm. Prior to measurement, the detector is calibrated using a Hexane 40% LEL gas. The allowable range of calibration is 38% to 42%.

#### 7.2.4) Soil Sampling

The soil from the disposable sampler liner is handled using new disposable gloves in order to avoid the risk of cross-contamination between the samples. Sufficient amounts of the soil



samples are placed into clean glass jars with Teflon lined lids for analyses for moisture content, medium to heavy PHCs, and Metals and Inorganics.

Small amounts of the soil samples are collected using a disposable 'T'-shaped Terracore sampler and stored in methanol or sodium bisulfate vials for light PHCs (CCME F1) and VOCs analysis, respectively; the remainder of the samples is placed into a sealable bag for vapour measurement and soil classification. The samples are stored in an insulated container with ice after sampling and during shipment to the laboratory.

The minimum requirements for the number, type and frequency of field quality control are given below:

- i. Field Duplicates: At least 1 field duplicate sample is collected and submitted for laboratory analysis for every 10 soil samples that are collected to ensure the soil sampling technique is accurate.

### 7.3) **Well Installation, Well Development/Purging and Groundwater Sampling**

#### 7.3.1) **Introduction**

The well installation procedures are described herein.

#### 7.3.2) **Screen and Riser Pipe**

Monitoring wells are constructed from individually wrapped 38 or 50 mm inside diameter (ID) schedule 40 polyvinyl chloride (PVC) flush threaded casing equipped with O-rings. The screen consists of casing material which is factory slotted (slot width = 0.25 mm) to permit the entry of water into the well. The bottom of the screens is equipped with threaded end caps. The appropriate numbers of risers are coupled with the screen section(s) via threaded joints to construct the well. The top of the wells are tightly capped using a locking well cap, which prevents the infiltration of surface water and foreign material into the well and also provides



security. A watertight, traffic-rated protective casing is installed over each monitoring well within a concrete pad extending approximately 0.5 mbgs. No PVC cements or other solvent based cements are used in the construction of the monitoring wells.

### 7.3.3) Well Materials Decontamination

Dedicated sampling equipment, such as submersible pumps, are decontaminated prior to installation inside monitoring wells. Where factory-cleaned, hermetically sealed materials are used, no decontamination is conducted.

### Setting Screen, Riser Casings and Filter Materials

At total depth, the soil cuttings are removed through circulation or rapidly spinning the augers prior to constructing the well. The drill pipe and bit or centre bit boring is removed. The well construction materials are then installed inside the open borehole or through the centre of the drive casing or augers.

After the monitoring well assembly is lowered to the bottom of the borehole, the filter pack is added until its height is approximately two feet above the top of the screen, and placement is verified. The filter pack is then surged using a surge block or swab in order to settle the pack material and reduce the possibility of bridging.

### Setting Seals and Grouting

Once the top of the filter pack is verified to be in the correct position, a bentonite seal is placed above the filter pack. The seal is allowed to hydrate for at least one hour before proceeding with the grouting operation.

After hydration of the bentonite seal, grout is then pumped through a tremie pipe and filled from the top of the bentonite seal upward. The bottom of the tremie pipe should be maintained below the top of the grout to prevent free fall and bridging. When using drive casing or hollow-stem



auger techniques, the drive casing/augers should be raised in incremental intervals, keeping the bottom of the drive casing/augers below the top of the grout. Grouting will cease when the grout level has risen to within approximately one to two feet of the ground surface, depending on the surface completion type (flush-mount versus above-ground). Grout levels are monitored to assure that grout taken into the formation is replaced by additional grout.

### Capping the Wells

For above-ground completions, the protective steel casing is centered on the well casing and inserted into the grouted annulus. Prior to installation, a 2-inch deep temporary spacer may be placed between the PVC well cap and the bottom of the protective casing cover to keep the protective casing from settling onto the well cap. A minimum of 24 hours after grouting should elapse before installation of the concrete pad and steel guard posts for above-ground completions, or street boxes or vaults for flush mount completions. For above-ground completions, a concrete pad, usually 3-foot by 3-foot by 4-inch thick, is constructed at ground surface around the protective steel casing. The concrete is sloped away from the protective casing to promote surface drainage from the well.

#### 7.3.4) Documentation of Monitoring Well Configuration

The following information is recorded:

- Length of well screen
- Total depth of well boring
- Depth from ground surface to top of grout or bentonite plug in bottom of borehole (if present)
- Depth to base of well string
- Depth to top and bottom of well screen



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|                     |                     |                     |                     |                     |                     |                   |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------|
| <b>BARRIE</b>       | <b>MISSISSAUGA</b>  | <b>OSHAWA</b>       | <b>NEWMARKET</b>    | <b>GRAVENHURST</b>  | <b>PETERBOROUGH</b> | <b>HAMILTON</b>   |
| TEL: (705) 721-7863 | TEL: (905) 542-7605 | TEL: (905) 440-2040 | TEL: (905) 853-0647 | TEL: (705) 684-4242 | TEL: (905) 440-2040 | TEL: (905) 777-79 |
| FAX: (705) 721-7864 | FAX: (905) 542-2769 | FAX: (905) 725-1315 | FAX: (905) 881-8335 | FAX: (705) 684-8522 | FAX: (905) 725-1315 | FAX: (905) 542-27 |

## **APPENDIX 'B'**

### **BOREHOLE LOGS**

**Reference No. 2206-E054**



JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 1**

FIGURE NO.: 1

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Flight Auger**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 16, 2022

| El.<br>(masl)<br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                                                                                                                                                                                  | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm)<br><br>● 20 60 100 140 180 | REMARKS             | WATER LEVEL |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|-------------------------------------------|--------------------|----------------------------------------------------------------------|---------------------|-------------|
|                                  |                                                                                                                                                                                                      | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                                                      |                     |             |
| 430.9                            | Ground Surface                                                                                                                                                                                       |         |      |                                           |                    |                                                                      |                     |             |
| 0.0                              | <b>30 cm TOPSOIL</b>                                                                                                                                                                                 | 1A      | DO   | 30                                        | 0                  | ●                                                                    |                     |             |
| 0.3                              |                                                                                                                                                                                                      | 1B      | DO   | 30                                        |                    | ●                                                                    |                     |             |
| 430.1                            | Brown<br><b>SILTY SAND</b><br>trace of gravel and sand                                                                                                                                               |         |      |                                           |                    |                                                                      |                     |             |
| 0.8                              |                                                                                                                                                                                                      | 2       | DO   | 30                                        | 1                  | ●                                                                    |                     |             |
|                                  | Brown<br><b>SAND</b><br>trace of gravel and silt                                                                                                                                                     |         |      |                                           |                    |                                                                      |                     |             |
|                                  |                                                                                                                                                                                                      | 3       | DO   | 30                                        | 2                  | ●                                                                    |                     |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           |                    |                                                                      |                     |             |
|                                  |                                                                                                                                                                                                      | 4       | DO   | 35                                        |                    | ●                                                                    |                     |             |
| 427.8                            |                                                                                                                                                                                                      |         |      |                                           | 3                  |                                                                      |                     |             |
| 3.0                              | Brown<br><b>SILT</b><br>some clay                                                                                                                                                                    | 5       | DO   | 40                                        |                    | ●                                                                    | BH1/5: PHCs, Metals |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           |                    |                                                                      |                     |             |
|                                  |                                                                                                                                                                                                      | 6       | DO   | 40                                        | 4                  | ●                                                                    | BH1/6: VOCs         |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           |                    |                                                                      |                     |             |
|                                  |                                                                                                                                                                                                      | 7       | DO   | 25                                        | 5                  | ●                                                                    | BH1/7: PAHs         |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           |                    |                                                                      |                     |             |
|                                  |                                                                                                                                                                                                      | 8       | DO   | 0                                         | 6                  | ●                                                                    |                     |             |
| 424.8                            |                                                                                                                                                                                                      |         |      |                                           |                    |                                                                      |                     |             |
| 6.1                              | END OF BOREHOLE<br>Installed 51mm standpipe @ 6.1m<br>Bentonite seal from 0.0m to 2.5m<br>Sand backfill from 2.5m to 6.1m<br>3m screen from 3.1m to 6.1m<br>Provided with monument protective casing |         |      |                                           | 7                  |                                                                      |                     |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           | 8                  |                                                                      |                     |             |

Dry upon completion

**Soil Engineers Ltd.**

JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 2**

FIGURE NO.: 2

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Flight Auger**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 16&17, 2022

| El.<br>(masl)<br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                                                                                                                                                                                  | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm) | REMARKS | WATER LEVEL |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|-------------------------------------------|--------------------|-------------------------------------------|---------|-------------|
|                                  |                                                                                                                                                                                                      | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                           |         |             |
| 431.8<br>0.0                     | Ground Surface<br><b>15 cm TOPSOIL</b>                                                                                                                                                               |         |      |                                           | 0                  |                                           |         |             |
| 431.1<br>0.8                     | Brown<br><b>SILT</b><br>trace of clay                                                                                                                                                                | 1       | DO   | 20                                        | 0                  | ●                                         |         |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |         |             |
|                                  | Brown<br><b>GRAVELLY SAND</b><br>some silt                                                                                                                                                           | 2       | DO   | 25                                        | 1                  | ●                                         |         |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |         |             |
|                                  |                                                                                                                                                                                                      | 3       | DO   | 20                                        | 2                  | ●                                         |         |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |         |             |
| 429.5<br>2.3                     | Brown<br><b>SAND</b><br>trace of silt and gravel, piece of rock                                                                                                                                      | 4       | DO   | 25                                        | 3                  | ●                                         |         |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |         |             |
|                                  |                                                                                                                                                                                                      | 5       | DO   | 25                                        | 4                  | ●                                         |         |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |         |             |
|                                  |                                                                                                                                                                                                      | 6       | DO   | 30                                        | 5                  | ●                                         |         |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |         |             |
|                                  |                                                                                                                                                                                                      | 7       | DO   | 20                                        | 6                  | ●                                         |         |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |         |             |
|                                  |                                                                                                                                                                                                      | 8       | DO   | 25                                        | 7                  | ●                                         |         |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |         |             |
|                                  |                                                                                                                                                                                                      | 9       | DO   | 25                                        | 8                  | ●                                         |         |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |         |             |
| 425.0<br>6.8                     | Brown<br><b>SILTY CLAY</b><br>some sand, trace of gravel                                                                                                                                             | 10      | DO   | 25                                        | 9                  | ●                                         |         |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |         |             |
| 423.9<br>7.9                     | END OF BOREHOLE<br>Installed 51mm standpipe @ 7.9m<br>Bentonite seal from 0.0m to 4.3m<br>Sand backfill from 4.3m to 7.9m<br>3m screen from 4.9m to 7.9m<br>Provided with monument protective casing | 11      | DO   | 25                                        | 10                 | ●                                         |         |             |

**Soil Engineers Ltd.**

JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 3**

FIGURE NO.: 3

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Flight Auger**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 17, 2022

| El.<br>(masl)<br><br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                                                                                                                                                                                  | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm) | REMARKS                | WATER LEVEL |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|-------------------------------------------|--------------------|-------------------------------------------|------------------------|-------------|
|                                      |                                                                                                                                                                                                      | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                           |                        |             |
| 428.4<br>0.0                         | Ground Surface<br><b>15 cm TOPSOIL</b>                                                                                                                                                               |         |      |                                           | 0                  |                                           |                        |             |
|                                      | Brown<br><b>SILT</b><br>trace of roots                                                                                                                                                               | 1       | DO   | 25                                        |                    |                                           |                        |             |
| 427.6<br>0.8                         | Brown<br><b>GRAVELLY SAND</b><br>some gravel, pieces of rock                                                                                                                                         | 2       | DO   | 30                                        | 1                  |                                           |                        |             |
|                                      |                                                                                                                                                                                                      | 3       | DO   | 25                                        | 2                  |                                           |                        |             |
| 426.1<br>2.3                         | Brown<br><b>SAND</b><br>some gravel                                                                                                                                                                  | 4       | DO   | 25                                        | 3                  |                                           |                        |             |
|                                      |                                                                                                                                                                                                      | 5       | DO   | 30                                        | 4                  |                                           |                        |             |
|                                      |                                                                                                                                                                                                      | 6       | DO   | 25                                        | 5                  |                                           | BH3/6: Metals<br>DUPS3 |             |
|                                      |                                                                                                                                                                                                      | 7       | DO   | 25                                        | 6                  |                                           | BH3/7: PHCs, VOCs      |             |
| 423.0<br>5.3                         | Brown to grey<br><b>SILTY CLAY</b>                                                                                                                                                                   | 8       | DO   | 30                                        | 7                  |                                           | BH3/8: PAHs            |             |
| 422.3<br>6.1                         | END OF BOREHOLE<br>Installed 51mm standpipe @ 6.1m<br>Bentonite seal from 0.0m to 2.5m<br>Sand backfill from 2.5m to 6.1m<br>3m screen from 3.1m to 6.1m<br>Provided with monument protective casing |         |      |                                           | 8                  |                                           |                        |             |

**Soil Engineers Ltd.**

W.L. @ 4.79 mbgs on December 1, 2022

JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 4**

FIGURE NO.: 4

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Flight Auger**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 18, 2022

| El.<br>(masl)<br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                                                                                                                                                                                    | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm) | REMARKS           | WATER LEVEL |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|-------------------------------------------|--------------------|-------------------------------------------|-------------------|-------------|
|                                  |                                                                                                                                                                                                        | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                           |                   |             |
| 427.6<br>0.0                     | Ground Surface<br><b>36 cm TOPSOIL</b>                                                                                                                                                                 |         |      |                                           | 0                  |                                           |                   |             |
| 427.1<br>0.5                     | <b>PLOUGHED SOIL</b><br>Dark brown sand, occ. rootlets                                                                                                                                                 | 1A      | DO   | 0                                         |                    |                                           |                   |             |
| 426.6<br>1.0                     | Brown<br><b>SAND</b><br>fine to medium grained                                                                                                                                                         | 1B      | DO   | 0                                         |                    |                                           |                   |             |
|                                  | Brown<br><b>GRAVELLY SAND</b><br>occ. cobbles and boulders                                                                                                                                             | 2A      | DO   | 0                                         |                    |                                           |                   |             |
|                                  |                                                                                                                                                                                                        | 2B      | DO   | 0                                         |                    |                                           |                   |             |
|                                  |                                                                                                                                                                                                        | 3       | DO   | 10                                        |                    |                                           |                   |             |
|                                  |                                                                                                                                                                                                        | 4       | DO   | 15                                        |                    |                                           |                   |             |
|                                  |                                                                                                                                                                                                        | 5       | DO   | 10                                        |                    |                                           |                   |             |
| 423.9<br>3.7                     | Brown<br><b>SILTY SAND TILL</b><br>some gravel to gravelly<br>a trace of clay<br>occ. cobbles and boulders                                                                                             | 6       | DO   | 20                                        |                    |                                           | BH4/6: Metals     |             |
|                                  |                                                                                                                                                                                                        | 7       | DO   | 15                                        |                    |                                           | BH4/7: PHCs, VOCs |             |
|                                  |                                                                                                                                                                                                        | 8       | DO   | 30                                        |                    |                                           | BH4/8: PAHs       |             |
| 421.0<br>6.6                     | END OF BOREHOLE<br>Installed 50mm standpipe @ 6.1m<br>Bentonite seal from 0.0m to 2.4m<br>Sand backfill from 2.4m to 6.1m<br>3.1m screen from 3.0m to 6.1m<br>Provided with monument protective casing |         |      |                                           | 7                  |                                           |                   |             |
|                                  |                                                                                                                                                                                                        |         |      |                                           | 8                  |                                           |                   |             |
|                                  |                                                                                                                                                                                                        |         |      |                                           | 9                  |                                           |                   |             |
|                                  |                                                                                                                                                                                                        |         |      |                                           | 10                 |                                           |                   |             |

W.L. @ 3.91 mbgs on December 1, 2022

**Soil Engineers Ltd.**

JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 5**

FIGURE NO.: 5

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Flight Auger**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 18, 2022

| El.<br>(masl)<br><br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                                                                                                                                                                                         | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm) | REMARKS           | WATER LEVEL |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|-------------------------------------------|--------------------|-------------------------------------------|-------------------|-------------|
|                                      |                                                                                                                                                                                                             | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                           |                   |             |
| 427.5<br>0.0                         | Ground Surface<br><b>20 cm TOPSOIL</b>                                                                                                                                                                      |         |      |                                           | 0                  |                                           |                   |             |
|                                      | Brown<br><b>SILT</b>                                                                                                                                                                                        | 1       | DO   | 25                                        |                    |                                           |                   |             |
| 426.7<br>0.8                         |                                                                                                                                                                                                             |         |      |                                           | 1                  |                                           |                   |             |
|                                      | Brown<br><b>SAND</b><br>trace of gravel                                                                                                                                                                     | 2       | DO   | 15                                        |                    |                                           |                   |             |
|                                      |                                                                                                                                                                                                             |         |      |                                           |                    |                                           |                   |             |
|                                      |                                                                                                                                                                                                             | 3       | DO   | 15                                        | 2                  |                                           |                   |             |
|                                      |                                                                                                                                                                                                             |         |      |                                           |                    |                                           |                   |             |
|                                      |                                                                                                                                                                                                             | 4       | DO   | 15                                        |                    |                                           |                   |             |
|                                      |                                                                                                                                                                                                             |         |      |                                           | 3                  |                                           |                   |             |
|                                      |                                                                                                                                                                                                             | 5       | DO   | 25                                        |                    |                                           |                   |             |
| 423.7<br>3.8                         |                                                                                                                                                                                                             |         |      |                                           | 4                  |                                           | BH5/6: PHCs, VOCs |             |
|                                      | Brown<br><b>CLAYEY SILT</b>                                                                                                                                                                                 | 6       | DO   | 35                                        |                    |                                           |                   |             |
|                                      |                                                                                                                                                                                                             |         |      |                                           |                    |                                           |                   |             |
|                                      |                                                                                                                                                                                                             | 7       | DO   | 40                                        | 5                  |                                           | BH5/7: PAHs       |             |
| 422.1<br>5.3                         |                                                                                                                                                                                                             |         |      |                                           |                    |                                           |                   |             |
|                                      | <b>END OF BOREHOLE</b><br>Installed 51mm standpipe @ 5.2m<br>Bentonite seal from 0.0m to 1.6m<br>Sand backfill from 1.6m to 5.2m<br>3m screen from 2.2m to 5.2m<br>Provided with monument protective casing |         |      |                                           | 6                  |                                           |                   |             |
|                                      |                                                                                                                                                                                                             |         |      |                                           | 7                  |                                           |                   |             |
|                                      |                                                                                                                                                                                                             |         |      |                                           | 8                  |                                           |                   |             |

W.L. @ 3.79 mbgs on December 1, 2022

**Soil Engineers Ltd.**

JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 6**

FIGURE NO.: 6

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Flight Auger**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 21, 2022

| El.<br>(masl)<br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                                                                                                                                                                                    | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm) | REMARKS                    | WATER LEVEL |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|-------------------------------------------|--------------------|-------------------------------------------|----------------------------|-------------|
|                                  |                                                                                                                                                                                                        | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                           |                            |             |
| 443.6<br>0.0                     | Ground Surface<br><b>36 cm TOPSOIL</b>                                                                                                                                                                 |         |      |                                           | 0                  |                                           |                            |             |
|                                  | <b>PLOUGHED SOIL</b><br>Dark brown sand, occ. rootlets                                                                                                                                                 | 1       | DO   | 15                                        |                    |                                           |                            |             |
| 442.9<br>0.8                     | Brown<br><b>SANDY SILT</b><br>some gravel                                                                                                                                                              | 2       | DO   | 20                                        | 1                  |                                           |                            |             |
|                                  |                                                                                                                                                                                                        | 3       | DO   | 20                                        | 2                  |                                           |                            |             |
| 441.4<br>2.3                     | Brown<br><b>SANDY GRAVEL</b><br>occ. cobbles and boulders                                                                                                                                              | 4       | DO   | 15                                        | 3                  |                                           | BH6/4: Metals              |             |
|                                  |                                                                                                                                                                                                        | 5       | DO   | 15                                        | 4                  |                                           | BH6/6: CPs                 |             |
|                                  |                                                                                                                                                                                                        | 6       | DO   | 15                                        | 5                  |                                           | BH6/7: PHCs, VOCs,<br>PAHs |             |
|                                  |                                                                                                                                                                                                        | 7       | DO   | 50                                        | 6                  |                                           |                            |             |
| 438.7<br>5.0                     | END OF BOREHOLE<br>Installed 50mm standpipe @ 4.6m<br>Bentonite seal from 0.0m to 0.9m<br>Sand backfill from 0.9m to 4.6m<br>3.1m screen from 1.5m to 4.6m<br>Provided with monument protective casing |         |      |                                           | 7                  |                                           |                            |             |
|                                  |                                                                                                                                                                                                        |         |      |                                           | 8                  |                                           |                            |             |

**Soil Engineers Ltd.**

JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 7**

FIGURE NO.: 7

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Flight Auger**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 21, 2022

| Ei.<br>(masl)<br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                                                                                                                                                                                  | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm) | REMARKS                    | WATER LEVEL |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|-------------------------------------------|--------------------|-------------------------------------------|----------------------------|-------------|
|                                  |                                                                                                                                                                                                      | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                           |                            |             |
| 442.5                            | Ground Surface                                                                                                                                                                                       |         |      |                                           |                    |                                           |                            |             |
| 0.0                              | <b>15 cm TOPSOIL</b>                                                                                                                                                                                 |         |      |                                           | 0                  |                                           |                            |             |
| 0.1                              |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |                            |             |
| 441.7                            | Brown<br><b>SILT</b><br>trace of gravel                                                                                                                                                              | 1       | DO   | 15                                        |                    |                                           |                            |             |
| 0.8                              |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |                            |             |
| 440.2                            | Brown<br><b>GRAVELLY SAND</b>                                                                                                                                                                        | 2       | DO   | 15                                        | 1                  |                                           |                            |             |
| 2.3                              |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |                            |             |
| 440.2                            |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |                            |             |
| 2.3                              | Brown<br><b>SILTY SAND</b><br>trace of gravel                                                                                                                                                        | 4       | DO   | 15                                        |                    |                                           |                            |             |
| 439.5                            |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |                            |             |
| 3.0                              | Brown<br><b>SANDY SILT</b><br>some gravel, moist                                                                                                                                                     | 5       | DO   | 25                                        | 3                  |                                           | BH7/5: PHCs, VOCs,<br>PAHs |             |
| 438.7                            |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |                            |             |
| 3.8                              | Brown<br><b>SILT</b><br>some clay                                                                                                                                                                    | 6       | DO   | 20                                        | 4                  |                                           | BH7/6: OCs, Metals         |             |
| 437.2                            |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |                            |             |
| 5.3                              | Grey<br><b>SILTY CLAY</b><br>moist                                                                                                                                                                   | 8       | DO   | 15                                        | 5                  |                                           |                            |             |
| 436.4                            |                                                                                                                                                                                                      |         |      |                                           |                    |                                           |                            |             |
| 6.1                              | END OF BOREHOLE<br>Installed 51mm standpipe @ 6.1m<br>Bentonite seal from 0.0m to 2.5m<br>Sand backfill from 2.5m to 6.1m<br>3m screen from 3.1m to 6.1m<br>Provided with monument protective casing |         |      |                                           | 6                  |                                           |                            |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           | 7                  |                                           |                            |             |
|                                  |                                                                                                                                                                                                      |         |      |                                           | 8                  |                                           |                            |             |

**Soil Engineers Ltd.**

JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 8**

FIGURE NO.: 8

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Flight Auger**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 22, 2022

| El.<br>(masl)<br><br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                                                                                                                                                                                           | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm)<br><br>●<br>20 60 100 140 180 | REMARKS | WATER LEVEL |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|-------------------------------------------|--------------------|-------------------------------------------------------------------------|---------|-------------|
|                                      |                                                                                                                                                                                                               | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                                                         |         |             |
| 434.3                                | Ground Surface                                                                                                                                                                                                |         |      |                                           | 0                  |                                                                         |         |             |
| 0.0                                  | <b>36 cm TOPSOIL</b>                                                                                                                                                                                          |         |      |                                           |                    |                                                                         |         |             |
|                                      | <b>PLOUGHED SOIL</b><br>Dark brown sand, occ. rootlets                                                                                                                                                        | 1       | DO   | 10                                        |                    |                                                                         |         |             |
| 433.6                                |                                                                                                                                                                                                               |         |      |                                           |                    |                                                                         |         |             |
| 0.7                                  | Brown, compact<br><b>SAND</b><br>fine to medium grained                                                                                                                                                       | 2       | DO   | 15                                        | 1                  |                                                                         |         |             |
| 432.8                                |                                                                                                                                                                                                               |         |      |                                           |                    |                                                                         |         |             |
| 1.5                                  | Brown, dense to very dense<br><b>GRAVELLY SAND</b><br>occ. cobbles and boulders<br>wet below 5.1 m                                                                                                            | 3       | DO   | 15                                        | 2                  |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               |         |      |                                           |                    |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               | 4       | DO   | 15                                        | 3                  |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               |         |      |                                           |                    |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               | 5       | DO   | 15                                        | 4                  |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               |         |      |                                           |                    |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               | 6       | DO   | 15                                        | 5                  |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               |         |      |                                           |                    |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               | 7       | DO   | 10                                        | 6                  |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               |         |      |                                           |                    |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               | 8       | DO   | 15                                        | 7                  |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               |         |      |                                           |                    |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               | 9       | DO   | 15                                        | 8                  |                                                                         |         |             |
| 427.6                                |                                                                                                                                                                                                               |         |      |                                           |                    |                                                                         |         |             |
| 6.7                                  | <b>END OF BOREHOLE</b><br>Installed 50mm standpipe @ 6.1m<br>Bentonite seal from 0.0m to 2.4m<br>Sand backfill from 2.4m to 6.1m<br>3.1m screen from 3.0m to 6.1m<br>Provided with monument protective casing |         |      |                                           |                    |                                                                         |         |             |

BH8/7: Metals

BH8/8: PHCs, VOCs,  
PAHs

W.L. @ 5.83 mbgs on December 1, 2022

**Soil Engineers Ltd.**



JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 9**

FIGURE NO.: 9

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Flight Auger**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 22, 2022

| El.<br>(masl)<br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                             | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm) | REMARKS | WATER LEVEL |
|----------------------------------|-------------------------------------------------|---------|------|-------------------------------------------|--------------------|-------------------------------------------|---------|-------------|
|                                  |                                                 | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                           |         |             |
| 434.3                            | Ground Surface                                  |         |      |                                           | 0                  |                                           |         |             |
| 0.0<br>0.1                       | 5 cm TOPSOIL                                    |         |      |                                           |                    |                                           |         |             |
|                                  | Dark brown<br><b>SILTY SAND</b><br>some gravel  | 1       | DO   | 15                                        |                    |                                           |         |             |
| 433.6<br>0.8                     | Brown<br><b>FINE SAND</b>                       | 2       | DO   | 15                                        | 1                  |                                           |         |             |
| 432.8<br>1.5                     | Brown<br><b>SILTY SAND, TILL</b><br>some gravel | 3       | DO   | 15                                        | 2                  |                                           |         |             |
|                                  |                                                 | 4       | DO   | 15                                        |                    |                                           |         |             |
|                                  |                                                 | 5       | DO   | 15                                        | 3                  |                                           |         |             |
|                                  |                                                 | 6       | DO   | 10                                        | 4                  |                                           |         |             |
| 429.8<br>4.6                     | Brown<br><b>SANDY GRAVEL</b>                    | 7       | DO   | 10                                        | 5                  |                                           |         |             |
|                                  |                                                 | 8       | DO   | 15                                        | 6                  |                                           |         |             |
|                                  |                                                 | 9       | DO   | 15                                        |                    |                                           |         |             |
| 427.5<br>6.8                     | END OF BOREHOLE                                 |         |      |                                           | 7                  |                                           |         |             |
|                                  |                                                 |         |      |                                           | 8                  |                                           |         |             |

BH9/8: PHCs, BTEX

**Soil Engineers Ltd.**

JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 10**

FIGURE NO.: 10

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Pionjar**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 22, 2022

| El.<br>(masl)<br><br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                       | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm)<br><br>●<br>20 60 100 140 180 | REMARKS                       | WATER LEVEL |
|--------------------------------------|-------------------------------------------|---------|------|-------------------------------------------|--------------------|-------------------------------------------------------------------------|-------------------------------|-------------|
|                                      |                                           | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                                                         |                               |             |
| 435.1                                | Ground Surface                            |         |      |                                           | 0                  |                                                                         |                               |             |
| 0.0                                  | Brown<br><b>SANDY SILT</b><br>some gravel | 1       | DO   | 10                                        | 0                  | ●                                                                       | BH10/1: PHCs, BTEX;<br>Metals |             |
|                                      |                                           | 2       | DO   | 10                                        | 1                  | ●                                                                       |                               |             |
| 433.7                                | END OF BOREHOLE                           |         |      |                                           | 2                  |                                                                         |                               |             |
| 1.4                                  |                                           |         |      |                                           | 3                  |                                                                         |                               |             |
|                                      |                                           |         |      |                                           | 4                  |                                                                         |                               |             |
|                                      |                                           |         |      |                                           | 5                  |                                                                         |                               |             |
|                                      |                                           |         |      |                                           | 6                  |                                                                         |                               |             |
|                                      |                                           |         |      |                                           | 7                  |                                                                         |                               |             |
|                                      |                                           |         |      |                                           | 8                  |                                                                         |                               |             |

**Soil Engineers Ltd.**

JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 11**

FIGURE NO.: 11

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Geoprobe**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 22, 2022

| El.<br>(masl)<br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                       | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm) | REMARKS                       | WATER LEVEL |
|----------------------------------|-------------------------------------------|---------|------|-------------------------------------------|--------------------|-------------------------------------------|-------------------------------|-------------|
|                                  |                                           | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                           |                               |             |
| 434.9<br>0.0                     | Ground Surface<br><b>10 cm TOPSOIL</b>    |         |      |                                           | 0                  |                                           |                               |             |
|                                  | Brown<br><b>SANDY SILT</b><br>some gravel | 1       | TO   | 15                                        |                    | ●                                         | BH11/1: PHCs, BTEX,<br>Metals |             |
| 434.1<br>0.8                     | Brown<br><b>SILT</b><br>trace of gravel   | 2       | TO   | 15                                        | 1                  | ●                                         |                               |             |
| 433.4<br>1.5                     | Brown<br><b>SANDY SILT</b><br>some gravel | 3       | TO   | 15                                        | 2                  | ●                                         |                               |             |
|                                  |                                           | 4       | TO   | 15                                        |                    | ●                                         |                               |             |
| 431.9<br>3.0                     | END OF BOREHOLE                           |         |      |                                           | 3                  |                                           |                               |             |
|                                  |                                           |         |      |                                           | 4                  |                                           |                               |             |
|                                  |                                           |         |      |                                           | 5                  |                                           |                               |             |
|                                  |                                           |         |      |                                           | 6                  |                                           |                               |             |
|                                  |                                           |         |      |                                           | 7                  |                                           |                               |             |
|                                  |                                           |         |      |                                           | 8                  |                                           |                               |             |

**Soil Engineers Ltd.**

JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 12**

FIGURE NO.: 12

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Geoprobe**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 22, 2022

| El.<br>(masl)<br><br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                       | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm)<br> | REMARKS                     | WATER LEVEL |
|--------------------------------------|-------------------------------------------|---------|------|-------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------|
|                                      |                                           | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                                                                                                                 |                             |             |
| 434.5<br>0.0                         | Ground Surface<br><b>10 cm TOPSOIL</b>    |         |      |                                           | 0                  |                                                                                                                                 |                             |             |
| 433.7<br>0.8                         | Brown<br><b>SAND</b><br>trace of gravel   | 1       | TO   | 15                                        |                    |                                                                                                                                 | BH12/4: PHCs, BTEX<br>DUPS4 |             |
| 432.9<br>1.5                         | Brown<br><b>SILT</b><br>trace of gravel   | 2       | TO   | 15                                        |                    |                                                                                                                                 |                             |             |
| 432.2<br>2.3                         | Brown<br><b>SILTY SAND</b><br>some gravel | 3       | TO   | 15                                        |                    |                                                                                                                                 |                             |             |
| 431.4<br>3.0                         | Brown<br><b>SAND</b><br>some gravel       | 4       | TO   | 15                                        |                    |                                                                                                                                 |                             |             |
|                                      | END OF BOREHOLE                           |         |      |                                           |                    |                                                                                                                                 |                             |             |

**Soil Engineers Ltd.**

JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 13**

FIGURE NO.: 13

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Flight Auger**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 24, 2022

| El.<br>(masl)<br><br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                                                                                                                                                                                    | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm) | REMARKS | WATER LEVEL |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|-------------------------------------------|--------------------|-------------------------------------------|---------|-------------|
|                                      |                                                                                                                                                                                                        | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                           |         |             |
| 433.9<br>0.0                         | Ground Surface<br><b>36 cm TOPSOIL</b>                                                                                                                                                                 |         |      |                                           | 0                  |                                           |         |             |
|                                      | <b>PLOUGHED SOIL</b><br>Dark brown sand, occ. rootlets                                                                                                                                                 | 1       | DO   | 0                                         | 0                  |                                           |         |             |
|                                      |                                                                                                                                                                                                        |         |      |                                           |                    |                                           |         |             |
|                                      |                                                                                                                                                                                                        | 2       | DO   | 0                                         | 1                  |                                           |         |             |
| 433.2<br>1.3                         | Brown, compact<br><b>SAND</b><br>fine grained<br>some silt                                                                                                                                             |         |      |                                           |                    |                                           |         |             |
|                                      |                                                                                                                                                                                                        | 3       | DO   | 0                                         | 2                  |                                           |         |             |
|                                      |                                                                                                                                                                                                        |         |      |                                           |                    |                                           |         |             |
|                                      |                                                                                                                                                                                                        | 4       | DO   | 0                                         | 3                  |                                           |         |             |
|                                      |                                                                                                                                                                                                        |         |      |                                           |                    |                                           |         |             |
|                                      |                                                                                                                                                                                                        | 5       | DO   | 0                                         | 4                  |                                           |         |             |
|                                      |                                                                                                                                                                                                        |         |      |                                           |                    |                                           |         |             |
| 429.8<br>4.1                         | Brown, dense<br><b>GRAVELLY SAND</b><br>occ. cobbles and boulders                                                                                                                                      |         |      |                                           | 5                  |                                           |         |             |
|                                      |                                                                                                                                                                                                        | 6       | DO   | 0                                         |                    |                                           |         |             |
|                                      |                                                                                                                                                                                                        |         |      |                                           |                    |                                           |         |             |
| 428.3<br>5.6                         | Brown, dense<br><b>SANDY SILT TILL</b><br>traces of gravel and clay<br>occ. cobbles and boulders                                                                                                       |         |      |                                           | 6                  |                                           |         |             |
|                                      |                                                                                                                                                                                                        |         |      |                                           |                    |                                           |         |             |
|                                      |                                                                                                                                                                                                        | 7       | DO   | 0                                         | 7                  |                                           |         |             |
| 427.3<br>6.6                         | END OF BOREHOLE<br>Installed 50mm standpipe @ 6.1m<br>Bentonite seal from 0.0m to 2.4m<br>Sand backfill from 2.4m to 6.1m<br>3.1m screen from 3.0m to 6.1m<br>Provided with monument protective casing |         |      |                                           | 8                  |                                           |         |             |
|                                      |                                                                                                                                                                                                        |         |      |                                           | 9                  |                                           |         |             |
|                                      |                                                                                                                                                                                                        |         |      |                                           | 10                 |                                           |         |             |

W.L. @ 3.17 mbgs on December 1, 2022

**Soil Engineers Ltd.**

JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 14**

FIGURE NO.: 14

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Flight Auger**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 23, 2022

| El.<br>(masl)<br><br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                                                                                                                                                                                           | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm)<br><br>●<br>20 60 100 140 180 | REMARKS | WATER LEVEL |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|-------------------------------------------|--------------------|-------------------------------------------------------------------------|---------|-------------|
|                                      |                                                                                                                                                                                                               | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                                                         |         |             |
| 442.3<br>0.0                         | Ground Surface<br><b>36 cm TOPSOIL</b>                                                                                                                                                                        |         |      |                                           | 0                  |                                                                         |         |             |
|                                      | <b>PLOUGHED SOIL</b><br>Dark brown sand, occ. rootlets                                                                                                                                                        | 1       | DO   | 0                                         |                    |                                                                         |         |             |
| 441.5<br>0.8                         | <b>Brown SAND</b><br>a trace to some gravel                                                                                                                                                                   | 2       | DO   | 0                                         | 1                  |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               | 3       | DO   | 0                                         | 2                  |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               | 4       | DO   | 0                                         | 3                  |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               | 5       | DO   | 0                                         | 4                  |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               | 6       | DO   | 0                                         | 5                  |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               | 7       | DO   | 0                                         | 6                  |                                                                         |         |             |
| 435.7<br>6.6                         | <b>END OF BOREHOLE</b><br>Installed 50mm standpipe @ 6.1m<br>Bentonite seal from 0.0m to 2.4m<br>Sand backfill from 2.4m to 6.1m<br>3.1m screen from 3.0m to 6.1m<br>Provided with monument protective casing |         |      |                                           | 7                  |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               |         |      |                                           | 8                  |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               |         |      |                                           | 9                  |                                                                         |         |             |
|                                      |                                                                                                                                                                                                               |         |      |                                           | 10                 |                                                                         |         |             |

Dry upon Completion

**Soil Engineers Ltd.**

JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 15**

FIGURE NO.: 15

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Flight Auger**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 25, 2022

| El.<br>(masl)<br><br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                                                                                                                                                                                           | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm) | REMARKS | WATER LEVEL |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|-------------------------------------------|--------------------|-------------------------------------------|---------|-------------|
|                                      |                                                                                                                                                                                                               | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                           |         |             |
| 438.0                                | Ground Surface                                                                                                                                                                                                |         |      |                                           | 0                  |                                           |         |             |
| 0.0                                  | <b>36 cm TOPSOIL</b>                                                                                                                                                                                          |         |      |                                           |                    |                                           |         |             |
|                                      | <b>PLOUGHED SOIL</b><br>Dark brown sand, occ. rootlets                                                                                                                                                        | 1       | DO   | 0                                         |                    |                                           |         |             |
| 437.1                                |                                                                                                                                                                                                               | 2       | DO   | 0                                         | 1                  |                                           |         |             |
| 1.0                                  | Brown, dense to very dense<br><b>GRAVELLY SAND</b><br>occ. cobbles and boulders                                                                                                                               |         |      |                                           |                    |                                           |         |             |
|                                      |                                                                                                                                                                                                               | 3       | DO   | 0                                         | 2                  |                                           |         |             |
|                                      |                                                                                                                                                                                                               | 4       | DO   | 0                                         | 3                  |                                           |         |             |
|                                      |                                                                                                                                                                                                               | 5       | DO   | 0                                         | 4                  |                                           |         |             |
|                                      |                                                                                                                                                                                                               | 6       | DO   | 0                                         | 5                  |                                           |         |             |
| 431.6                                |                                                                                                                                                                                                               | 7       | DO   | 0                                         | 6                  |                                           |         |             |
| 6.4                                  | <b>END OF BOREHOLE</b><br>Installed 50mm standpipe @ 6.1m<br>Bentonite seal from 0.0m to 2.4m<br>Sand backfill from 2.4m to 6.1m<br>3.1m screen from 3.0m to 6.1m<br>Provided with monument protective casing |         |      |                                           | 7                  |                                           |         |             |
|                                      |                                                                                                                                                                                                               |         |      |                                           | 8                  |                                           |         |             |
|                                      |                                                                                                                                                                                                               |         |      |                                           | 9                  |                                           |         |             |
|                                      |                                                                                                                                                                                                               |         |      |                                           | 10                 |                                           |         |             |

**Soil Engineers Ltd.**

JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 16**

FIGURE NO.: 16

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Flight Auger**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 24, 2022

| E.L.<br>(masl)<br><br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                                                                                                                                                                                           | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm) | REMARKS | WATER LEVEL |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|-------------------------------------------|--------------------|-------------------------------------------|---------|-------------|
|                                       |                                                                                                                                                                                                               | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                           |         |             |
| 437.7<br>0.0                          | Ground Surface<br><b>36 cm TOPSOIL</b>                                                                                                                                                                        |         |      |                                           | 0                  |                                           |         |             |
|                                       | <b>PLOUGHED SOIL</b><br>Dark brown sand, occ. rootlets                                                                                                                                                        | 1       | DO   | 0                                         |                    |                                           |         |             |
| 436.9<br>0.8                          | Brown<br><b>SAND</b><br>fine to medium grained                                                                                                                                                                | 2       | DO   | 0                                         | 1                  |                                           |         |             |
|                                       |                                                                                                                                                                                                               | 3       | DO   | 0                                         | 2                  |                                           |         |             |
| 435.7<br>2.0                          | Brown<br><b>GRAVELLY SAND</b><br>occ. cobbles and boulders                                                                                                                                                    | 4       | DO   | 0                                         | 3                  |                                           |         |             |
|                                       |                                                                                                                                                                                                               | 5       | DO   | 0                                         | 4                  |                                           |         |             |
| 433.0<br>4.7                          | <b>END OF BOREHOLE</b><br>Installed 50mm standpipe @ 4.6m<br>Bentonite seal from 0.0m to 0.9m<br>Sand backfill from 0.9m to 4.6m<br>3.1m screen from 1.5m to 4.6m<br>Provided with monument protective casing | 6       | DO   | 0                                         | 5                  |                                           |         |             |
|                                       |                                                                                                                                                                                                               |         |      |                                           | 6                  |                                           |         |             |
|                                       |                                                                                                                                                                                                               |         |      |                                           | 7                  |                                           |         |             |
|                                       |                                                                                                                                                                                                               |         |      |                                           | 8                  |                                           |         |             |
|                                       |                                                                                                                                                                                                               |         |      |                                           | 9                  |                                           |         |             |
|                                       |                                                                                                                                                                                                               |         |      |                                           | 10                 |                                           |         |             |

Dry upon Completion

**Soil Engineers Ltd.**



JOB NO.: 2206-E054

**LOG OF BOREHOLE NO.: 17**

FIGURE NO.: 17

**PROJECT DESCRIPTION:** Proposed Residential Development**METHOD OF BORING:** Flight Auger**PROJECT LOCATION:** 63 and 63A Trafalgar Road  
Parts of Lots 23 and 24, Concession 8  
Town of Erin**DRILLING DATE:** November 25, 2022

| El.<br>(masl)<br>Depth<br>(mbgs) | SOIL<br>DESCRIPTION                                                                                                                                                                                                                            | SAMPLES |      |                                           | Depth Scale (mbgs) | Combustible<br>Headspace<br>Reading (ppm) | REMARKS | WATER LEVEL |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|-------------------------------------------|--------------------|-------------------------------------------|---------|-------------|
|                                  |                                                                                                                                                                                                                                                | Number  | Type | Combustible<br>Headspace<br>Reading (ppm) |                    |                                           |         |             |
| 435.6<br>0.0                     | Ground Surface<br><b>36 cm TOPSOIL</b>                                                                                                                                                                                                         |         |      |                                           | 0                  |                                           |         |             |
|                                  | <b>PLOUGHED SOIL</b><br>Dark brown sand, occ. rootlets                                                                                                                                                                                         | 1       | DO   | 0                                         | 0                  |                                           |         |             |
| 434.8<br>0.8                     | Brown<br><b>SAND</b><br>trace to some gravel                                                                                                                                                                                                   | 2       | DO   | 0                                         | 1                  |                                           |         |             |
|                                  |                                                                                                                                                                                                                                                | 3       | DO   | 0                                         | 2                  |                                           |         |             |
|                                  |                                                                                                                                                                                                                                                | 4       | DO   | 0                                         | 3                  |                                           |         |             |
|                                  |                                                                                                                                                                                                                                                | 5       | DO   | 0                                         | 4                  |                                           |         |             |
| 431.0<br>4.6                     | Dense<br><b>SILT</b><br>occ. clay seams                                                                                                                                                                                                        | 6       | DO   | 0                                         | 5                  |                                           |         |             |
| 429.0<br>6.6                     | — — — — brown<br>— — — — grey<br><b>END OF BOREHOLE</b><br>Installed 50mm standpipe @ 6.1m<br>Bentonite seal from 0.0m to 2.4m<br>Sand backfill from 2.4m to 6.1m<br>3.1m screen from 3.0m to 6.1m<br>Provided with monument protective casing | 7       | DO   | 0                                         | 6                  |                                           |         |             |
|                                  |                                                                                                                                                                                                                                                |         |      |                                           | 7                  |                                           |         |             |
|                                  |                                                                                                                                                                                                                                                |         |      |                                           | 8                  |                                           |         |             |
|                                  |                                                                                                                                                                                                                                                |         |      |                                           | 9                  |                                           |         |             |
|                                  |                                                                                                                                                                                                                                                |         |      |                                           | 10                 |                                           |         |             |

W.L. @ 3.85 mbgs on December 1, 2022

**Soil Engineers Ltd.**



# ***Soil Engineers Ltd.***

CONSULTING ENGINEERS

**GEOTECHNICAL • ENVIRONMENTAL • HYDROGEOLOGICAL • BUILDING SCIENCE**

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|                     |                     |                     |                     |                     |                     |                   |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------|
| <b>BARRIE</b>       | <b>MISSISSAUGA</b>  | <b>OSHAWA</b>       | <b>NEWMARKET</b>    | <b>GRAVENHURST</b>  | <b>PETERBOROUGH</b> | <b>HAMILTON</b>   |
| TEL: (705) 721-7863 | TEL: (905) 542-7605 | TEL: (905) 440-2040 | TEL: (905) 853-0647 | TEL: (705) 684-4242 | TEL: (905) 440-2040 | TEL: (905) 777-79 |
| FAX: (705) 721-7864 | FAX: (905) 542-2769 | FAX: (905) 725-1315 | FAX: (905) 881-8335 | FAX: (705) 684-8522 | FAX: (905) 725-1315 | FAX: (905) 542-27 |

## **APPENDIX 'C'**

### **CERTIFICATE OF ANALYSIS (SOIL SAMPLES)**

**Reference No. 2206-E054**



Your Project #: 2206-E054  
Your C.O.C. #: na

**Attention: Madan K. Suwal**

Soil Engineers Ltd  
90 West Beaver Creek Road  
Unit 100  
Richmond Hill, ON  
CANADA L4B 1E7

**Report Date: 2022/11/25**  
Report #: R7404342  
Version: 2 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C2X8204**

**Received: 2022/11/17, 14:58**

Sample Matrix: Soil  
# Samples Received: 10

| Analyses                              | Quantity | Date<br>Extracted | Date<br>Analyzed | Laboratory Method | Analytical Method    |
|---------------------------------------|----------|-------------------|------------------|-------------------|----------------------|
| Hot Water Extractable Boron           | 7        | 2022/11/21        | 2022/11/22       | CAM SOP-00408     | R153 Ana. Prot. 2011 |
| Hot Water Extractable Boron           | 1        | 2022/11/21        | 2022/11/23       | CAM SOP-00408     | R153 Ana. Prot. 2011 |
| Free (WAD) Cyanide                    | 8        | 2022/11/22        | 2022/11/22       | CAM SOP-00457     | OMOE E3015 m         |
| Hexavalent Chromium in Soil by IC (1) | 8        | 2022/11/22        | 2022/11/23       | CAM SOP-00436     | EPA 3060/7199 m      |
| Acid Extractable Metals by ICPMS      | 9        | 2022/11/21        | 2022/11/23       | CAM SOP-00447     | EPA 6020B m          |
| Moisture                              | 10       | N/A               | 2022/11/21       | CAM SOP-00445     | Carter 2nd ed 51.2 m |
| OC Pesticides (Selected) & PCB (2)    | 8        | 2022/11/22        | 2022/11/23       | CAM SOP-00307     | SW846 8081, 8082     |
| OC Pesticides (Selected) & PCB (2)    | 2        | 2022/11/23        | 2022/11/24       | CAM SOP-00307     | SW846 8081, 8082     |
| OC Pesticides Summed Parameters       | 10       | N/A               | 2022/11/22       | CAM SOP-00307     | EPA 8081/8082 m      |
| pH CaCl2 EXTRACT                      | 4        | 2022/11/22        | 2022/11/22       | CAM SOP-00413     | EPA 9045 D m         |

**Remarks:**

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

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

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

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

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

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

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



Your Project #: 2206-E054  
Your C.O.C. #: na

**Attention: Madan K. Suwal**

Soil Engineers Ltd  
90 West Beaver Creek Road  
Unit 100  
Richmond Hill, ON  
CANADA L4B 1E7

**Report Date: 2022/11/25**  
Report #: R7404342  
Version: 2 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C2X8204**

**Received: 2022/11/17, 14:58**

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

(1) Soils are reported on a dry weight basis unless otherwise specified.

(2) Chlordane ( Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key



AUTHORIZED REPORT  
RAPPORT AUTORISÉ

Bureau Veritas  
25 Nov 2022 15:58:57

Please direct all questions regarding this Certificate of Analysis to:

Antonella Brasil, Senior Project Manager

Email: Antonella.Brasil@bureauveritas.com

Phone# (905)817-5817

=====

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



Bureau Veritas Job #: C2X8204  
Report Date: 2022/11/25

Soil Engineers Ltd  
Client Project #: 2206-E054  
Sampler Initials: ANK

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

|                                  |              |              |            |                 |
|----------------------------------|--------------|--------------|------------|-----------------|
| <b>Bureau Veritas ID</b>         |              | UIJ718       |            |                 |
| <b>Sampling Date</b>             |              | 2022/11/16   |            |                 |
| <b>COC Number</b>                |              | na           |            |                 |
|                                  | <b>UNITS</b> | <b>DUPS1</b> | <b>RDL</b> | <b>QC Batch</b> |
| <b>Metals</b>                    |              |              |            |                 |
| Acid Extractable Antimony (Sb)   | ug/g         | <0.20        | 0.20       | 8357955         |
| Acid Extractable Arsenic (As)    | ug/g         | 4.1          | 1.0        | 8357955         |
| Acid Extractable Barium (Ba)     | ug/g         | 47           | 0.50       | 8357955         |
| Acid Extractable Beryllium (Be)  | ug/g         | 0.43         | 0.20       | 8357955         |
| Acid Extractable Boron (B)       | ug/g         | <5.0         | 5.0        | 8357955         |
| Acid Extractable Cadmium (Cd)    | ug/g         | 0.26         | 0.10       | 8357955         |
| Acid Extractable Chromium (Cr)   | ug/g         | 14           | 1.0        | 8357955         |
| Acid Extractable Cobalt (Co)     | ug/g         | 4.7          | 0.10       | 8357955         |
| Acid Extractable Copper (Cu)     | ug/g         | 9.5          | 0.50       | 8357955         |
| Acid Extractable Lead (Pb)       | ug/g         | 20           | 1.0        | 8357955         |
| Acid Extractable Molybdenum (Mo) | ug/g         | <0.50        | 0.50       | 8357955         |
| Acid Extractable Nickel (Ni)     | ug/g         | 8.7          | 0.50       | 8357955         |
| Acid Extractable Selenium (Se)   | ug/g         | <0.50        | 0.50       | 8357955         |
| Acid Extractable Silver (Ag)     | ug/g         | <0.20        | 0.20       | 8357955         |
| Acid Extractable Thallium (Tl)   | ug/g         | 0.088        | 0.050      | 8357955         |
| Acid Extractable Uranium (U)     | ug/g         | 0.47         | 0.050      | 8357955         |
| Acid Extractable Vanadium (V)    | ug/g         | 32           | 5.0        | 8357955         |
| Acid Extractable Zinc (Zn)       | ug/g         | 75           | 5.0        | 8357955         |
| Acid Extractable Mercury (Hg)    | ug/g         | <0.050       | 0.050      | 8357955         |
| RDL = Reportable Detection Limit |              |              |            |                 |
| QC Batch = Quality Control Batch |              |              |            |                 |



Bureau Veritas Job #: C2X8204  
Report Date: 2022/11/25

Soil Engineers Ltd  
Client Project #: 2206-E054  
Sampler Initials: ANK

### O.REG 153 METALS & INORGANICS PKG (SOIL)

| Bureau Veritas ID                                                                                                |       | UIJ710     |          | UIJ711     | UIJ712     |       |          | UIJ712      |      |          |
|------------------------------------------------------------------------------------------------------------------|-------|------------|----------|------------|------------|-------|----------|-------------|------|----------|
| Sampling Date                                                                                                    |       | 2022/11/16 |          | 2022/11/16 | 2022/11/16 |       |          | 2022/11/16  |      |          |
| COC Number                                                                                                       |       | na         |          | na         | na         |       |          | na          |      |          |
|                                                                                                                  | UNITS | TP1        | QC Batch | TP2        | TP3        | RDL   | QC Batch | TP3 Lab-Dup | RDL  | QC Batch |
| <b>Inorganics</b>                                                                                                |       |            |          |            |            |       |          |             |      |          |
| Available (CaCl <sub>2</sub> ) pH                                                                                | pH    | 6.97       | 8359663  |            |            |       |          |             |      |          |
| WAD Cyanide (Free)                                                                                               | ug/g  | <0.01      | 8359412  | <0.01      | <0.01      | 0.01  | 8359412  |             |      |          |
| Chromium (VI)                                                                                                    | ug/g  | <0.18      | 8359716  | <0.18      | <0.18      | 0.18  | 8359716  | <0.18       | 0.18 | 8359716  |
| <b>Metals</b>                                                                                                    |       |            |          |            |            |       |          |             |      |          |
| Hot Water Ext. Boron (B)                                                                                         | ug/g  | 0.68       | 8358041  | 0.64       | 0.60       | 0.050 | 8358041  |             |      |          |
| Acid Extractable Antimony (Sb)                                                                                   | ug/g  | <0.20      | 8357955  | <0.20      | <0.20      | 0.20  | 8357955  |             |      |          |
| Acid Extractable Arsenic (As)                                                                                    | ug/g  | 4.2        | 8357955  | 4.3        | 4.5        | 1.0   | 8357955  |             |      |          |
| Acid Extractable Barium (Ba)                                                                                     | ug/g  | 48         | 8357955  | 53         | 34         | 0.50  | 8357955  |             |      |          |
| Acid Extractable Beryllium (Be)                                                                                  | ug/g  | 0.43       | 8357955  | 0.42       | 0.36       | 0.20  | 8357955  |             |      |          |
| Acid Extractable Boron (B)                                                                                       | ug/g  | <5.0       | 8357955  | <5.0       | <5.0       | 5.0   | 8357955  |             |      |          |
| Acid Extractable Cadmium (Cd)                                                                                    | ug/g  | 0.30       | 8357955  | 0.32       | 0.32       | 0.10  | 8357955  |             |      |          |
| Acid Extractable Chromium (Cr)                                                                                   | ug/g  | 14         | 8357955  | 17         | 15         | 1.0   | 8357955  |             |      |          |
| Acid Extractable Cobalt (Co)                                                                                     | ug/g  | 4.8        | 8357955  | 5.2        | 4.4        | 0.10  | 8357955  |             |      |          |
| Acid Extractable Copper (Cu)                                                                                     | ug/g  | 10         | 8357955  | 10         | 12         | 0.50  | 8357955  |             |      |          |
| Acid Extractable Lead (Pb)                                                                                       | ug/g  | 20         | 8357955  | 20         | 17         | 1.0   | 8357955  |             |      |          |
| Acid Extractable Molybdenum (Mo)                                                                                 | ug/g  | <0.50      | 8357955  | 0.55       | <0.50      | 0.50  | 8357955  |             |      |          |
| Acid Extractable Nickel (Ni)                                                                                     | ug/g  | 8.7        | 8357955  | 9.0        | 8.0        | 0.50  | 8357955  |             |      |          |
| Acid Extractable Selenium (Se)                                                                                   | ug/g  | <0.50      | 8357955  | <0.50      | <0.50      | 0.50  | 8357955  |             |      |          |
| Acid Extractable Silver (Ag)                                                                                     | ug/g  | <0.20      | 8357955  | <0.20      | <0.20      | 0.20  | 8357955  |             |      |          |
| Acid Extractable Thallium (Tl)                                                                                   | ug/g  | 0.10       | 8357955  | 0.097      | 0.077      | 0.050 | 8357955  |             |      |          |
| Acid Extractable Uranium (U)                                                                                     | ug/g  | 0.46       | 8357955  | 0.51       | 0.51       | 0.050 | 8357955  |             |      |          |
| Acid Extractable Vanadium (V)                                                                                    | ug/g  | 31         | 8357955  | 39         | 37         | 5.0   | 8357955  |             |      |          |
| Acid Extractable Zinc (Zn)                                                                                       | ug/g  | 76         | 8357955  | 71         | 56         | 5.0   | 8357955  |             |      |          |
| Acid Extractable Mercury (Hg)                                                                                    | ug/g  | <0.050     | 8357955  | <0.050     | <0.050     | 0.050 | 8357955  |             |      |          |
| RDL = Reportable Detection Limit<br>QC Batch = Quality Control Batch<br>Lab-Dup = Laboratory Initiated Duplicate |       |            |          |            |            |       |          |             |      |          |



Bureau Veritas Job #: C2X8204  
Report Date: 2022/11/25

Soil Engineers Ltd  
Client Project #: 2206-E054  
Sampler Initials: ANK

### O.REG 153 METALS & INORGANICS PKG (SOIL)

| Bureau Veritas ID                                                                                                |       | UII713     |       |          | UII713      |       |          | UII714     | UII715     |       |          |
|------------------------------------------------------------------------------------------------------------------|-------|------------|-------|----------|-------------|-------|----------|------------|------------|-------|----------|
| Sampling Date                                                                                                    |       | 2022/11/16 |       |          | 2022/11/16  |       |          | 2022/11/16 | 2022/11/16 |       |          |
| COC Number                                                                                                       |       | na         |       |          | na          |       |          | na         | na         |       |          |
|                                                                                                                  | UNITS | TP4        | RDL   | QC Batch | TP4 Lab-Dup | RDL   | QC Batch | TP5        | TP6        | RDL   | QC Batch |
| <b>Inorganics</b>                                                                                                |       |            |       |          |             |       |          |            |            |       |          |
| Available (CaCl <sub>2</sub> ) pH                                                                                | pH    | 7.10       |       | 8359663  |             |       |          |            |            |       |          |
| WAD Cyanide (Free)                                                                                               | ug/g  | <0.01      | 0.01  | 8359412  | <0.01       | 0.01  | 8359412  | <0.01      | <0.01      | 0.01  | 8359412  |
| Chromium (VI)                                                                                                    | ug/g  | <0.18      | 0.18  | 8359716  |             |       |          | <0.18      | <0.18      | 0.18  | 8359716  |
| <b>Metals</b>                                                                                                    |       |            |       |          |             |       |          |            |            |       |          |
| Hot Water Ext. Boron (B)                                                                                         | ug/g  | 0.59       | 0.050 | 8358041  | 0.57        | 0.050 | 8358041  | 0.50       | 0.55       | 0.050 | 8358041  |
| Acid Extractable Antimony (Sb)                                                                                   | ug/g  | <0.20      | 0.20  | 8357955  |             |       |          | <0.20      | 0.22       | 0.20  | 8357955  |
| Acid Extractable Arsenic (As)                                                                                    | ug/g  | 4.4        | 1.0   | 8357955  |             |       |          | 4.3        | 7.4        | 1.0   | 8357955  |
| Acid Extractable Barium (Ba)                                                                                     | ug/g  | 33         | 0.50  | 8357955  |             |       |          | 31         | 45         | 0.50  | 8357955  |
| Acid Extractable Beryllium (Be)                                                                                  | ug/g  | 0.36       | 0.20  | 8357955  |             |       |          | 0.32       | 0.33       | 0.20  | 8357955  |
| Acid Extractable Boron (B)                                                                                       | ug/g  | <5.0       | 5.0   | 8357955  |             |       |          | <5.0       | <5.0       | 5.0   | 8357955  |
| Acid Extractable Cadmium (Cd)                                                                                    | ug/g  | 0.20       | 0.10  | 8357955  |             |       |          | 0.21       | 0.27       | 0.10  | 8357955  |
| Acid Extractable Chromium (Cr)                                                                                   | ug/g  | 13         | 1.0   | 8357955  |             |       |          | 12         | 13         | 1.0   | 8357955  |
| Acid Extractable Cobalt (Co)                                                                                     | ug/g  | 4.2        | 0.10  | 8357955  |             |       |          | 3.8        | 4.0        | 0.10  | 8357955  |
| Acid Extractable Copper (Cu)                                                                                     | ug/g  | 11         | 0.50  | 8357955  |             |       |          | 10         | 16         | 0.50  | 8357955  |
| Acid Extractable Lead (Pb)                                                                                       | ug/g  | 14         | 1.0   | 8357955  |             |       |          | 13         | 17         | 1.0   | 8357955  |
| Acid Extractable Molybdenum (Mo)                                                                                 | ug/g  | <0.50      | 0.50  | 8357955  |             |       |          | <0.50      | <0.50      | 0.50  | 8357955  |
| Acid Extractable Nickel (Ni)                                                                                     | ug/g  | 7.8        | 0.50  | 8357955  |             |       |          | 6.5        | 7.0        | 0.50  | 8357955  |
| Acid Extractable Selenium (Se)                                                                                   | ug/g  | <0.50      | 0.50  | 8357955  |             |       |          | <0.50      | <0.50      | 0.50  | 8357955  |
| Acid Extractable Silver (Ag)                                                                                     | ug/g  | <0.20      | 0.20  | 8357955  |             |       |          | <0.20      | <0.20      | 0.20  | 8357955  |
| Acid Extractable Thallium (Tl)                                                                                   | ug/g  | 0.075      | 0.050 | 8357955  |             |       |          | 0.069      | 0.080      | 0.050 | 8357955  |
| Acid Extractable Uranium (U)                                                                                     | ug/g  | 0.45       | 0.050 | 8357955  |             |       |          | 0.42       | 0.47       | 0.050 | 8357955  |
| Acid Extractable Vanadium (V)                                                                                    | ug/g  | 32         | 5.0   | 8357955  |             |       |          | 29         | 32         | 5.0   | 8357955  |
| Acid Extractable Zinc (Zn)                                                                                       | ug/g  | 56         | 5.0   | 8357955  |             |       |          | 46         | 63         | 5.0   | 8357955  |
| Acid Extractable Mercury (Hg)                                                                                    | ug/g  | <0.050     | 0.050 | 8357955  |             |       |          | <0.050     | <0.050     | 0.050 | 8357955  |
| RDL = Reportable Detection Limit<br>QC Batch = Quality Control Batch<br>Lab-Dup = Laboratory Initiated Duplicate |       |            |       |          |             |       |          |            |            |       |          |

BUREAU  
VERITAS

Bureau Veritas Job #: C2X8204

Report Date: 2022/11/25

Soil Engineers Ltd

Client Project #: 2206-E054

Sampler Initials: ANK

**O.REG 153 METALS & INORGANICS PKG (SOIL)**

| Bureau Veritas ID                 |       | UIJ716     | UIJ717     |       |          |
|-----------------------------------|-------|------------|------------|-------|----------|
| Sampling Date                     |       | 2022/11/16 | 2022/11/16 |       |          |
| COC Number                        |       | na         | na         |       |          |
|                                   | UNITS | TP7        | TP8        | RDL   | QC Batch |
| <b>Inorganics</b>                 |       |            |            |       |          |
| Available (CaCl <sub>2</sub> ) pH | pH    | 5.42       | 6.32       |       | 8359663  |
| WAD Cyanide (Free)                | ug/g  | <0.01      | <0.01      | 0.01  | 8359412  |
| Chromium (VI)                     | ug/g  | <0.18      | <0.18      | 0.18  | 8359716  |
| <b>Metals</b>                     |       |            |            |       |          |
| Hot Water Ext. Boron (B)          | ug/g  | 0.47       | 0.45       | 0.050 | 8358041  |
| Acid Extractable Antimony (Sb)    | ug/g  | <0.20      | <0.20      | 0.20  | 8357955  |
| Acid Extractable Arsenic (As)     | ug/g  | 6.7        | 6.7        | 1.0   | 8357955  |
| Acid Extractable Barium (Ba)      | ug/g  | 46         | 41         | 0.50  | 8357955  |
| Acid Extractable Beryllium (Be)   | ug/g  | 0.33       | 0.32       | 0.20  | 8357955  |
| Acid Extractable Boron (B)        | ug/g  | <5.0       | <5.0       | 5.0   | 8357955  |
| Acid Extractable Cadmium (Cd)     | ug/g  | 0.27       | 0.28       | 0.10  | 8357955  |
| Acid Extractable Chromium (Cr)    | ug/g  | 13         | 13         | 1.0   | 8357955  |
| Acid Extractable Cobalt (Co)      | ug/g  | 3.9        | 4.0        | 0.10  | 8357955  |
| Acid Extractable Copper (Cu)      | ug/g  | 16         | 15         | 0.50  | 8357955  |
| Acid Extractable Lead (Pb)        | ug/g  | 17         | 16         | 1.0   | 8357955  |
| Acid Extractable Molybdenum (Mo)  | ug/g  | <0.50      | <0.50      | 0.50  | 8357955  |
| Acid Extractable Nickel (Ni)      | ug/g  | 7.2        | 7.3        | 0.50  | 8357955  |
| Acid Extractable Selenium (Se)    | ug/g  | <0.50      | <0.50      | 0.50  | 8357955  |
| Acid Extractable Silver (Ag)      | ug/g  | <0.20      | <0.20      | 0.20  | 8357955  |
| Acid Extractable Thallium (Tl)    | ug/g  | 0.077      | 0.086      | 0.050 | 8357955  |
| Acid Extractable Uranium (U)      | ug/g  | 0.49       | 0.47       | 0.050 | 8357955  |
| Acid Extractable Vanadium (V)     | ug/g  | 32         | 33         | 5.0   | 8357955  |
| Acid Extractable Zinc (Zn)        | ug/g  | 63         | 56         | 5.0   | 8357955  |
| Acid Extractable Mercury (Hg)     | ug/g  | <0.050     | <0.050     | 0.050 | 8357955  |
| RDL = Reportable Detection Limit  |       |            |            |       |          |
| QC Batch = Quality Control Batch  |       |            |            |       |          |





Bureau Veritas Job #: C2X8204  
Report Date: 2022/11/25

Soil Engineers Ltd  
Client Project #: 2206-E054  
Sampler Initials: ANK

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

| Bureau Veritas ID                        |       | UIJ710     |        |          | UIJ710      |        |          | UIJ711     | UIJ712     |        |          |
|------------------------------------------|-------|------------|--------|----------|-------------|--------|----------|------------|------------|--------|----------|
| Sampling Date                            |       | 2022/11/16 |        |          | 2022/11/16  |        |          | 2022/11/16 | 2022/11/16 |        |          |
| COC Number                               |       | na         |        |          | na          |        |          | na         | na         |        |          |
|                                          | UNITS | TP1        | RDL    | QC Batch | TP1 Lab-Dup | RDL    | QC Batch | TP2        | TP3        | RDL    | QC Batch |
| <b>Inorganics</b>                        |       |            |        |          |             |        |          |            |            |        |          |
| Moisture                                 | %     | 17         | 1.0    | 8357623  |             |        |          | 18         | 16         | 1.0    | 8357623  |
| <b>Calculated Parameters</b>             |       |            |        |          |             |        |          |            |            |        |          |
| Chlordane (Total)                        | ug/g  | <0.0020    | 0.0020 | 8351186  |             |        |          | <0.0020    | <0.0020    | 0.0020 | 8351186  |
| o,p-DDD + p,p-DDD                        | ug/g  | <0.0020    | 0.0020 | 8351186  |             |        |          | <0.0020    | <0.0020    | 0.0020 | 8351186  |
| o,p-DDE + p,p-DDE                        | ug/g  | <0.0020    | 0.0020 | 8351186  |             |        |          | <0.0020    | <0.0020    | 0.0020 | 8351186  |
| o,p-DDT + p,p-DDT                        | ug/g  | <0.0020    | 0.0020 | 8351186  |             |        |          | <0.0020    | <0.0020    | 0.0020 | 8351186  |
| Total Endosulfan                         | ug/g  | <0.0020    | 0.0020 | 8351186  |             |        |          | <0.0020    | <0.0020    | 0.0020 | 8351186  |
| <b>Pesticides &amp; Herbicides</b>       |       |            |        |          |             |        |          |            |            |        |          |
| Aldrin                                   | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| a-Chlordane                              | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| g-Chlordane                              | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| o,p-DDD                                  | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| p,p-DDD                                  | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| o,p-DDE                                  | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| p,p-DDE                                  | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| o,p-DDT                                  | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| p,p-DDT                                  | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Dieldrin                                 | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Lindane                                  | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Endosulfan I (alpha)                     | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Endosulfan II (beta)                     | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Endrin                                   | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Heptachlor                               | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Heptachlor epoxide                       | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Hexachlorobenzene                        | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Hexachlorobutadiene                      | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Hexachloroethane                         | ug/g  | <0.0020    | 0.0020 | 8361100  | <0.0020     | 0.0020 | 8361100  | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Methoxychlor                             | ug/g  | <0.0050    | 0.0050 | 8361100  | <0.0050     | 0.0050 | 8361100  | <0.0050    | <0.0050    | 0.0050 | 8361100  |
| <b>Surrogate Recovery (%)</b>            |       |            |        |          |             |        |          |            |            |        |          |
| 2,4,5,6-Tetrachloro-m-xylene             | %     | 81         |        | 8361100  | 84          |        | 8361100  | 80         | 82         |        | 8361100  |
| Decachlorobiphenyl                       | %     | 117        |        | 8361100  | 102         |        | 8361100  | 109        | 122        |        | 8361100  |
| RDL = Reportable Detection Limit         |       |            |        |          |             |        |          |            |            |        |          |
| QC Batch = Quality Control Batch         |       |            |        |          |             |        |          |            |            |        |          |
| Lab-Dup = Laboratory Initiated Duplicate |       |            |        |          |             |        |          |            |            |        |          |



Bureau Veritas Job #: C2X8204  
Report Date: 2022/11/25

Soil Engineers Ltd  
Client Project #: 2206-E054  
Sampler Initials: ANK

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

| Bureau Veritas ID                  |       | UIJ713     | UIJ714     | UIJ715     | UIJ716     | UIJ717     |        |          |
|------------------------------------|-------|------------|------------|------------|------------|------------|--------|----------|
| Sampling Date                      |       | 2022/11/16 | 2022/11/16 | 2022/11/16 | 2022/11/16 | 2022/11/16 |        |          |
| COC Number                         |       | na         | na         | na         | na         | na         |        |          |
|                                    | UNITS | TP4        | TP5        | TP6        | TP7        | TP8        | RDL    | QC Batch |
| <b>Inorganics</b>                  |       |            |            |            |            |            |        |          |
| Moisture                           | %     | 17         | 14         | 16         | 15         | 15         | 1.0    | 8357623  |
| <b>Calculated Parameters</b>       |       |            |            |            |            |            |        |          |
| Chlordane (Total)                  | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8351186  |
| o,p-DDD + p,p-DDD                  | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8351186  |
| o,p-DDE + p,p-DDE                  | ug/g  | <0.0020    | <0.0020    | 0.0037     | 0.0026     | 0.0021     | 0.0020 | 8351186  |
| o,p-DDT + p,p-DDT                  | ug/g  | <0.0020    | <0.0020    | 0.0023     | 0.0024     | <0.0020    | 0.0020 | 8351186  |
| Total Endosulfan                   | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8351186  |
| <b>Pesticides &amp; Herbicides</b> |       |            |            |            |            |            |        |          |
| Aldrin                             | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| a-Chlordane                        | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| g-Chlordane                        | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| o,p-DDD                            | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| p,p-DDD                            | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| o,p-DDE                            | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| p,p-DDE                            | ug/g  | <0.0020    | <0.0020    | 0.0037     | 0.0026     | 0.0021     | 0.0020 | 8361100  |
| o,p-DDT                            | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| p,p-DDT                            | ug/g  | <0.0020    | <0.0020    | 0.0023     | 0.0024     | <0.0020    | 0.0020 | 8361100  |
| Dieldrin                           | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Lindane                            | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Endosulfan I (alpha)               | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Endosulfan II (beta)               | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Endrin                             | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Heptachlor                         | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Heptachlor epoxide                 | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Hexachlorobenzene                  | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Hexachlorobutadiene                | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Hexachloroethane                   | ug/g  | <0.0020    | <0.0020    | <0.0020    | <0.0020    | <0.0020    | 0.0020 | 8361100  |
| Methoxychlor                       | ug/g  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8361100  |
| <b>Surrogate Recovery (%)</b>      |       |            |            |            |            |            |        |          |
| 2,4,5,6-Tetrachloro-m-xylene       | %     | 83         | 79         | 81         | 77         | 78         |        | 8361100  |
| Decachlorobiphenyl                 | %     | 105        | 116        | 118        | 91         | 103        |        | 8361100  |
| RDL = Reportable Detection Limit   |       |            |            |            |            |            |        |          |
| QC Batch = Quality Control Batch   |       |            |            |            |            |            |        |          |



Bureau Veritas Job #: C2X8204  
Report Date: 2022/11/25

Soil Engineers Ltd  
Client Project #: 2206-E054  
Sampler Initials: ANK

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

| Bureau Veritas ID                  |       | UIJ718     | UIJ719     |        |          |
|------------------------------------|-------|------------|------------|--------|----------|
| Sampling Date                      |       | 2022/11/16 | 2022/11/16 |        |          |
| COC Number                         |       | na         | na         |        |          |
|                                    | UNITS | DUPS1      | DUPS2      | RDL    | QC Batch |
| <b>Inorganics</b>                  |       |            |            |        |          |
| Moisture                           | %     | 16         | 18         | 1.0    | 8357623  |
| <b>Calculated Parameters</b>       |       |            |            |        |          |
| Chlordane (Total)                  | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8351186  |
| o,p-DDD + p,p-DDD                  | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8351186  |
| o,p-DDE + p,p-DDE                  | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8351186  |
| o,p-DDT + p,p-DDT                  | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8351186  |
| Total Endosulfan                   | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8351186  |
| <b>Pesticides &amp; Herbicides</b> |       |            |            |        |          |
| Aldrin                             | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| a-Chlordane                        | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| g-Chlordane                        | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| o,p-DDD                            | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| p,p-DDD                            | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| o,p-DDE                            | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| p,p-DDE                            | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| o,p-DDT                            | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| p,p-DDT                            | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| Dieldrin                           | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| Lindane                            | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| Endosulfan I (alpha)               | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| Endosulfan II (beta)               | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| Endrin                             | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| Heptachlor                         | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| Heptachlor epoxide                 | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| Hexachlorobenzene                  | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| Hexachlorobutadiene                | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| Hexachloroethane                   | ug/g  | <0.0020    | <0.0020    | 0.0020 | 8363328  |
| Methoxychlor                       | ug/g  | <0.0050    | <0.0050    | 0.0050 | 8363328  |
| <b>Surrogate Recovery (%)</b>      |       |            |            |        |          |
| 2,4,5,6-Tetrachloro-m-xylene       | %     | 72         | 73         |        | 8363328  |
| Decachlorobiphenyl                 | %     | 96         | 108        |        | 8363328  |
| RDL = Reportable Detection Limit   |       |            |            |        |          |
| QC Batch = Quality Control Batch   |       |            |            |        |          |



Bureau Veritas Job #: C2X8204  
Report Date: 2022/11/25

Soil Engineers Ltd  
Client Project #: 2206-E054  
Sampler Initials: ANK

## TEST SUMMARY

**Bureau Veritas ID:** UIJ710  
**Sample ID:** TP1  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/17

| Test Description                  | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst             |
|-----------------------------------|-----------------|---------|------------|---------------|---------------------|
| Hot Water Extractable Boron       | ICP             | 8358041 | 2022/11/21 | 2022/11/22    | Jaswinder Kaur      |
| Free (WAD) Cyanide                | TECH            | 8359412 | 2022/11/22 | 2022/11/22    | Chloe Pollock       |
| Hexavalent Chromium in Soil by IC | IC/SPEC         | 8359716 | 2022/11/22 | 2022/11/23    | Surleen Kaur Romana |
| Acid Extractable Metals by ICPMS  | ICP/MS          | 8357955 | 2022/11/21 | 2022/11/23    | Azita Fazaeli       |
| Moisture                          | BAL             | 8357623 | N/A        | 2022/11/21    | Mathew Bowles       |
| OC Pesticides (Selected) & PCB    | GC/ECD          | 8361100 | 2022/11/22 | 2022/11/23    | Li Peng             |
| OC Pesticides Summed Parameters   | CALC            | 8351186 | N/A        | 2022/11/22    | Automated Statchk   |
| pH CaCl2 EXTRACT                  | AT              | 8359663 | 2022/11/22 | 2022/11/22    | Taslima Aktar       |

**Bureau Veritas ID:** UIJ710 Dup  
**Sample ID:** TP1  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/17

| Test Description               | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst |
|--------------------------------|-----------------|---------|------------|---------------|---------|
| OC Pesticides (Selected) & PCB | GC/ECD          | 8361100 | 2022/11/22 | 2022/11/23    | Li Peng |

**Bureau Veritas ID:** UIJ711  
**Sample ID:** TP2  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/17

| Test Description                  | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst             |
|-----------------------------------|-----------------|---------|------------|---------------|---------------------|
| Hot Water Extractable Boron       | ICP             | 8358041 | 2022/11/21 | 2022/11/22    | Jaswinder Kaur      |
| Free (WAD) Cyanide                | TECH            | 8359412 | 2022/11/22 | 2022/11/22    | Chloe Pollock       |
| Hexavalent Chromium in Soil by IC | IC/SPEC         | 8359716 | 2022/11/22 | 2022/11/23    | Surleen Kaur Romana |
| Acid Extractable Metals by ICPMS  | ICP/MS          | 8357955 | 2022/11/21 | 2022/11/23    | Azita Fazaeli       |
| Moisture                          | BAL             | 8357623 | N/A        | 2022/11/21    | Mathew Bowles       |
| OC Pesticides (Selected) & PCB    | GC/ECD          | 8361100 | 2022/11/22 | 2022/11/23    | Li Peng             |
| OC Pesticides Summed Parameters   | CALC            | 8351186 | N/A        | 2022/11/22    | Automated Statchk   |

**Bureau Veritas ID:** UIJ712  
**Sample ID:** TP3  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/17

| Test Description                  | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst             |
|-----------------------------------|-----------------|---------|------------|---------------|---------------------|
| Hot Water Extractable Boron       | ICP             | 8358041 | 2022/11/21 | 2022/11/22    | Jaswinder Kaur      |
| Free (WAD) Cyanide                | TECH            | 8359412 | 2022/11/22 | 2022/11/22    | Chloe Pollock       |
| Hexavalent Chromium in Soil by IC | IC/SPEC         | 8359716 | 2022/11/22 | 2022/11/23    | Surleen Kaur Romana |
| Acid Extractable Metals by ICPMS  | ICP/MS          | 8357955 | 2022/11/21 | 2022/11/23    | Azita Fazaeli       |
| Moisture                          | BAL             | 8357623 | N/A        | 2022/11/21    | Mathew Bowles       |
| OC Pesticides (Selected) & PCB    | GC/ECD          | 8361100 | 2022/11/22 | 2022/11/23    | Li Peng             |
| OC Pesticides Summed Parameters   | CALC            | 8351186 | N/A        | 2022/11/22    | Automated Statchk   |



Bureau Veritas Job #: C2X8204  
Report Date: 2022/11/25

Soil Engineers Ltd  
Client Project #: 2206-E054  
Sampler Initials: ANK

## TEST SUMMARY

**Bureau Veritas ID:** UIJ712 Dup  
**Sample ID:** TP3  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/17

| Test Description                  | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst             |
|-----------------------------------|-----------------|---------|------------|---------------|---------------------|
| Hexavalent Chromium in Soil by IC | IC/SPEC         | 8359716 | 2022/11/22 | 2022/11/23    | Surleen Kaur Romana |

**Bureau Veritas ID:** UIJ713  
**Sample ID:** TP4  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/17

| Test Description                  | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst             |
|-----------------------------------|-----------------|---------|------------|---------------|---------------------|
| Hot Water Extractable Boron       | ICP             | 8358041 | 2022/11/21 | 2022/11/22    | Jaswinder Kaur      |
| Free (WAD) Cyanide                | TECH            | 8359412 | 2022/11/22 | 2022/11/22    | Chloe Pollock       |
| Hexavalent Chromium in Soil by IC | IC/SPEC         | 8359716 | 2022/11/22 | 2022/11/23    | Surleen Kaur Romana |
| Acid Extractable Metals by ICPMS  | ICP/MS          | 8357955 | 2022/11/21 | 2022/11/23    | Azita Fazaeli       |
| Moisture                          | BAL             | 8357623 | N/A        | 2022/11/21    | Mathew Bowles       |
| OC Pesticides (Selected) & PCB    | GC/ECD          | 8361100 | 2022/11/22 | 2022/11/23    | Li Peng             |
| OC Pesticides Summed Parameters   | CALC            | 8351186 | N/A        | 2022/11/22    | Automated Statchk   |
| pH CaCl2 EXTRACT                  | AT              | 8359663 | 2022/11/22 | 2022/11/22    | Taslima Aktar       |

**Bureau Veritas ID:** UIJ713 Dup  
**Sample ID:** TP4  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/17

| Test Description            | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst        |
|-----------------------------|-----------------|---------|------------|---------------|----------------|
| Hot Water Extractable Boron | ICP             | 8358041 | 2022/11/21 | 2022/11/22    | Jaswinder Kaur |
| Free (WAD) Cyanide          | TECH            | 8359412 | 2022/11/22 | 2022/11/22    | Chloe Pollock  |

**Bureau Veritas ID:** UIJ714  
**Sample ID:** TP5  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/17

| Test Description                  | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst             |
|-----------------------------------|-----------------|---------|------------|---------------|---------------------|
| Hot Water Extractable Boron       | ICP             | 8358041 | 2022/11/21 | 2022/11/22    | Jaswinder Kaur      |
| Free (WAD) Cyanide                | TECH            | 8359412 | 2022/11/22 | 2022/11/22    | Chloe Pollock       |
| Hexavalent Chromium in Soil by IC | IC/SPEC         | 8359716 | 2022/11/22 | 2022/11/23    | Surleen Kaur Romana |
| Acid Extractable Metals by ICPMS  | ICP/MS          | 8357955 | 2022/11/21 | 2022/11/23    | Azita Fazaeli       |
| Moisture                          | BAL             | 8357623 | N/A        | 2022/11/21    | Mathew Bowles       |
| OC Pesticides (Selected) & PCB    | GC/ECD          | 8361100 | 2022/11/22 | 2022/11/23    | Li Peng             |
| OC Pesticides Summed Parameters   | CALC            | 8351186 | N/A        | 2022/11/22    | Automated Statchk   |

**Bureau Veritas ID:** UIJ715  
**Sample ID:** TP6  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/17

| Test Description                  | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst             |
|-----------------------------------|-----------------|---------|------------|---------------|---------------------|
| Hot Water Extractable Boron       | ICP             | 8358041 | 2022/11/21 | 2022/11/22    | Jaswinder Kaur      |
| Free (WAD) Cyanide                | TECH            | 8359412 | 2022/11/22 | 2022/11/22    | Chloe Pollock       |
| Hexavalent Chromium in Soil by IC | IC/SPEC         | 8359716 | 2022/11/22 | 2022/11/23    | Surleen Kaur Romana |
| Acid Extractable Metals by ICPMS  | ICP/MS          | 8357955 | 2022/11/21 | 2022/11/23    | Azita Fazaeli       |



Bureau Veritas Job #: C2X8204  
Report Date: 2022/11/25

Soil Engineers Ltd  
Client Project #: 2206-E054  
Sampler Initials: ANK

## TEST SUMMARY

**Bureau Veritas ID:** UIJ715  
**Sample ID:** TP6  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/17

| Test Description                | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst           |
|---------------------------------|-----------------|---------|------------|---------------|-------------------|
| Moisture                        | BAL             | 8357623 | N/A        | 2022/11/21    | Mathew Bowles     |
| OC Pesticides (Selected) & PCB  | GC/ECD          | 8361100 | 2022/11/22 | 2022/11/23    | Li Peng           |
| OC Pesticides Summed Parameters | CALC            | 8351186 | N/A        | 2022/11/22    | Automated Statchk |

**Bureau Veritas ID:** UIJ716  
**Sample ID:** TP7  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/17

| Test Description                  | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst             |
|-----------------------------------|-----------------|---------|------------|---------------|---------------------|
| Hot Water Extractable Boron       | ICP             | 8358041 | 2022/11/21 | 2022/11/22    | Jaswinder Kaur      |
| Free (WAD) Cyanide                | TECH            | 8359412 | 2022/11/22 | 2022/11/22    | Chloe Pollock       |
| Hexavalent Chromium in Soil by IC | IC/SPEC         | 8359716 | 2022/11/22 | 2022/11/23    | Surleen Kaur Romana |
| Acid Extractable Metals by ICPMS  | ICP/MS          | 8357955 | 2022/11/21 | 2022/11/23    | Azita Fazaeli       |
| Moisture                          | BAL             | 8357623 | N/A        | 2022/11/21    | Mathew Bowles       |
| OC Pesticides (Selected) & PCB    | GC/ECD          | 8361100 | 2022/11/22 | 2022/11/23    | Li Peng             |
| OC Pesticides Summed Parameters   | CALC            | 8351186 | N/A        | 2022/11/22    | Automated Statchk   |
| pH CaCl2 EXTRACT                  | AT              | 8359663 | 2022/11/22 | 2022/11/22    | Taslima Aktar       |

**Bureau Veritas ID:** UIJ717  
**Sample ID:** TP8  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/17

| Test Description                  | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst             |
|-----------------------------------|-----------------|---------|------------|---------------|---------------------|
| Hot Water Extractable Boron       | ICP             | 8358041 | 2022/11/21 | 2022/11/23    | Jaswinder Kaur      |
| Free (WAD) Cyanide                | TECH            | 8359412 | 2022/11/22 | 2022/11/22    | Chloe Pollock       |
| Hexavalent Chromium in Soil by IC | IC/SPEC         | 8359716 | 2022/11/22 | 2022/11/23    | Surleen Kaur Romana |
| Acid Extractable Metals by ICPMS  | ICP/MS          | 8357955 | 2022/11/21 | 2022/11/23    | Azita Fazaeli       |
| Moisture                          | BAL             | 8357623 | N/A        | 2022/11/21    | Mathew Bowles       |
| OC Pesticides (Selected) & PCB    | GC/ECD          | 8361100 | 2022/11/22 | 2022/11/23    | Li Peng             |
| OC Pesticides Summed Parameters   | CALC            | 8351186 | N/A        | 2022/11/22    | Automated Statchk   |
| pH CaCl2 EXTRACT                  | AT              | 8359663 | 2022/11/22 | 2022/11/22    | Taslima Aktar       |

**Bureau Veritas ID:** UIJ718  
**Sample ID:** DUPS1  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/17

| Test Description                 | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst           |
|----------------------------------|-----------------|---------|------------|---------------|-------------------|
| Acid Extractable Metals by ICPMS | ICP/MS          | 8357955 | 2022/11/21 | 2022/11/23    | Azita Fazaeli     |
| Moisture                         | BAL             | 8357623 | N/A        | 2022/11/21    | Mathew Bowles     |
| OC Pesticides (Selected) & PCB   | GC/ECD          | 8363328 | 2022/11/23 | 2022/11/24    | Li Peng           |
| OC Pesticides Summed Parameters  | CALC            | 8351186 | N/A        | 2022/11/22    | Automated Statchk |



Bureau Veritas Job #: C2X8204  
Report Date: 2022/11/25

Soil Engineers Ltd  
Client Project #: 2206-E054  
Sampler Initials: ANK

## TEST SUMMARY

Bureau Veritas ID: UIJ719  
Sample ID: DUPS2  
Matrix: Soil

Collected: 2022/11/16  
Shipped:  
Received: 2022/11/17

| Test Description                | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst           |
|---------------------------------|-----------------|---------|------------|---------------|-------------------|
| Moisture                        | BAL             | 8357623 | N/A        | 2022/11/21    | Mathew Bowles     |
| OC Pesticides (Selected) & PCB  | GC/ECD          | 8363328 | 2022/11/23 | 2022/11/24    | Li Peng           |
| OC Pesticides Summed Parameters | CALC            | 8351186 | N/A        | 2022/11/22    | Automated Statchk |



Bureau Veritas Job #: C2X8204  
Report Date: 2022/11/25

Soil Engineers Ltd  
Client Project #: 2206-E054  
Sampler Initials: ANK

#### GENERAL COMMENTS

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

|           |       |
|-----------|-------|
| Package 1 | 0.0°C |
|-----------|-------|

Cooler custody seal was present and intact.

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





Bureau Veritas Job #: C2X8204  
Report Date: 2022/11/25

## QUALITY ASSURANCE REPORT

Soil Engineers Ltd  
Client Project #: 2206-E054  
Sampler Initials: ANK

| QC Batch | Parameter                        | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|----------------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                                  |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8361100  | 2,4,5,6-Tetrachloro-m-xylene     | 2022/11/23 | 84           | 50 - 130  | 80           | 50 - 130  | 79           | %     |           |           |
| 8361100  | Decachlorobiphenyl               | 2022/11/23 | 117          | 50 - 130  | 119          | 50 - 130  | 115          | %     |           |           |
| 8363328  | 2,4,5,6-Tetrachloro-m-xylene     | 2022/11/24 | 62           | 50 - 130  | 69           | 50 - 130  | 67           | %     |           |           |
| 8363328  | Decachlorobiphenyl               | 2022/11/24 | 108          | 50 - 130  | 107          | 50 - 130  | 116          | %     |           |           |
| 8357623  | Moisture                         | 2022/11/21 |              |           |              |           |              |       | 0         | 20        |
| 8357955  | Acid Extractable Antimony (Sb)   | 2022/11/23 | 96           | 75 - 125  | 104          | 80 - 120  | <0.20        | ug/g  | NC        | 30        |
| 8357955  | Acid Extractable Arsenic (As)    | 2022/11/23 | 106          | 75 - 125  | 100          | 80 - 120  | <1.0         | ug/g  | 8.6       | 30        |
| 8357955  | Acid Extractable Barium (Ba)     | 2022/11/23 | NC           | 75 - 125  | 103          | 80 - 120  | <0.50        | ug/g  | 0.72      | 30        |
| 8357955  | Acid Extractable Beryllium (Be)  | 2022/11/23 | 111          | 75 - 125  | 105          | 80 - 120  | <0.20        | ug/g  | 2.5       | 30        |
| 8357955  | Acid Extractable Boron (B)       | 2022/11/23 | 110          | 75 - 125  | 104          | 80 - 120  | <5.0         | ug/g  | 3.7       | 30        |
| 8357955  | Acid Extractable Cadmium (Cd)    | 2022/11/23 | 104          | 75 - 125  | 100          | 80 - 120  | <0.10        | ug/g  | 5.1       | 30        |
| 8357955  | Acid Extractable Chromium (Cr)   | 2022/11/23 | 109          | 75 - 125  | 103          | 80 - 120  | <1.0         | ug/g  | 0.48      | 30        |
| 8357955  | Acid Extractable Cobalt (Co)     | 2022/11/23 | 105          | 75 - 125  | 101          | 80 - 120  | <0.10        | ug/g  | 0.013     | 30        |
| 8357955  | Acid Extractable Copper (Cu)     | 2022/11/23 | 99           | 75 - 125  | 102          | 80 - 120  | <0.50        | ug/g  | 4.0       | 30        |
| 8357955  | Acid Extractable Lead (Pb)       | 2022/11/23 | 100          | 75 - 125  | 98           | 80 - 120  | <1.0         | ug/g  | 0.45      | 30        |
| 8357955  | Acid Extractable Mercury (Hg)    | 2022/11/23 | 99           | 75 - 125  | 96           | 80 - 120  | <0.050       | ug/g  | NC        | 30        |
| 8357955  | Acid Extractable Molybdenum (Mo) | 2022/11/23 | 103          | 75 - 125  | 99           | 80 - 120  | <0.50        | ug/g  | 1.8       | 30        |
| 8357955  | Acid Extractable Nickel (Ni)     | 2022/11/23 | 103          | 75 - 125  | 103          | 80 - 120  | <0.50        | ug/g  | 3.1       | 30        |
| 8357955  | Acid Extractable Selenium (Se)   | 2022/11/23 | 105          | 75 - 125  | 105          | 80 - 120  | <0.50        | ug/g  | NC        | 30        |
| 8357955  | Acid Extractable Silver (Ag)     | 2022/11/23 | 102          | 75 - 125  | 102          | 80 - 120  | <0.20        | ug/g  | NC        | 30        |
| 8357955  | Acid Extractable Thallium (Tl)   | 2022/11/23 | 98           | 75 - 125  | 98           | 80 - 120  | <0.050       | ug/g  | 0.53      | 30        |
| 8357955  | Acid Extractable Uranium (U)     | 2022/11/23 | 104          | 75 - 125  | 99           | 80 - 120  | <0.050       | ug/g  | 3.9       | 30        |
| 8357955  | Acid Extractable Vanadium (V)    | 2022/11/23 | NC           | 75 - 125  | 103          | 80 - 120  | <5.0         | ug/g  | 1.8       | 30        |
| 8357955  | Acid Extractable Zinc (Zn)       | 2022/11/23 | NC           | 75 - 125  | 102          | 80 - 120  | <5.0         | ug/g  | 3.7       | 30        |
| 8358041  | Hot Water Ext. Boron (B)         | 2022/11/22 | 113          | 75 - 125  | 104          | 75 - 125  | <0.050       | ug/g  | 4.5       | 40        |
| 8359412  | WAD Cyanide (Free)               | 2022/11/22 | 98           | 75 - 125  | 106          | 80 - 120  | <0.01        | ug/g  | NC        | 35        |
| 8359663  | Available (CaCl2) pH             | 2022/11/22 |              |           | 100          | 97 - 103  |              |       | 0.58      | N/A       |
| 8359716  | Chromium (VI)                    | 2022/11/23 | 0 (1)        | 70 - 130  | 93           | 80 - 120  | <0.18        | ug/g  | NC        | 35        |
| 8361100  | a-Chlordane                      | 2022/11/23 | 91           | 50 - 130  | 78           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | Aldrin                           | 2022/11/23 | 100          | 50 - 130  | 94           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | Dieldrin                         | 2022/11/23 | 100          | 50 - 130  | 78           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |

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**BUREAU  
VERITAS**  
Bureau Veritas Job #: C2X8204  
Report Date: 2022/11/25

## QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Sampler Initials: ANK

| QC Batch | Parameter            | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|----------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                      |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8361100  | Endosulfan I (alpha) | 2022/11/23 | 86           | 50 - 130  | 70           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | Endosulfan II (beta) | 2022/11/23 | 94           | 50 - 130  | 71           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | Endrin               | 2022/11/23 | 93           | 50 - 130  | 69           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | g-Chlordane          | 2022/11/23 | 84           | 50 - 130  | 68           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | Heptachlor epoxide   | 2022/11/23 | 86           | 50 - 130  | 70           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | Heptachlor           | 2022/11/23 | 110          | 50 - 130  | 100          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | Hexachlorobenzene    | 2022/11/23 | 93           | 50 - 130  | 89           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | Hexachlorobutadiene  | 2022/11/23 | 102          | 50 - 130  | 104          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | Hexachloroethane     | 2022/11/23 | 76           | 50 - 130  | 75           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | Lindane              | 2022/11/23 | 74           | 50 - 130  | 60           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | Methoxychlor         | 2022/11/23 | 93           | 50 - 130  | 73           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8361100  | o,p-DDD              | 2022/11/23 | 106          | 50 - 130  | 83           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | o,p-DDE              | 2022/11/23 | 110          | 50 - 130  | 106          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | o,p-DDT              | 2022/11/23 | 108          | 50 - 130  | 104          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | p,p-DDD              | 2022/11/23 | 112          | 50 - 130  | 84           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | p,p-DDE              | 2022/11/23 | 110          | 50 - 130  | 108          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8361100  | p,p-DDT              | 2022/11/23 | 115          | 50 - 130  | 85           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | a-Chlordane          | 2022/11/24 | 98           | 50 - 130  | 104          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | Aldrin               | 2022/11/24 | 83           | 50 - 130  | 92           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | Dieldrin             | 2022/11/24 | 92           | 50 - 130  | 112          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | Endosulfan I (alpha) | 2022/11/24 | 75           | 50 - 130  | 105          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | Endosulfan II (beta) | 2022/11/24 | 90           | 50 - 130  | 108          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | Endrin               | 2022/11/24 | 88           | 50 - 130  | 103          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | g-Chlordane          | 2022/11/24 | 85           | 50 - 130  | 98           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | Heptachlor epoxide   | 2022/11/24 | 81           | 50 - 130  | 100          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | Heptachlor           | 2022/11/24 | 92           | 50 - 130  | 99           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | Hexachlorobenzene    | 2022/11/24 | 74           | 50 - 130  | 93           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | Hexachlorobutadiene  | 2022/11/24 | 69           | 50 - 130  | 75           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | Hexachloroethane     | 2022/11/24 | 59           | 50 - 130  | 53           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | Lindane              | 2022/11/24 | 67           | 50 - 130  | 82           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | Methoxychlor         | 2022/11/24 | 105          | 50 - 130  | 111          | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |

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Bureau Veritas Job #: C2X8204  
Report Date: 2022/11/25

## QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Sampler Initials: ANK

| QC Batch | Parameter | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|-----------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |           |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8363328  | o,p-DDD   | 2022/11/24 | 111          | 50 - 130  | 121          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | o,p-DDE   | 2022/11/24 | 102          | 50 - 130  | 108          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | o,p-DDT   | 2022/11/24 | 112          | 50 - 130  | 110          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | p,p-DDD   | 2022/11/24 | 107          | 50 - 130  | 121          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | p,p-DDE   | 2022/11/24 | 98           | 50 - 130  | 98           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8363328  | p,p-DDT   | 2022/11/24 | 116          | 50 - 130  | 102          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |

N/A = Not Applicable

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

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

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

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

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

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

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

(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was reanalyzed with the same results.



Bureau Veritas Job #: C2X8204  
Report Date: 2022/11/25

Soil Engineers Ltd  
Client Project #: 2206-E054  
Sampler Initials: ANK

### VALIDATION SIGNATURE PAGE

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

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

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



Your Project #: 2206-E054

Site Location: ERIN

Your C.O.C. #: n/a

**Attention: Madan K. Suwal**

Soil Engineers Ltd  
90 West Beaver Creek Road  
Unit 100  
Richmond Hill, ON  
CANADA L4B 1E7

**Report Date: 2022/11/29**

Report #: R7408610

Version: 2 - Revision

**CERTIFICATE OF ANALYSIS – REVISED REPORT**

**BUREAU VERITAS JOB #: C2Y0178**

**Received: 2022/11/18, 18:01**

Sample Matrix: Soil  
# Samples Received: 14

| Analyses                                    | Quantity | Date<br>Extracted | Date<br>Analyzed | Laboratory Method | Analytical Method    |
|---------------------------------------------|----------|-------------------|------------------|-------------------|----------------------|
| Methylnaphthalene Sum                       | 5        | N/A               | 2022/11/26       | CAM SOP-00301     | EPA 8270D m          |
| 1,3-Dichloropropene Sum                     | 1        | N/A               | 2022/11/22       |                   | EPA 8260C m          |
| 1,3-Dichloropropene Sum                     | 4        | N/A               | 2022/11/24       |                   | EPA 8260C m          |
| Petroleum Hydro. CCME F1 & BTEX in Soil (1) | 1        | N/A               | 2022/11/24       | CAM SOP-00315     | CCME PHC-CWS m       |
| Petroleum Hydrocarbons F2-F4 in Soil (2)    | 5        | 2022/11/27        | 2022/11/28       | CAM SOP-00316     | CCME CWS m           |
| Acid Extractable Metals by ICPMS            | 6        | 2022/11/23        | 2022/11/24       | CAM SOP-00447     | EPA 6020B m          |
| Moisture                                    | 1        | N/A               | 2022/11/21       | CAM SOP-00445     | Carter 2nd ed 51.2 m |
| Moisture                                    | 9        | N/A               | 2022/11/23       | CAM SOP-00445     | Carter 2nd ed 51.2 m |
| PAH Compounds in Soil by GC/MS (SIM)        | 5        | 2022/11/25        | 2022/11/25       | CAM SOP-00318     | EPA 8270D m          |
| pH CaCl2 EXTRACT                            | 1        | 2022/11/24        | 2022/11/24       | CAM SOP-00413     | EPA 9045 D m         |
| Volatile Organic Compounds and F1 PHCs      | 4        | N/A               | 2022/11/22       | CAM SOP-00230     | EPA 8260C m          |
| Volatile Organic Compounds in Soil          | 1        | N/A               | 2022/11/20       | CAM SOP-00228     | EPA 8260C m          |

**Remarks:**

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

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

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

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

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



Your Project #: 2206-E054  
Site Location: ERIN  
Your C.O.C. #: n/a

**Attention: Madan K. Suwal**

Soil Engineers Ltd  
90 West Beaver Creek Road  
Unit 100  
Richmond Hill, ON  
CANADA L4B 1E7

**Report Date: 2022/11/29**  
Report #: R7408610  
Version: 2 - Revision

**CERTIFICATE OF ANALYSIS – REVISED REPORT**

**BUREAU VERITAS JOB #: C2Y0178**

**Received: 2022/11/18, 18:01**

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

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

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

(1) No lab extraction date is given for F1BTX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

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

Encryption Key

Antonella Brasil  
Senior Project Manager  
29 Nov 2022 13:08:08

Please direct all questions regarding this Certificate of Analysis to:

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Phone# (905)817-5817

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BUREAU  
VERITAS

Bureau Veritas Job #: C2Y0178

Report Date: 2022/11/29

Soil Engineers Ltd

Client Project #: 2206-E054

Site Location: ERIN

Sampler Initials: ANK

**O.REG 153 ICPMS METALS (SOIL)**

| Bureau Veritas ID |       | UIT857     | UIT858     | UIT863     | UIT863           | UIT867     | UIT871     |     |          |
|-------------------|-------|------------|------------|------------|------------------|------------|------------|-----|----------|
| Sampling Date     |       | 2022/11/16 | 2022/11/17 | 2022/11/16 | 2022/11/16       | 2022/11/17 | 2022/11/18 |     |          |
| COC Number        |       | n/a        | n/a        | n/a        | n/a              | n/a        | n/a        |     |          |
|                   | UNITS | BH2/9      | BH3/6      | BH1/5      | BH1/5<br>Lab-Dup | DUPS3      | BH4/6      | RDL | QC Batch |

**Metals**

|                                  |      |        |        |        |        |        |        |       |         |
|----------------------------------|------|--------|--------|--------|--------|--------|--------|-------|---------|
| Acid Extractable Antimony (Sb)   | ug/g | <0.20  | <0.20  | <0.20  | <0.20  | <0.20  | <0.20  | 0.20  | 8363470 |
| Acid Extractable Arsenic (As)    | ug/g | 1.8    | 3.0    | 1.9    | 1.9    | 2.5    | 1.7    | 1.0   | 8363470 |
| Acid Extractable Barium (Ba)     | ug/g | 11     | 9.3    | 44     | 43     | 9.0    | 36     | 0.50  | 8363470 |
| Acid Extractable Beryllium (Be)  | ug/g | <0.20  | <0.20  | 0.34   | 0.33   | <0.20  | 0.24   | 0.20  | 8363470 |
| Acid Extractable Boron (B)       | ug/g | <5.0   | 5.5    | 6.5    | 6.7    | 5.5    | 5.3    | 5.0   | 8363470 |
| Acid Extractable Cadmium (Cd)    | ug/g | 0.10   | 0.11   | <0.10  | <0.10  | <0.10  | 0.33   | 0.10  | 8363470 |
| Acid Extractable Chromium (Cr)   | ug/g | 4.9    | 7.4    | 15     | 15     | 6.7    | 11     | 1.0   | 8363470 |
| Acid Extractable Cobalt (Co)     | ug/g | 1.8    | 3.2    | 6.0    | 6.1    | 3.2    | 4.6    | 0.10  | 8363470 |
| Acid Extractable Copper (Cu)     | ug/g | 8.0    | 18     | 14     | 14     | 16     | 13     | 0.50  | 8363470 |
| Acid Extractable Lead (Pb)       | ug/g | 4.6    | 8.5    | 5.9    | 5.9    | 7.9    | 27     | 1.0   | 8363470 |
| Acid Extractable Molybdenum (Mo) | ug/g | <0.50  | <0.50  | <0.50  | <0.50  | <0.50  | 0.50   | 0.50  | 8363470 |
| Acid Extractable Nickel (Ni)     | ug/g | 3.9    | 6.2    | 12     | 13     | 5.1    | 9.1    | 0.50  | 8363470 |
| Acid Extractable Selenium (Se)   | ug/g | <0.50  | <0.50  | <0.50  | <0.50  | <0.50  | <0.50  | 0.50  | 8363470 |
| Acid Extractable Silver (Ag)     | ug/g | <0.20  | <0.20  | <0.20  | <0.20  | <0.20  | <0.20  | 0.20  | 8363470 |
| Acid Extractable Thallium (Tl)   | ug/g | <0.050 | <0.050 | 0.081  | 0.096  | <0.050 | 0.085  | 0.050 | 8363470 |
| Acid Extractable Uranium (U)     | ug/g | 0.28   | 0.36   | 0.48   | 0.47   | 0.37   | 0.49   | 0.050 | 8363470 |
| Acid Extractable Vanadium (V)    | ug/g | 10     | 20     | 24     | 24     | 16     | 19     | 5.0   | 8363470 |
| Acid Extractable Zinc (Zn)       | ug/g | 47     | 41     | 32     | 33     | 40     | 100    | 5.0   | 8363470 |
| Acid Extractable Mercury (Hg)    | ug/g | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | 0.050 | 8363470 |

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate



Bureau Veritas Job #: C2Y0178  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

### O.REG 153 METALS & INORGANICS PKG (SOIL)

|                                   |              |              |            |                 |
|-----------------------------------|--------------|--------------|------------|-----------------|
| <b>Bureau Veritas ID</b>          |              | UIT862       |            |                 |
| <b>Sampling Date</b>              |              | 2022/11/18   |            |                 |
| <b>COC Number</b>                 |              | n/a          |            |                 |
|                                   | <b>UNITS</b> | <b>BH5/6</b> | <b>RDL</b> | <b>QC Batch</b> |
| <b>Inorganics</b>                 |              |              |            |                 |
| Available (CaCl <sub>2</sub> ) pH | pH           | 8.04         |            | 8365043         |
| <b>Metals</b>                     |              |              |            |                 |
| Acid Extractable Antimony (Sb)    | ug/g         | <0.20        | 0.20       | 8363618         |
| Acid Extractable Arsenic (As)     | ug/g         | 1.9          | 1.0        | 8363618         |
| Acid Extractable Barium (Ba)      | ug/g         | 37           | 0.50       | 8363618         |
| Acid Extractable Beryllium (Be)   | ug/g         | 0.26         | 0.20       | 8363618         |
| Acid Extractable Boron (B)        | ug/g         | 5.7          | 5.0        | 8363618         |
| Acid Extractable Cadmium (Cd)     | ug/g         | 0.37         | 0.10       | 8363618         |
| Acid Extractable Chromium (Cr)    | ug/g         | 12           | 1.0        | 8363618         |
| Acid Extractable Cobalt (Co)      | ug/g         | 4.7          | 0.10       | 8363618         |
| Acid Extractable Copper (Cu)      | ug/g         | 11           | 0.50       | 8363618         |
| Acid Extractable Lead (Pb)        | ug/g         | 28           | 1.0        | 8363618         |
| Acid Extractable Molybdenum (Mo)  | ug/g         | <0.50        | 0.50       | 8363618         |
| Acid Extractable Nickel (Ni)      | ug/g         | 9.4          | 0.50       | 8363618         |
| Acid Extractable Selenium (Se)    | ug/g         | <0.50        | 0.50       | 8363618         |
| Acid Extractable Silver (Ag)      | ug/g         | <0.20        | 0.20       | 8363618         |
| Acid Extractable Thallium (Tl)    | ug/g         | 0.096        | 0.050      | 8363618         |
| Acid Extractable Uranium (U)      | ug/g         | 0.49         | 0.050      | 8363618         |
| Acid Extractable Vanadium (V)     | ug/g         | 20           | 5.0        | 8363618         |
| Acid Extractable Zinc (Zn)        | ug/g         | 100          | 5.0        | 8363618         |
| Acid Extractable Mercury (Hg)     | ug/g         | <0.050       | 0.050      | 8363618         |
| RDL = Reportable Detection Limit  |              |              |            |                 |
| QC Batch = Quality Control Batch  |              |              |            |                 |





Bureau Veritas Job #: C2Y0178  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

### O.REG 153 PAHS (SOIL)

| Bureau Veritas ID                |       | UIT856     |        |          | UIT860     | UIT861     | UIT869     | UIT874     |        |          |
|----------------------------------|-------|------------|--------|----------|------------|------------|------------|------------|--------|----------|
| Sampling Date                    |       | 2022/11/16 |        |          | 2022/11/17 | 2022/11/18 | 2022/11/16 | 2022/11/18 |        |          |
| COC Number                       |       | n/a        |        |          | n/a        | n/a        | n/a        | n/a        |        |          |
|                                  | UNITS | BH2/10     | RDL    | QC Batch | BH3/8      | BH5/7      | BH1/7      | BH4/8      | RDL    | QC Batch |
| <b>Inorganics</b>                |       |            |        |          |            |            |            |            |        |          |
| Moisture                         | %     |            |        |          | 18         | 8.0        | 15         | 8.6        | 1.0    | 8363098  |
| <b>Calculated Parameters</b>     |       |            |        |          |            |            |            |            |        |          |
| Methylnaphthalene, 2-(1-)        | ug/g  | <0.0071    | 0.0071 | 8356233  | <0.0071    | <0.0071    | <0.0071    | <0.0071    | 0.0071 | 8356233  |
| <b>Polyaromatic Hydrocarbons</b> |       |            |        |          |            |            |            |            |        |          |
| Acenaphthene                     | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| Acenaphthylene                   | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| Anthracene                       | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| Benzo(a)anthracene               | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| Benzo(a)pyrene                   | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| Benzo(b/j)fluoranthene           | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| Benzo(g,h,i)perylene             | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| Benzo(k)fluoranthene             | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| Chrysene                         | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| Dibenzo(a,h)anthracene           | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| Fluoranthene                     | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| Fluorene                         | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| Indeno(1,2,3-cd)pyrene           | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| 1-Methylnaphthalene              | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| 2-Methylnaphthalene              | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| Naphthalene                      | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| Phenanthrene                     | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| Pyrene                           | ug/g  | <0.0050    | 0.0050 | 8367122  | <0.0050    | <0.0050    | <0.0050    | <0.0050    | 0.0050 | 8367122  |
| <b>Surrogate Recovery (%)</b>    |       |            |        |          |            |            |            |            |        |          |
| D10-Anthracene                   | %     | 102        |        | 8367122  | 101        | 101        | 99         | 102        |        | 8367122  |
| D14-Terphenyl (FS)               | %     | 107        |        | 8367122  | 107        | 106        | 104        | 109        |        | 8367122  |
| D8-Acenaphthylene                | %     | 103        |        | 8367122  | 103        | 103        | 101        | 105        |        | 8367122  |
| RDL = Reportable Detection Limit |       |            |        |          |            |            |            |            |        |          |
| QC Batch = Quality Control Batch |       |            |        |          |            |            |            |            |        |          |



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Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

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

|                                          |              |              |            |                 |                      |            |                 |
|------------------------------------------|--------------|--------------|------------|-----------------|----------------------|------------|-----------------|
| <b>Bureau Veritas ID</b>                 |              | UIT863       |            |                 | UIT863               |            |                 |
| <b>Sampling Date</b>                     |              | 2022/11/16   |            |                 | 2022/11/16           |            |                 |
| <b>COC Number</b>                        |              | n/a          |            |                 | n/a                  |            |                 |
|                                          | <b>UNITS</b> | <b>BH1/5</b> | <b>RDL</b> | <b>QC Batch</b> | <b>BH1/5 Lab-Dup</b> | <b>RDL</b> | <b>QC Batch</b> |
| <b>Inorganics</b>                        |              |              |            |                 |                      |            |                 |
| Moisture                                 | %            | 18           | 1.0        | 8363098         | 16                   | 1.0        | 8363098         |
| <b>BTEX &amp; F1 Hydrocarbons</b>        |              |              |            |                 |                      |            |                 |
| Benzene                                  | ug/g         | <0.020       | 0.020      | 8363828         | <0.020               | 0.020      | 8363828         |
| Toluene                                  | ug/g         | <0.020       | 0.020      | 8363828         | <0.020               | 0.020      | 8363828         |
| Ethylbenzene                             | ug/g         | <0.020       | 0.020      | 8363828         | <0.020               | 0.020      | 8363828         |
| o-Xylene                                 | ug/g         | <0.020       | 0.020      | 8363828         | <0.020               | 0.020      | 8363828         |
| p+m-Xylene                               | ug/g         | <0.040       | 0.040      | 8363828         | <0.040               | 0.040      | 8363828         |
| Total Xylenes                            | ug/g         | <0.040       | 0.040      | 8363828         | <0.040               | 0.040      | 8363828         |
| F1 (C6-C10)                              | ug/g         | <10          | 10         | 8363828         | <10                  | 10         | 8363828         |
| F1 (C6-C10) - BTEX                       | ug/g         | <10          | 10         | 8363828         | <10                  | 10         | 8363828         |
| <b>F2-F4 Hydrocarbons</b>                |              |              |            |                 |                      |            |                 |
| F2 (C10-C16 Hydrocarbons)                | ug/g         | <10          | 10         | 8369921         |                      |            |                 |
| F3 (C16-C34 Hydrocarbons)                | ug/g         | <50          | 50         | 8369921         |                      |            |                 |
| F4 (C34-C50 Hydrocarbons)                | ug/g         | <50          | 50         | 8369921         |                      |            |                 |
| Reached Baseline at C50                  | ug/g         | Yes          |            | 8369921         |                      |            |                 |
| <b>Surrogate Recovery (%)</b>            |              |              |            |                 |                      |            |                 |
| 1,4-Difluorobenzene                      | %            | 99           |            | 8363828         | 101                  |            | 8363828         |
| 4-Bromofluorobenzene                     | %            | 98           |            | 8363828         | 98                   |            | 8363828         |
| D10-o-Xylene                             | %            | 93           |            | 8363828         | 95                   |            | 8363828         |
| D4-1,2-Dichloroethane                    | %            | 86           |            | 8363828         | 85                   |            | 8363828         |
| o-Terphenyl                              | %            | 79           |            | 8369921         |                      |            |                 |
| RDL = Reportable Detection Limit         |              |              |            |                 |                      |            |                 |
| QC Batch = Quality Control Batch         |              |              |            |                 |                      |            |                 |
| Lab-Dup = Laboratory Initiated Duplicate |              |              |            |                 |                      |            |                 |



Bureau Veritas Job #: C2Y0178  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

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

| Bureau Veritas ID                   |       | UIT856     | UIT859     | UIT862     | UIT873     |        |          |
|-------------------------------------|-------|------------|------------|------------|------------|--------|----------|
| Sampling Date                       |       | 2022/11/16 | 2022/11/17 | 2022/11/18 | 2022/11/18 |        |          |
| COC Number                          |       | n/a        | n/a        | n/a        | n/a        |        |          |
|                                     | UNITS | BH2/10     | BH3/7      | BH5/6      | BH4/7      | RDL    | QC Batch |
| <b>Inorganics</b>                   |       |            |            |            |            |        |          |
| Moisture                            | %     | 8.1        | 11         | 8.6        | 7.7        | 1.0    | 8358762  |
| <b>Calculated Parameters</b>        |       |            |            |            |            |        |          |
| 1,3-Dichloropropene (cis+trans)     | ug/g  | <0.050     | <0.050     | <0.050     | <0.050     | 0.050  | 8358762  |
| <b>Volatile Organics</b>            |       |            |            |            |            |        |          |
| Acetone (2-Propanone)               | ug/g  | <0.49      | <0.49      | <0.49      | <0.49      | 0.49   | 8358762  |
| Benzene                             | ug/g  | <0.0060    | <0.0060    | <0.0060    | <0.0060    | 0.0060 | 8358762  |
| Bromodichloromethane                | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| Bromoform                           | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| Bromomethane                        | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| Carbon Tetrachloride                | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| Chlorobenzene                       | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| Chloroform                          | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| Dibromochloromethane                | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| 1,2-Dichlorobenzene                 | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| 1,3-Dichlorobenzene                 | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| 1,4-Dichlorobenzene                 | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| Dichlorodifluoromethane (FREON 12)  | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| 1,1-Dichloroethane                  | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| 1,2-Dichloroethane                  | ug/g  | <0.049     | <0.049     | <0.049     | <0.049     | 0.049  | 8358762  |
| 1,1-Dichloroethylene                | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| cis-1,2-Dichloroethylene            | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| trans-1,2-Dichloroethylene          | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| 1,2-Dichloropropane                 | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| cis-1,3-Dichloropropene             | ug/g  | <0.030     | <0.030     | <0.030     | <0.030     | 0.030  | 8358762  |
| trans-1,3-Dichloropropene           | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| Ethylbenzene                        | ug/g  | <0.010     | <0.010     | <0.010     | <0.010     | 0.010  | 8358762  |
| Ethylene Dibromide                  | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| Hexane                              | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| Methylene Chloride(Dichloromethane) | ug/g  | <0.049     | <0.049     | <0.049     | <0.049     | 0.049  | 8358762  |
| Methyl Ethyl Ketone (2-Butanone)    | ug/g  | <0.40      | <0.40      | <0.40      | <0.40      | 0.40   | 8358762  |
| Methyl Isobutyl Ketone              | ug/g  | <0.40      | <0.40      | <0.40      | <0.40      | 0.40   | 8358762  |
| Methyl t-butyl ether (MTBE)         | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| Styrene                             | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| 1,1,1,2-Tetrachloroethane           | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040  | 8358762  |
| RDL = Reportable Detection Limit    |       |            |            |            |            |        |          |
| QC Batch = Quality Control Batch    |       |            |            |            |            |        |          |



Bureau Veritas Job #: C2Y0178  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
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Sampler Initials: ANK

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

| Bureau Veritas ID                 |       | UIT856     | UIT859     | UIT862     | UIT873     |       |          |
|-----------------------------------|-------|------------|------------|------------|------------|-------|----------|
| Sampling Date                     |       | 2022/11/16 | 2022/11/17 | 2022/11/18 | 2022/11/18 |       |          |
| COC Number                        |       | n/a        | n/a        | n/a        | n/a        |       |          |
|                                   | UNITS | BH2/10     | BH3/7      | BH5/6      | BH4/7      | RDL   | QC Batch |
| 1,1,2,2-Tetrachloroethane         | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040 | 8358762  |
| Tetrachloroethylene               | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040 | 8358762  |
| Toluene                           | ug/g  | <0.020     | <0.020     | <0.020     | <0.020     | 0.020 | 8358762  |
| 1,1,1-Trichloroethane             | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040 | 8358762  |
| 1,1,2-Trichloroethane             | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040 | 8358762  |
| Trichloroethylene                 | ug/g  | <0.010     | <0.010     | <0.010     | <0.010     | 0.010 | 8358762  |
| Trichlorofluoromethane (FREON 11) | ug/g  | <0.040     | <0.040     | <0.040     | <0.040     | 0.040 | 8358762  |
| Vinyl Chloride                    | ug/g  | <0.019     | <0.019     | <0.019     | <0.019     | 0.019 | 8358762  |
| p+m-Xylene                        | ug/g  | <0.020     | <0.020     | <0.020     | <0.020     | 0.020 | 8358762  |
| o-Xylene                          | ug/g  | <0.020     | <0.020     | <0.020     | <0.020     | 0.020 | 8358762  |
| Total Xylenes                     | ug/g  | <0.020     | <0.020     | <0.020     | <0.020     | 0.020 | 8358762  |
| F1 (C6-C10)                       | ug/g  | <10        | <10        | <10        | <10        | 10    | 8358762  |
| F1 (C6-C10) - BTEX                | ug/g  | <10        | <10        | <10        | <10        | 10    | 8358762  |
| <b>F2-F4 Hydrocarbons</b>         |       |            |            |            |            |       |          |
| F2 (C10-C16 Hydrocarbons)         | ug/g  | <10        | <10        | <10        | <10        | 10    | 8369921  |
| F3 (C16-C34 Hydrocarbons)         | ug/g  | <50        | <50        | <50        | <50        | 50    | 8369921  |
| F4 (C34-C50 Hydrocarbons)         | ug/g  | <50        | <50        | <50        | <50        | 50    | 8369921  |
| Reached Baseline at C50           | ug/g  | Yes        | Yes        | Yes        | Yes        |       | 8369921  |
| <b>Surrogate Recovery (%)</b>     |       |            |            |            |            |       |          |
| o-Terphenyl                       | %     | 70         | 77         | 86         | 86         |       | 8369921  |
| 4-Bromofluorobenzene              | %     | 93         | 91         | 93         | 93         |       | 8358762  |
| D10-o-Xylene                      | %     | 119        | 111        | 115        | 103        |       | 8358762  |
| D4-1,2-Dichloroethane             | %     | 107        | 106        | 108        | 107        |       | 8358762  |
| D8-Toluene                        | %     | 97         | 97         | 95         | 97         |       | 8358762  |
| RDL = Reportable Detection Limit  |       |            |            |            |            |       |          |
| QC Batch = Quality Control Batch  |       |            |            |            |            |       |          |



Bureau Veritas Job #: C2Y0178  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

### O.REG 153 VOCs BY HS (SOIL)

|                                                                                                                  |              |              |            |                 |                      |            |                 |
|------------------------------------------------------------------------------------------------------------------|--------------|--------------|------------|-----------------|----------------------|------------|-----------------|
| <b>Bureau Veritas ID</b>                                                                                         |              | UIT864       |            |                 | UIT864               |            |                 |
| <b>Sampling Date</b>                                                                                             |              | 2022/11/16   |            |                 | 2022/11/16           |            |                 |
| <b>COC Number</b>                                                                                                |              | n/a          |            |                 | n/a                  |            |                 |
|                                                                                                                  | <b>UNITS</b> | <b>BH1/6</b> | <b>RDL</b> | <b>QC Batch</b> | <b>BH1/6 Lab-Dup</b> | <b>RDL</b> | <b>QC Batch</b> |
| <b>Inorganics</b>                                                                                                |              |              |            |                 |                      |            |                 |
| Moisture                                                                                                         | %            | 21           | 1.0        | 8357933         | 20                   | 1.0        | 8357933         |
| <b>Calculated Parameters</b>                                                                                     |              |              |            |                 |                      |            |                 |
| 1,3-Dichloropropene (cis+trans)                                                                                  | ug/g         | <0.050       | 0.050      | 8356234         |                      |            |                 |
| <b>Volatile Organics</b>                                                                                         |              |              |            |                 |                      |            |                 |
| Acetone (2-Propanone)                                                                                            | ug/g         | <0.49        | 0.49       | 8356706         |                      |            |                 |
| Benzene                                                                                                          | ug/g         | <0.0060      | 0.0060     | 8356706         |                      |            |                 |
| Bromodichloromethane                                                                                             | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| Bromoform                                                                                                        | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| Bromomethane                                                                                                     | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| Carbon Tetrachloride                                                                                             | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| Chlorobenzene                                                                                                    | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| Chloroform                                                                                                       | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| Dibromochloromethane                                                                                             | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| 1,2-Dichlorobenzene                                                                                              | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| 1,3-Dichlorobenzene                                                                                              | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| 1,4-Dichlorobenzene                                                                                              | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| Dichlorodifluoromethane (FREON 12)                                                                               | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| 1,1-Dichloroethane                                                                                               | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| 1,2-Dichloroethane                                                                                               | ug/g         | <0.049       | 0.049      | 8356706         |                      |            |                 |
| 1,1-Dichloroethylene                                                                                             | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| cis-1,2-Dichloroethylene                                                                                         | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| trans-1,2-Dichloroethylene                                                                                       | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| 1,2-Dichloropropane                                                                                              | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| cis-1,3-Dichloropropene                                                                                          | ug/g         | <0.030       | 0.030      | 8356706         |                      |            |                 |
| trans-1,3-Dichloropropene                                                                                        | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| Ethylbenzene                                                                                                     | ug/g         | <0.010       | 0.010      | 8356706         |                      |            |                 |
| Ethylene Dibromide                                                                                               | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| Hexane                                                                                                           | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| Methylene Chloride(Dichloromethane)                                                                              | ug/g         | <0.049       | 0.049      | 8356706         |                      |            |                 |
| Methyl Ethyl Ketone (2-Butanone)                                                                                 | ug/g         | <0.40        | 0.40       | 8356706         |                      |            |                 |
| Methyl Isobutyl Ketone                                                                                           | ug/g         | <0.40        | 0.40       | 8356706         |                      |            |                 |
| Methyl t-butyl ether (MTBE)                                                                                      | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| Styrene                                                                                                          | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| 1,1,1,2-Tetrachloroethane                                                                                        | ug/g         | <0.040       | 0.040      | 8356706         |                      |            |                 |
| RDL = Reportable Detection Limit<br>QC Batch = Quality Control Batch<br>Lab-Dup = Laboratory Initiated Duplicate |              |              |            |                 |                      |            |                 |



Bureau Veritas Job #: C2Y0178  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

### O.REG 153 VOCs BY HS (SOIL)

|                                                                                                                  |              |              |            |                 |                          |            |                 |
|------------------------------------------------------------------------------------------------------------------|--------------|--------------|------------|-----------------|--------------------------|------------|-----------------|
| <b>Bureau Veritas ID</b>                                                                                         |              | UIT864       |            |                 | UIT864                   |            |                 |
| <b>Sampling Date</b>                                                                                             |              | 2022/11/16   |            |                 | 2022/11/16               |            |                 |
| <b>COC Number</b>                                                                                                |              | n/a          |            |                 | n/a                      |            |                 |
|                                                                                                                  | <b>UNITS</b> | <b>BH1/6</b> | <b>RDL</b> | <b>QC Batch</b> | <b>BH1/6<br/>Lab-Dup</b> | <b>RDL</b> | <b>QC Batch</b> |
| 1,1,2,2-Tetrachloroethane                                                                                        | ug/g         | <0.040       | 0.040      | 8356706         |                          |            |                 |
| Tetrachloroethylene                                                                                              | ug/g         | <0.040       | 0.040      | 8356706         |                          |            |                 |
| Toluene                                                                                                          | ug/g         | <0.020       | 0.020      | 8356706         |                          |            |                 |
| 1,1,1-Trichloroethane                                                                                            | ug/g         | <0.040       | 0.040      | 8356706         |                          |            |                 |
| 1,1,2-Trichloroethane                                                                                            | ug/g         | <0.040       | 0.040      | 8356706         |                          |            |                 |
| Trichloroethylene                                                                                                | ug/g         | <0.010       | 0.010      | 8356706         |                          |            |                 |
| Trichlorofluoromethane (FREON 11)                                                                                | ug/g         | <0.040       | 0.040      | 8356706         |                          |            |                 |
| Vinyl Chloride                                                                                                   | ug/g         | <0.019       | 0.019      | 8356706         |                          |            |                 |
| p+m-Xylene                                                                                                       | ug/g         | <0.020       | 0.020      | 8356706         |                          |            |                 |
| o-Xylene                                                                                                         | ug/g         | <0.020       | 0.020      | 8356706         |                          |            |                 |
| Total Xylenes                                                                                                    | ug/g         | <0.020       | 0.020      | 8356706         |                          |            |                 |
| <b>Surrogate Recovery (%)</b>                                                                                    |              |              |            |                 |                          |            |                 |
| 4-Bromofluorobenzene                                                                                             | %            | 99           |            | 8356706         |                          |            |                 |
| D10-o-Xylene                                                                                                     | %            | 111          |            | 8356706         |                          |            |                 |
| D4-1,2-Dichloroethane                                                                                            | %            | 100          |            | 8356706         |                          |            |                 |
| D8-Toluene                                                                                                       | %            | 102          |            | 8356706         |                          |            |                 |
| RDL = Reportable Detection Limit<br>QC Batch = Quality Control Batch<br>Lab-Dup = Laboratory Initiated Duplicate |              |              |            |                 |                          |            |                 |



Bureau Veritas Job #: C2Y0178  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

### TEST SUMMARY

**Bureau Veritas ID:** UIT856  
**Sample ID:** BH2/10  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/18

| Test Description                       | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst           |
|----------------------------------------|-----------------|---------|------------|---------------|-------------------|
| Methylnaphthalene Sum                  | CALC            | 8356233 | N/A        | 2022/11/26    | Automated Statchk |
| 1,3-Dichloropropene Sum                | CALC            | 8356234 | N/A        | 2022/11/24    | Automated Statchk |
| Petroleum Hydrocarbons F2-F4 in Soil   | GC/FID          | 8369921 | 2022/11/27 | 2022/11/28    | Dennis Ngondou    |
| Moisture                               | BAL             | 8363098 | N/A        | 2022/11/23    | Simrat Bhathal    |
| PAH Compounds in Soil by GC/MS (SIM)   | GC/MS           | 8367122 | 2022/11/25 | 2022/11/25    | Mitesh Raj        |
| Volatile Organic Compounds and F1 PHCs | GC/MSFD         | 8358762 | N/A        | 2022/11/22    | Denis Reid        |

**Bureau Veritas ID:** UIT857  
**Sample ID:** BH2/9  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/18

| Test Description                 | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst            |
|----------------------------------|-----------------|---------|------------|---------------|--------------------|
| Acid Extractable Metals by ICPMS | ICP/MS          | 8363470 | 2022/11/23 | 2022/11/24    | Viviana Canzonieri |

**Bureau Veritas ID:** UIT858  
**Sample ID:** BH3/6  
**Matrix:** Soil

**Collected:** 2022/11/17  
**Shipped:**  
**Received:** 2022/11/18

| Test Description                 | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst            |
|----------------------------------|-----------------|---------|------------|---------------|--------------------|
| Acid Extractable Metals by ICPMS | ICP/MS          | 8363470 | 2022/11/23 | 2022/11/24    | Viviana Canzonieri |

**Bureau Veritas ID:** UIT859  
**Sample ID:** BH3/7  
**Matrix:** Soil

**Collected:** 2022/11/17  
**Shipped:**  
**Received:** 2022/11/18

| Test Description                       | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst           |
|----------------------------------------|-----------------|---------|------------|---------------|-------------------|
| 1,3-Dichloropropene Sum                | CALC            | 8356234 | N/A        | 2022/11/24    | Automated Statchk |
| Petroleum Hydrocarbons F2-F4 in Soil   | GC/FID          | 8369921 | 2022/11/27 | 2022/11/28    | Dennis Ngondou    |
| Moisture                               | BAL             | 8363098 | N/A        | 2022/11/23    | Simrat Bhathal    |
| Volatile Organic Compounds and F1 PHCs | GC/MSFD         | 8358762 | N/A        | 2022/11/22    | Denis Reid        |

**Bureau Veritas ID:** UIT860  
**Sample ID:** BH3/8  
**Matrix:** Soil

**Collected:** 2022/11/17  
**Shipped:**  
**Received:** 2022/11/18

| Test Description                     | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst           |
|--------------------------------------|-----------------|---------|------------|---------------|-------------------|
| Methylnaphthalene Sum                | CALC            | 8356233 | N/A        | 2022/11/26    | Automated Statchk |
| Moisture                             | BAL             | 8363098 | N/A        | 2022/11/23    | Simrat Bhathal    |
| PAH Compounds in Soil by GC/MS (SIM) | GC/MS           | 8367122 | 2022/11/25 | 2022/11/25    | Mitesh Raj        |



Bureau Veritas Job #: C2Y0178  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

## TEST SUMMARY

**Bureau Veritas ID:** UIT861  
**Sample ID:** BH5/7  
**Matrix:** Soil

**Collected:** 2022/11/18  
**Shipped:**  
**Received:** 2022/11/18

| Test Description                     | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst           |
|--------------------------------------|-----------------|---------|------------|---------------|-------------------|
| Methylnaphthalene Sum                | CALC            | 8356233 | N/A        | 2022/11/26    | Automated Statchk |
| Moisture                             | BAL             | 8363098 | N/A        | 2022/11/23    | Simrat Bhathal    |
| PAH Compounds in Soil by GC/MS (SIM) | GC/MS           | 8367122 | 2022/11/25 | 2022/11/25    | Mitesh Raj        |

**Bureau Veritas ID:** UIT862  
**Sample ID:** BH5/6  
**Matrix:** Soil

**Collected:** 2022/11/18  
**Shipped:**  
**Received:** 2022/11/18

| Test Description                       | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst            |
|----------------------------------------|-----------------|---------|------------|---------------|--------------------|
| 1,3-Dichloropropene Sum                | CALC            | 8356234 | N/A        | 2022/11/24    | Automated Statchk  |
| Petroleum Hydrocarbons F2-F4 in Soil   | GC/FID          | 8369921 | 2022/11/27 | 2022/11/28    | Dennis Ngundu      |
| Acid Extractable Metals by ICPMS       | ICP/MS          | 8363618 | 2022/11/23 | 2022/11/24    | Viviana Canzonieri |
| Moisture                               | BAL             | 8363098 | N/A        | 2022/11/23    | Simrat Bhathal     |
| pH CaCl2 EXTRACT                       | AT              | 8365043 | 2022/11/24 | 2022/11/24    | Taslima Aktar      |
| Volatile Organic Compounds and F1 PHCs | GC/MSFD         | 8358762 | N/A        | 2022/11/22    | Denis Reid         |

**Bureau Veritas ID:** UIT863  
**Sample ID:** BH1/5  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/18

| Test Description                        | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst            |
|-----------------------------------------|-----------------|---------|------------|---------------|--------------------|
| Petroleum Hydro. CCME F1 & BTEX in Soil | HSGC/MSFD       | 8363828 | N/A        | 2022/11/24    | Georgeta Rusu      |
| Petroleum Hydrocarbons F2-F4 in Soil    | GC/FID          | 8369921 | 2022/11/27 | 2022/11/28    | Dennis Ngundu      |
| Acid Extractable Metals by ICPMS        | ICP/MS          | 8363470 | 2022/11/23 | 2022/11/24    | Viviana Canzonieri |
| Moisture                                | BAL             | 8363098 | N/A        | 2022/11/23    | Simrat Bhathal     |

**Bureau Veritas ID:** UIT863 Dup  
**Sample ID:** BH1/5  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/18

| Test Description                        | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst            |
|-----------------------------------------|-----------------|---------|------------|---------------|--------------------|
| Petroleum Hydro. CCME F1 & BTEX in Soil | HSGC/MSFD       | 8363828 | N/A        | 2022/11/24    | Georgeta Rusu      |
| Acid Extractable Metals by ICPMS        | ICP/MS          | 8363470 | 2022/11/23 | 2022/11/24    | Viviana Canzonieri |
| Moisture                                | BAL             | 8363098 | N/A        | 2022/11/23    | Simrat Bhathal     |

**Bureau Veritas ID:** UIT864  
**Sample ID:** BH1/6  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/18

| Test Description                   | Instrumentation | Batch   | Extracted | Date Analyzed | Analyst           |
|------------------------------------|-----------------|---------|-----------|---------------|-------------------|
| 1,3-Dichloropropene Sum            | CALC            | 8356234 | N/A       | 2022/11/22    | Automated Statchk |
| Moisture                           | BAL             | 8357933 | N/A       | 2022/11/21    | Muhammad Chhaidan |
| Volatile Organic Compounds in Soil | GC/MS           | 8356706 | N/A       | 2022/11/20    | Gladys Guerrero   |





Bureau Veritas Job #: C2Y0178  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

## TEST SUMMARY

**Bureau Veritas ID:** UIT864 Dup  
**Sample ID:** BH1/6  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/18

| Test Description | Instrumentation | Batch   | Extracted | Date Analyzed | Analyst           |
|------------------|-----------------|---------|-----------|---------------|-------------------|
| Moisture         | BAL             | 8357933 | N/A       | 2022/11/21    | Muhammad Chhaidan |

**Bureau Veritas ID:** UIT867  
**Sample ID:** DUPS3  
**Matrix:** Soil

**Collected:** 2022/11/17  
**Shipped:**  
**Received:** 2022/11/18

| Test Description                 | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst            |
|----------------------------------|-----------------|---------|------------|---------------|--------------------|
| Acid Extractable Metals by ICPMS | ICP/MS          | 8363470 | 2022/11/23 | 2022/11/24    | Viviana Canzonieri |

**Bureau Veritas ID:** UIT869  
**Sample ID:** BH1/7  
**Matrix:** Soil

**Collected:** 2022/11/16  
**Shipped:**  
**Received:** 2022/11/18

| Test Description                     | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst           |
|--------------------------------------|-----------------|---------|------------|---------------|-------------------|
| Methylnaphthalene Sum                | CALC            | 8356233 | N/A        | 2022/11/26    | Automated Statchk |
| Moisture                             | BAL             | 8363098 | N/A        | 2022/11/23    | Simrat Bhathal    |
| PAH Compounds in Soil by GC/MS (SIM) | GC/MS           | 8367122 | 2022/11/25 | 2022/11/25    | Mitesh Raj        |

**Bureau Veritas ID:** UIT871  
**Sample ID:** BH4/6  
**Matrix:** Soil

**Collected:** 2022/11/18  
**Shipped:**  
**Received:** 2022/11/18

| Test Description                 | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst            |
|----------------------------------|-----------------|---------|------------|---------------|--------------------|
| Acid Extractable Metals by ICPMS | ICP/MS          | 8363470 | 2022/11/23 | 2022/11/24    | Viviana Canzonieri |

**Bureau Veritas ID:** UIT873  
**Sample ID:** BH4/7  
**Matrix:** Soil

**Collected:** 2022/11/18  
**Shipped:**  
**Received:** 2022/11/18

| Test Description                       | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst           |
|----------------------------------------|-----------------|---------|------------|---------------|-------------------|
| 1,3-Dichloropropene Sum                | CALC            | 8356234 | N/A        | 2022/11/24    | Automated Statchk |
| Petroleum Hydrocarbons F2-F4 in Soil   | GC/FID          | 8369921 | 2022/11/27 | 2022/11/28    | Dennis Ngundu     |
| Moisture                               | BAL             | 8363098 | N/A        | 2022/11/23    | Simrat Bhathal    |
| Volatile Organic Compounds and F1 PHCs | GC/MSFD         | 8358762 | N/A        | 2022/11/22    | Denis Reid        |

**Bureau Veritas ID:** UIT874  
**Sample ID:** BH4/8  
**Matrix:** Soil

**Collected:** 2022/11/18  
**Shipped:**  
**Received:** 2022/11/18

| Test Description                     | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst           |
|--------------------------------------|-----------------|---------|------------|---------------|-------------------|
| Methylnaphthalene Sum                | CALC            | 8356233 | N/A        | 2022/11/26    | Automated Statchk |
| Moisture                             | BAL             | 8363098 | N/A        | 2022/11/23    | Simrat Bhathal    |
| PAH Compounds in Soil by GC/MS (SIM) | GC/MS           | 8367122 | 2022/11/25 | 2022/11/25    | Mitesh Raj        |



Bureau Veritas Job #: C2Y0178  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

### GENERAL COMMENTS

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

|           |       |
|-----------|-------|
| Package 1 | 1.3°C |
|-----------|-------|

Cooler custody seal was present and intact .

Revised Report (2022/11/29): Excel file for OEC 0036 included.

Sample UIT863 [BH1/5] : F1 BTEX analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

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



BUREAU  
VERITAS

Bureau Veritas Job #: C2Y0178  
Report Date: 2022/11/29

## QUALITY ASSURANCE REPORT

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

| QC Batch | Parameter                 | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|---------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                           |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8356706  | 4-Bromofluorobenzene      | 2022/11/20 | 98           | 60 - 140  | 99           | 60 - 140  | 100          | %     |           |           |
| 8356706  | D10-o-Xylene              | 2022/11/20 | 98           | 60 - 130  | 112          | 60 - 130  | 117          | %     |           |           |
| 8356706  | D4-1,2-Dichloroethane     | 2022/11/20 | 99           | 60 - 140  | 102          | 60 - 140  | 104          | %     |           |           |
| 8356706  | D8-Toluene                | 2022/11/20 | 101          | 60 - 140  | 100          | 60 - 140  | 99           | %     |           |           |
| 8358762  | 4-Bromofluorobenzene      | 2022/11/22 | 100          | 60 - 140  | 100          | 60 - 140  | 92           | %     |           |           |
| 8358762  | D10-o-Xylene              | 2022/11/22 | 132 (1)      | 60 - 130  | 95           | 60 - 130  | 101          | %     |           |           |
| 8358762  | D4-1,2-Dichloroethane     | 2022/11/22 | 108          | 60 - 140  | 108          | 60 - 140  | 104          | %     |           |           |
| 8358762  | D8-Toluene                | 2022/11/22 | 100          | 60 - 140  | 99           | 60 - 140  | 97           | %     |           |           |
| 8363828  | 1,4-Difluorobenzene       | 2022/11/24 | 99           | 60 - 140  | 98           | 60 - 140  | 100          | %     |           |           |
| 8363828  | 4-Bromofluorobenzene      | 2022/11/24 | 96           | 60 - 140  | 98           | 60 - 140  | 96           | %     |           |           |
| 8363828  | D10-o-Xylene              | 2022/11/24 | 89           | 60 - 140  | 86           | 60 - 140  | 88           | %     |           |           |
| 8363828  | D4-1,2-Dichloroethane     | 2022/11/24 | 83           | 60 - 140  | 85           | 60 - 140  | 86           | %     |           |           |
| 8367122  | D10-Anthracene            | 2022/11/25 | 94           | 50 - 130  | 90           | 50 - 130  | 93           | %     |           |           |
| 8367122  | D14-Terphenyl (FS)        | 2022/11/25 | 101          | 50 - 130  | 97           | 50 - 130  | 98           | %     |           |           |
| 8367122  | D8-Acenaphthylene         | 2022/11/25 | 94           | 50 - 130  | 89           | 50 - 130  | 92           | %     |           |           |
| 8369921  | o-Terphenyl               | 2022/11/27 | 75           | 60 - 130  | 98           | 60 - 130  | 80           | %     |           |           |
| 8356706  | 1,1,2-Tetrachloroethane   | 2022/11/20 | 89           | 60 - 140  | 98           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | 1,1,1-Trichloroethane     | 2022/11/20 | 94           | 60 - 140  | 100          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | 1,1,2,2-Tetrachloroethane | 2022/11/20 | 81           | 60 - 140  | 96           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | 1,1,2-Trichloroethane     | 2022/11/20 | 87           | 60 - 140  | 99           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | 1,1-Dichloroethane        | 2022/11/20 | 90           | 60 - 140  | 96           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | 1,1-Dichloroethylene      | 2022/11/20 | 96           | 60 - 140  | 101          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | 1,2-Dichlorobenzene       | 2022/11/20 | 86           | 60 - 140  | 95           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | 1,2-Dichloroethane        | 2022/11/20 | 87           | 60 - 140  | 96           | 60 - 130  | <0.049       | ug/g  | NC        | 50        |
| 8356706  | 1,2-Dichloropropane       | 2022/11/20 | 89           | 60 - 140  | 98           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | 1,3-Dichlorobenzene       | 2022/11/20 | 89           | 60 - 140  | 97           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | 1,4-Dichlorobenzene       | 2022/11/20 | 103          | 60 - 140  | 113          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | Acetone (2-Propanone)     | 2022/11/20 | 89           | 60 - 140  | 102          | 60 - 140  | <0.49        | ug/g  | NC        | 50        |
| 8356706  | Benzene                   | 2022/11/20 | 89           | 60 - 140  | 96           | 60 - 130  | <0.0060      | ug/g  | NC        | 50        |
| 8356706  | Bromodichloromethane      | 2022/11/20 | 92           | 60 - 140  | 101          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | Bromoform                 | 2022/11/20 | 81           | 60 - 140  | 95           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |



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VERITAS**  
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## QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

| QC Batch | Parameter                           | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|-------------------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                                     |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8356706  | Bromomethane                        | 2022/11/20 | 90           | 60 - 140  | 95           | 60 - 140  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | Carbon Tetrachloride                | 2022/11/20 | 92           | 60 - 140  | 97           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | Chlorobenzene                       | 2022/11/20 | 86           | 60 - 140  | 94           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | Chloroform                          | 2022/11/20 | 90           | 60 - 140  | 97           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | cis-1,2-Dichloroethylene            | 2022/11/20 | 92           | 60 - 140  | 99           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | cis-1,3-Dichloropropene             | 2022/11/20 | 92           | 60 - 140  | 99           | 60 - 130  | <0.030       | ug/g  | NC        | 50        |
| 8356706  | Dibromochloromethane                | 2022/11/20 | 85           | 60 - 140  | 96           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | Dichlorodifluoromethane (FREON 12)  | 2022/11/20 | 118          | 60 - 140  | 123          | 60 - 140  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | Ethylbenzene                        | 2022/11/20 | 84           | 60 - 140  | 91           | 60 - 130  | <0.010       | ug/g  | NC        | 50        |
| 8356706  | Ethylene Dibromide                  | 2022/11/20 | 81           | 60 - 140  | 93           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | Hexane                              | 2022/11/20 | 99           | 60 - 140  | 103          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | Methyl Ethyl Ketone (2-Butanone)    | 2022/11/20 | 89           | 60 - 140  | 106          | 60 - 140  | <0.40        | ug/g  | NC        | 50        |
| 8356706  | Methyl Isobutyl Ketone              | 2022/11/20 | 86           | 60 - 140  | 103          | 60 - 130  | <0.40        | ug/g  | NC        | 50        |
| 8356706  | Methyl t-butyl ether (MTBE)         | 2022/11/20 | 86           | 60 - 140  | 94           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | Methylene Chloride(Dichloromethane) | 2022/11/20 | 94           | 60 - 140  | 102          | 60 - 130  | <0.049       | ug/g  | NC        | 50        |
| 8356706  | o-Xylene                            | 2022/11/20 | 85           | 60 - 140  | 93           | 60 - 130  | <0.020       | ug/g  | NC        | 50        |
| 8356706  | p-m-Xylene                          | 2022/11/20 | 87           | 60 - 140  | 94           | 60 - 130  | <0.020       | ug/g  | NC        | 50        |
| 8356706  | Styrene                             | 2022/11/20 | 93           | 60 - 140  | 102          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | Tetrachloroethylene                 | 2022/11/20 | 84           | 60 - 140  | 90           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | Toluene                             | 2022/11/20 | 85           | 60 - 140  | 92           | 60 - 130  | <0.020       | ug/g  | NC        | 50        |
| 8356706  | Total Xylenes                       | 2022/11/20 |              |           |              |           | <0.020       | ug/g  | NC        | 50        |
| 8356706  | trans-1,2-Dichloroethylene          | 2022/11/20 | 95           | 60 - 140  | 101          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | trans-1,3-Dichloropropene           | 2022/11/20 | 94           | 60 - 140  | 101          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | Trichloroethylene                   | 2022/11/20 | 95           | 60 - 140  | 101          | 60 - 130  | <0.010       | ug/g  | NC        | 50        |
| 8356706  | Trichlorofluoromethane (FREON 11)   | 2022/11/20 | 93           | 60 - 140  | 98           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8356706  | Vinyl Chloride                      | 2022/11/20 | 91           | 60 - 140  | 95           | 60 - 130  | <0.019       | ug/g  | NC        | 50        |
| 8357933  | Moisture                            | 2022/11/21 |              |           |              |           |              |       | 3.9       | 20        |
| 8358762  | 1,1,1,2-Tetrachloroethane           | 2022/11/23 | 101          | 60 - 140  | 100          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | 1,1,1-Trichloroethane               | 2022/11/23 | 97           | 60 - 140  | 95           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | 1,1,2,2-Tetrachloroethane           | 2022/11/23 | 111          | 60 - 140  | 113          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | 1,1,2-Trichloroethane               | 2022/11/23 | 107          | 60 - 140  | 106          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |

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Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

| QC Batch | Parameter                           | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|-------------------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                                     |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8358762  | 1,1-Dichloroethane                  | 2022/11/23 | 95           | 60 - 140  | 93           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | 1,1-Dichloroethylene                | 2022/11/23 | 97           | 60 - 140  | 95           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | 1,2-Dichlorobenzene                 | 2022/11/23 | 90           | 60 - 140  | 89           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | 1,2-Dichloroethane                  | 2022/11/23 | 100          | 60 - 140  | 98           | 60 - 130  | <0.049       | ug/g  | NC        | 50        |
| 8358762  | 1,2-Dichloropropane                 | 2022/11/23 | 98           | 60 - 140  | 96           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | 1,3-Dichlorobenzene                 | 2022/11/23 | 92           | 60 - 140  | 90           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | 1,4-Dichlorobenzene                 | 2022/11/23 | 105          | 60 - 140  | 99           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | Acetone (2-Propanone)               | 2022/11/23 | 107          | 60 - 140  | 106          | 60 - 140  | <0.49        | ug/g  | NC        | 50        |
| 8358762  | Benzene                             | 2022/11/23 | 91           | 60 - 140  | 89           | 60 - 130  | <0.0060      | ug/g  | NC        | 50        |
| 8358762  | Bromodichloromethane                | 2022/11/23 | 105          | 60 - 140  | 104          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | Bromoform                           | 2022/11/23 | 110          | 60 - 140  | 112          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | Bromomethane                        | 2022/11/23 | 90           | 60 - 140  | 90           | 60 - 140  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | Carbon Tetrachloride                | 2022/11/23 | 101          | 60 - 140  | 99           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | Chlorobenzene                       | 2022/11/23 | 95           | 60 - 140  | 93           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | Chloroform                          | 2022/11/23 | 100          | 60 - 140  | 98           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | cis-1,2-Dichloroethylene            | 2022/11/23 | 99           | 60 - 140  | 98           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | cis-1,3-Dichloropropene             | 2022/11/23 | 87           | 60 - 140  | 87           | 60 - 130  | <0.030       | ug/g  | NC        | 50        |
| 8358762  | Dibromochloromethane                | 2022/11/23 | 105          | 60 - 140  | 135 (2)      | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | Dichlorodifluoromethane (FREON 12)  | 2022/11/23 | 92           | 60 - 140  | 94           | 60 - 140  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | Ethylbenzene                        | 2022/11/23 | 89           | 60 - 140  | 86           | 60 - 130  | <0.010       | ug/g  | NC        | 50        |
| 8358762  | Ethylene Dibromide                  | 2022/11/23 | 97           | 60 - 140  | 97           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | F1 (C6-C10) - BTEX                  | 2022/11/23 |              |           |              |           | <10          | ug/g  | NC        | 30        |
| 8358762  | F1 (C6-C10)                         | 2022/11/23 | 101          | 60 - 140  | 94           | 80 - 120  | <10          | ug/g  | NC        | 30        |
| 8358762  | Hexane                              | 2022/11/23 | 94           | 60 - 140  | 94           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | Methyl Ethyl Ketone (2-Butanone)    | 2022/11/23 | 108          | 60 - 140  | 110          | 60 - 140  | <0.40        | ug/g  | NC        | 50        |
| 8358762  | Methyl Isobutyl Ketone              | 2022/11/23 | 102          | 60 - 140  | 106          | 60 - 130  | <0.40        | ug/g  | NC        | 50        |
| 8358762  | Methyl t-butyl ether (MTBE)         | 2022/11/23 | 87           | 60 - 140  | 85           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | Methylene Chloride(Dichloromethane) | 2022/11/23 | 101          | 60 - 140  | 100          | 60 - 130  | <0.049       | ug/g  | NC        | 50        |
| 8358762  | o-Xylene                            | 2022/11/23 | 90           | 60 - 140  | 87           | 60 - 130  | <0.020       | ug/g  | NC        | 50        |
| 8358762  | p+m-Xylene                          | 2022/11/23 | 90           | 60 - 140  | 87           | 60 - 130  | <0.020       | ug/g  | NC        | 50        |
| 8358762  | Styrene                             | 2022/11/23 | 99           | 60 - 140  | 97           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |



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## QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

| QC Batch | Parameter                         | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|-----------------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                                   |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8358762  | Tetrachloroethylene               | 2022/11/23 | 90           | 60 - 140  | 87           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | Toluene                           | 2022/11/23 | 93           | 60 - 140  | 91           | 60 - 130  | <0.020       | ug/g  | NC        | 50        |
| 8358762  | Total Xylenes                     | 2022/11/23 |              |           |              |           | <0.020       | ug/g  | NC        | 50        |
| 8358762  | trans-1,2-Dichloroethylene        | 2022/11/23 | 96           | 60 - 140  | 93           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | trans-1,3-Dichloropropene         | 2022/11/23 | 90           | 60 - 140  | 88           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | Trichloroethylene                 | 2022/11/23 | 100          | 60 - 140  | 97           | 60 - 130  | <0.010       | ug/g  | NC        | 50        |
| 8358762  | Trichlorofluoromethane (FREON 11) | 2022/11/23 | 95           | 60 - 140  | 94           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8358762  | Vinyl Chloride                    | 2022/11/23 | 83           | 60 - 140  | 84           | 60 - 130  | <0.019       | ug/g  | NC        | 50        |
| 8363098  | Moisture                          | 2022/11/23 |              |           |              |           |              |       | 6.5       | 20        |
| 8363470  | Acid Extractable Antimony (Sb)    | 2022/11/24 | 97           | 75 - 125  | 104          | 80 - 120  | <0.20        | ug/g  | NC        | 30        |
| 8363470  | Acid Extractable Arsenic (As)     | 2022/11/24 | 97           | 75 - 125  | 100          | 80 - 120  | <1.0         | ug/g  | 3.9       | 30        |
| 8363470  | Acid Extractable Barium (Ba)      | 2022/11/24 | NC           | 75 - 125  | 105          | 80 - 120  | <0.50        | ug/g  | 0.74      | 30        |
| 8363470  | Acid Extractable Beryllium (Be)   | 2022/11/24 | 97           | 75 - 125  | 98           | 80 - 120  | <0.20        | ug/g  | 1.7       | 30        |
| 8363470  | Acid Extractable Boron (B)        | 2022/11/24 | 97           | 75 - 125  | 101          | 80 - 120  | <5.0         | ug/g  | 1.9       | 30        |
| 8363470  | Acid Extractable Cadmium (Cd)     | 2022/11/24 | 99           | 75 - 125  | 101          | 80 - 120  | <0.10        | ug/g  | NC        | 30        |
| 8363470  | Acid Extractable Chromium (Cr)    | 2022/11/24 | 97           | 75 - 125  | 99           | 80 - 120  | <1.0         | ug/g  | 0.66      | 30        |
| 8363470  | Acid Extractable Cobalt (Co)      | 2022/11/24 | 96           | 75 - 125  | 102          | 80 - 120  | <0.10        | ug/g  | 0.76      | 30        |
| 8363470  | Acid Extractable Copper (Cu)      | 2022/11/24 | 97           | 75 - 125  | 102          | 80 - 120  | <0.50        | ug/g  | 3.4       | 30        |
| 8363470  | Acid Extractable Lead (Pb)        | 2022/11/24 | 97           | 75 - 125  | 102          | 80 - 120  | <1.0         | ug/g  | 0.45      | 30        |
| 8363470  | Acid Extractable Mercury (Hg)     | 2022/11/24 | 91           | 75 - 125  | 94           | 80 - 120  | <0.050       | ug/g  | NC        | 30        |
| 8363470  | Acid Extractable Molybdenum (Mo)  | 2022/11/24 | 102          | 75 - 125  | 99           | 80 - 120  | <0.50        | ug/g  | NC        | 30        |
| 8363470  | Acid Extractable Nickel (Ni)      | 2022/11/24 | 97           | 75 - 125  | 102          | 80 - 120  | <0.50        | ug/g  | 7.4       | 30        |
| 8363470  | Acid Extractable Selenium (Se)    | 2022/11/24 | 98           | 75 - 125  | 102          | 80 - 120  | <0.50        | ug/g  | NC        | 30        |
| 8363470  | Acid Extractable Silver (Ag)      | 2022/11/24 | 98           | 75 - 125  | 100          | 80 - 120  | <0.20        | ug/g  | NC        | 30        |
| 8363470  | Acid Extractable Thallium (Tl)    | 2022/11/24 | 98           | 75 - 125  | 104          | 80 - 120  | <0.050       | ug/g  | 18        | 30        |
| 8363470  | Acid Extractable Uranium (U)      | 2022/11/24 | 100          | 75 - 125  | 103          | 80 - 120  | <0.050       | ug/g  | 1.3       | 30        |
| 8363470  | Acid Extractable Vanadium (V)     | 2022/11/24 | 104          | 75 - 125  | 99           | 80 - 120  | <5.0         | ug/g  | 0.34      | 30        |
| 8363470  | Acid Extractable Zinc (Zn)        | 2022/11/24 | NC           | 75 - 125  | 104          | 80 - 120  | <5.0         | ug/g  | 3.1       | 30        |
| 8363618  | Acid Extractable Antimony (Sb)    | 2022/11/24 | 101          | 75 - 125  | 102          | 80 - 120  | <0.20        | ug/g  | NC        | 30        |
| 8363618  | Acid Extractable Arsenic (As)     | 2022/11/24 | 98           | 75 - 125  | 100          | 80 - 120  | <1.0         | ug/g  | NC        | 30        |
| 8363618  | Acid Extractable Barium (Ba)      | 2022/11/24 | 94           | 75 - 125  | 100          | 80 - 120  | <0.50        | ug/g  | 4.6       | 30        |



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## QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

| QC Batch | Parameter                        | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|----------------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                                  |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8363618  | Acid Extractable Beryllium (Be)  | 2022/11/24 | 98           | 75 - 125  | 97           | 80 - 120  | <0.20        | ug/g  | NC        | 30        |
| 8363618  | Acid Extractable Boron (B)       | 2022/11/24 | 96           | 75 - 125  | 98           | 80 - 120  | <5.0         | ug/g  | NC        | 30        |
| 8363618  | Acid Extractable Cadmium (Cd)    | 2022/11/24 | 99           | 75 - 125  | 99           | 80 - 120  | <0.10        | ug/g  | NC        | 30        |
| 8363618  | Acid Extractable Chromium (Cr)   | 2022/11/24 | 96           | 75 - 125  | 100          | 80 - 120  | <1.0         | ug/g  | 4.4       | 30        |
| 8363618  | Acid Extractable Cobalt (Co)     | 2022/11/24 | 98           | 75 - 125  | 99           | 80 - 120  | <0.10        | ug/g  | 13        | 30        |
| 8363618  | Acid Extractable Copper (Cu)     | 2022/11/24 | 98           | 75 - 125  | 102          | 80 - 120  | <0.50        | ug/g  | 1.7       | 30        |
| 8363618  | Acid Extractable Lead (Pb)       | 2022/11/24 | 99           | 75 - 125  | 103          | 80 - 120  | <1.0         | ug/g  | NC        | 30        |
| 8363618  | Acid Extractable Mercury (Hg)    | 2022/11/24 | 91           | 75 - 125  | 97           | 80 - 120  | <0.050       | ug/g  | NC        | 30        |
| 8363618  | Acid Extractable Molybdenum (Mo) | 2022/11/24 | 100          | 75 - 125  | 101          | 80 - 120  | <0.50        | ug/g  | NC        | 30        |
| 8363618  | Acid Extractable Nickel (Ni)     | 2022/11/24 | 100          | 75 - 125  | 101          | 80 - 120  | <0.50        | ug/g  | 7.0       | 30        |
| 8363618  | Acid Extractable Selenium (Se)   | 2022/11/24 | 102          | 75 - 125  | 100          | 80 - 120  | <0.50        | ug/g  | NC        | 30        |
| 8363618  | Acid Extractable Silver (Ag)     | 2022/11/24 | 101          | 75 - 125  | 101          | 80 - 120  | <0.20        | ug/g  | NC        | 30        |
| 8363618  | Acid Extractable Thallium (Tl)   | 2022/11/24 | 101          | 75 - 125  | 103          | 80 - 120  | <0.050       | ug/g  | NC        | 30        |
| 8363618  | Acid Extractable Uranium (U)     | 2022/11/24 | 104          | 75 - 125  | 104          | 80 - 120  | <0.050       | ug/g  | 1.9       | 30        |
| 8363618  | Acid Extractable Vanadium (V)    | 2022/11/24 | 96           | 75 - 125  | 97           | 80 - 120  | <5.0         | ug/g  | 2.3       | 30        |
| 8363618  | Acid Extractable Zinc (Zn)       | 2022/11/24 | 100          | 75 - 125  | 100          | 80 - 120  | <5.0         | ug/g  | 2.8       | 30        |
| 8363828  | Benzene                          | 2022/11/24 | 80           | 50 - 140  | 79           | 50 - 140  | <0.020       | ug/g  | NC        | 50        |
| 8363828  | Ethylbenzene                     | 2022/11/24 | 81           | 50 - 140  | 79           | 50 - 140  | <0.020       | ug/g  | NC        | 50        |
| 8363828  | F1 (C6-C10) - BTEX               | 2022/11/24 |              |           |              |           | <10          | ug/g  | NC        | 30        |
| 8363828  | F1 (C6-C10)                      | 2022/11/24 | 86           | 60 - 140  | 89           | 80 - 120  | <10          | ug/g  | NC        | 30        |
| 8363828  | o-Xylene                         | 2022/11/24 | 88           | 50 - 140  | 86           | 50 - 140  | <0.020       | ug/g  | NC        | 50        |
| 8363828  | p+m-Xylene                       | 2022/11/24 | 89           | 50 - 140  | 84           | 50 - 140  | <0.040       | ug/g  | NC        | 50        |
| 8363828  | Toluene                          | 2022/11/24 | 82           | 50 - 140  | 80           | 50 - 140  | <0.020       | ug/g  | NC        | 50        |
| 8363828  | Total Xylenes                    | 2022/11/24 |              |           |              |           | <0.040       | ug/g  | NC        | 50        |
| 8365043  | Available (CaCl2) pH             | 2022/11/24 |              |           | 100          | 97 - 103  |              |       | 1.3       | N/A       |
| 8367122  | 1-Methylnaphthalene              | 2022/11/25 | 83           | 50 - 130  | 84           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | 2-Methylnaphthalene              | 2022/11/25 | 78           | 50 - 130  | 79           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | Acenaphthene                     | 2022/11/25 | 92           | 50 - 130  | 88           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | Acenaphthylene                   | 2022/11/25 | 90           | 50 - 130  | 85           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | Anthracene                       | 2022/11/25 | 92           | 50 - 130  | 88           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | Benzo(a)anthracene               | 2022/11/25 | 103          | 50 - 130  | 90           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |



BUREAU  
VERITAS

Bureau Veritas Job #: C2Y0178  
Report Date: 2022/11/29

## QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

| QC Batch | Parameter                 | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|---------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                           |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8367122  | Benzo(a)pyrene            | 2022/11/25 | 98           | 50 - 130  | 88           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | Benzo(b,j)fluoranthene    | 2022/11/25 | 94           | 50 - 130  | 88           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | Benzo(g,h,i)perylene      | 2022/11/25 | 105          | 50 - 130  | 96           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | Benzo(k)fluoranthene      | 2022/11/25 | 93           | 50 - 130  | 85           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | Chrysene                  | 2022/11/25 | 94           | 50 - 130  | 88           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | Dibenzo(a,h)anthracene    | 2022/11/25 | 98           | 50 - 130  | 83           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | Fluoranthene              | 2022/11/25 | 100          | 50 - 130  | 94           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | Fluorene                  | 2022/11/25 | 98           | 50 - 130  | 92           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | Indeno(1,2,3-cd)pyrene    | 2022/11/25 | 98           | 50 - 130  | 89           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | Naphthalene               | 2022/11/25 | 77           | 50 - 130  | 83           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | Phenanthrene              | 2022/11/25 | 91           | 50 - 130  | 86           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8367122  | Pyrene                    | 2022/11/25 | 96           | 50 - 130  | 91           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8369921  | F2 (C10-C16 Hydrocarbons) | 2022/11/28 | 79           | 60 - 130  | 98           | 80 - 120  | <10          | ug/g  | NC        | 30        |
| 8369921  | F3 (C16-C34 Hydrocarbons) | 2022/11/28 | 80           | 60 - 130  | 104          | 80 - 120  | <50          | ug/g  | NC        | 30        |
| 8369921  | F4 (C34-C50 Hydrocarbons) | 2022/11/28 | 79           | 60 - 130  | 104          | 80 - 120  | <50          | ug/g  | NC        | 30        |

N/A = Not Applicable

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

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

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

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

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

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

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

(1) The recovery for the extraction surrogate compound was above the upper control limit for duplicate analyses of the soil sample. Visible loss of methanol was observed in this sample. As a result, there is an increased level of uncertainty associated with the values reported for this sample.

(2) The recovery was above the upper control limit. This may represent a high bias in some results for this specific analyte. For results that were not detected (ND), this potential bias has no impact.





Bureau Veritas Job #: C2Y0178  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

### VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



Your Project #: 2206-E054  
Site Location: ERIN  
Your C.O.C. #: N/A

**Attention: Madan K. Suwal**

Soil Engineers Ltd  
90 West Beaver Creek Road  
Unit 100  
Richmond Hill, ON  
CANADA L4B 1E7

**Report Date: 2022/11/30**  
Report #: R7410888  
Version: 3 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C2Y3355**

**Received: 2022/11/22, 17:47**

Sample Matrix: Soil  
# Samples Received: 12

| Analyses                                    | Quantity | Date<br>Extracted | Date<br>Analyzed | Laboratory Method | Analytical Method    |
|---------------------------------------------|----------|-------------------|------------------|-------------------|----------------------|
| Methylnaphthalene Sum                       | 3        | N/A               | 2022/11/29       | CAM SOP-00301     | EPA 8270D m          |
| 1,3-Dichloropropene Sum                     | 3        | N/A               | 2022/11/28       |                   | EPA 8260C m          |
| Acid Extractables by GC/MS                  | 1        | 2022/11/29        | 2022/11/30       | CAM SOP-00332     | EPA 8270E m          |
| Petroleum Hydro. CCME F1 & BTEX in Soil (1) | 3        | N/A               | 2022/11/28       | CAM SOP-00315     | CCME PHC-CWS m       |
| Petroleum Hydro. CCME F1 & BTEX in Soil (1) | 2        | N/A               | 2022/11/29       | CAM SOP-00315     | CCME PHC-CWS m       |
| Petroleum Hydrocarbons F2-F4 in Soil (2)    | 8        | 2022/11/28        | 2022/11/29       | CAM SOP-00316     | CCME CWS m           |
| Acid Extractable Metals by ICPMS            | 5        | 2022/11/25        | 2022/11/26       | CAM SOP-00447     | EPA 6020B m          |
| Moisture                                    | 10       | N/A               | 2022/11/24       | CAM SOP-00445     | Carter 2nd ed 51.2 m |
| OC Pesticides (Selected) & PCB (3)          | 1        | 2022/11/28        | 2022/11/29       | CAM SOP-00307     | SW846 8081, 8082     |
| OC Pesticides Summed Parameters             | 1        | N/A               | 2022/11/25       | CAM SOP-00307     | EPA 8081/8082 m      |
| PAH Compounds in Soil by GC/MS (SIM)        | 3        | 2022/11/28        | 2022/11/29       | CAM SOP-00318     | EPA 8270D m          |
| pH CaCl2 EXTRACT                            | 2        | 2022/11/25        | 2022/11/25       | CAM SOP-00413     | EPA 9045 D m         |
| Volatile Organic Compounds and F1 PHCs      | 3        | N/A               | 2022/11/27       | CAM SOP-00230     | EPA 8260C m          |

**Remarks:**

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

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

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

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



Your Project #: 2206-E054  
Site Location: ERIN  
Your C.O.C. #: N/A

**Attention: Madan K. Suwal**

Soil Engineers Ltd  
90 West Beaver Creek Road  
Unit 100  
Richmond Hill, ON  
CANADA L4B 1E7

**Report Date: 2022/11/30**  
Report #: R7410888  
Version: 3 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C2Y3355**

**Received: 2022/11/22, 17:47**

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

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

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

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

(1) No lab extraction date is given for F18TEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

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

(3) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane

**Encryption Key**



AUTHORIZED REPORT  
RAPPORT AUTORISÉ

Bureau Veritas  
30 Nov 2022 17:21:52

Please direct all questions regarding this Certificate of Analysis to:

Antonella Brasil, Senior Project Manager  
Email: Antonella.Brasil@bureauveritas.com  
Phone# (905)817-5817

=====

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



Bureau Veritas Job #: C2Y3355  
Report Date: 2022/11/30

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

### O.REG 153 CHLOROPHENOLS (SOIL)

|                                  |       |            |      |          |
|----------------------------------|-------|------------|------|----------|
| Bureau Veritas ID                |       | UJM450     |      |          |
| Sampling Date                    |       | 2022/11/22 |      |          |
| COC Number                       |       | N/A        |      |          |
|                                  | UNITS | BH6/6      | RDL  | QC Batch |
| <b>Phenolics</b>                 |       |            |      |          |
| 2-Chlorophenol                   | ug/g  | <0.05      | 0.05 | 8374034  |
| 2,4-Dichlorophenol               | ug/g  | <0.05      | 0.05 | 8374034  |
| 2,4,6-Trichlorophenol            | ug/g  | <0.05      | 0.05 | 8374034  |
| Pentachlorophenol                | ug/g  | <0.05      | 0.05 | 8374034  |
| 2,4,5-Trichlorophenol            | ug/g  | <0.05      | 0.05 | 8374034  |
| 3 & 4-Chlorophenol               | ug/g  | <0.05      | 0.05 | 8374034  |
| <b>Surrogate Recovery (%)</b>    |       |            |      |          |
| 2,4,6-Tribromophenol             | %     | 84         |      | 8374034  |
| 2-Fluorophenol                   | %     | 70         |      | 8374034  |
| D5-Phenol                        | %     | 76         |      | 8374034  |
| RDL = Reportable Detection Limit |       |            |      |          |
| QC Batch = Quality Control Batch |       |            |      |          |



Bureau Veritas Job #: C2Y3355  
Report Date: 2022/11/30

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

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

| Bureau Veritas ID                |       | UJM449     | UJM452     | UJM453     | UJM456     | UJM460     |       |          |
|----------------------------------|-------|------------|------------|------------|------------|------------|-------|----------|
| Sampling Date                    |       | 2022/11/22 | 2022/11/22 | 2022/11/22 | 2022/11/22 | 2022/11/22 |       |          |
| COC Number                       |       | N/A        | N/A        | N/A        | N/A        | N/A        |       |          |
|                                  | UNITS | BH6/4      | BH10/1     | BH11/1     | BH7/6      | BH8/7      | RDL   | QC Batch |
| <b>Metals</b>                    |       |            |            |            |            |            |       |          |
| Acid Extractable Antimony (Sb)   | ug/g  | <0.20      | <0.20      | <0.20      | <0.20      | 0.38       | 0.20  | 8367267  |
| Acid Extractable Arsenic (As)    | ug/g  | <1.0       | 1.7        | 2.7        | 1.5        | 4.4        | 1.0   | 8367267  |
| Acid Extractable Barium (Ba)     | ug/g  | 12         | 17         | 37         | 27         | 12         | 0.50  | 8367267  |
| Acid Extractable Beryllium (Be)  | ug/g  | <0.20      | <0.20      | 0.26       | 0.25       | <0.20      | 0.20  | 8367267  |
| Acid Extractable Boron (B)       | ug/g  | <5.0       | <5.0       | <5.0       | <5.0       | 12         | 5.0   | 8367267  |
| Acid Extractable Cadmium (Cd)    | ug/g  | <0.10      | 0.12       | 0.13       | <0.10      | 0.23       | 0.10  | 8367267  |
| Acid Extractable Chromium (Cr)   | ug/g  | 5.5        | 9.9        | 10         | 11         | 7.4        | 1.0   | 8367267  |
| Acid Extractable Cobalt (Co)     | ug/g  | 2.0        | 3.4        | 3.6        | 4.4        | 4.3        | 0.10  | 8367267  |
| Acid Extractable Copper (Cu)     | ug/g  | 6.8        | 13         | 10         | 11         | 27         | 0.50  | 8367267  |
| Acid Extractable Lead (Pb)       | ug/g  | 2.9        | 7.5        | 19         | 4.0        | 57         | 1.0   | 8367267  |
| Acid Extractable Molybdenum (Mo) | ug/g  | <0.50      | <0.50      | <0.50      | <0.50      | 1.8        | 0.50  | 8367267  |
| Acid Extractable Nickel (Ni)     | ug/g  | 4.2        | 6.8        | 6.6        | 8.7        | 9.9        | 0.50  | 8367267  |
| Acid Extractable Selenium (Se)   | ug/g  | <0.50      | <0.50      | <0.50      | <0.50      | <0.50      | 0.50  | 8367267  |
| Acid Extractable Silver (Ag)     | ug/g  | <0.20      | <0.20      | <0.20      | <0.20      | <0.20      | 0.20  | 8367267  |
| Acid Extractable Thallium (Tl)   | ug/g  | <0.050     | 0.066      | 0.062      | 0.052      | 0.16       | 0.050 | 8367267  |
| Acid Extractable Uranium (U)     | ug/g  | 0.27       | 0.40       | 0.32       | 0.41       | 0.44       | 0.050 | 8367267  |
| Acid Extractable Vanadium (V)    | ug/g  | 12         | 23         | 23         | 20         | 10         | 5.0   | 8367267  |
| Acid Extractable Zinc (Zn)       | ug/g  | 29         | 99         | 59         | 21         | 130        | 5.0   | 8367267  |
| Acid Extractable Mercury (Hg)    | ug/g  | <0.050     | <0.050     | <0.050     | <0.050     | <0.050     | 0.050 | 8367267  |
| RDL = Reportable Detection Limit |       |            |            |            |            |            |       |          |
| QC Batch = Quality Control Batch |       |            |            |            |            |            |       |          |



Bureau Veritas Job #: C2Y3355  
Report Date: 2022/11/30

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

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

|                                    |              |              |            |                 |
|------------------------------------|--------------|--------------|------------|-----------------|
| <b>Bureau Veritas ID</b>           |              | UJM456       |            |                 |
| <b>Sampling Date</b>               |              | 2022/11/22   |            |                 |
| <b>COC Number</b>                  |              | N/A          |            |                 |
|                                    | <b>UNITS</b> | <b>BH7/6</b> | <b>RDL</b> | <b>QC Batch</b> |
| <b>Inorganics</b>                  |              |              |            |                 |
| Moisture                           | %            | 16           | 1.0        | 8366932         |
| <b>Calculated Parameters</b>       |              |              |            |                 |
| Chlordane (Total)                  | ug/g         | <0.0020      | 0.0020     | 8362250         |
| o,p-DDD + p,p-DDD                  | ug/g         | <0.0020      | 0.0020     | 8362250         |
| o,p-DDE + p,p-DDE                  | ug/g         | <0.0020      | 0.0020     | 8362250         |
| o,p-DDT + p,p-DDT                  | ug/g         | <0.0020      | 0.0020     | 8362250         |
| Total Endosulfan                   | ug/g         | <0.0020      | 0.0020     | 8362250         |
| <b>Pesticides &amp; Herbicides</b> |              |              |            |                 |
| Aldrin                             | ug/g         | <0.0020      | 0.0020     | 8372432         |
| a-Chlordane                        | ug/g         | <0.0020      | 0.0020     | 8372432         |
| g-Chlordane                        | ug/g         | <0.0020      | 0.0020     | 8372432         |
| o,p-DDD                            | ug/g         | <0.0020      | 0.0020     | 8372432         |
| p,p-DDD                            | ug/g         | <0.0020      | 0.0020     | 8372432         |
| o,p-DDE                            | ug/g         | <0.0020      | 0.0020     | 8372432         |
| p,p-DDE                            | ug/g         | <0.0020      | 0.0020     | 8372432         |
| o,p-DDT                            | ug/g         | <0.0020      | 0.0020     | 8372432         |
| p,p-DDT                            | ug/g         | <0.0020      | 0.0020     | 8372432         |
| Dieldrin                           | ug/g         | <0.0020      | 0.0020     | 8372432         |
| Lindane                            | ug/g         | <0.0020      | 0.0020     | 8372432         |
| Endosulfan I (alpha)               | ug/g         | <0.0020      | 0.0020     | 8372432         |
| Endosulfan II (beta)               | ug/g         | <0.0020      | 0.0020     | 8372432         |
| Endrin                             | ug/g         | <0.0020      | 0.0020     | 8372432         |
| Heptachlor                         | ug/g         | <0.0020      | 0.0020     | 8372432         |
| Heptachlor epoxide                 | ug/g         | <0.0020      | 0.0020     | 8372432         |
| Hexachlorobenzene                  | ug/g         | <0.0020      | 0.0020     | 8372432         |
| Hexachlorobutadiene                | ug/g         | <0.0020      | 0.0020     | 8372432         |
| Hexachloroethane                   | ug/g         | <0.0020      | 0.0020     | 8372432         |
| Methoxychlor                       | ug/g         | <0.0050      | 0.0050     | 8372432         |
| <b>Surrogate Recovery (%)</b>      |              |              |            |                 |
| 2,4,5,6-Tetrachloro-m-xylene       | %            | 95           |            | 8372432         |
| Decachlorobiphenyl                 | %            | 97           |            | 8372432         |
| RDL = Reportable Detection Limit   |              |              |            |                 |
| QC Batch = Quality Control Batch   |              |              |            |                 |



Bureau Veritas Job #: C2Y3355  
Report Date: 2022/11/30

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

### O.REG 153 PAHS (SOIL)

|                          |              |              |              |            |                 |                      |            |                 |              |            |                 |
|--------------------------|--------------|--------------|--------------|------------|-----------------|----------------------|------------|-----------------|--------------|------------|-----------------|
| <b>Bureau Veritas ID</b> |              | UJM451       | UJM455       |            |                 | UJM455               |            |                 | UJM459       |            |                 |
| <b>Sampling Date</b>     |              | 2022/11/22   | 2022/11/22   |            |                 | 2022/11/22           |            |                 | 2022/11/22   |            |                 |
| <b>COC Number</b>        |              | N/A          | N/A          |            |                 | N/A                  |            |                 | N/A          |            |                 |
|                          | <b>UNITS</b> | <b>BH6/7</b> | <b>BH7/5</b> | <b>RDL</b> | <b>QC Batch</b> | <b>BH7/5 Lab-Dup</b> | <b>RDL</b> | <b>QC Batch</b> | <b>BH8/8</b> | <b>RDL</b> | <b>QC Batch</b> |

#### Calculated Parameters

|                           |      |         |         |        |         |  |  |  |         |        |         |
|---------------------------|------|---------|---------|--------|---------|--|--|--|---------|--------|---------|
| Methylnaphthalene, 2-(1-) | ug/g | <0.0071 | <0.0071 | 0.0071 | 8362254 |  |  |  | <0.0071 | 0.0071 | 8362254 |
|---------------------------|------|---------|---------|--------|---------|--|--|--|---------|--------|---------|

#### Polyaromatic Hydrocarbons

|                        |      |         |         |        |         |         |        |         |         |        |         |
|------------------------|------|---------|---------|--------|---------|---------|--------|---------|---------|--------|---------|
| Acenaphthene           | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| Acenaphthylene         | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| Anthracene             | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| Benzo(a)anthracene     | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| Benzo(a)pyrene         | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| Benzo(b,j)fluoranthene | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| Benzo(g,h,i)perylene   | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| Benzo(k)fluoranthene   | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| Chrysene               | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| Dibenzo(a,h)anthracene | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| Fluoranthene           | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| Fluorene               | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| Indeno(1,2,3-cd)pyrene | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| 1-Methylnaphthalene    | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| 2-Methylnaphthalene    | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| Naphthalene            | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| Phenanthrene           | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |
| Pyrene                 | ug/g | <0.0050 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 | <0.0050 | 0.0050 | 8372443 |

#### Surrogate Recovery (%)

|                    |   |    |     |  |         |     |  |         |    |  |         |
|--------------------|---|----|-----|--|---------|-----|--|---------|----|--|---------|
| D10-Anthracene     | % | 96 | 94  |  | 8372443 | 99  |  | 8372443 | 90 |  | 8372443 |
| D14-Terphenyl (FS) | % | 96 | 105 |  | 8372443 | 111 |  | 8372443 | 89 |  | 8372443 |
| D8-Acenaphthylene  | % | 89 | 86  |  | 8372443 | 88  |  | 8372443 | 81 |  | 8372443 |

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate

BUREAU  
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Bureau Veritas Job #: C2Y3355

Report Date: 2022/11/30

Soil Engineers Ltd

Client Project #: 2206-E054

Site Location: ERIN

Sampler Initials: ANK

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

|                          |              |               |               |            |                 |                           |            |                 |               |            |                 |
|--------------------------|--------------|---------------|---------------|------------|-----------------|---------------------------|------------|-----------------|---------------|------------|-----------------|
| <b>Bureau Veritas ID</b> |              | UJM452        | UJM453        |            |                 | UJM453                    |            |                 | UJM454        |            |                 |
| <b>Sampling Date</b>     |              | 2022/11/22    | 2022/11/22    |            |                 | 2022/11/22                |            |                 | 2022/11/22    |            |                 |
| <b>COC Number</b>        |              | N/A           | N/A           |            |                 | N/A                       |            |                 | N/A           |            |                 |
|                          | <b>UNITS</b> | <b>BH10/1</b> | <b>BH11/1</b> | <b>RDL</b> | <b>QC Batch</b> | <b>BH11/1<br/>Lab-Dup</b> | <b>RDL</b> | <b>QC Batch</b> | <b>BH12/4</b> | <b>RDL</b> | <b>QC Batch</b> |

|                                          |      |        |        |       |         |        |       |         |        |       |         |
|------------------------------------------|------|--------|--------|-------|---------|--------|-------|---------|--------|-------|---------|
| <b>Inorganics</b>                        |      |        |        |       |         |        |       |         |        |       |         |
| Moisture                                 | %    | 5.8    | 8.9    | 1.0   | 8366932 |        |       |         | 7.1    | 1.0   | 8366932 |
| <b>BTEX &amp; F1 Hydrocarbons</b>        |      |        |        |       |         |        |       |         |        |       |         |
| Benzene                                  | ug/g | <0.020 | <0.020 | 0.020 | 8372071 | <0.020 | 0.020 | 8372071 | <0.020 | 0.020 | 8372071 |
| Toluene                                  | ug/g | <0.020 | <0.020 | 0.020 | 8372071 | <0.020 | 0.020 | 8372071 | <0.020 | 0.020 | 8372071 |
| Ethylbenzene                             | ug/g | <0.020 | <0.020 | 0.020 | 8372071 | <0.020 | 0.020 | 8372071 | <0.020 | 0.020 | 8372071 |
| o-Xylene                                 | ug/g | <0.020 | <0.020 | 0.020 | 8372071 | <0.020 | 0.020 | 8372071 | <0.020 | 0.020 | 8372071 |
| p+m-Xylene                               | ug/g | <0.040 | <0.040 | 0.040 | 8372071 | <0.040 | 0.040 | 8372071 | <0.040 | 0.040 | 8372071 |
| Total Xylenes                            | ug/g | <0.040 | <0.040 | 0.040 | 8372071 | <0.040 | 0.040 | 8372071 | <0.040 | 0.040 | 8372071 |
| F1 (C6-C10)                              | ug/g | <10    | <10    | 10    | 8372071 | <10    | 10    | 8372071 | <10    | 10    | 8372071 |
| F1 (C6-C10) - BTEX                       | ug/g | <10    | <10    | 10    | 8372071 | <10    | 10    | 8372071 | <10    | 10    | 8372071 |
| <b>F2-F4 Hydrocarbons</b>                |      |        |        |       |         |        |       |         |        |       |         |
| F2 (C10-C16 Hydrocarbons)                | ug/g | <10    | <10    | 10    | 8370975 |        |       |         | <10    | 10    | 8370975 |
| F3 (C16-C34 Hydrocarbons)                | ug/g | <50    | 200    | 50    | 8370975 |        |       |         | <50    | 50    | 8370975 |
| F4 (C34-C50 Hydrocarbons)                | ug/g | <50    | <50    | 50    | 8370975 |        |       |         | <50    | 50    | 8370975 |
| Reached Baseline at C50                  | ug/g | Yes    | Yes    |       | 8370975 |        |       |         | Yes    |       | 8370975 |
| <b>Surrogate Recovery (%)</b>            |      |        |        |       |         |        |       |         |        |       |         |
| 1,4-Difluorobenzene                      | %    | 99     | 99     |       | 8372071 | 99     |       | 8372071 | 99     |       | 8372071 |
| 4-Bromofluorobenzene                     | %    | 96     | 97     |       | 8372071 | 97     |       | 8372071 | 97     |       | 8372071 |
| D10-o-Xylene                             | %    | 97     | 91     |       | 8372071 | 89     |       | 8372071 | 88     |       | 8372071 |
| D4-1,2-Dichloroethane                    | %    | 85     | 87     |       | 8372071 | 86     |       | 8372071 | 84     |       | 8372071 |
| o-Terphenyl                              | %    | 79     | 103    |       | 8370975 |        |       |         | 103    |       | 8370975 |
| RDL = Reportable Detection Limit         |      |        |        |       |         |        |       |         |        |       |         |
| QC Batch = Quality Control Batch         |      |        |        |       |         |        |       |         |        |       |         |
| Lab-Dup = Laboratory Initiated Duplicate |      |        |        |       |         |        |       |         |        |       |         |





Bureau Veritas Job #: C2Y3355  
Report Date: 2022/11/30

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

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

|                                   |              |              |              |            |                 |
|-----------------------------------|--------------|--------------|--------------|------------|-----------------|
| <b>Bureau Veritas ID</b>          |              | UJM457       | UJM458       |            |                 |
| <b>Sampling Date</b>              |              | 2022/11/22   | 2022/11/22   |            |                 |
| <b>COC Number</b>                 |              | N/A          | N/A          |            |                 |
|                                   | <b>UNITS</b> | <b>BH9/8</b> | <b>DUPS4</b> | <b>RDL</b> | <b>QC Batch</b> |
| <b>Inorganics</b>                 |              |              |              |            |                 |
| Moisture                          | %            | 9.0          | 6.7          | 1.0        | 8366932         |
| <b>BTEX &amp; F1 Hydrocarbons</b> |              |              |              |            |                 |
| Benzene                           | ug/g         | <0.020       | <0.020       | 0.020      | 8372071         |
| Toluene                           | ug/g         | <0.020       | <0.020       | 0.020      | 8372071         |
| Ethylbenzene                      | ug/g         | <0.020       | <0.020       | 0.020      | 8372071         |
| o-Xylene                          | ug/g         | <0.020       | <0.020       | 0.020      | 8372071         |
| p+m-Xylene                        | ug/g         | <0.040       | <0.040       | 0.040      | 8372071         |
| Total Xylenes                     | ug/g         | <0.040       | <0.040       | 0.040      | 8372071         |
| F1 (C6-C10)                       | ug/g         | <10          | <10          | 10         | 8372071         |
| F1 (C6-C10) - BTEX                | ug/g         | <10          | <10          | 10         | 8372071         |
| <b>F2-F4 Hydrocarbons</b>         |              |              |              |            |                 |
| F2 (C10-C16 Hydrocarbons)         | ug/g         | <10          | <10          | 10         | 8370975         |
| F3 (C16-C34 Hydrocarbons)         | ug/g         | <50          | <50          | 50         | 8370975         |
| F4 (C34-C50 Hydrocarbons)         | ug/g         | <50          | <50          | 50         | 8370975         |
| Reached Baseline at C50           | ug/g         | Yes          | Yes          |            | 8370975         |
| <b>Surrogate Recovery (%)</b>     |              |              |              |            |                 |
| 1,4-Difluorobenzene               | %            | 100          | 102          |            | 8372071         |
| 4-Bromofluorobenzene              | %            | 96           | 96           |            | 8372071         |
| D10-o-Xylene                      | %            | 81           | 90           |            | 8372071         |
| D4-1,2-Dichloroethane             | %            | 85           | 83           |            | 8372071         |
| o-Terphenyl                       | %            | 103          | 100          |            | 8370975         |
| RDL = Reportable Detection Limit  |              |              |              |            |                 |
| QC Batch = Quality Control Batch  |              |              |              |            |                 |



Bureau Veritas Job #: C2Y3355  
Report Date: 2022/11/30

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

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

| Bureau Veritas ID                        |       | UJM451     | UJM455     |        |          | UJM455        |     |          |
|------------------------------------------|-------|------------|------------|--------|----------|---------------|-----|----------|
| Sampling Date                            |       | 2022/11/22 | 2022/11/22 |        |          | 2022/11/22    |     |          |
| COC Number                               |       | N/A        | N/A        |        |          | N/A           |     |          |
|                                          | UNITS | BH6/7      | BH7/5      | RDL    | QC Batch | BH7/5 Lab-Dup | RDL | QC Batch |
| <b>Inorganics</b>                        |       |            |            |        |          |               |     |          |
| Moisture                                 | %     | 14         | 14         | 1.0    | 8366932  | 15            | 1.0 | 8366932  |
| <b>Calculated Parameters</b>             |       |            |            |        |          |               |     |          |
| 1,3-Dichloropropene (cis+trans)          | ug/g  | <0.050     | <0.050     | 0.050  | 8362249  |               |     |          |
| <b>Volatile Organics</b>                 |       |            |            |        |          |               |     |          |
| Acetone (2-Propanone)                    | ug/g  | <0.49      | <0.49      | 0.49   | 8369549  |               |     |          |
| Benzene                                  | ug/g  | <0.0060    | <0.0060    | 0.0060 | 8369549  |               |     |          |
| Bromodichloromethane                     | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| Bromoform                                | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| Bromomethane                             | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| Carbon Tetrachloride                     | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| Chlorobenzene                            | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| Chloroform                               | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| Dibromochloromethane                     | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| 1,2-Dichlorobenzene                      | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| 1,3-Dichlorobenzene                      | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| 1,4-Dichlorobenzene                      | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| Dichlorodifluoromethane (FREON 12)       | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| 1,1-Dichloroethane                       | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| 1,2-Dichloroethane                       | ug/g  | <0.049     | <0.049     | 0.049  | 8369549  |               |     |          |
| 1,1-Dichloroethylene                     | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| cis-1,2-Dichloroethylene                 | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| trans-1,2-Dichloroethylene               | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| 1,2-Dichloropropane                      | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| cis-1,3-Dichloropropene                  | ug/g  | <0.030     | <0.030     | 0.030  | 8369549  |               |     |          |
| trans-1,3-Dichloropropene                | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| Ethylbenzene                             | ug/g  | <0.010     | <0.010     | 0.010  | 8369549  |               |     |          |
| Ethylene Dibromide                       | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| Hexane                                   | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| Methylene Chloride(Dichloromethane)      | ug/g  | <0.049     | <0.049     | 0.049  | 8369549  |               |     |          |
| Methyl Ethyl Ketone (2-Butanone)         | ug/g  | <0.40      | <0.40      | 0.40   | 8369549  |               |     |          |
| Methyl Isobutyl Ketone                   | ug/g  | <0.40      | <0.40      | 0.40   | 8369549  |               |     |          |
| Methyl t-butyl ether (MTBE)              | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| Styrene                                  | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| 1,1,1,2-Tetrachloroethane                | ug/g  | <0.040     | <0.040     | 0.040  | 8369549  |               |     |          |
| RDL = Reportable Detection Limit         |       |            |            |        |          |               |     |          |
| QC Batch = Quality Control Batch         |       |            |            |        |          |               |     |          |
| Lab-Dup = Laboratory Initiated Duplicate |       |            |            |        |          |               |     |          |



Bureau Veritas Job #: C2Y3355  
Report Date: 2022/11/30

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

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

| Bureau Veritas ID                                                                                                |       | UJM451     | UJM455     |       |          | UJM455        |     |          |
|------------------------------------------------------------------------------------------------------------------|-------|------------|------------|-------|----------|---------------|-----|----------|
| Sampling Date                                                                                                    |       | 2022/11/22 | 2022/11/22 |       |          | 2022/11/22    |     |          |
| COC Number                                                                                                       |       | N/A        | N/A        |       |          | N/A           |     |          |
|                                                                                                                  | UNITS | BH6/7      | BH7/5      | RDL   | QC Batch | BH7/5 Lab-Dup | RDL | QC Batch |
| 1,1,2,2-Tetrachloroethane                                                                                        | ug/g  | <0.040     | <0.040     | 0.040 | 8369549  |               |     |          |
| Tetrachloroethylene                                                                                              | ug/g  | <0.040     | <0.040     | 0.040 | 8369549  |               |     |          |
| Toluene                                                                                                          | ug/g  | <0.020     | <0.020     | 0.020 | 8369549  |               |     |          |
| 1,1,1-Trichloroethane                                                                                            | ug/g  | <0.040     | <0.040     | 0.040 | 8369549  |               |     |          |
| 1,1,2-Trichloroethane                                                                                            | ug/g  | <0.040     | <0.040     | 0.040 | 8369549  |               |     |          |
| Trichloroethylene                                                                                                | ug/g  | <0.010     | <0.010     | 0.010 | 8369549  |               |     |          |
| Trichlorofluoromethane (FREON 11)                                                                                | ug/g  | <0.040     | <0.040     | 0.040 | 8369549  |               |     |          |
| Vinyl Chloride                                                                                                   | ug/g  | <0.019     | <0.019     | 0.019 | 8369549  |               |     |          |
| p+m-Xylene                                                                                                       | ug/g  | <0.020     | <0.020     | 0.020 | 8369549  |               |     |          |
| o-Xylene                                                                                                         | ug/g  | <0.020     | <0.020     | 0.020 | 8369549  |               |     |          |
| Total Xylenes                                                                                                    | ug/g  | <0.020     | <0.020     | 0.020 | 8369549  |               |     |          |
| F1 (C6-C10)                                                                                                      | ug/g  | <10        | <10        | 10    | 8369549  |               |     |          |
| F1 (C6-C10) - BTEX                                                                                               | ug/g  | <10        | <10        | 10    | 8369549  |               |     |          |
| <b>F2-F4 Hydrocarbons</b>                                                                                        |       |            |            |       |          |               |     |          |
| F2 (C10-C16 Hydrocarbons)                                                                                        | ug/g  | <10        | <10        | 10    | 8370975  |               |     |          |
| F3 (C16-C34 Hydrocarbons)                                                                                        | ug/g  | <50        | <50        | 50    | 8370975  |               |     |          |
| F4 (C34-C50 Hydrocarbons)                                                                                        | ug/g  | <50        | <50        | 50    | 8370975  |               |     |          |
| Reached Baseline at C50                                                                                          | ug/g  | Yes        | Yes        |       | 8370975  |               |     |          |
| <b>Surrogate Recovery (%)</b>                                                                                    |       |            |            |       |          |               |     |          |
| o-Terphenyl                                                                                                      | %     | 102        | 102        |       | 8370975  |               |     |          |
| 4-Bromofluorobenzene                                                                                             | %     | 91         | 89         |       | 8369549  |               |     |          |
| D10-o-Xylene                                                                                                     | %     | 94         | 92         |       | 8369549  |               |     |          |
| D4-1,2-Dichloroethane                                                                                            | %     | 104        | 105        |       | 8369549  |               |     |          |
| D8-Toluene                                                                                                       | %     | 94         | 94         |       | 8369549  |               |     |          |
| RDL = Reportable Detection Limit<br>QC Batch = Quality Control Batch<br>Lab-Dup = Laboratory Initiated Duplicate |       |            |            |       |          |               |     |          |



Bureau Veritas Job #: C2Y3355  
Report Date: 2022/11/30

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

**O.REG 153 VOCS BY HS & F1-F4 (SOIL)**

|                                     |              |              |            |                 |
|-------------------------------------|--------------|--------------|------------|-----------------|
| <b>Bureau Veritas ID</b>            |              | UJM459       |            |                 |
| <b>Sampling Date</b>                |              | 2022/11/22   |            |                 |
| <b>COC Number</b>                   |              | N/A          |            |                 |
|                                     | <b>UNITS</b> | <b>BH8/8</b> | <b>RDL</b> | <b>QC Batch</b> |
| <b>Inorganics</b>                   |              |              |            |                 |
| Moisture                            | %            | 10           | 1.0        | 8366932         |
| <b>Calculated Parameters</b>        |              |              |            |                 |
| 1,3-Dichloropropene (cis+trans)     | ug/g         | <0.050       | 0.050      | 8362249         |
| <b>Volatile Organics</b>            |              |              |            |                 |
| Acetone (2-Propanone)               | ug/g         | <0.49        | 0.49       | 8369549         |
| Benzene                             | ug/g         | <0.0060      | 0.0060     | 8369549         |
| Bromodichloromethane                | ug/g         | <0.040       | 0.040      | 8369549         |
| Bromoform                           | ug/g         | <0.040       | 0.040      | 8369549         |
| Bromomethane                        | ug/g         | <0.040       | 0.040      | 8369549         |
| Carbon Tetrachloride                | ug/g         | <0.040       | 0.040      | 8369549         |
| Chlorobenzene                       | ug/g         | <0.040       | 0.040      | 8369549         |
| Chloroform                          | ug/g         | <0.040       | 0.040      | 8369549         |
| Dibromochloromethane                | ug/g         | <0.040       | 0.040      | 8369549         |
| 1,2-Dichlorobenzene                 | ug/g         | <0.040       | 0.040      | 8369549         |
| 1,3-Dichlorobenzene                 | ug/g         | <0.040       | 0.040      | 8369549         |
| 1,4-Dichlorobenzene                 | ug/g         | <0.040       | 0.040      | 8369549         |
| Dichlorodifluoromethane (FREON 12)  | ug/g         | <0.040       | 0.040      | 8369549         |
| 1,1-Dichloroethane                  | ug/g         | <0.040       | 0.040      | 8369549         |
| 1,2-Dichloroethane                  | ug/g         | <0.049       | 0.049      | 8369549         |
| 1,1-Dichloroethylene                | ug/g         | <0.040       | 0.040      | 8369549         |
| cis-1,2-Dichloroethylene            | ug/g         | <0.040       | 0.040      | 8369549         |
| trans-1,2-Dichloroethylene          | ug/g         | <0.040       | 0.040      | 8369549         |
| 1,2-Dichloropropane                 | ug/g         | <0.040       | 0.040      | 8369549         |
| cis-1,3-Dichloropropene             | ug/g         | <0.030       | 0.030      | 8369549         |
| trans-1,3-Dichloropropene           | ug/g         | <0.040       | 0.040      | 8369549         |
| Ethylbenzene                        | ug/g         | <0.010       | 0.010      | 8369549         |
| Ethylene Dibromide                  | ug/g         | <0.040       | 0.040      | 8369549         |
| Hexane                              | ug/g         | <0.040       | 0.040      | 8369549         |
| Methylene Chloride(Dichloromethane) | ug/g         | <0.049       | 0.049      | 8369549         |
| Methyl Ethyl Ketone (2-Butanone)    | ug/g         | <0.40        | 0.40       | 8369549         |
| Methyl Isobutyl Ketone              | ug/g         | <0.40        | 0.40       | 8369549         |
| Methyl t-butyl ether (MTBE)         | ug/g         | <0.040       | 0.040      | 8369549         |
| Styrene                             | ug/g         | <0.040       | 0.040      | 8369549         |
| 1,1,1,2-Tetrachloroethane           | ug/g         | <0.040       | 0.040      | 8369549         |
| RDL = Reportable Detection Limit    |              |              |            |                 |
| QC Batch = Quality Control Batch    |              |              |            |                 |



Bureau Veritas Job #: C2Y3355  
Report Date: 2022/11/30

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

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

|                                   |              |              |            |                 |
|-----------------------------------|--------------|--------------|------------|-----------------|
| <b>Bureau Veritas ID</b>          |              | UJM459       |            |                 |
| <b>Sampling Date</b>              |              | 2022/11/22   |            |                 |
| <b>COC Number</b>                 |              | N/A          |            |                 |
|                                   | <b>UNITS</b> | <b>BH8/8</b> | <b>RDL</b> | <b>QC Batch</b> |
| 1,1,2,2-Tetrachloroethane         | ug/g         | <0.040       | 0.040      | 8369549         |
| Tetrachloroethylene               | ug/g         | <0.040       | 0.040      | 8369549         |
| Toluene                           | ug/g         | <0.020       | 0.020      | 8369549         |
| 1,1,1-Trichloroethane             | ug/g         | <0.040       | 0.040      | 8369549         |
| 1,1,2-Trichloroethane             | ug/g         | <0.040       | 0.040      | 8369549         |
| Trichloroethylene                 | ug/g         | <0.010       | 0.010      | 8369549         |
| Trichlorofluoromethane (FREON 11) | ug/g         | <0.040       | 0.040      | 8369549         |
| Vinyl Chloride                    | ug/g         | <0.019       | 0.019      | 8369549         |
| p+m-Xylene                        | ug/g         | <0.020       | 0.020      | 8369549         |
| o-Xylene                          | ug/g         | <0.020       | 0.020      | 8369549         |
| Total Xylenes                     | ug/g         | <0.020       | 0.020      | 8369549         |
| F1 (C6-C10)                       | ug/g         | <10          | 10         | 8369549         |
| F1 (C6-C10) - BTEX                | ug/g         | <10          | 10         | 8369549         |
| <b>F2-F4 Hydrocarbons</b>         |              |              |            |                 |
| F2 (C10-C16 Hydrocarbons)         | ug/g         | <10          | 10         | 8370975         |
| F3 (C16-C34 Hydrocarbons)         | ug/g         | <50          | 50         | 8370975         |
| F4 (C34-C50 Hydrocarbons)         | ug/g         | <50          | 50         | 8370975         |
| Reached Baseline at C50           | ug/g         | Yes          |            | 8370975         |
| <b>Surrogate Recovery (%)</b>     |              |              |            |                 |
| o-Terphenyl                       | %            | 103          |            | 8370975         |
| 4-Bromofluorobenzene              | %            | 91           |            | 8369549         |
| D10-o-Xylene                      | %            | 120          |            | 8369549         |
| D4-1,2-Dichloroethane             | %            | 105          |            | 8369549         |
| D8-Toluene                        | %            | 93           |            | 8369549         |
| RDL = Reportable Detection Limit  |              |              |            |                 |
| QC Batch = Quality Control Batch  |              |              |            |                 |



Bureau Veritas Job #: C2Y3355  
Report Date: 2022/11/30

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

#### RESULTS OF ANALYSES OF SOIL

|                                   |       |            |          |            |     |          |            |          |
|-----------------------------------|-------|------------|----------|------------|-----|----------|------------|----------|
| Bureau Veritas ID                 |       | UJM449     |          | UJM450     |     |          | UJM456     |          |
| Sampling Date                     |       | 2022/11/22 |          | 2022/11/22 |     |          | 2022/11/22 |          |
| COC Number                        |       | N/A        |          | N/A        |     |          | N/A        |          |
|                                   | UNITS | BH6/4      | QC Batch | BH6/6      | RDL | QC Batch | BH7/6      | QC Batch |
| <b>Inorganics</b>                 |       |            |          |            |     |          |            |          |
| Moisture                          | %     |            |          | 12         | 1.0 | 8366932  |            |          |
| Available (CaCl <sub>2</sub> ) pH | pH    | 7.91       | 8367485  |            |     |          | 7.96       | 8367485  |
| RDL = Reportable Detection Limit  |       |            |          |            |     |          |            |          |
| QC Batch = Quality Control Batch  |       |            |          |            |     |          |            |          |



Bureau Veritas Job #: C2Y3355  
Report Date: 2022/11/30

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

## TEST SUMMARY

**Bureau Veritas ID:** UJM449  
**Sample ID:** BH6/4  
**Matrix:** Soil

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/22

| Test Description                 | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst       |
|----------------------------------|-----------------|---------|------------|---------------|---------------|
| Acid Extractable Metals by ICPMS | ICP/MS          | 8367267 | 2022/11/25 | 2022/11/26    | Azita Fazaeli |
| pH CaCl2 EXTRACT                 | AT              | 8367485 | 2022/11/25 | 2022/11/25    | Taslima Aktar |

**Bureau Veritas ID:** UJM450  
**Sample ID:** BH6/6  
**Matrix:** Soil

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/22

| Test Description           | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst       |
|----------------------------|-----------------|---------|------------|---------------|---------------|
| Acid Extractables by GC/MS | GC/MS           | 8374034 | 2022/11/29 | 2022/11/30    | May Yin Mak   |
| Moisture                   | BAL             | 8366932 | N/A        | 2022/11/24    | Mathew Bowles |

**Bureau Veritas ID:** UJM451  
**Sample ID:** BH6/7  
**Matrix:** Soil

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/22

| Test Description                       | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|----------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Methylnaphthalene Sum                  | CALC            | 8362254 | N/A        | 2022/11/29    | Automated Statchk    |
| 1,3-Dichloropropene Sum                | CALC            | 8362249 | N/A        | 2022/11/28    | Automated Statchk    |
| Petroleum Hydrocarbons F2-F4 in Soil   | GC/FID          | 8370975 | 2022/11/28 | 2022/11/29    | Jeevaraj Jeevaratnam |
| Moisture                               | BAL             | 8366932 | N/A        | 2022/11/24    | Mathew Bowles        |
| PAH Compounds in Soil by GC/MS (SIM)   | GC/MS           | 8372443 | 2022/11/28 | 2022/11/29    | Joe Paino            |
| Volatile Organic Compounds and F1 PHCs | GC/MSFD         | 8369549 | N/A        | 2022/11/27    | Anna Gabrielyan      |

**Bureau Veritas ID:** UJM452  
**Sample ID:** BH10/1  
**Matrix:** Soil

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/22

| Test Description                        | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|-----------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Petroleum Hydro. CCME F1 & BTEX in Soil | HSGC/MSFD       | 8372071 | N/A        | 2022/11/28    | Georgeta Rusu        |
| Petroleum Hydrocarbons F2-F4 in Soil    | GC/FID          | 8370975 | 2022/11/28 | 2022/11/29    | Jeevaraj Jeevaratnam |
| Acid Extractable Metals by ICPMS        | ICP/MS          | 8367267 | 2022/11/25 | 2022/11/26    | Azita Fazaeli        |
| Moisture                                | BAL             | 8366932 | N/A        | 2022/11/24    | Mathew Bowles        |

**Bureau Veritas ID:** UJM453  
**Sample ID:** BH11/1  
**Matrix:** Soil

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/22

| Test Description                        | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|-----------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Petroleum Hydro. CCME F1 & BTEX in Soil | HSGC/MSFD       | 8372071 | N/A        | 2022/11/28    | Georgeta Rusu        |
| Petroleum Hydrocarbons F2-F4 in Soil    | GC/FID          | 8370975 | 2022/11/28 | 2022/11/29    | Jeevaraj Jeevaratnam |
| Acid Extractable Metals by ICPMS        | ICP/MS          | 8367267 | 2022/11/25 | 2022/11/26    | Azita Fazaeli        |
| Moisture                                | BAL             | 8366932 | N/A        | 2022/11/24    | Mathew Bowles        |



Bureau Veritas Job #: C2Y3355  
Report Date: 2022/11/30

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

## TEST SUMMARY

**Bureau Veritas ID:** UJM453 Dup  
**Sample ID:** BH11/1  
**Matrix:** Soil

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/22

| Test Description                        | Instrumentation | Batch   | Extracted | Date Analyzed | Analyst       |
|-----------------------------------------|-----------------|---------|-----------|---------------|---------------|
| Petroleum Hydro. CCME F1 & BTEX in Soil | HSGC/MSFD       | 8372071 | N/A       | 2022/11/28    | Georgeta Rusu |

**Bureau Veritas ID:** UJM454  
**Sample ID:** BH12/4  
**Matrix:** Soil

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/22

| Test Description                        | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|-----------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Petroleum Hydro. CCME F1 & BTEX in Soil | HSGC/MSFD       | 8372071 | N/A        | 2022/11/28    | Georgeta Rusu        |
| Petroleum Hydrocarbons F2-F4 in Soil    | GC/FID          | 8370975 | 2022/11/28 | 2022/11/29    | Jeevaraj Jeevaratnam |
| Moisture                                | BAL             | 8366932 | N/A        | 2022/11/24    | Mathew Bowles        |

**Bureau Veritas ID:** UJM455  
**Sample ID:** BH7/5  
**Matrix:** Soil

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/22

| Test Description                       | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|----------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Methylnaphthalene Sum                  | CALC            | 8362254 | N/A        | 2022/11/29    | Automated Statchk    |
| 1,3-Dichloropropene Sum                | CALC            | 8362249 | N/A        | 2022/11/28    | Automated Statchk    |
| Petroleum Hydrocarbons F2-F4 in Soil   | GC/FID          | 8370975 | 2022/11/28 | 2022/11/29    | Jeevaraj Jeevaratnam |
| Moisture                               | BAL             | 8366932 | N/A        | 2022/11/24    | Mathew Bowles        |
| PAH Compounds in Soil by GC/MS (SIM)   | GC/MS           | 8372443 | 2022/11/28 | 2022/11/29    | Joe Paino            |
| Volatile Organic Compounds and F1 PHCs | GC/MSFD         | 8369549 | N/A        | 2022/11/27    | Anna Gabrielyan      |

**Bureau Veritas ID:** UJM455 Dup  
**Sample ID:** BH7/5  
**Matrix:** Soil

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/22

| Test Description                     | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst       |
|--------------------------------------|-----------------|---------|------------|---------------|---------------|
| Moisture                             | BAL             | 8366932 | N/A        | 2022/11/24    | Mathew Bowles |
| PAH Compounds in Soil by GC/MS (SIM) | GC/MS           | 8372443 | 2022/11/28 | 2022/11/29    | Joe Paino     |

**Bureau Veritas ID:** UJM456  
**Sample ID:** BH7/6  
**Matrix:** Soil

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/22

| Test Description                 | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst           |
|----------------------------------|-----------------|---------|------------|---------------|-------------------|
| Acid Extractable Metals by ICPMS | ICP/MS          | 8367267 | 2022/11/25 | 2022/11/26    | Azita Fazaali     |
| Moisture                         | BAL             | 8366932 | N/A        | 2022/11/24    | Mathew Bowles     |
| OC Pesticides (Selected) & PCB   | GC/ECD          | 8372432 | 2022/11/28 | 2022/11/29    | Li Peng           |
| OC Pesticides Summed Parameters  | CALC            | 8362250 | N/A        | 2022/11/25    | Automated Statchk |
| pH CaCl2 EXTRACT                 | AT              | 8367485 | 2022/11/25 | 2022/11/25    | Taslina Aktar     |





Bureau Veritas Job #: C2Y3355  
Report Date: 2022/11/30

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

## TEST SUMMARY

**Bureau Veritas ID:** UJM457  
**Sample ID:** BH9/8  
**Matrix:** Soil

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/22

| Test Description                        | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|-----------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Petroleum Hydro. CCME F1 & BTEX in Soil | HSGC/MSFD       | 8372071 | N/A        | 2022/11/29    | Georgeta Rusu        |
| Petroleum Hydrocarbons F2-F4 in Soil    | GC/FID          | 8370975 | 2022/11/28 | 2022/11/29    | Jeevaraj Jeevaratnam |
| Moisture                                | BAL             | 8366932 | N/A        | 2022/11/24    | Mathew Bowles        |

**Bureau Veritas ID:** UJM458  
**Sample ID:** DUP54  
**Matrix:** Soil

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/22

| Test Description                        | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|-----------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Petroleum Hydro. CCME F1 & BTEX in Soil | HSGC/MSFD       | 8372071 | N/A        | 2022/11/29    | Georgeta Rusu        |
| Petroleum Hydrocarbons F2-F4 in Soil    | GC/FID          | 8370975 | 2022/11/28 | 2022/11/29    | Jeevaraj Jeevaratnam |
| Moisture                                | BAL             | 8366932 | N/A        | 2022/11/24    | Mathew Bowles        |

**Bureau Veritas ID:** UJM459  
**Sample ID:** BH8/8  
**Matrix:** Soil

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/22

| Test Description                       | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|----------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Methylnaphthalene Sum                  | CALC            | 8362254 | N/A        | 2022/11/29    | Automated Statchk    |
| 1,3-Dichloropropene Sum                | CALC            | 8362249 | N/A        | 2022/11/28    | Automated Statchk    |
| Petroleum Hydrocarbons F2-F4 in Soil   | GC/FID          | 8370975 | 2022/11/28 | 2022/11/29    | Jeevaraj Jeevaratnam |
| Moisture                               | BAL             | 8366932 | N/A        | 2022/11/24    | Mathew Bowles        |
| PAH Compounds in Soil by GC/MS (SIM)   | GC/MS           | 8372443 | 2022/11/28 | 2022/11/29    | Joe Paino            |
| Volatile Organic Compounds and F1 PHCs | GC/MSFD         | 8369549 | N/A        | 2022/11/27    | Anna Gabrielyan      |

**Bureau Veritas ID:** UJM460  
**Sample ID:** BH8/7  
**Matrix:** Soil

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/22

| Test Description                 | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst       |
|----------------------------------|-----------------|---------|------------|---------------|---------------|
| Acid Extractable Metals by ICPMS | ICP/MS          | 8367267 | 2022/11/25 | 2022/11/26    | Azita Fazaeli |



BUREAU  
VERITAS

Bureau Veritas Job #: C2Y3355

Report Date: 2022/11/30

Soil Engineers Ltd

Client Project #: 2206-E054

Site Location: ERIN

Sampler Initials: ANK

### GENERAL COMMENTS

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

|           |       |
|-----------|-------|
| Package 1 | 1.7°C |
|-----------|-------|

Cooler custody seal was present and intact.

Sample UJM457 [BH9/8] : F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

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



Bureau Veritas Job #: C2Y3355  
Report Date: 2022/11/30

## QUALITY ASSURANCE REPORT

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

| QC Batch | Parameter                        | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|----------------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                                  |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8369549  | 4-Bromofluorobenzene             | 2022/11/26 | 101          | 60 - 140  | 100          | 60 - 140  | 92           | %     |           |           |
| 8369549  | D10-o-Xylene                     | 2022/11/26 | 111          | 60 - 130  | 100          | 60 - 130  | 91           | %     |           |           |
| 8369549  | D4-1,2-Dichloroethane            | 2022/11/26 | 100          | 60 - 140  | 100          | 60 - 140  | 102          | %     |           |           |
| 8369549  | D8-Toluene                       | 2022/11/26 | 104          | 60 - 140  | 104          | 60 - 140  | 95           | %     |           |           |
| 8370975  | o-Terphenyl                      | 2022/11/29 | 67           | 60 - 130  | 101          | 60 - 130  | 108          | %     |           |           |
| 8372071  | 1,4-Difluorobenzene              | 2022/11/28 | 99           | 60 - 140  | 99           | 60 - 140  | 99           | %     |           |           |
| 8372071  | 4-Bromofluorobenzene             | 2022/11/28 | 96           | 60 - 140  |              |           | 97           | %     |           |           |
| 8372071  | D10-o-Xylene                     | 2022/11/28 | 88           | 60 - 140  | 86           | 60 - 140  | 83           | %     |           |           |
| 8372071  | D4-1,2-Dichloroethane            | 2022/11/28 | 83           | 60 - 140  | 84           | 60 - 140  | 85           | %     |           |           |
| 8372432  | 2,4,5,6-Tetrachloro-m-xylene     | 2022/11/29 | 92           | 50 - 130  | 86           | 50 - 130  | 81           | %     |           |           |
| 8372432  | Decachlorobiphenyl               | 2022/11/29 | 101          | 50 - 130  | 86           | 50 - 130  | 83           | %     |           |           |
| 8372443  | D10-Anthracene                   | 2022/11/29 | 90           | 50 - 130  | 94           | 50 - 130  | 99           | %     |           |           |
| 8372443  | D14-Terphenyl (FS)               | 2022/11/29 | 102          | 50 - 130  | 107          | 50 - 130  | 110          | %     |           |           |
| 8372443  | D8-Acenaphthylene                | 2022/11/29 | 84           | 50 - 130  | 92           | 50 - 130  | 93           | %     |           |           |
| 8374034  | 2,4,6-Tribromophenol             | 2022/11/30 | 99           | 50 - 130  | 95           | 50 - 130  | 97           | %     |           |           |
| 8374034  | 2-Fluorophenol                   | 2022/11/30 | 70           | 50 - 130  | 47 (1)       | 50 - 130  | 49 (1)       | %     |           |           |
| 8374034  | D5-Phenol                        | 2022/11/30 | 75           | 30 - 130  | 82           | 30 - 130  | 86           | %     |           |           |
| 8366932  | Moisture                         | 2022/11/24 |              |           |              |           |              |       | 4.8       | 20        |
| 8367267  | Acid Extractable Antimony (Sb)   | 2022/11/26 | 101          | 75 - 125  | 97           | 80 - 120  | <0.20        | ug/g  | NC        | 30        |
| 8367267  | Acid Extractable Arsenic (As)    | 2022/11/26 | 105          | 75 - 125  | 98           | 80 - 120  | <1.0         | ug/g  | NC        | 30        |
| 8367267  | Acid Extractable Barium (Ba)     | 2022/11/26 | 103          | 75 - 125  | 97           | 80 - 120  | <0.50        | ug/g  | 1.0       | 30        |
| 8367267  | Acid Extractable Beryllium (Be)  | 2022/11/26 | 105          | 75 - 125  | 96           | 80 - 120  | <0.20        | ug/g  | NC        | 30        |
| 8367267  | Acid Extractable Boron (B)       | 2022/11/26 | 107          | 75 - 125  | 96           | 80 - 120  | <5.0         | ug/g  | NC        | 30        |
| 8367267  | Acid Extractable Cadmium (Cd)    | 2022/11/26 | 102          | 75 - 125  | 95           | 80 - 120  | <0.10        | ug/g  | NC        | 30        |
| 8367267  | Acid Extractable Chromium (Cr)   | 2022/11/26 | 100          | 75 - 125  | 98           | 80 - 120  | <1.0         | ug/g  | 17        | 30        |
| 8367267  | Acid Extractable Cobalt (Co)     | 2022/11/26 | 102          | 75 - 125  | 98           | 80 - 120  | <0.10        | ug/g  | 4.7       | 30        |
| 8367267  | Acid Extractable Copper (Cu)     | 2022/11/26 | 103          | 75 - 125  | 99           | 80 - 120  | <0.50        | ug/g  | 5.9       | 30        |
| 8367267  | Acid Extractable Lead (Pb)       | 2022/11/26 | 98           | 75 - 125  | 94           | 80 - 120  | <1.0         | ug/g  | NC        | 30        |
| 8367267  | Acid Extractable Mercury (Hg)    | 2022/11/26 | 95           | 75 - 125  | 92           | 80 - 120  | <0.050       | ug/g  | NC        | 30        |
| 8367267  | Acid Extractable Molybdenum (Mo) | 2022/11/26 | 103          | 75 - 125  | 97           | 80 - 120  | <0.50        | ug/g  | NC        | 30        |
| 8367267  | Acid Extractable Nickel (Ni)     | 2022/11/26 | 104          | 75 - 125  | 99           | 80 - 120  | <0.50        | ug/g  | 11        | 30        |



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## QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

| QC Batch | Parameter                          | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|------------------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                                    |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8367267  | Acid Extractable Selenium (Se)     | 2022/11/26 | 103          | 75 - 125  | 99           | 80 - 120  | <0.50        | ug/g  | NC        | 30        |
| 8367267  | Acid Extractable Silver (Ag)       | 2022/11/26 | 102          | 75 - 125  | 96           | 80 - 120  | <0.20        | ug/g  | NC        | 30        |
| 8367267  | Acid Extractable Thallium (Tl)     | 2022/11/26 | 98           | 75 - 125  | 94           | 80 - 120  | <0.050       | ug/g  | NC        | 30        |
| 8367267  | Acid Extractable Uranium (U)       | 2022/11/26 | 100          | 75 - 125  | 94           | 80 - 120  | <0.050       | ug/g  | 16        | 30        |
| 8367267  | Acid Extractable Vanadium (V)      | 2022/11/26 | 97           | 75 - 125  | 98           | 80 - 120  | <5.0         | ug/g  | 1.0       | 30        |
| 8367267  | Acid Extractable Zinc (Zn)         | 2022/11/26 | 96           | 75 - 125  | 97           | 80 - 120  | <5.0         | ug/g  | 11        | 30        |
| 8367485  | Available (CaCl2) pH               | 2022/11/25 |              |           | 100          | 97 - 103  |              |       | 0.86      | N/A       |
| 8369549  | 1,1,1,2-Tetrachloroethane          | 2022/11/27 | 98           | 60 - 140  | 98           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | 1,1,1-Trichloroethane              | 2022/11/27 | 101          | 60 - 140  | 101          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | 1,1,2,2-Tetrachloroethane          | 2022/11/27 | 90           | 60 - 140  | 90           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | 1,1,2-Trichloroethane              | 2022/11/27 | 99           | 60 - 140  | 98           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | 1,1-Dichloroethane                 | 2022/11/27 | 93           | 60 - 140  | 93           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | 1,1-Dichloroethylene               | 2022/11/27 | 99           | 60 - 140  | 99           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | 1,2-Dichlorobenzene                | 2022/11/27 | 92           | 60 - 140  | 92           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | 1,2-Dichloroethane                 | 2022/11/27 | 93           | 60 - 140  | 93           | 60 - 130  | <0.049       | ug/g  | NC        | 50        |
| 8369549  | 1,2-Dichloropropane                | 2022/11/27 | 95           | 60 - 140  | 94           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | 1,3-Dichlorobenzene                | 2022/11/27 | 96           | 60 - 140  | 96           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | 1,4-Dichlorobenzene                | 2022/11/27 | 113          | 60 - 140  | 112          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | Acetone (2-Propanone)              | 2022/11/27 | 102          | 60 - 140  | 99           | 60 - 140  | <0.49        | ug/g  | NC        | 50        |
| 8369549  | Benzene                            | 2022/11/27 | 89           | 60 - 140  | 89           | 60 - 130  | <0.0060      | ug/g  | NC        | 50        |
| 8369549  | Bromodichloromethane               | 2022/11/27 | 97           | 60 - 140  | 97           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | Bromoform                          | 2022/11/27 | 93           | 60 - 140  | 93           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | Bromomethane                       | 2022/11/27 | 92           | 60 - 140  | 91           | 60 - 140  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | Carbon Tetrachloride               | 2022/11/27 | 99           | 60 - 140  | 99           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | Chlorobenzene                      | 2022/11/27 | 94           | 60 - 140  | 94           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | Chloroform                         | 2022/11/27 | 95           | 60 - 140  | 95           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | cis-1,2-Dichloroethylene           | 2022/11/27 | 99           | 60 - 140  | 99           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | cis-1,3-Dichloropropene            | 2022/11/27 | 82           | 60 - 140  | 80           | 60 - 130  | <0.030       | ug/g  | NC        | 50        |
| 8369549  | Dibromochloromethane               | 2022/11/27 | 94           | 60 - 140  | 93           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | Dichlorodifluoromethane (FREON 12) | 2022/11/27 | 115          | 60 - 140  | 116          | 60 - 140  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | Ethylbenzene                       | 2022/11/27 | 85           | 60 - 140  | 86           | 60 - 130  | <0.010       | ug/g  | NC        | 50        |



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Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

| QC Batch | Parameter                           | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|-------------------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                                     |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8369549  | Ethylene Dibromide                  | 2022/11/27 | 91           | 60 - 140  | 90           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | F1 (C6-C10) - BTEX                  | 2022/11/27 |              |           |              |           | <10          | ug/g  | NC        | 30        |
| 8369549  | F1 (C6-C10)                         | 2022/11/27 | 93           | 60 - 140  | 92           | 80 - 120  | <10          | ug/g  | NC        | 30        |
| 8369549  | Hexane                              | 2022/11/27 | 102          | 60 - 140  | 102          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | Methyl Ethyl Ketone (2-Butanone)    | 2022/11/27 | 98           | 60 - 140  | 96           | 60 - 140  | <0.40        | ug/g  | NC        | 50        |
| 8369549  | Methyl Isobutyl Ketone              | 2022/11/27 | 97           | 60 - 140  | 95           | 60 - 130  | <0.40        | ug/g  | NC        | 50        |
| 8369549  | Methyl t-butyl ether (MTBE)         | 2022/11/27 | 90           | 60 - 140  | 89           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | Methylene Chloride(Dichloromethane) | 2022/11/27 | 98           | 60 - 140  | 98           | 60 - 130  | <0.049       | ug/g  | NC        | 50        |
| 8369549  | o-Xylene                            | 2022/11/27 | 90           | 60 - 140  | 90           | 60 - 130  | <0.020       | ug/g  | NC        | 50        |
| 8369549  | p+m-Xylene                          | 2022/11/27 | 87           | 60 - 140  | 87           | 60 - 130  | <0.020       | ug/g  | NC        | 50        |
| 8369549  | Styrene                             | 2022/11/27 | 97           | 60 - 140  | 97           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | Tetrachloroethylene                 | 2022/11/27 | 92           | 60 - 140  | 93           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | Toluene                             | 2022/11/27 | 92           | 60 - 140  | 92           | 60 - 130  | <0.020       | ug/g  | NC        | 50        |
| 8369549  | Total Xylenes                       | 2022/11/27 |              |           |              |           | <0.020       | ug/g  | NC        | 50        |
| 8369549  | trans-1,2-Dichloroethylene          | 2022/11/27 | 98           | 60 - 140  | 99           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | trans-1,3-Dichloropropene           | 2022/11/27 | 86           | 60 - 140  | 82           | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | Trichloroethylene                   | 2022/11/27 | 101          | 60 - 140  | 101          | 60 - 130  | <0.010       | ug/g  | NC        | 50        |
| 8369549  | Trichlorofluoromethane (FREON 11)   | 2022/11/27 | 101          | 60 - 140  | 101          | 60 - 130  | <0.040       | ug/g  | NC        | 50        |
| 8369549  | Vinyl Chloride                      | 2022/11/27 | 90           | 60 - 140  | 91           | 60 - 130  | <0.019       | ug/g  | NC        | 50        |
| 8370975  | F2 (C10-C16 Hydrocarbons)           | 2022/11/29 | 70           | 60 - 130  | 105          | 80 - 120  | <10          | ug/g  | NC        | 30        |
| 8370975  | F3 (C16-C34 Hydrocarbons)           | 2022/11/29 | 71           | 60 - 130  | 105          | 80 - 120  | <50          | ug/g  | NC        | 30        |
| 8370975  | F4 (C34-C50 Hydrocarbons)           | 2022/11/29 | 71           | 60 - 130  | 105          | 80 - 120  | <50          | ug/g  | NC        | 30        |
| 8372071  | Benzene                             | 2022/11/28 | 75           | 50 - 140  | 75           | 50 - 140  | <0.020       | ug/g  | NC        | 50        |
| 8372071  | Ethylbenzene                        | 2022/11/28 | 85           | 50 - 140  | 84           | 50 - 140  | <0.020       | ug/g  | NC        | 50        |
| 8372071  | F1 (C6-C10) - BTEX                  | 2022/11/28 |              |           |              |           | <10          | ug/g  | NC        | 30        |
| 8372071  | F1 (C6-C10)                         | 2022/11/28 | 82           | 60 - 140  | 85           | 80 - 120  | <10          | ug/g  | NC        | 30        |
| 8372071  | o-Xylene                            | 2022/11/28 | 82           | 50 - 140  | 81           | 50 - 140  | <0.020       | ug/g  | NC        | 50        |
| 8372071  | p+m-Xylene                          | 2022/11/28 | 82           | 50 - 140  | 82           | 50 - 140  | <0.040       | ug/g  | NC        | 50        |
| 8372071  | Toluene                             | 2022/11/28 | 77           | 50 - 140  | 76           | 50 - 140  | <0.020       | ug/g  | NC        | 50        |
| 8372071  | Total Xylenes                       | 2022/11/28 |              |           |              |           | <0.040       | ug/g  | NC        | 50        |
| 8372432  | a-Chlordane                         | 2022/11/29 | 102          | 50 - 130  | 96           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |



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Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

| QC Batch | Parameter              | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                        |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8372432  | Aldrin                 | 2022/11/29 | 97           | 50 - 130  | 97           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | Dieldrin               | 2022/11/29 | 107          | 50 - 130  | 108          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | Endosulfan I (alpha)   | 2022/11/29 | 93           | 50 - 130  | 93           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | Endosulfan II (beta)   | 2022/11/29 | 98           | 50 - 130  | 95           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | Endrin                 | 2022/11/29 | 99           | 50 - 130  | 97           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | g-Chlordane            | 2022/11/29 | 99           | 50 - 130  | 94           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | Heptachlor epoxide     | 2022/11/29 | 98           | 50 - 130  | 97           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | Heptachlor             | 2022/11/29 | 101          | 50 - 130  | 101          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | Hexachlorobenzene      | 2022/11/29 | 97           | 50 - 130  | 93           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | Hexachlorobutadiene    | 2022/11/29 | 102          | 50 - 130  | 105          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | Hexachloroethane       | 2022/11/29 | 70           | 50 - 130  | 90           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | Lindane                | 2022/11/29 | 87           | 50 - 130  | 93           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | Methoxychlor           | 2022/11/29 | 101          | 50 - 130  | 92           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372432  | o,p-DDD                | 2022/11/29 | 110          | 50 - 130  | 104          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | o,p-DDE                | 2022/11/29 | 106          | 50 - 130  | 97           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | o,p-DDT                | 2022/11/29 | 115          | 50 - 130  | 99           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | p,p-DDD                | 2022/11/29 | 109          | 50 - 130  | 100          | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | p,p-DDE                | 2022/11/29 | 107          | 50 - 130  | 93           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372432  | p,p-DDT                | 2022/11/29 | 109          | 50 - 130  | 96           | 50 - 130  | <0.0020      | ug/g  | NC        | 40        |
| 8372443  | 1-Methylnaphthalene    | 2022/11/29 | 99           | 50 - 130  | 99           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | 2-Methylnaphthalene    | 2022/11/29 | 92           | 50 - 130  | 92           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | Acenaphthene           | 2022/11/29 | 90           | 50 - 130  | 89           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | Acenaphthylene         | 2022/11/29 | 87           | 50 - 130  | 88           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | Anthracene             | 2022/11/29 | 91           | 50 - 130  | 90           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | Benzo(a)anthracene     | 2022/11/29 | 95           | 50 - 130  | 94           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | Benzo(a)pyrene         | 2022/11/29 | 87           | 50 - 130  | 87           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | Benzo(b,j)fluoranthene | 2022/11/29 | 85           | 50 - 130  | 85           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | Benzo(g,h,i)perylene   | 2022/11/29 | 77           | 50 - 130  | 78           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | Benzo(k)fluoranthene   | 2022/11/29 | 90           | 50 - 130  | 89           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | Chrysene               | 2022/11/29 | 88           | 50 - 130  | 87           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | Dibenzo(a,h)anthracene | 2022/11/29 | 82           | 50 - 130  | 81           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |



## QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

| QC Batch | Parameter              | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                        |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8372443  | Fluoranthene           | 2022/11/29 | 97           | 50 - 130  | 97           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | Fluorene               | 2022/11/29 | 90           | 50 - 130  | 90           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | Indeno(1,2,3-cd)pyrene | 2022/11/29 | 81           | 50 - 130  | 81           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | Naphthalene            | 2022/11/29 | 87           | 50 - 130  | 88           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | Phenanthrene           | 2022/11/29 | 86           | 50 - 130  | 85           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8372443  | Pyrene                 | 2022/11/29 | 99           | 50 - 130  | 99           | 50 - 130  | <0.0050      | ug/g  | NC        | 40        |
| 8374034  | 2,4,5-Trichlorophenol  | 2022/11/30 | 102          | 50 - 130  | 89           | 50 - 130  | <0.05        | ug/g  | NC        | 50        |
| 8374034  | 2,4,6-Trichlorophenol  | 2022/11/30 | 81           | 50 - 130  | 84           | 50 - 130  | <0.05        | ug/g  | NC        | 50        |
| 8374034  | 2,4-Dichlorophenol     | 2022/11/30 | 79           | 50 - 130  | 84           | 50 - 130  | <0.05        | ug/g  | NC        | 50        |
| 8374034  | 2-Chlorophenol         | 2022/11/30 | 71           | 50 - 130  | 70           | 50 - 130  | <0.05        | ug/g  | NC        | 50        |
| 8374034  | 3 & 4-Chlorophenol     | 2022/11/30 | 85           | 10 - 130  | 79           | 10 - 130  | <0.05        | ug/g  | NC        | 50        |
| 8374034  | Pentachlorophenol      | 2022/11/30 | 102          | 50 - 130  | 99           | 50 - 130  | <0.05        | ug/g  | NC        | 50        |

N/A = Not Applicable

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

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

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

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

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

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

(1) Surrogate recovery was below the lower control limit. This may represent a low bias in some results.



Bureau Veritas Job #: C2Y3355  
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Soil Engineers Ltd  
Client Project #: 2206-E054  
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### VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

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

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# ***Soil Engineers Ltd.***

CONSULTING ENGINEERS

**GEOTECHNICAL • ENVIRONMENTAL • HYDROGEOLOGICAL • BUILDING SCIENCE**

90 WEST BEAVER CREEK ROAD, SUITE #100, RICHMOND HILL, ONTARIO L4B 1E7 • TEL (416) 754-8515 • FAX (905) 881-83

|                     |                     |                     |                     |                     |                     |                   |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------------|
| <b>BARRIE</b>       | <b>MISSISSAUGA</b>  | <b>OSHAWA</b>       | <b>NEWMARKET</b>    | <b>GRAVENHURST</b>  | <b>PETERBOROUGH</b> | <b>HAMILTON</b>   |
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## **APPENDIX 'D'**

### **CERTIFICATE OF ANALYSIS (GROUNDWATER SAMPLES)**

**Reference No. 2206-E054**



Your Project #: 2206-E054  
Site Location: ERIN  
Your C.O.C. #: na

**Attention: Madan K. Suwal**

Soil Engineers Ltd  
90 West Beaver Creek Road  
Unit 100  
Richmond Hill, ON  
CANADA L4B 1E7

**Report Date: 2022/11/28**  
Report #: R7407287  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C2Y4331**

**Received: 2022/11/23, 15:06**

Sample Matrix: Ground Water  
# Samples Received: 6

| Analyses                                  | Quantity | Date<br>Extracted | Date<br>Analyzed | Laboratory Method | Analytical Method |
|-------------------------------------------|----------|-------------------|------------------|-------------------|-------------------|
| Methylnaphthalene Sum                     | 5        | N/A               | 2022/11/25       | CAM SOP-00301     | EPA 8270D m       |
| 1,3-Dichloropropene Sum                   | 1        | N/A               | 2022/11/25       |                   | EPA 8260C m       |
| 1,3-Dichloropropene Sum                   | 5        | N/A               | 2022/11/26       |                   | EPA 8260C m       |
| Acid Extractables by GC/MS                | 1        | 2022/11/25        | 2022/11/26       | CAM SOP-00332     | EPA 8270E m       |
| Petroleum Hydrocarbons F2-F4 in Water (1) | 5        | 2022/11/24        | 2022/11/25       | CAM SOP-00316     | CCME PHC-CWS m    |
| Dissolved Metals by ICPMS                 | 4        | N/A               | 2022/11/24       | CAM SOP-00447     | EPA 6020B m       |
| OC Pesticides (Selected) & PCB (2)        | 1        | 2022/11/26        | 2022/11/27       | CAM SOP-00307     | EPA 8081A/8082B m |
| OC Pesticides Summed Parameters           | 1        | N/A               | 2022/11/25       | CAM SOP-00307     | EPA 8081A/8082B m |
| PAH Compounds in Water by GC/MS (SIM)     | 5        | 2022/11/24        | 2022/11/25       | CAM SOP-00318     | EPA 8270D m       |
| Volatile Organic Compounds and F1 PHCs    | 5        | N/A               | 2022/11/25       | CAM SOP-00230     | EPA 8260C m       |
| Volatile Organic Compounds in Water       | 1        | N/A               | 2022/11/25       | CAM SOP-00228     | EPA 8260C m       |

**Remarks:**

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

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

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

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

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

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



Your Project #: 2206-E054  
Site Location: ERIN  
Your C.O.C. #: na

**Attention: Madan K. Suwal**

Soil Engineers Ltd  
90 West Beaver Creek Road  
Unit 100  
Richmond Hill, ON  
CANADA L4B 1E7

**Report Date: 2022/11/28**  
Report #: R7407287  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C2Y4331**

**Received: 2022/11/23, 15:06**

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

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

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

(2) Chlordane ( Total) = Alpha Chlordane + Gamma Chlordane

Encryption Key

Antonella Brasil  
Senior Project Manager  
28 Nov 2022 16:46:33

Please direct all questions regarding this Certificate of Analysis to:

Antonella Brasil, Senior Project Manager  
Email: Antonella.Brasil@bureauveritas.com  
Phone# (905)817-5817

=====

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Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

### O.REG 153 CHLOROPHENOLS (WATER)

|                                                                                                            |       |            |     |          |
|------------------------------------------------------------------------------------------------------------|-------|------------|-----|----------|
| Bureau Veritas ID                                                                                          |       | UJT430     |     |          |
| Sampling Date                                                                                              |       | 2022/11/22 |     |          |
| COC Number                                                                                                 |       | na         |     |          |
|                                                                                                            | UNITS | MW6        | RDL | QC Batch |
| <b>Phenolics</b>                                                                                           |       |            |     |          |
| 2-Chlorophenol                                                                                             | ug/L  | <0.1       | 0.1 | 8368493  |
| 2,4-Dichlorophenol                                                                                         | ug/L  | <0.1       | 0.1 | 8368493  |
| 2,4,6-Trichlorophenol                                                                                      | ug/L  | <0.1       | 0.1 | 8368493  |
| Pentachlorophenol                                                                                          | ug/L  | <0.1       | 0.1 | 8368493  |
| 2,4,5-Trichlorophenol                                                                                      | ug/L  | <0.1       | 0.1 | 8368493  |
| 3 & 4-Chlorophenol                                                                                         | ug/L  | <0.1       | 0.1 | 8368493  |
| <b>Surrogate Recovery (%)</b>                                                                              |       |            |     |          |
| 2,4,6-Tribromophenol                                                                                       | %     | 95         |     | 8368493  |
| 2-Fluorophenol                                                                                             | %     | 48 (1)     |     | 8368493  |
| D5-Phenol                                                                                                  | %     | 70         |     | 8368493  |
| RDL = Reportable Detection Limit                                                                           |       |            |     |          |
| QC Batch = Quality Control Batch                                                                           |       |            |     |          |
| (1) Surrogate recovery was below the lower control limit. This may represent a lower bias in some results. |       |            |     |          |



Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

### O.REG 153 DISSOLVED ICPMS METALS (WATER)

| Bureau Veritas ID                |       | UJT427     | UJT428     | UJT429     | UJT430     |       |          |
|----------------------------------|-------|------------|------------|------------|------------|-------|----------|
| Sampling Date                    |       | 2022/11/22 | 2022/11/22 | 2022/11/22 | 2022/11/22 |       |          |
| COC Number                       |       | na         | na         | na         | na         |       |          |
|                                  | UNITS | MW3        | MW4        | MW5        | MW6        | RDL   | QC Batch |
| <b>Metals</b>                    |       |            |            |            |            |       |          |
| Dissolved Antimony (Sb)          | ug/L  | <0.50      | 0.54       | <0.50      | <0.50      | 0.50  | 8364770  |
| Dissolved Arsenic (As)           | ug/L  | <1.0       | <1.0       | <1.0       | <1.0       | 1.0   | 8364770  |
| Dissolved Barium (Ba)            | ug/L  | 27         | 85         | 58         | 39         | 2.0   | 8364770  |
| Dissolved Beryllium (Be)         | ug/L  | <0.40      | <0.40      | <0.40      | <0.40      | 0.40  | 8364770  |
| Dissolved Boron (B)              | ug/L  | <10        | 38         | 32         | 24         | 10    | 8364770  |
| Dissolved Cadmium (Cd)           | ug/L  | <0.090     | <0.090     | <0.090     | <0.090     | 0.090 | 8364770  |
| Dissolved Chromium (Cr)          | ug/L  | <5.0       | <5.0       | <5.0       | <5.0       | 5.0   | 8364770  |
| Dissolved Cobalt (Co)            | ug/L  | <0.50      | <0.50      | <0.50      | <0.50      | 0.50  | 8364770  |
| Dissolved Copper (Cu)            | ug/L  | 1.2        | 1.1        | 1.5        | 2.6        | 0.90  | 8364770  |
| Dissolved Lead (Pb)              | ug/L  | <0.50      | <0.50      | <0.50      | <0.50      | 0.50  | 8364770  |
| Dissolved Molybdenum (Mo)        | ug/L  | <0.50      | 5.3        | 3.3        | 4.3        | 0.50  | 8364770  |
| Dissolved Nickel (Ni)            | ug/L  | <1.0       | <1.0       | <1.0       | <1.0       | 1.0   | 8364770  |
| Dissolved Selenium (Se)          | ug/L  | <2.0       | <2.0       | <2.0       | <2.0       | 2.0   | 8364770  |
| Dissolved Silver (Ag)            | ug/L  | <0.090     | <0.090     | <0.090     | <0.090     | 0.090 | 8364770  |
| Dissolved Thallium (Tl)          | ug/L  | <0.050     | <0.050     | <0.050     | <0.050     | 0.050 | 8364770  |
| Dissolved Uranium (U)            | ug/L  | 0.28       | 0.69       | 0.32       | 0.38       | 0.10  | 8364770  |
| Dissolved Vanadium (V)           | ug/L  | <0.50      | 0.57       | <0.50      | <0.50      | 0.50  | 8364770  |
| Dissolved Zinc (Zn)              | ug/L  | <5.0       | <5.0       | <5.0       | <5.0       | 5.0   | 8364770  |
| RDL = Reportable Detection Limit |       |            |            |            |            |       |          |
| QC Batch = Quality Control Batch |       |            |            |            |            |       |          |



Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

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

|                                    |              |            |            |                 |
|------------------------------------|--------------|------------|------------|-----------------|
| <b>Bureau Veritas ID</b>           |              | UJT430     |            |                 |
| <b>Sampling Date</b>               |              | 2022/11/22 |            |                 |
| <b>COC Number</b>                  |              | na         |            |                 |
|                                    | <b>UNITS</b> | <b>MW6</b> | <b>RDL</b> | <b>QC Batch</b> |
| <b>Calculated Parameters</b>       |              |            |            |                 |
| Chlordane (Total)                  | ug/L         | <0.005     | 0.005      | 8362828         |
| o,p-DDD + p,p-DDD                  | ug/L         | <0.005     | 0.005      | 8362828         |
| o,p-DDE + p,p-DDE                  | ug/L         | <0.005     | 0.005      | 8362828         |
| o,p-DDT + p,p-DDT                  | ug/L         | <0.005     | 0.005      | 8362828         |
| Total Endosulfan                   | ug/L         | <0.005     | 0.005      | 8362828         |
| <b>Pesticides &amp; Herbicides</b> |              |            |            |                 |
| Aldrin                             | ug/L         | <0.005     | 0.005      | 8369484         |
| Dieldrin                           | ug/L         | <0.005     | 0.005      | 8369484         |
| a-Chlordane                        | ug/L         | <0.005     | 0.005      | 8369484         |
| g-Chlordane                        | ug/L         | <0.005     | 0.005      | 8369484         |
| o,p-DDD                            | ug/L         | <0.005     | 0.005      | 8369484         |
| p,p-DDD                            | ug/L         | <0.005     | 0.005      | 8369484         |
| o,p-DDE                            | ug/L         | <0.005     | 0.005      | 8369484         |
| p,p-DDE                            | ug/L         | <0.005     | 0.005      | 8369484         |
| o,p-DDT                            | ug/L         | <0.005     | 0.005      | 8369484         |
| p,p-DDT                            | ug/L         | <0.005     | 0.005      | 8369484         |
| Lindane                            | ug/L         | <0.003     | 0.003      | 8369484         |
| Endosulfan I (alpha)               | ug/L         | <0.005     | 0.005      | 8369484         |
| Endosulfan II (beta)               | ug/L         | <0.005     | 0.005      | 8369484         |
| Endrin                             | ug/L         | <0.005     | 0.005      | 8369484         |
| Heptachlor                         | ug/L         | <0.005     | 0.005      | 8369484         |
| Heptachlor epoxide                 | ug/L         | <0.005     | 0.005      | 8369484         |
| Hexachlorobenzene                  | ug/L         | <0.005     | 0.005      | 8369484         |
| Hexachlorobutadiene                | ug/L         | <0.009     | 0.009      | 8369484         |
| Hexachloroethane                   | ug/L         | <0.01      | 0.01       | 8369484         |
| Methoxychlor                       | ug/L         | <0.01      | 0.01       | 8369484         |
| <b>Surrogate Recovery (%)</b>      |              |            |            |                 |
| 2,4,5,6-Tetrachloro-m-xylene       | %            | 64         |            | 8369484         |
| Decachlorobiphenyl                 | %            | 81         |            | 8369484         |
| RDL = Reportable Detection Limit   |              |            |            |                 |
| QC Batch = Quality Control Batch   |              |            |            |                 |



Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

### O.REG 153 PAHS (GROUND WATER)

| Bureau Veritas ID |       | UJT427     | UJT428     |     |          | UJT428      |     |          | UJT429     |     |          |
|-------------------|-------|------------|------------|-----|----------|-------------|-----|----------|------------|-----|----------|
| Sampling Date     |       | 2022/11/22 | 2022/11/22 |     |          | 2022/11/22  |     |          | 2022/11/22 |     |          |
| COC Number        |       | na         | na         |     |          | na          |     |          | na         |     |          |
|                   | UNITS | MW3        | MW4        | RDL | QC Batch | MW4 Lab-Dup | RDL | QC Batch | MW5        | RDL | QC Batch |

#### Calculated Parameters

|                           |      |        |        |       |         |  |  |  |        |       |         |
|---------------------------|------|--------|--------|-------|---------|--|--|--|--------|-------|---------|
| Methylnaphthalene, 2-(1-) | ug/L | <0.071 | <0.071 | 0.071 | 8362383 |  |  |  | <0.071 | 0.071 | 8362383 |
|---------------------------|------|--------|--------|-------|---------|--|--|--|--------|-------|---------|

#### Polyaromatic Hydrocarbons

|                        |      |         |         |        |         |         |        |         |         |        |         |
|------------------------|------|---------|---------|--------|---------|---------|--------|---------|---------|--------|---------|
| Acenaphthene           | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |
| Acenaphthylene         | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |
| Anthracene             | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |
| Benzo(a)anthracene     | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |
| Benzo(a)pyrene         | ug/L | <0.0090 | <0.0090 | 0.0090 | 8365857 | <0.0090 | 0.0090 | 8365857 | <0.0090 | 0.0090 | 8365857 |
| Benzo(b,j)fluoranthene | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |
| Benzo(g,h,i)perylene   | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |
| Benzo(k)fluoranthene   | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |
| Chrysene               | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |
| Dibenzo(a,h)anthracene | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |
| Fluoranthene           | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |
| Fluorene               | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |
| Indeno(1,2,3-cd)pyrene | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |
| 1-Methylnaphthalene    | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |
| 2-Methylnaphthalene    | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |
| Naphthalene            | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |
| Phenanthrene           | ug/L | <0.030  | <0.030  | 0.030  | 8365857 | <0.030  | 0.030  | 8365857 | <0.030  | 0.030  | 8365857 |
| Pyrene                 | ug/L | <0.050  | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 | <0.050  | 0.050  | 8365857 |

#### Surrogate Recovery (%)

|                    |   |    |    |  |         |    |  |         |     |  |         |
|--------------------|---|----|----|--|---------|----|--|---------|-----|--|---------|
| D10-Anthracene     | % | 97 | 80 |  | 8365857 | 82 |  | 8365857 | 100 |  | 8365857 |
| D14-Terphenyl (FS) | % | 92 | 92 |  | 8365857 | 93 |  | 8365857 | 95  |  | 8365857 |
| D8-Acenaphthylene  | % | 88 | 84 |  | 8365857 | 83 |  | 8365857 | 89  |  | 8365857 |

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate



Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

### O.REG 153 PAHS (GROUND WATER)

|                                  |              |            |              |            |                 |
|----------------------------------|--------------|------------|--------------|------------|-----------------|
| <b>Bureau Veritas ID</b>         |              | UJT430     | UJT432       |            |                 |
| <b>Sampling Date</b>             |              | 2022/11/22 | 2022/11/22   |            |                 |
| <b>COC Number</b>                |              | na         | na           |            |                 |
|                                  | <b>UNITS</b> | <b>MW6</b> | <b>DUPW1</b> | <b>RDL</b> | <b>QC Batch</b> |
| <b>Calculated Parameters</b>     |              |            |              |            |                 |
| Methylnaphthalene, 2-(1-)        | ug/L         | 0.10       | <0.071       | 0.071      | 8362383         |
| <b>Polyaromatic Hydrocarbons</b> |              |            |              |            |                 |
| Acenaphthene                     | ug/L         | <0.050     | <0.050       | 0.050      | 8365857         |
| Acenaphthylene                   | ug/L         | <0.050     | <0.050       | 0.050      | 8365857         |
| Anthracene                       | ug/L         | <0.050     | <0.050       | 0.050      | 8365857         |
| Benzo(a)anthracene               | ug/L         | <0.050     | <0.050       | 0.050      | 8365857         |
| Benzo(a)pyrene                   | ug/L         | <0.0090    | <0.0090      | 0.0090     | 8365857         |
| Benzo(b/j)fluoranthene           | ug/L         | <0.050     | <0.050       | 0.050      | 8365857         |
| Benzo(g,h,i)perylene             | ug/L         | <0.050     | <0.050       | 0.050      | 8365857         |
| Benzo(k)fluoranthene             | ug/L         | <0.050     | <0.050       | 0.050      | 8365857         |
| Chrysene                         | ug/L         | <0.050     | <0.050       | 0.050      | 8365857         |
| Dibenzo(a,h)anthracene           | ug/L         | <0.050     | <0.050       | 0.050      | 8365857         |
| Fluoranthene                     | ug/L         | <0.050     | <0.050       | 0.050      | 8365857         |
| Fluorene                         | ug/L         | <0.050     | <0.050       | 0.050      | 8365857         |
| Indeno(1,2,3-cd)pyrene           | ug/L         | <0.050     | <0.050       | 0.050      | 8365857         |
| 1-Methylnaphthalene              | ug/L         | 0.051      | <0.050       | 0.050      | 8365857         |
| 2-Methylnaphthalene              | ug/L         | 0.050      | <0.050       | 0.050      | 8365857         |
| Naphthalene                      | ug/L         | <0.050     | <0.050       | 0.050      | 8365857         |
| Phenanthrene                     | ug/L         | <0.030     | <0.030       | 0.030      | 8365857         |
| Pyrene                           | ug/L         | <0.050     | <0.050       | 0.050      | 8365857         |
| <b>Surrogate Recovery (%)</b>    |              |            |              |            |                 |
| D10-Anthracene                   | %            | 103        | 105          |            | 8365857         |
| D14-Terphenyl (FS)               | %            | 95         | 96           |            | 8365857         |
| D8-Acenaphthylene                | %            | 91         | 93           |            | 8365857         |
| RDL = Reportable Detection Limit |              |            |              |            |                 |
| QC Batch = Quality Control Batch |              |            |              |            |                 |





Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

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

| Bureau Veritas ID                        |       | UJT427     |      |          | UJT427      |      |          | UJT428     |      |          |
|------------------------------------------|-------|------------|------|----------|-------------|------|----------|------------|------|----------|
| Sampling Date                            |       | 2022/11/22 |      |          | 2022/11/22  |      |          | 2022/11/22 |      |          |
| COC Number                               |       | na         |      |          | na          |      |          | na         |      |          |
|                                          | UNITS | MW3        | RDL  | QC Batch | MW3 Lab-Dup | RDL  | QC Batch | MW4        | RDL  | QC Batch |
| <b>Calculated Parameters</b>             |       |            |      |          |             |      |          |            |      |          |
| 1,3-Dichloropropene (cis+trans)          | ug/L  | <0.50      | 0.50 | 8363263  |             |      |          | <0.50      | 0.50 | 8363263  |
| <b>Volatile Organics</b>                 |       |            |      |          |             |      |          |            |      |          |
| Acetone (2-Propanone)                    | ug/L  | <10        | 10   | 8365179  | <10         | 10   | 8365179  | <10        | 10   | 8365179  |
| Benzene                                  | ug/L  | <0.17      | 0.17 | 8365179  | <0.17       | 0.17 | 8365179  | 0.49       | 0.17 | 8365179  |
| Bromodichloromethane                     | ug/L  | <0.50      | 0.50 | 8365179  | <0.50       | 0.50 | 8365179  | <0.50      | 0.50 | 8365179  |
| Bromoform                                | ug/L  | <1.0       | 1.0  | 8365179  | <1.0        | 1.0  | 8365179  | <1.0       | 1.0  | 8365179  |
| Bromomethane                             | ug/L  | <0.50      | 0.50 | 8365179  | <0.50       | 0.50 | 8365179  | <0.50      | 0.50 | 8365179  |
| Carbon Tetrachloride                     | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | <0.20      | 0.20 | 8365179  |
| Chlorobenzene                            | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | <0.20      | 0.20 | 8365179  |
| Chloroform                               | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | <0.20      | 0.20 | 8365179  |
| Dibromochloromethane                     | ug/L  | <0.50      | 0.50 | 8365179  | <0.50       | 0.50 | 8365179  | <0.50      | 0.50 | 8365179  |
| 1,2-Dichlorobenzene                      | ug/L  | <0.50      | 0.50 | 8365179  | <0.50       | 0.50 | 8365179  | <0.50      | 0.50 | 8365179  |
| 1,3-Dichlorobenzene                      | ug/L  | <0.50      | 0.50 | 8365179  | <0.50       | 0.50 | 8365179  | <0.50      | 0.50 | 8365179  |
| 1,4-Dichlorobenzene                      | ug/L  | <0.50      | 0.50 | 8365179  | <0.50       | 0.50 | 8365179  | <0.50      | 0.50 | 8365179  |
| Dichlorodifluoromethane (FREON 12)       | ug/L  | <1.0       | 1.0  | 8365179  | <1.0        | 1.0  | 8365179  | <1.0       | 1.0  | 8365179  |
| 1,1-Dichloroethane                       | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | <0.20      | 0.20 | 8365179  |
| 1,2-Dichloroethane                       | ug/L  | <0.50      | 0.50 | 8365179  | <0.50       | 0.50 | 8365179  | <0.50      | 0.50 | 8365179  |
| 1,1-Dichloroethylene                     | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | <0.20      | 0.20 | 8365179  |
| cis-1,2-Dichloroethylene                 | ug/L  | <0.50      | 0.50 | 8365179  | <0.50       | 0.50 | 8365179  | <0.50      | 0.50 | 8365179  |
| trans-1,2-Dichloroethylene               | ug/L  | <0.50      | 0.50 | 8365179  | <0.50       | 0.50 | 8365179  | <0.50      | 0.50 | 8365179  |
| 1,2-Dichloropropane                      | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | <0.20      | 0.20 | 8365179  |
| cis-1,3-Dichloropropene                  | ug/L  | <0.30      | 0.30 | 8365179  | <0.30       | 0.30 | 8365179  | <0.30      | 0.30 | 8365179  |
| trans-1,3-Dichloropropene                | ug/L  | <0.40      | 0.40 | 8365179  | <0.40       | 0.40 | 8365179  | <0.40      | 0.40 | 8365179  |
| Ethylbenzene                             | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | 0.22       | 0.20 | 8365179  |
| Ethylene Dibromide                       | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | <0.20      | 0.20 | 8365179  |
| Hexane                                   | ug/L  | <1.0       | 1.0  | 8365179  | <1.0        | 1.0  | 8365179  | <1.0       | 1.0  | 8365179  |
| Methylene Chloride(Dichloromethane)      | ug/L  | <2.0       | 2.0  | 8365179  | <2.0        | 2.0  | 8365179  | <2.0       | 2.0  | 8365179  |
| Methyl Ethyl Ketone (2-Butanone)         | ug/L  | <10        | 10   | 8365179  | <10         | 10   | 8365179  | <10        | 10   | 8365179  |
| Methyl Isobutyl Ketone                   | ug/L  | <5.0       | 5.0  | 8365179  | <5.0        | 5.0  | 8365179  | <5.0       | 5.0  | 8365179  |
| Methyl t-butyl ether (MTBE)              | ug/L  | <0.50      | 0.50 | 8365179  | <0.50       | 0.50 | 8365179  | <0.50      | 0.50 | 8365179  |
| Styrene                                  | ug/L  | <0.50      | 0.50 | 8365179  | <0.50       | 0.50 | 8365179  | <0.50      | 0.50 | 8365179  |
| 1,1,1,2-Tetrachloroethane                | ug/L  | <0.50      | 0.50 | 8365179  | <0.50       | 0.50 | 8365179  | <0.50      | 0.50 | 8365179  |
| 1,1,2,2-Tetrachloroethane                | ug/L  | <0.50      | 0.50 | 8365179  | <0.50       | 0.50 | 8365179  | <0.50      | 0.50 | 8365179  |
| Tetrachloroethylene                      | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | <0.20      | 0.20 | 8365179  |
| RDL = Reportable Detection Limit         |       |            |      |          |             |      |          |            |      |          |
| QC Batch = Quality Control Batch         |       |            |      |          |             |      |          |            |      |          |
| Lab-Dup = Laboratory Initiated Duplicate |       |            |      |          |             |      |          |            |      |          |



Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

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

| Bureau Veritas ID                                                                                                |       | UJT427     |      |          | UJT427      |      |          | UJT428     |      |          |
|------------------------------------------------------------------------------------------------------------------|-------|------------|------|----------|-------------|------|----------|------------|------|----------|
| Sampling Date                                                                                                    |       | 2022/11/22 |      |          | 2022/11/22  |      |          | 2022/11/22 |      |          |
| COC Number                                                                                                       |       | na         |      |          | na          |      |          | na         |      |          |
|                                                                                                                  | UNITS | MW3        | RDL  | QC Batch | MW3 Lab-Dup | RDL  | QC Batch | MW4        | RDL  | QC Batch |
| Toluene                                                                                                          | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | 1.1        | 0.20 | 8365179  |
| 1,1,1-Trichloroethane                                                                                            | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | <0.20      | 0.20 | 8365179  |
| 1,1,2-Trichloroethane                                                                                            | ug/L  | <0.50      | 0.50 | 8365179  | <0.50       | 0.50 | 8365179  | <0.50      | 0.50 | 8365179  |
| Trichloroethylene                                                                                                | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | <0.20      | 0.20 | 8365179  |
| Trichlorofluoromethane (FREON 11)                                                                                | ug/L  | <0.50      | 0.50 | 8365179  | <0.50       | 0.50 | 8365179  | <0.50      | 0.50 | 8365179  |
| Vinyl Chloride                                                                                                   | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | <0.20      | 0.20 | 8365179  |
| p+m-Xylene                                                                                                       | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | 0.43       | 0.20 | 8365179  |
| o-Xylene                                                                                                         | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | 0.25       | 0.20 | 8365179  |
| Total Xylenes                                                                                                    | ug/L  | <0.20      | 0.20 | 8365179  | <0.20       | 0.20 | 8365179  | 0.68       | 0.20 | 8365179  |
| F1 (C6-C10)                                                                                                      | ug/L  | <25        | 25   | 8365179  | <25         | 25   | 8365179  | <25        | 25   | 8365179  |
| F1 (C6-C10) - BTEX                                                                                               | ug/L  | <25        | 25   | 8365179  | <25         | 25   | 8365179  | <25        | 25   | 8365179  |
| <b>F2-F4 Hydrocarbons</b>                                                                                        |       |            |      |          |             |      |          |            |      |          |
| F2 (C10-C16 Hydrocarbons)                                                                                        | ug/L  | <100       | 100  | 8365892  |             |      |          | <100       | 100  | 8365892  |
| F3 (C16-C34 Hydrocarbons)                                                                                        | ug/L  | <200       | 200  | 8365892  |             |      |          | <200       | 200  | 8365892  |
| F4 (C34-C50 Hydrocarbons)                                                                                        | ug/L  | <200       | 200  | 8365892  |             |      |          | <200       | 200  | 8365892  |
| Reached Baseline at C50                                                                                          | ug/L  | Yes        |      | 8365892  |             |      |          | Yes        |      | 8365892  |
| <b>Surrogate Recovery (%)</b>                                                                                    |       |            |      |          |             |      |          |            |      |          |
| o-Terphenyl                                                                                                      | %     | 100        |      | 8365892  |             |      |          | 99         |      | 8365892  |
| 4-Bromofluorobenzene                                                                                             | %     | 91         |      | 8365179  | 90          |      | 8365179  | 90         |      | 8365179  |
| D4-1,2-Dichloroethane                                                                                            | %     | 99         |      | 8365179  | 100         |      | 8365179  | 101        |      | 8365179  |
| D8-Toluene                                                                                                       | %     | 98         |      | 8365179  | 98          |      | 8365179  | 97         |      | 8365179  |
| RDL = Reportable Detection Limit<br>QC Batch = Quality Control Batch<br>Lab-Dup = Laboratory Initiated Duplicate |       |            |      |          |             |      |          |            |      |          |



Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

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

| Bureau Veritas ID                        |       | UJT428         |     |          | UJT429     | UJT430     | UJT432     |      |          |
|------------------------------------------|-------|----------------|-----|----------|------------|------------|------------|------|----------|
| Sampling Date                            |       | 2022/11/22     |     |          | 2022/11/22 | 2022/11/22 | 2022/11/22 |      |          |
| COC Number                               |       | na             |     |          | na         | na         | na         |      |          |
|                                          | UNITS | MW4<br>Lab-Dup | RDL | QC Batch | MW5        | MW6        | DUPW1      | RDL  | QC Batch |
| <b>Calculated Parameters</b>             |       |                |     |          |            |            |            |      |          |
| 1,3-Dichloropropene (cis+trans)          | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8363263  |
| <b>Volatile Organics</b>                 |       |                |     |          |            |            |            |      |          |
| Acetone (2-Propanone)                    | ug/L  |                |     |          | <10        | <10        | <10        | 10   | 8365179  |
| Benzene                                  | ug/L  |                |     |          | 0.65       | 0.33       | <0.17      | 0.17 | 8365179  |
| Bromodichloromethane                     | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8365179  |
| Bromoform                                | ug/L  |                |     |          | <1.0       | <1.0       | <1.0       | 1.0  | 8365179  |
| Bromomethane                             | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8365179  |
| Carbon Tetrachloride                     | ug/L  |                |     |          | <0.20      | <0.20      | <0.20      | 0.20 | 8365179  |
| Chlorobenzene                            | ug/L  |                |     |          | <0.20      | <0.20      | <0.20      | 0.20 | 8365179  |
| Chloroform                               | ug/L  |                |     |          | <0.20      | <0.20      | <0.20      | 0.20 | 8365179  |
| Dibromochloromethane                     | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8365179  |
| 1,2-Dichlorobenzene                      | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8365179  |
| 1,3-Dichlorobenzene                      | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8365179  |
| 1,4-Dichlorobenzene                      | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8365179  |
| Dichlorodifluoromethane (FREON 12)       | ug/L  |                |     |          | <1.0       | <1.0       | <1.0       | 1.0  | 8365179  |
| 1,1-Dichloroethane                       | ug/L  |                |     |          | <0.20      | <0.20      | <0.20      | 0.20 | 8365179  |
| 1,2-Dichloroethane                       | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8365179  |
| 1,1-Dichloroethylene                     | ug/L  |                |     |          | <0.20      | <0.20      | <0.20      | 0.20 | 8365179  |
| cis-1,2-Dichloroethylene                 | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8365179  |
| trans-1,2-Dichloroethylene               | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8365179  |
| 1,2-Dichloropropane                      | ug/L  |                |     |          | <0.20      | <0.20      | <0.20      | 0.20 | 8365179  |
| cis-1,3-Dichloropropene                  | ug/L  |                |     |          | <0.30      | <0.30      | <0.30      | 0.30 | 8365179  |
| trans-1,3-Dichloropropene                | ug/L  |                |     |          | <0.40      | <0.40      | <0.40      | 0.40 | 8365179  |
| Ethylbenzene                             | ug/L  |                |     |          | 0.27       | <0.20      | <0.20      | 0.20 | 8365179  |
| Ethylene Dibromide                       | ug/L  |                |     |          | <0.20      | <0.20      | <0.20      | 0.20 | 8365179  |
| Hexane                                   | ug/L  |                |     |          | <1.0       | <1.0       | <1.0       | 1.0  | 8365179  |
| Methylene Chloride(Dichloromethane)      | ug/L  |                |     |          | <2.0       | <2.0       | <2.0       | 2.0  | 8365179  |
| Methyl Ethyl Ketone (2-Butanone)         | ug/L  |                |     |          | <10        | <10        | <10        | 10   | 8365179  |
| Methyl Isobutyl Ketone                   | ug/L  |                |     |          | <5.0       | <5.0       | <5.0       | 5.0  | 8365179  |
| Methyl t-butyl ether (MTBE)              | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8365179  |
| Styrene                                  | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8365179  |
| 1,1,1,2-Tetrachloroethane                | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8365179  |
| 1,1,2,2-Tetrachloroethane                | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8365179  |
| Tetrachloroethylene                      | ug/L  |                |     |          | <0.20      | <0.20      | <0.20      | 0.20 | 8365179  |
| RDL = Reportable Detection Limit         |       |                |     |          |            |            |            |      |          |
| QC Batch = Quality Control Batch         |       |                |     |          |            |            |            |      |          |
| Lab-Dup = Laboratory Initiated Duplicate |       |                |     |          |            |            |            |      |          |



Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

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

| Bureau Veritas ID                                                                                                |       | UJT428         |     |          | UJT429     | UJT430     | UJT432     |      |          |
|------------------------------------------------------------------------------------------------------------------|-------|----------------|-----|----------|------------|------------|------------|------|----------|
| Sampling Date                                                                                                    |       | 2022/11/22     |     |          | 2022/11/22 | 2022/11/22 | 2022/11/22 |      |          |
| COC Number                                                                                                       |       | na             |     |          | na         | na         | na         |      |          |
|                                                                                                                  | UNITS | MW4<br>Lab-Dup | RDL | QC Batch | MW5        | MW6        | DUPW1      | RDL  | QC Batch |
| Toluene                                                                                                          | ug/L  |                |     |          | 1.1        | 0.68       | <0.20      | 0.20 | 8365179  |
| 1,1,1-Trichloroethane                                                                                            | ug/L  |                |     |          | <0.20      | <0.20      | <0.20      | 0.20 | 8365179  |
| 1,1,2-Trichloroethane                                                                                            | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8365179  |
| Trichloroethylene                                                                                                | ug/L  |                |     |          | <0.20      | <0.20      | <0.20      | 0.20 | 8365179  |
| Trichlorofluoromethane (FREON 11)                                                                                | ug/L  |                |     |          | <0.50      | <0.50      | <0.50      | 0.50 | 8365179  |
| Vinyl Chloride                                                                                                   | ug/L  |                |     |          | <0.20      | <0.20      | <0.20      | 0.20 | 8365179  |
| p+m-Xylene                                                                                                       | ug/L  |                |     |          | 0.50       | 0.34       | <0.20      | 0.20 | 8365179  |
| o-Xylene                                                                                                         | ug/L  |                |     |          | 0.26       | <0.20      | <0.20      | 0.20 | 8365179  |
| Total Xylenes                                                                                                    | ug/L  |                |     |          | 0.76       | 0.34       | <0.20      | 0.20 | 8365179  |
| F1 (C6-C10)                                                                                                      | ug/L  |                |     |          | <25        | <25        | <25        | 25   | 8365179  |
| F1 (C6-C10) - BTEX                                                                                               | ug/L  |                |     |          | <25        | <25        | <25        | 25   | 8365179  |
| <b>F2-F4 Hydrocarbons</b>                                                                                        |       |                |     |          |            |            |            |      |          |
| F2 (C10-C16 Hydrocarbons)                                                                                        | ug/L  | <100           | 100 | 8365892  | <100       | <100       | <100       | 100  | 8365892  |
| F3 (C16-C34 Hydrocarbons)                                                                                        | ug/L  | <200           | 200 | 8365892  | <200       | <200       | <200       | 200  | 8365892  |
| F4 (C34-C50 Hydrocarbons)                                                                                        | ug/L  | <200           | 200 | 8365892  | <200       | <200       | <200       | 200  | 8365892  |
| Reached Baseline at C50                                                                                          | ug/L  | Yes            |     | 8365892  | Yes        | Yes        | Yes        |      | 8365892  |
| <b>Surrogate Recovery (%)</b>                                                                                    |       |                |     |          |            |            |            |      |          |
| o-Terphenyl                                                                                                      | %     | 99             |     | 8365892  | 104        | 100        | 100        |      | 8365892  |
| 4-Bromofluorobenzene                                                                                             | %     |                |     |          | 90         | 89         | 89         |      | 8365179  |
| D4-1,2-Dichloroethane                                                                                            | %     |                |     |          | 107        | 103        | 101        |      | 8365179  |
| D8-Toluene                                                                                                       | %     |                |     |          | 97         | 97         | 99         |      | 8365179  |
| RDL = Reportable Detection Limit<br>QC Batch = Quality Control Batch<br>Lab-Dup = Laboratory Initiated Duplicate |       |                |     |          |            |            |            |      |          |

BUREAU  
VERITAS

Bureau Veritas Job #: C2Y4331

Report Date: 2022/11/28

Soil Engineers Ltd

Client Project #: 2206-E054

Site Location: ERIN

Sampler Initials: CHR

**O.REG 153 VOCS BY HS (WATER)**

|                                     |              |                   |            |                 |
|-------------------------------------|--------------|-------------------|------------|-----------------|
| <b>Bureau Veritas ID</b>            |              | UJT433            |            |                 |
| <b>Sampling Date</b>                |              | 2022/11/22        |            |                 |
| <b>COC Number</b>                   |              | na                |            |                 |
|                                     | <b>UNITS</b> | <b>TRIP BLANK</b> | <b>RDL</b> | <b>QC Batch</b> |
| <b>Calculated Parameters</b>        |              |                   |            |                 |
| 1,3-Dichloropropene (cis+trans)     | ug/L         | <0.50             | 0.50       | 83633263        |
| <b>Volatile Organics</b>            |              |                   |            |                 |
| Acetone (2-Propanone)               | ug/L         | <10               | 10         | 8363324         |
| Benzene                             | ug/L         | <0.20             | 0.20       | 8363324         |
| Bromodichloromethane                | ug/L         | <0.50             | 0.50       | 8363324         |
| Bromoform                           | ug/L         | <1.0              | 1.0        | 8363324         |
| Bromomethane                        | ug/L         | <0.50             | 0.50       | 8363324         |
| Carbon Tetrachloride                | ug/L         | <0.19             | 0.19       | 8363324         |
| Chlorobenzene                       | ug/L         | <0.20             | 0.20       | 8363324         |
| Chloroform                          | ug/L         | <0.20             | 0.20       | 8363324         |
| Dibromochloromethane                | ug/L         | <0.50             | 0.50       | 8363324         |
| 1,2-Dichlorobenzene                 | ug/L         | <0.40             | 0.40       | 8363324         |
| 1,3-Dichlorobenzene                 | ug/L         | <0.40             | 0.40       | 8363324         |
| 1,4-Dichlorobenzene                 | ug/L         | <0.40             | 0.40       | 8363324         |
| Dichlorodifluoromethane (FREON 12)  | ug/L         | <1.0              | 1.0        | 8363324         |
| 1,1-Dichloroethane                  | ug/L         | <0.20             | 0.20       | 8363324         |
| 1,2-Dichloroethane                  | ug/L         | <0.49             | 0.49       | 8363324         |
| 1,1-Dichloroethylene                | ug/L         | <0.20             | 0.20       | 8363324         |
| cis-1,2-Dichloroethylene            | ug/L         | <0.50             | 0.50       | 8363324         |
| trans-1,2-Dichloroethylene          | ug/L         | <0.50             | 0.50       | 8363324         |
| 1,2-Dichloropropane                 | ug/L         | <0.20             | 0.20       | 8363324         |
| cis-1,3-Dichloropropene             | ug/L         | <0.30             | 0.30       | 8363324         |
| trans-1,3-Dichloropropene           | ug/L         | <0.40             | 0.40       | 8363324         |
| Ethylbenzene                        | ug/L         | <0.20             | 0.20       | 8363324         |
| Ethylene Dibromide                  | ug/L         | <0.19             | 0.19       | 8363324         |
| Hexane                              | ug/L         | <1.0              | 1.0        | 8363324         |
| Methylene Chloride(Dichloromethane) | ug/L         | <2.0              | 2.0        | 8363324         |
| Methyl Ethyl Ketone (2-Butanone)    | ug/L         | <10               | 10         | 8363324         |
| Methyl Isobutyl Ketone              | ug/L         | <5.0              | 5.0        | 8363324         |
| Methyl t-butyl ether (MTBE)         | ug/L         | <0.50             | 0.50       | 8363324         |
| Styrene                             | ug/L         | <0.40             | 0.40       | 8363324         |
| 1,1,1,2-Tetrachloroethane           | ug/L         | <0.50             | 0.50       | 8363324         |
| 1,1,2,2-Tetrachloroethane           | ug/L         | <0.40             | 0.40       | 8363324         |
| Tetrachloroethylene                 | ug/L         | <0.20             | 0.20       | 8363324         |
| RDL = Reportable Detection Limit    |              |                   |            |                 |
| QC Batch = Quality Control Batch    |              |                   |            |                 |



Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

### O.REG 153 VOCs BY HS (WATER)

|                                   |       |            |      |          |
|-----------------------------------|-------|------------|------|----------|
| Bureau Veritas ID                 |       | UJT433     |      |          |
| Sampling Date                     |       | 2022/11/22 |      |          |
| COC Number                        |       | na         |      |          |
|                                   | UNITS | TRIP BLANK | RDL  | QC Batch |
| Toluene                           | ug/L  | <0.20      | 0.20 | 8363324  |
| 1,1,1-Trichloroethane             | ug/L  | <0.20      | 0.20 | 8363324  |
| 1,1,2-Trichloroethane             | ug/L  | <0.40      | 0.40 | 8363324  |
| Trichloroethylene                 | ug/L  | <0.20      | 0.20 | 8363324  |
| Trichlorofluoromethane (FREON 11) | ug/L  | <0.50      | 0.50 | 8363324  |
| Vinyl Chloride                    | ug/L  | <0.20      | 0.20 | 8363324  |
| p+m-Xylene                        | ug/L  | <0.20      | 0.20 | 8363324  |
| o-Xylene                          | ug/L  | <0.20      | 0.20 | 8363324  |
| Total Xylenes                     | ug/L  | <0.20      | 0.20 | 8363324  |
| Surrogate Recovery (%)            |       |            |      |          |
| 4-Bromofluorobenzene              | %     | 92         |      | 8363324  |
| D4-1,2-Dichloroethane             | %     | 111        |      | 8363324  |
| D8-Toluene                        | %     | 100        |      | 8363324  |
| RDL = Reportable Detection Limit  |       |            |      |          |
| QC Batch = Quality Control Batch  |       |            |      |          |



Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

## TEST SUMMARY

**Bureau Veritas ID:** UJT427  
**Sample ID:** MW3  
**Matrix:** Ground Water

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/23

| Test Description                       | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|----------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Methylnaphthalene Sum                  | CALC            | 8362383 | N/A        | 2022/11/25    | Automated Statchk    |
| 1,3-Dichloropropene Sum                | CALC            | 8363263 | N/A        | 2022/11/26    | Automated Statchk    |
| Petroleum Hydrocarbons F2-F4 in Water  | GC/FID          | 8365892 | 2022/11/24 | 2022/11/25    | Jeevaraj Jeevaratnam |
| Dissolved Metals by ICPMS              | ICP/MS          | 8364770 | N/A        | 2022/11/24    | Prempal Bhatti       |
| PAH Compounds in Water by GC/MS (SIM)  | GC/MS           | 8365857 | 2022/11/24 | 2022/11/25    | Mitesh Raj           |
| Volatile Organic Compounds and F1 PHCs | GC/MSFD         | 8365179 | N/A        | 2022/11/25    | Juan Pangilinan      |

**Bureau Veritas ID:** UJT427 Dup  
**Sample ID:** MW3  
**Matrix:** Ground Water

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/23

| Test Description                       | Instrumentation | Batch   | Extracted | Date Analyzed | Analyst         |
|----------------------------------------|-----------------|---------|-----------|---------------|-----------------|
| Volatile Organic Compounds and F1 PHCs | GC/MSFD         | 8365179 | N/A       | 2022/11/25    | Juan Pangilinan |

**Bureau Veritas ID:** UJT428  
**Sample ID:** MW4  
**Matrix:** Ground Water

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/23

| Test Description                       | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|----------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Methylnaphthalene Sum                  | CALC            | 8362383 | N/A        | 2022/11/25    | Automated Statchk    |
| 1,3-Dichloropropene Sum                | CALC            | 8363263 | N/A        | 2022/11/26    | Automated Statchk    |
| Petroleum Hydrocarbons F2-F4 in Water  | GC/FID          | 8365892 | 2022/11/24 | 2022/11/25    | Jeevaraj Jeevaratnam |
| Dissolved Metals by ICPMS              | ICP/MS          | 8364770 | N/A        | 2022/11/24    | Prempal Bhatti       |
| PAH Compounds in Water by GC/MS (SIM)  | GC/MS           | 8365857 | 2022/11/24 | 2022/11/25    | Mitesh Raj           |
| Volatile Organic Compounds and F1 PHCs | GC/MSFD         | 8365179 | N/A        | 2022/11/25    | Juan Pangilinan      |

**Bureau Veritas ID:** UJT428 Dup  
**Sample ID:** MW4  
**Matrix:** Ground Water

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/23

| Test Description                      | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|---------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Petroleum Hydrocarbons F2-F4 in Water | GC/FID          | 8365892 | 2022/11/24 | 2022/11/25    | Jeevaraj Jeevaratnam |
| PAH Compounds in Water by GC/MS (SIM) | GC/MS           | 8365857 | 2022/11/24 | 2022/11/25    | Mitesh Raj           |

**Bureau Veritas ID:** UJT429  
**Sample ID:** MW5  
**Matrix:** Ground Water

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/23

| Test Description                       | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|----------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Methylnaphthalene Sum                  | CALC            | 8362383 | N/A        | 2022/11/25    | Automated Statchk    |
| 1,3-Dichloropropene Sum                | CALC            | 8363263 | N/A        | 2022/11/26    | Automated Statchk    |
| Petroleum Hydrocarbons F2-F4 in Water  | GC/FID          | 8365892 | 2022/11/24 | 2022/11/25    | Jeevaraj Jeevaratnam |
| Dissolved Metals by ICPMS              | ICP/MS          | 8364770 | N/A        | 2022/11/24    | Prempal Bhatti       |
| PAH Compounds in Water by GC/MS (SIM)  | GC/MS           | 8365857 | 2022/11/24 | 2022/11/25    | Mitesh Raj           |
| Volatile Organic Compounds and F1 PHCs | GC/MSFD         | 8365179 | N/A        | 2022/11/25    | Juan Pangilinan      |



Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

## TEST SUMMARY

**Bureau Veritas ID:** UJT430  
**Sample ID:** MW6  
**Matrix:** Ground Water

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/23

| Test Description                       | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|----------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Methylnaphthalene Sum                  | CALC            | 8362383 | N/A        | 2022/11/25    | Automated Statchk    |
| 1,3-Dichloropropene Sum                | CALC            | 8363263 | N/A        | 2022/11/26    | Automated Statchk    |
| Acid Extractables by GC/MS             | GC/MS           | 8368493 | 2022/11/25 | 2022/11/26    | May Yin Mak          |
| Petroleum Hydrocarbons F2-F4 in Water  | GC/FID          | 8365892 | 2022/11/24 | 2022/11/25    | Jeevaraj Jeevaratnam |
| Dissolved Metals by ICPMS              | ICP/MS          | 8364770 | N/A        | 2022/11/24    | Prempal Bhatti       |
| OC Pesticides (Selected) & PCB         | GC/ECD          | 8369484 | 2022/11/26 | 2022/11/27    | Li Peng              |
| OC Pesticides Summed Parameters        | CALC            | 8362828 | N/A        | 2022/11/25    | Automated Statchk    |
| PAH Compounds in Water by GC/MS (SIM)  | GC/MS           | 8365857 | 2022/11/24 | 2022/11/25    | Mitesh Raj           |
| Volatile Organic Compounds and F1 PHCs | GC/MSFD         | 8365179 | N/A        | 2022/11/25    | Juan Pangilinan      |

**Bureau Veritas ID:** UJT432  
**Sample ID:** DUPW1  
**Matrix:** Ground Water

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/23

| Test Description                       | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|----------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Methylnaphthalene Sum                  | CALC            | 8362383 | N/A        | 2022/11/25    | Automated Statchk    |
| 1,3-Dichloropropene Sum                | CALC            | 8363263 | N/A        | 2022/11/26    | Automated Statchk    |
| Petroleum Hydrocarbons F2-F4 in Water  | GC/FID          | 8365892 | 2022/11/24 | 2022/11/25    | Jeevaraj Jeevaratnam |
| PAH Compounds in Water by GC/MS (SIM)  | GC/MS           | 8365857 | 2022/11/24 | 2022/11/25    | Mitesh Raj           |
| Volatile Organic Compounds and F1 PHCs | GC/MSFD         | 8365179 | N/A        | 2022/11/25    | Juan Pangilinan      |

**Bureau Veritas ID:** UJT433  
**Sample ID:** TRIP BLANK  
**Matrix:** Ground Water

**Collected:** 2022/11/22  
**Shipped:**  
**Received:** 2022/11/23

| Test Description                    | Instrumentation | Batch   | Extracted | Date Analyzed | Analyst           |
|-------------------------------------|-----------------|---------|-----------|---------------|-------------------|
| 1,3-Dichloropropene Sum             | CALC            | 8363263 | N/A       | 2022/11/25    | Automated Statchk |
| Volatile Organic Compounds in Water | GC/MS           | 8363324 | N/A       | 2022/11/25    | Gladys Guerrero   |





Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

#### GENERAL COMMENTS

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

|           |       |
|-----------|-------|
| Package 1 | 3.3°C |
|-----------|-------|

Cooler custody seal was present and intact.

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



BUREAU VERITAS  
Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

## QUALITY ASSURANCE REPORT

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

| QC Batch | Parameter                    | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|------------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                              |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8363324  | 4-Bromofluorobenzene         | 2022/11/24 | 95           | 70 - 130  | 94           | 70 - 130  | 95           | %     |           |           |
| 8363324  | D4-1,2-Dichloroethane        | 2022/11/24 | 112          | 70 - 130  | 110          | 70 - 130  | 107          | %     |           |           |
| 8363324  | D8-Toluene                   | 2022/11/24 | 101          | 70 - 130  | 102          | 70 - 130  | 99           | %     |           |           |
| 8365179  | 4-Bromofluorobenzene         | 2022/11/25 | 103          | 70 - 130  | 104          | 70 - 130  | 92           | %     |           |           |
| 8365179  | D4-1,2-Dichloroethane        | 2022/11/25 | 101          | 70 - 130  | 97           | 70 - 130  | 95           | %     |           |           |
| 8365179  | D8-Toluene                   | 2022/11/25 | 101          | 70 - 130  | 101          | 70 - 130  | 98           | %     |           |           |
| 8365857  | D10-Anthracene               | 2022/11/25 | 99           | 50 - 130  | 105          | 50 - 130  | 103          | %     |           |           |
| 8365857  | D14-Terphenyl (FS)           | 2022/11/25 | 94           | 50 - 130  | 102          | 50 - 130  | 101          | %     |           |           |
| 8365857  | D8-Acenaphthylene            | 2022/11/25 | 89           | 50 - 130  | 92           | 50 - 130  | 90           | %     |           |           |
| 8365892  | o-Terphenyl                  | 2022/11/24 | 100          | 60 - 130  | 99           | 60 - 130  | 100          | %     |           |           |
| 8368493  | 2,4,6-Tribromophenol         | 2022/11/26 |              |           | 89           | 50 - 130  | 88           | %     |           |           |
| 8368493  | 2-Fluorophenol               | 2022/11/26 |              |           | 65           | 50 - 130  | 61           | %     |           |           |
| 8368493  | D5-Phenol                    | 2022/11/26 |              |           | 70           | 30 - 130  | 63           | %     |           |           |
| 8369484  | 2,4,5,6-Tetrachloro-m-xylene | 2022/11/27 | 70           | 50 - 130  | 63           | 50 - 130  | 60           | %     |           |           |
| 8369484  | Decachlorobiphenyl           | 2022/11/27 | 80           | 50 - 130  | 77           | 50 - 130  | 89           | %     |           |           |
| 8363324  | 1,1,1,2-Tetrachloroethane    | 2022/11/24 | 88           | 70 - 130  | 92           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8363324  | 1,1,1-Trichloroethane        | 2022/11/24 | 88           | 70 - 130  | 94           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8363324  | 1,1,2,2-Tetrachloroethane    | 2022/11/24 | 94           | 70 - 130  | 94           | 70 - 130  | <0.40        | ug/L  | NC        | 30        |
| 8363324  | 1,1,2-Trichloroethane        | 2022/11/24 | 104          | 70 - 130  | 106          | 70 - 130  | <0.40        | ug/L  | NC        | 30        |
| 8363324  | 1,1-Dichloroethane           | 2022/11/24 | 87           | 70 - 130  | 92           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8363324  | 1,1-Dichloroethylene         | 2022/11/24 | 88           | 70 - 130  | 95           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8363324  | 1,2-Dichlorobenzene          | 2022/11/24 | 90           | 70 - 130  | 95           | 70 - 130  | <0.40        | ug/L  | NC        | 30        |
| 8363324  | 1,2-Dichloroethane           | 2022/11/24 | 94           | 70 - 130  | 97           | 70 - 130  | <0.49        | ug/L  | NC        | 30        |
| 8363324  | 1,2-Dichloropropane          | 2022/11/24 | 90           | 70 - 130  | 93           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8363324  | 1,3-Dichlorobenzene          | 2022/11/24 | 86           | 70 - 130  | 94           | 70 - 130  | <0.40        | ug/L  | NC        | 30        |
| 8363324  | 1,4-Dichlorobenzene          | 2022/11/24 | 99           | 70 - 130  | 108          | 70 - 130  | <0.40        | ug/L  | NC        | 30        |
| 8363324  | Acetone (2-Propanone)        | 2022/11/24 | 108          | 60 - 140  | 108          | 60 - 140  | <10          | ug/L  | NC        | 30        |
| 8363324  | Benzene                      | 2022/11/24 | 83           | 70 - 130  | 87           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8363324  | Bromodichloromethane         | 2022/11/24 | 90           | 70 - 130  | 93           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8363324  | Bromoform                    | 2022/11/24 | 92           | 70 - 130  | 93           | 70 - 130  | <1.0         | ug/L  | NC        | 30        |
| 8363324  | Bromomethane                 | 2022/11/24 | 83           | 60 - 140  | 88           | 60 - 140  | <0.50        | ug/L  | NC        | 30        |



**BUREAU  
VERITAS**  
Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

## QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

| QC Batch | Parameter                           | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|-------------------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                                     |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8363324  | Carbon Tetrachloride                | 2022/11/24 | 86           | 70 - 130  | 91           | 70 - 130  | <0.19        | ug/L  | NC        | 30        |
| 8363324  | Chlorobenzene                       | 2022/11/24 | 87           | 70 - 130  | 94           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8363324  | Chloroform                          | 2022/11/24 | 87           | 70 - 130  | 92           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8363324  | dis-1,2-Dichloroethylene            | 2022/11/24 | 90           | 70 - 130  | 96           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8363324  | cis-1,3-Dichloropropene             | 2022/11/24 | 86           | 70 - 130  | 84           | 70 - 130  | <0.30        | ug/L  | NC        | 30        |
| 8363324  | Dibromochloromethane                | 2022/11/24 | 89           | 70 - 130  | 92           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8363324  | Dichlorodifluoromethane (FREON 12)  | 2022/11/24 | 94           | 60 - 140  | 104          | 60 - 140  | <1.0         | ug/L  | NC        | 30        |
| 8363324  | Ethylbenzene                        | 2022/11/24 | 81           | 70 - 130  | 88           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8363324  | Ethylene Dibromide                  | 2022/11/24 | 91           | 70 - 130  | 93           | 70 - 130  | <0.19        | ug/L  | NC        | 30        |
| 8363324  | Hexane                              | 2022/11/24 | 80           | 70 - 130  | 90           | 70 - 130  | <1.0         | ug/L  | NC        | 30        |
| 8363324  | Methyl Ethyl Ketone (2-Butanone)    | 2022/11/24 | 109          | 60 - 140  | 108          | 60 - 140  | <10          | ug/L  | NC        | 30        |
| 8363324  | Methyl Isobutyl Ketone              | 2022/11/24 | 101          | 70 - 130  | 100          | 70 - 130  | <5.0         | ug/L  | NC        | 30        |
| 8363324  | Methyl t-butyl ether (MTBE)         | 2022/11/24 | 86           | 70 - 130  | 88           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8363324  | Methylene Chloride(Dichloromethane) | 2022/11/24 | 90           | 70 - 130  | 96           | 70 - 130  | <2.0         | ug/L  | NC        | 30        |
| 8363324  | o-Xylene                            | 2022/11/24 | 83           | 70 - 130  | 89           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8363324  | p-m-Xylene                          | 2022/11/24 | 82           | 70 - 130  | 89           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8363324  | Styrene                             | 2022/11/24 | 89           | 70 - 130  | 95           | 70 - 130  | <0.40        | ug/L  | NC        | 30        |
| 8363324  | Tetrachloroethylene                 | 2022/11/24 | 76           | 70 - 130  | 84           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8363324  | Toluene                             | 2022/11/24 | 81           | 70 - 130  | 88           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8363324  | Total Xylenes                       | 2022/11/24 |              |           |              |           | <0.20        | ug/L  | NC        | 30        |
| 8363324  | trans-1,2-Dichloroethylene          | 2022/11/24 | 86           | 70 - 130  | 94           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8363324  | trans-1,3-Dichloropropene           | 2022/11/24 | 86           | 70 - 130  | 85           | 70 - 130  | <0.40        | ug/L  | NC        | 30        |
| 8363324  | Trichloroethylene                   | 2022/11/24 | 84           | 70 - 130  | 91           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8363324  | Trichlorofluoromethane (FREON 11)   | 2022/11/24 | 85           | 70 - 130  | 91           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8363324  | Vinyl Chloride                      | 2022/11/24 | 76           | 70 - 130  | 83           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8364770  | Dissolved Antimony (Sb)             | 2022/11/24 | 105          | 80 - 120  | 101          | 80 - 120  | <0.50        | ug/L  | 2.9       | 20        |
| 8364770  | Dissolved Arsenic (As)              | 2022/11/24 | 105          | 80 - 120  | 99           | 80 - 120  | <1.0         | ug/L  | NC        | 20        |
| 8364770  | Dissolved Barium (Ba)               | 2022/11/24 | NC           | 80 - 120  | 98           | 80 - 120  | <2.0         | ug/L  | 0.016     | 20        |
| 8364770  | Dissolved Beryllium (Be)            | 2022/11/24 | 95           | 80 - 120  | 97           | 80 - 120  | <0.40        | ug/L  | NC        | 20        |
| 8364770  | Dissolved Boron (B)                 | 2022/11/24 | 94           | 80 - 120  | 98           | 80 - 120  | <10          | ug/L  | 2.8       | 20        |
| 8364770  | Dissolved Cadmium (Cd)              | 2022/11/24 | 99           | 80 - 120  | 99           | 80 - 120  | <0.090       | ug/L  | NC        | 20        |



Bureau Veritas Job #: CZY4331  
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## QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

| QC Batch | Parameter                 | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|---------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                           |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8364770  | Dissolved Chromium (Cr)   | 2022/11/24 | 105          | 80 - 120  | 98           | 80 - 120  | <5.0         | ug/L  | NC        | 20        |
| 8364770  | Dissolved Cobalt (Co)     | 2022/11/24 | 103          | 80 - 120  | 100          | 80 - 120  | <0.50        | ug/L  | 1.7       | 20        |
| 8364770  | Dissolved Copper (Cu)     | 2022/11/24 | 98           | 80 - 120  | 98           | 80 - 120  | <0.90        | ug/L  | 2.5       | 20        |
| 8364770  | Dissolved Lead (Pb)       | 2022/11/24 | 94           | 80 - 120  | 98           | 80 - 120  | <0.50        | ug/L  | NC        | 20        |
| 8364770  | Dissolved Molybdenum (Mo) | 2022/11/24 | 110          | 80 - 120  | 101          | 80 - 120  | <0.50        | ug/L  | 1.1       | 20        |
| 8364770  | Dissolved Nickel (Ni)     | 2022/11/24 | 99           | 80 - 120  | 100          | 80 - 120  | <1.0         | ug/L  | 2.2       | 20        |
| 8364770  | Dissolved Selenium (Se)   | 2022/11/24 | 103          | 80 - 120  | 102          | 80 - 120  | <2.0         | ug/L  | NC        | 20        |
| 8364770  | Dissolved Silver (Ag)     | 2022/11/24 | 86           | 80 - 120  | 101          | 80 - 120  | <0.090       | ug/L  | NC        | 20        |
| 8364770  | Dissolved Thallium (Tl)   | 2022/11/24 | 97           | 80 - 120  | 100          | 80 - 120  | <0.050       | ug/L  | 7.3       | 20        |
| 8364770  | Dissolved Uranium (U)     | 2022/11/24 | 101          | 80 - 120  | 100          | 80 - 120  | <0.10        | ug/L  | 0.82      | 20        |
| 8364770  | Dissolved Vanadium (V)    | 2022/11/24 | 108          | 80 - 120  | 98           | 80 - 120  | <0.50        | ug/L  | 2.6       | 20        |
| 8364770  | Dissolved Zinc (Zn)       | 2022/11/24 | 93           | 80 - 120  | 99           | 80 - 120  | <5.0         | ug/L  | NC        | 20        |
| 8365179  | 1,1,1,2-Tetrachloroethane | 2022/11/25 | 104          | 70 - 130  | 102          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8365179  | 1,1,1-Trichloroethane     | 2022/11/25 | 105          | 70 - 130  | 103          | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8365179  | 1,1,2,2-Tetrachloroethane | 2022/11/25 | 102          | 70 - 130  | 97           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8365179  | 1,1,2-Trichloroethane     | 2022/11/25 | 108          | 70 - 130  | 102          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8365179  | 1,1-Dichloroethane        | 2022/11/25 | 102          | 70 - 130  | 98           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8365179  | 1,1-Dichloroethylene      | 2022/11/25 | 106          | 70 - 130  | 105          | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8365179  | 1,2-Dichlorobenzene       | 2022/11/25 | 103          | 70 - 130  | 102          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8365179  | 1,2-Dichloroethane        | 2022/11/25 | 103          | 70 - 130  | 96           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8365179  | 1,2-Dichloropropane       | 2022/11/25 | 104          | 70 - 130  | 99           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8365179  | 1,3-Dichlorobenzene       | 2022/11/25 | 109          | 70 - 130  | 109          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8365179  | 1,4-Dichlorobenzene       | 2022/11/25 | 107          | 70 - 130  | 107          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8365179  | Acetone (2-Propanone)     | 2022/11/25 | 114          | 60 - 140  | 105          | 60 - 140  | <10          | ug/L  | NC        | 30        |
| 8365179  | Benzene                   | 2022/11/25 | 97           | 70 - 130  | 94           | 70 - 130  | <0.17        | ug/L  | NC        | 30        |
| 8365179  | Bromodichloromethane      | 2022/11/25 | 107          | 70 - 130  | 102          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8365179  | Bromoform                 | 2022/11/25 | 103          | 70 - 130  | 99           | 70 - 130  | <1.0         | ug/L  | NC        | 30        |
| 8365179  | Bromomethane              | 2022/11/25 | 113          | 60 - 140  | 102          | 60 - 140  | <0.50        | ug/L  | NC        | 30        |
| 8365179  | Carbon Tetrachloride      | 2022/11/25 | 104          | 70 - 130  | 103          | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8365179  | Chlorobenzene             | 2022/11/25 | 105          | 70 - 130  | 104          | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8365179  | Chloroform                | 2022/11/25 | 103          | 70 - 130  | 100          | 70 - 130  | <0.20        | ug/L  | NC        | 30        |



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## QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

| QC Batch | Parameter                           | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|-------------------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                                     |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8365179  | cis-1,2-Dichloroethylene            | 2022/11/25 | 108          | 70 - 130  | 104          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8365179  | cis-1,3-Dichloropropene             | 2022/11/25 | 109          | 70 - 130  | 97           | 70 - 130  | <0.30        | ug/L  | NC        | 30        |
| 8365179  | Dibromochloromethane                | 2022/11/25 | 111          | 70 - 130  | 107          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8365179  | Dichlorodifluoromethane (FREON 12)  | 2022/11/25 | 110          | 60 - 140  | 109          | 60 - 140  | <1.0         | ug/L  | NC        | 30        |
| 8365179  | Ethylbenzene                        | 2022/11/25 | 96           | 70 - 130  | 96           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8365179  | Ethylene Dibromide                  | 2022/11/25 | 103          | 70 - 130  | 97           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8365179  | F1 (C6-C10) - BTEX                  | 2022/11/25 |              |           |              |           | <25          | ug/L  | NC        | 30        |
| 8365179  | F1 (C6-C10)                         | 2022/11/25 | 100          | 60 - 140  | 101          | 60 - 140  | <25          | ug/L  | NC        | 30        |
| 8365179  | Hexane                              | 2022/11/25 | 105          | 70 - 130  | 105          | 70 - 130  | <1.0         | ug/L  | NC        | 30        |
| 8365179  | Methyl Ethyl Ketone (2-Butanone)    | 2022/11/25 | 118          | 60 - 140  | 110          | 60 - 140  | <10          | ug/L  | NC        | 30        |
| 8365179  | Methyl Isobutyl Ketone              | 2022/11/25 | 86           | 70 - 130  | 81           | 70 - 130  | <5.0         | ug/L  | NC        | 30        |
| 8365179  | Methyl t-butyl ether (MTBE)         | 2022/11/25 | 100          | 70 - 130  | 96           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8365179  | Methylene Chloride(Dichloromethane) | 2022/11/25 | 111          | 70 - 130  | 105          | 70 - 130  | <2.0         | ug/L  | NC        | 30        |
| 8365179  | o-Xylene                            | 2022/11/25 | 98           | 70 - 130  | 98           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8365179  | p+m-Xylene                          | 2022/11/25 | 102          | 70 - 130  | 102          | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8365179  | Styrene                             | 2022/11/25 | 116          | 70 - 130  | 116          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8365179  | Tetrachloroethylene                 | 2022/11/25 | 100          | 70 - 130  | 101          | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8365179  | Toluene                             | 2022/11/25 | 99           | 70 - 130  | 99           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8365179  | Total Xylenes                       | 2022/11/25 |              |           |              |           | <0.20        | ug/L  | NC        | 30        |
| 8365179  | trans-1,2-Dichloroethylene          | 2022/11/25 | 104          | 70 - 130  | 102          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8365179  | trans-1,3-Dichloropropene           | 2022/11/25 | 113          | 70 - 130  | 97           | 70 - 130  | <0.40        | ug/L  | NC        | 30        |
| 8365179  | Trichloroethylene                   | 2022/11/25 | 110          | 70 - 130  | 109          | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8365179  | Trichlorofluoromethane (FREON 11)   | 2022/11/25 | 106          | 70 - 130  | 104          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8365179  | Vinyl Chloride                      | 2022/11/25 | 100          | 70 - 130  | 98           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8365857  | 1-Methylnaphthalene                 | 2022/11/25 | 91           | 50 - 130  | 89           | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365857  | 2-Methylnaphthalene                 | 2022/11/25 | 84           | 50 - 130  | 81           | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365857  | Acenaphthene                        | 2022/11/25 | 94           | 50 - 130  | 93           | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365857  | Acenaphthylene                      | 2022/11/25 | 91           | 50 - 130  | 90           | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365857  | Anthracene                          | 2022/11/25 | 99           | 50 - 130  | 101          | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365857  | Benzo(a)anthracene                  | 2022/11/25 | 94           | 50 - 130  | 94           | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365857  | Benzo(a)pyrene                      | 2022/11/25 | 92           | 50 - 130  | 93           | 50 - 130  | <0.0090      | ug/L  | NC        | 30        |



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Bureau Veritas Job #: C2Y4331  
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## QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

| QC Batch | Parameter                 | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|---------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                           |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8365857  | Benzo(b,j)fluoranthene    | 2022/11/25 | 97           | 50 - 130  | 99           | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365857  | Benzo(g,h,i)perylene      | 2022/11/25 | 96           | 50 - 130  | 98           | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365857  | Benzo(k)fluoranthene      | 2022/11/25 | 96           | 50 - 130  | 98           | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365857  | Chrysene                  | 2022/11/25 | 96           | 50 - 130  | 97           | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365857  | Dibenzo(a,h)anthracene    | 2022/11/25 | 86           | 50 - 130  | 87           | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365857  | Fluoranthene              | 2022/11/25 | 104          | 50 - 130  | 105          | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365857  | Fluorene                  | 2022/11/25 | 95           | 50 - 130  | 95           | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365857  | Indeno(1,2,3-cd)pyrene    | 2022/11/25 | 94           | 50 - 130  | 95           | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365857  | Naphthalene               | 2022/11/25 | 84           | 50 - 130  | 81           | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365857  | Phenanthrene              | 2022/11/25 | 97           | 50 - 130  | 98           | 50 - 130  | <0.030       | ug/L  | NC        | 30        |
| 8365857  | Pyrene                    | 2022/11/25 | 104          | 50 - 130  | 106          | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8365892  | F2 (C10-C16 Hydrocarbons) | 2022/11/25 | 103          | 60 - 130  | 100          | 60 - 130  | <100         | ug/L  | NC        | 30        |
| 8365892  | F3 (C16-C34 Hydrocarbons) | 2022/11/25 | 107          | 60 - 130  | 109          | 60 - 130  | <200         | ug/L  | NC        | 30        |
| 8365892  | F4 (C34-C50 Hydrocarbons) | 2022/11/25 | 110          | 60 - 130  | 111          | 60 - 130  | <200         | ug/L  | NC        | 30        |
| 8368493  | 2,4,5-Trichlorophenol     | 2022/11/26 |              |           | 83           | 50 - 130  | <0.1         | ug/L  | 0.12      | 30        |
| 8368493  | 2,4,6-Trichlorophenol     | 2022/11/26 |              |           | 85           | 10 - 130  | <0.1         | ug/L  | 0.25      | 30        |
| 8368493  | 2,4-Dichlorophenol        | 2022/11/26 |              |           | 83           | 50 - 130  | <0.1         | ug/L  | 1.5       | 30        |
| 8368493  | 2-Chlorophenol            | 2022/11/26 |              |           | 78           | 50 - 130  | <0.1         | ug/L  | 4.5       | 30        |
| 8368493  | 3 & 4-Chlorophenol        | 2022/11/26 |              |           | 90           | 10 - 130  | <0.1         | ug/L  | 0.82      | 40        |
| 8368493  | Pentachlorophenol         | 2022/11/26 |              |           | 101          | 50 - 130  | <0.1         | ug/L  | 1.2       | 30        |
| 8369484  | a-Chlordane               | 2022/11/27 | 96           | 50 - 130  | 101          | 50 - 130  | <0.005       | ug/L  | 8.1       | 30        |
| 8369484  | Aldrin                    | 2022/11/27 | 84           | 50 - 130  | 85           | 50 - 130  | <0.005       | ug/L  | 8.5       | 30        |
| 8369484  | Dieldrin                  | 2022/11/27 | 111          | 50 - 130  | 111          | 50 - 130  | <0.005       | ug/L  | 11        | 30        |
| 8369484  | Endosulfan I (alpha)      | 2022/11/27 | 89           | 50 - 130  | 111          | 50 - 130  | <0.005       | ug/L  | 4.9       | 30        |
| 8369484  | Endosulfan II (beta)      | 2022/11/27 | 100          | 50 - 130  | 101          | 50 - 130  | <0.005       | ug/L  | 12        | 30        |
| 8369484  | Endrin                    | 2022/11/27 | 121          | 50 - 130  | 114          | 50 - 130  | <0.005       | ug/L  | 9.9       | 30        |
| 8369484  | g-Chlordane               | 2022/11/27 | 96           | 50 - 130  | 102          | 50 - 130  | <0.005       | ug/L  | 9.4       | 30        |
| 8369484  | Heptachlor epoxide        | 2022/11/27 | 100          | 50 - 130  | 106          | 50 - 130  | <0.005       | ug/L  | 8.0       | 30        |
| 8369484  | Heptachlor                | 2022/11/27 | 114          | 50 - 130  | 112          | 50 - 130  | <0.005       | ug/L  | 5.3       | 30        |
| 8369484  | Hexachlorobenzene         | 2022/11/27 | 90           | 50 - 130  | 85           | 50 - 130  | <0.005       | ug/L  | NC        | 30        |
| 8369484  | Hexachlorobutadiene       | 2022/11/27 | 76           | 50 - 130  | 70           | 50 - 130  | <0.009       | ug/L  | 10        | 30        |



## QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

| QC Batch | Parameter        | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                  |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8369484  | Hexachloroethane | 2022/11/27 | 63           | 50 - 130  | 57           | 50 - 130  | <0.01        | ug/L  | 14        | 30        |
| 8369484  | Lindane          | 2022/11/27 | 99           | 50 - 130  | 100          | 50 - 130  | <0.003       | ug/L  | 9.7       | 30        |
| 8369484  | Methoxychlor     | 2022/11/27 | 81           | 50 - 130  | 93           | 50 - 130  | <0.01        | ug/L  | 4.7       | 30        |
| 8369484  | o,p-DDD          | 2022/11/27 | 122          | 50 - 130  | 112          | 50 - 130  | <0.005       | ug/L  | 8.1       | 30        |
| 8369484  | o,p-DDE          | 2022/11/27 | 93           | 50 - 130  | 97           | 50 - 130  | <0.005       | ug/L  | 8.0       | 30        |
| 8369484  | o,p-DDT          | 2022/11/27 | 130          | 50 - 130  | 112          | 50 - 130  | <0.005       | ug/L  | 14        | 30        |
| 8369484  | p,p-DDD          | 2022/11/27 | 125          | 50 - 130  | 119          | 50 - 130  | <0.005       | ug/L  | 4.7       | 30        |
| 8369484  | p,p-DDE          | 2022/11/27 | 97           | 50 - 130  | 108          | 50 - 130  | <0.005       | ug/L  | 5.9       | 30        |
| 8369484  | p,p-DDT          | 2022/11/27 | 119          | 50 - 130  | 109          | 50 - 130  | <0.005       | ug/L  | 15        | 30        |

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

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

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

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

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

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

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



Bureau Veritas Job #: C2Y4331  
Report Date: 2022/11/28

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: CHR

### VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.





Your Project #: 2206-E054  
Site Location: ERIN  
Your C.O.C. #: n/a

**Attention: Madan K. Suwal**

Soil Engineers Ltd  
90 West Beaver Creek Road  
Unit 100  
Richmond Hill, ON  
CANADA L4B 1E7

**Report Date: 2022/11/29**  
Report #: R7409130  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C2Y4835**

**Received: 2022/11/23, 17:28**

Sample Matrix: Water  
# Samples Received: 2

| Analyses                                  | Quantity | Date<br>Extracted | Date<br>Analyzed | Laboratory Method | Analytical Method |
|-------------------------------------------|----------|-------------------|------------------|-------------------|-------------------|
| Methylnaphthalene Sum                     | 1        | N/A               | 2022/11/29       | CAM SOP-00301     | EPA 8270D m       |
| 1,3-Dichloropropene Sum                   | 1        | N/A               | 2022/11/26       |                   | EPA 8260C m       |
| Petroleum Hydro. CCME F1 & BTEX in Water  | 1        | N/A               | 2022/11/26       | CAM SOP-00315     | CCME PHC-CWS m    |
| Petroleum Hydrocarbons F2-F4 in Water (1) | 2        | 2022/11/26        | 2022/11/27       | CAM SOP-00316     | CCME PHC-CWS m    |
| Dissolved Metals by ICPMS                 | 2        | N/A               | 2022/11/25       | CAM SOP-00447     | EPA 6020B m       |
| PAH Compounds in Water by GC/MS (SIM)     | 1        | 2022/11/26        | 2022/11/26       | CAM SOP-00318     | EPA 8270D m       |
| Volatile Organic Compounds and F1 PHCs    | 1        | N/A               | 2022/11/26       | CAM SOP-00230     | EPA 8260C m       |

**Remarks:**

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

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

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

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

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

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

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

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

(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003".



Your Project #: 2206-E054  
Site Location: ERIN  
Your C.O.C. #: n/a

**Attention: Madan K. Suwal**

Soil Engineers Ltd  
90 West Beaver Creek Road  
Unit 100  
Richmond Hill, ON  
CANADA L4B 1E7

**Report Date: 2022/11/29**  
Report #: R7409130  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C2Y4835**

**Received: 2022/11/23, 17:28**

Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key



AUTHORIZED REPORT  
RAPPORT AUTORISÉ

Bureau Veritas  
29 Nov 2022 16:48:07

Please direct all questions regarding this Certificate of Analysis to:  
Antonella Brasil, Senior Project Manager  
Email: Antonella.Brasil@bureauveritas.com  
Phone# (905)817-5817

=====

This report has been generated and distributed using a secure automated process.

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

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

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.



Bureau Veritas Job #: C2Y4835  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

### O.REG 153 DISSOLVED ICPMS METALS (WATER)

| Bureau Veritas ID                |       | UJW180     | UJW181     |       |          |
|----------------------------------|-------|------------|------------|-------|----------|
| Sampling Date                    |       | 2022/11/23 | 2022/11/23 |       |          |
| COC Number                       |       | n/a        | n/a        |       |          |
|                                  | UNITS | MW7        | MW8        | RDL   | QC Batch |
| <b>Metals</b>                    |       |            |            |       |          |
| Dissolved Antimony (Sb)          | ug/L  | 0.50       | <0.50      | 0.50  | 8365125  |
| Dissolved Arsenic (As)           | ug/L  | <1.0       | <1.0       | 1.0   | 8365125  |
| Dissolved Barium (Ba)            | ug/L  | 70         | 43         | 2.0   | 8365125  |
| Dissolved Beryllium (Be)         | ug/L  | <0.40      | <0.40      | 0.40  | 8365125  |
| Dissolved Boron (B)              | ug/L  | 19         | 73         | 10    | 8365125  |
| Dissolved Cadmium (Cd)           | ug/L  | <0.090     | <0.090     | 0.090 | 8365125  |
| Dissolved Chromium (Cr)          | ug/L  | <5.0       | <5.0       | 5.0   | 8365125  |
| Dissolved Cobalt (Co)            | ug/L  | <0.50      | <0.50      | 0.50  | 8365125  |
| Dissolved Copper (Cu)            | ug/L  | 2.5        | 3.4        | 0.90  | 8365125  |
| Dissolved Lead (Pb)              | ug/L  | <0.50      | <0.50      | 0.50  | 8365125  |
| Dissolved Molybdenum (Mo)        | ug/L  | 3.5        | 4.5        | 0.50  | 8365125  |
| Dissolved Nickel (Ni)            | ug/L  | <1.0       | 1.1        | 1.0   | 8365125  |
| Dissolved Selenium (Se)          | ug/L  | <2.0       | <2.0       | 2.0   | 8365125  |
| Dissolved Silver (Ag)            | ug/L  | <0.090     | <0.090     | 0.090 | 8365125  |
| Dissolved Thallium (Tl)          | ug/L  | <0.050     | 0.052      | 0.050 | 8365125  |
| Dissolved Uranium (U)            | ug/L  | 1.2        | 0.21       | 0.10  | 8365125  |
| Dissolved Vanadium (V)           | ug/L  | <0.50      | <0.50      | 0.50  | 8365125  |
| Dissolved Zinc (Zn)              | ug/L  | <5.0       | <5.0       | 5.0   | 8365125  |
| RDL = Reportable Detection Limit |       |            |            |       |          |
| QC Batch = Quality Control Batch |       |            |            |       |          |



Bureau Veritas Job #: C2Y4835  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

### O.REG 153 PAHS (WATER)

|                                  |              |            |            |                 |
|----------------------------------|--------------|------------|------------|-----------------|
| <b>Bureau Veritas ID</b>         |              | UJW180     |            |                 |
| <b>Sampling Date</b>             |              | 2022/11/23 |            |                 |
| <b>COC Number</b>                |              | n/a        |            |                 |
|                                  | <b>UNITS</b> | <b>MW7</b> | <b>RDL</b> | <b>QC Batch</b> |
| <b>Calculated Parameters</b>     |              |            |            |                 |
| Methylnaphthalene, 2-(1-)        | ug/L         | <0.071     | 0.071      | 8362383         |
| <b>Polyaromatic Hydrocarbons</b> |              |            |            |                 |
| Acenaphthene                     | ug/L         | <0.050     | 0.050      | 8369338         |
| Acenaphthylene                   | ug/L         | <0.050     | 0.050      | 8369338         |
| Anthracene                       | ug/L         | <0.050     | 0.050      | 8369338         |
| Benzo(a)anthracene               | ug/L         | <0.050     | 0.050      | 8369338         |
| Benzo(a)pyrene                   | ug/L         | <0.0090    | 0.0090     | 8369338         |
| Benzo(b,j)fluoranthene           | ug/L         | <0.050     | 0.050      | 8369338         |
| Benzo(g,h,i)perylene             | ug/L         | <0.050     | 0.050      | 8369338         |
| Benzo(k)fluoranthene             | ug/L         | <0.050     | 0.050      | 8369338         |
| Chrysene                         | ug/L         | <0.050     | 0.050      | 8369338         |
| Dibenzo(a,h)anthracene           | ug/L         | <0.050     | 0.050      | 8369338         |
| Fluoranthene                     | ug/L         | <0.050     | 0.050      | 8369338         |
| Fluorene                         | ug/L         | <0.050     | 0.050      | 8369338         |
| Indeno(1,2,3-cd)pyrene           | ug/L         | <0.050     | 0.050      | 8369338         |
| 1-Methylnaphthalene              | ug/L         | <0.050     | 0.050      | 8369338         |
| 2-Methylnaphthalene              | ug/L         | <0.050     | 0.050      | 8369338         |
| Naphthalene                      | ug/L         | <0.050     | 0.050      | 8369338         |
| Phenanthrene                     | ug/L         | <0.030     | 0.030      | 8369338         |
| Pyrene                           | ug/L         | <0.050     | 0.050      | 8369338         |
| <b>Surrogate Recovery (%)</b>    |              |            |            |                 |
| D10-Anthracene                   | %            | 104        |            | 8369338         |
| D14-Terphenyl (FS)               | %            | 98         |            | 8369338         |
| D8-Acenaphthylene                | %            | 95         |            | 8369338         |
| RDL = Reportable Detection Limit |              |            |            |                 |
| QC Batch = Quality Control Batch |              |            |            |                 |



Bureau Veritas Job #: C2Y4835  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

**O.REG 153 PHCS, BTEX/F1-F4 (WATER)**

|                                   |              |            |            |                 |
|-----------------------------------|--------------|------------|------------|-----------------|
| <b>Bureau Veritas ID</b>          |              | UJW181     |            |                 |
| <b>Sampling Date</b>              |              | 2022/11/23 |            |                 |
| <b>COC Number</b>                 |              | n/a        |            |                 |
|                                   | <b>UNITS</b> | <b>MW8</b> | <b>RDL</b> | <b>QC Batch</b> |
| <b>BTEX &amp; F1 Hydrocarbons</b> |              |            |            |                 |
| Benzene                           | ug/L         | 0.34       | 0.20       | 8368559         |
| Toluene                           | ug/L         | 0.44       | 0.20       | 8368559         |
| Ethylbenzene                      | ug/L         | <0.20      | 0.20       | 8368559         |
| o-Xylene                          | ug/L         | <0.20      | 0.20       | 8368559         |
| p+m-Xylene                        | ug/L         | <0.40      | 0.40       | 8368559         |
| Total Xylenes                     | ug/L         | <0.40      | 0.40       | 8368559         |
| F1 (C6-C10)                       | ug/L         | <25        | 25         | 8368559         |
| F1 (C6-C10) - BTEX                | ug/L         | <25        | 25         | 8368559         |
| <b>F2-F4 Hydrocarbons</b>         |              |            |            |                 |
| F2 (C10-C16 Hydrocarbons)         | ug/L         | <100       | 100        | 8369340         |
| F3 (C16-C34 Hydrocarbons)         | ug/L         | <200       | 200        | 8369340         |
| F4 (C34-C50 Hydrocarbons)         | ug/L         | <200       | 200        | 8369340         |
| Reached Baseline at C50           | ug/L         | Yes        |            | 8369340         |
| <b>Surrogate Recovery (%)</b>     |              |            |            |                 |
| 1,4-Difluorobenzene               | %            | 99         |            | 8368559         |
| 4-Bromofluorobenzene              | %            | 98         |            | 8368559         |
| D10-o-Xylene                      | %            | 84         |            | 8368559         |
| D4-1,2-Dichloroethane             | %            | 97         |            | 8368559         |
| o-Terphenyl                       | %            | 97         |            | 8369340         |
| RDL = Reportable Detection Limit  |              |            |            |                 |
| QC Batch = Quality Control Batch  |              |            |            |                 |



Bureau Veritas Job #: C2Y4835  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

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

| Bureau Veritas ID                        |       | UJW180     |      |          | UJW180      |      |          |
|------------------------------------------|-------|------------|------|----------|-------------|------|----------|
| Sampling Date                            |       | 2022/11/23 |      |          | 2022/11/23  |      |          |
| COC Number                               |       | n/a        |      |          | n/a         |      |          |
|                                          | UNITS | MW7        | RDL  | QC Batch | MW7 Lab-Dup | RDL  | QC Batch |
| <b>Calculated Parameters</b>             |       |            |      |          |             |      |          |
| 1,3-Dichloropropene (cis+trans)          | ug/L  | <0.50      | 0.50 | 8364393  |             |      |          |
| <b>Volatile Organics</b>                 |       |            |      |          |             |      |          |
| Acetone (2-Propanone)                    | ug/L  | 29         | 10   | 8366174  | 35          | 10   | 8366174  |
| Benzene                                  | ug/L  | <0.17      | 0.17 | 8366174  | <0.17       | 0.17 | 8366174  |
| Bromodichloromethane                     | ug/L  | <0.50      | 0.50 | 8366174  | <0.50       | 0.50 | 8366174  |
| Bromoform                                | ug/L  | <1.0       | 1.0  | 8366174  | <1.0        | 1.0  | 8366174  |
| Bromomethane                             | ug/L  | <0.50      | 0.50 | 8366174  | <0.50       | 0.50 | 8366174  |
| Carbon Tetrachloride                     | ug/L  | <0.20      | 0.20 | 8366174  | <0.20       | 0.20 | 8366174  |
| Chlorobenzene                            | ug/L  | <0.20      | 0.20 | 8366174  | <0.20       | 0.20 | 8366174  |
| Chloroform                               | ug/L  | <0.20      | 0.20 | 8366174  | <0.20       | 0.20 | 8366174  |
| Dibromochloromethane                     | ug/L  | <0.50      | 0.50 | 8366174  | <0.50       | 0.50 | 8366174  |
| 1,2-Dichlorobenzene                      | ug/L  | <0.50      | 0.50 | 8366174  | <0.50       | 0.50 | 8366174  |
| 1,3-Dichlorobenzene                      | ug/L  | <0.50      | 0.50 | 8366174  | <0.50       | 0.50 | 8366174  |
| 1,4-Dichlorobenzene                      | ug/L  | <0.50      | 0.50 | 8366174  | <0.50       | 0.50 | 8366174  |
| Dichlorodifluoromethane (FREON 12)       | ug/L  | <1.0       | 1.0  | 8366174  | <1.0        | 1.0  | 8366174  |
| 1,1-Dichloroethane                       | ug/L  | <0.20      | 0.20 | 8366174  | <0.20       | 0.20 | 8366174  |
| 1,2-Dichloroethane                       | ug/L  | <0.50      | 0.50 | 8366174  | <0.50       | 0.50 | 8366174  |
| 1,1-Dichloroethylene                     | ug/L  | <0.20      | 0.20 | 8366174  | <0.20       | 0.20 | 8366174  |
| cis-1,2-Dichloroethylene                 | ug/L  | <0.50      | 0.50 | 8366174  | <0.50       | 0.50 | 8366174  |
| trans-1,2-Dichloroethylene               | ug/L  | <0.50      | 0.50 | 8366174  | <0.50       | 0.50 | 8366174  |
| 1,2-Dichloropropane                      | ug/L  | <0.20      | 0.20 | 8366174  | <0.20       | 0.20 | 8366174  |
| cis-1,3-Dichloropropene                  | ug/L  | <0.30      | 0.30 | 8366174  | <0.30       | 0.30 | 8366174  |
| trans-1,3-Dichloropropene                | ug/L  | <0.40      | 0.40 | 8366174  | <0.40       | 0.40 | 8366174  |
| Ethylbenzene                             | ug/L  | <0.20      | 0.20 | 8366174  | <0.20       | 0.20 | 8366174  |
| Ethylene Dibromide                       | ug/L  | <0.20      | 0.20 | 8366174  | <0.20       | 0.20 | 8366174  |
| Hexane                                   | ug/L  | <1.0       | 1.0  | 8366174  | <1.0        | 1.0  | 8366174  |
| Methylene Chloride(Dichloromethane)      | ug/L  | <2.0       | 2.0  | 8366174  | <2.0        | 2.0  | 8366174  |
| Methyl Ethyl Ketone (2-Butanone)         | ug/L  | <10        | 10   | 8366174  | <10         | 10   | 8366174  |
| Methyl Isobutyl Ketone                   | ug/L  | <5.0       | 5.0  | 8366174  | <5.0        | 5.0  | 8366174  |
| Methyl t-butyl ether (MTBE)              | ug/L  | <0.50      | 0.50 | 8366174  | <0.50       | 0.50 | 8366174  |
| Styrene                                  | ug/L  | <0.50      | 0.50 | 8366174  | <0.50       | 0.50 | 8366174  |
| 1,1,1,2-Tetrachloroethane                | ug/L  | <0.50      | 0.50 | 8366174  | <0.50       | 0.50 | 8366174  |
| 1,1,2,2-Tetrachloroethane                | ug/L  | <0.50      | 0.50 | 8366174  | <0.50       | 0.50 | 8366174  |
| Tetrachloroethylene                      | ug/L  | <0.20      | 0.20 | 8366174  | <0.20       | 0.20 | 8366174  |
| RDL = Reportable Detection Limit         |       |            |      |          |             |      |          |
| QC Batch = Quality Control Batch         |       |            |      |          |             |      |          |
| Lab-Dup = Laboratory Initiated Duplicate |       |            |      |          |             |      |          |



Bureau Veritas Job #: C2Y4835  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

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

|                                                                                                                  |              |            |            |                 |                    |            |                 |
|------------------------------------------------------------------------------------------------------------------|--------------|------------|------------|-----------------|--------------------|------------|-----------------|
| <b>Bureau Veritas ID</b>                                                                                         |              | UJW180     |            |                 | UJW180             |            |                 |
| <b>Sampling Date</b>                                                                                             |              | 2022/11/23 |            |                 | 2022/11/23         |            |                 |
| <b>COC Number</b>                                                                                                |              | n/a        |            |                 | n/a                |            |                 |
|                                                                                                                  | <b>UNITS</b> | <b>MW7</b> | <b>RDL</b> | <b>QC Batch</b> | <b>MW7 Lab-Dup</b> | <b>RDL</b> | <b>QC Batch</b> |
| Toluene                                                                                                          | ug/L         | 0.33       | 0.20       | 8366174         | 0.35               | 0.20       | 8366174         |
| 1,1,1-Trichloroethane                                                                                            | ug/L         | <0.20      | 0.20       | 8366174         | <0.20              | 0.20       | 8366174         |
| 1,1,2-Trichloroethane                                                                                            | ug/L         | <0.50      | 0.50       | 8366174         | <0.50              | 0.50       | 8366174         |
| Trichloroethylene                                                                                                | ug/L         | <0.20      | 0.20       | 8366174         | <0.20              | 0.20       | 8366174         |
| Trichlorofluoromethane (FREON 11)                                                                                | ug/L         | <0.50      | 0.50       | 8366174         | <0.50              | 0.50       | 8366174         |
| Vinyl Chloride                                                                                                   | ug/L         | <0.20      | 0.20       | 8366174         | <0.20              | 0.20       | 8366174         |
| p+m-Xylene                                                                                                       | ug/L         | <0.20      | 0.20       | 8366174         | <0.20              | 0.20       | 8366174         |
| o-Xylene                                                                                                         | ug/L         | <0.20      | 0.20       | 8366174         | <0.20              | 0.20       | 8366174         |
| Total Xylenes                                                                                                    | ug/L         | <0.20      | 0.20       | 8366174         | <0.20              | 0.20       | 8366174         |
| F1 (C6-C10)                                                                                                      | ug/L         | <25        | 25         | 8366174         | <25                | 25         | 8366174         |
| F1 (C6-C10) - BTEX                                                                                               | ug/L         | <25        | 25         | 8366174         | <25                | 25         | 8366174         |
| <b>F2-F4 Hydrocarbons</b>                                                                                        |              |            |            |                 |                    |            |                 |
| F2 (C10-C16 Hydrocarbons)                                                                                        | ug/L         | <100       | 100        | 8369340         |                    |            |                 |
| F3 (C16-C34 Hydrocarbons)                                                                                        | ug/L         | <200       | 200        | 8369340         |                    |            |                 |
| F4 (C34-C50 Hydrocarbons)                                                                                        | ug/L         | <200       | 200        | 8369340         |                    |            |                 |
| Reached Baseline at C50                                                                                          | ug/L         | Yes        |            | 8369340         |                    |            |                 |
| <b>Surrogate Recovery (%)</b>                                                                                    |              |            |            |                 |                    |            |                 |
| o-Terphenyl                                                                                                      | %            | 96         |            | 8369340         |                    |            |                 |
| 4-Bromofluorobenzene                                                                                             | %            | 88         |            | 8366174         | 89                 |            | 8366174         |
| D4-1,2-Dichloroethane                                                                                            | %            | 104        |            | 8366174         | 103                |            | 8366174         |
| D8-Toluene                                                                                                       | %            | 97         |            | 8366174         | 97                 |            | 8366174         |
| RDL = Reportable Detection Limit<br>QC Batch = Quality Control Batch<br>Lab-Dup = Laboratory Initiated Duplicate |              |            |            |                 |                    |            |                 |



Bureau Veritas Job #: C2Y4835  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

## TEST SUMMARY

**Bureau Veritas ID:** UJW180  
**Sample ID:** MW7  
**Matrix:** Water

**Collected:** 2022/11/23  
**Shipped:**  
**Received:** 2022/11/23

| Test Description                       | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|----------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Methylnaphthalene Sum                  | CALC            | 8362383 | N/A        | 2022/11/29    | Automated Statchk    |
| 1,3-Dichloropropene Sum                | CALC            | 8364393 | N/A        | 2022/11/26    | Automated Statchk    |
| Petroleum Hydrocarbons F2-F4 in Water  | GC/FID          | 8369340 | 2022/11/26 | 2022/11/27    | Jeevaraj Jeevaratnam |
| Dissolved Metals by ICPMS              | ICP/MS          | 8365125 | N/A        | 2022/11/25    | Arefa Dabhad         |
| PAH Compounds in Water by GC/MS (SIM)  | GC/MS           | 8369338 | 2022/11/26 | 2022/11/26    | Jonghan Yoon         |
| Volatile Organic Compounds and F1 PHCs | GC/MSFD         | 8366174 | N/A        | 2022/11/26    | Denis Reid           |

**Bureau Veritas ID:** UJW180 Dup  
**Sample ID:** MW7  
**Matrix:** Water

**Collected:** 2022/11/23  
**Shipped:**  
**Received:** 2022/11/23

| Test Description                       | Instrumentation | Batch   | Extracted | Date Analyzed | Analyst    |
|----------------------------------------|-----------------|---------|-----------|---------------|------------|
| Volatile Organic Compounds and F1 PHCs | GC/MSFD         | 8366174 | N/A       | 2022/11/26    | Denis Reid |

**Bureau Veritas ID:** UJW181  
**Sample ID:** MW8  
**Matrix:** Water

**Collected:** 2022/11/23  
**Shipped:**  
**Received:** 2022/11/23

| Test Description                         | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst              |
|------------------------------------------|-----------------|---------|------------|---------------|----------------------|
| Petroleum Hydro. CCME F1 & BTEX in Water | HSGC/MSFD       | 8368559 | N/A        | 2022/11/26    | Georgeta Rusu        |
| Petroleum Hydrocarbons F2-F4 in Water    | GC/FID          | 8369340 | 2022/11/26 | 2022/11/27    | Jeevaraj Jeevaratnam |
| Dissolved Metals by ICPMS                | ICP/MS          | 8365125 | N/A        | 2022/11/25    | Arefa Dabhad         |





Bureau Veritas Job #: C2Y4835  
Report Date: 2022/11/29

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

#### GENERAL COMMENTS

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

|           |       |
|-----------|-------|
| Package 1 | 4.7°C |
|-----------|-------|

Cooler custody seal was present and intact.

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



BUREAU  
VERITAS

Bureau Veritas Job #: C2Y4835  
Report Date: 2022/11/29

## QUALITY ASSURANCE REPORT

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

| QC Batch | Parameter                 | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|---------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                           |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8366174  | 4-Bromofluorobenzene      | 2022/11/26 | 96           | 70 - 130  | 97           | 70 - 130  | 89           | %     |           |           |
| 8366174  | D4-1,2-Dichloroethane     | 2022/11/26 | 103          | 70 - 130  | 105          | 70 - 130  | 103          | %     |           |           |
| 8366174  | D8-Toluene                | 2022/11/26 | 101          | 70 - 130  | 102          | 70 - 130  | 96           | %     |           |           |
| 8368559  | 1,4-Difluorobenzene       | 2022/11/25 | 99           | 70 - 130  | 100          | 70 - 130  | 101          | %     |           |           |
| 8368559  | 4-Bromofluorobenzene      | 2022/11/25 | 97           | 70 - 130  | 97           | 70 - 130  | 96           | %     |           |           |
| 8368559  | D10-o-Xylene              | 2022/11/25 | 88           | 70 - 130  | 90           | 70 - 130  | 82           | %     |           |           |
| 8368559  | D4-1,2-Dichloroethane     | 2022/11/25 | 92           | 70 - 130  | 89           | 70 - 130  | 88           | %     |           |           |
| 8369338  | D10-Anthracene            | 2022/11/26 | 108          | 50 - 130  | 110          | 50 - 130  | 108          | %     |           |           |
| 8369338  | D14-Terphenyl (FS)        | 2022/11/26 | 104          | 50 - 130  | 104          | 50 - 130  | 102          | %     |           |           |
| 8369338  | D8-Acenaphthylene         | 2022/11/26 | 101          | 50 - 130  | 103          | 50 - 130  | 98           | %     |           |           |
| 8369340  | o-Terphenyl               | 2022/11/27 | 100          | 60 - 130  | 102          | 60 - 130  | 98           | %     |           |           |
| 8365125  | Dissolved Antimony (Sb)   | 2022/11/25 | 102          | 80 - 120  | 104          | 80 - 120  | <0.50        | ug/L  |           |           |
| 8365125  | Dissolved Arsenic (As)    | 2022/11/25 | 97           | 80 - 120  | 100          | 80 - 120  | <1.0         | ug/L  |           |           |
| 8365125  | Dissolved Barium (Ba)     | 2022/11/25 | 102          | 80 - 120  | 105          | 80 - 120  | <2.0         | ug/L  |           |           |
| 8365125  | Dissolved Beryllium (Be)  | 2022/11/25 | 98           | 80 - 120  | 100          | 80 - 120  | <0.40        | ug/L  |           |           |
| 8365125  | Dissolved Boron (B)       | 2022/11/25 | 93           | 80 - 120  | 97           | 80 - 120  | <10          | ug/L  |           |           |
| 8365125  | Dissolved Cadmium (Cd)    | 2022/11/25 | 100          | 80 - 120  | 101          | 80 - 120  | <0.090       | ug/L  |           |           |
| 8365125  | Dissolved Chromium (Cr)   | 2022/11/25 | 94           | 80 - 120  | 96           | 80 - 120  | <5.0         | ug/L  |           |           |
| 8365125  | Dissolved Cobalt (Co)     | 2022/11/25 | 94           | 80 - 120  | 100          | 80 - 120  | <0.50        | ug/L  |           |           |
| 8365125  | Dissolved Copper (Cu)     | 2022/11/25 | 99           | 80 - 120  | 102          | 80 - 120  | <0.90        | ug/L  |           |           |
| 8365125  | Dissolved Lead (Pb)       | 2022/11/25 | 95           | 80 - 120  | 98           | 80 - 120  | <0.50        | ug/L  | NC        | 20        |
| 8365125  | Dissolved Molybdenum (Mo) | 2022/11/25 | 97           | 80 - 120  | 97           | 80 - 120  | <0.50        | ug/L  |           |           |
| 8365125  | Dissolved Nickel (Ni)     | 2022/11/25 | 93           | 80 - 120  | 95           | 80 - 120  | <1.0         | ug/L  |           |           |
| 8365125  | Dissolved Selenium (Se)   | 2022/11/25 | 94           | 80 - 120  | 99           | 80 - 120  | <2.0         | ug/L  |           |           |
| 8365125  | Dissolved Silver (Ag)     | 2022/11/25 | 96           | 80 - 120  | 97           | 80 - 120  | <0.090       | ug/L  |           |           |
| 8365125  | Dissolved Thallium (Tl)   | 2022/11/25 | 102          | 80 - 120  | 100          | 80 - 120  | <0.050       | ug/L  |           |           |
| 8365125  | Dissolved Uranium (U)     | 2022/11/25 | 97           | 80 - 120  | 100          | 80 - 120  | <0.10        | ug/L  |           |           |
| 8365125  | Dissolved Vanadium (V)    | 2022/11/25 | 96           | 80 - 120  | 97           | 80 - 120  | <0.50        | ug/L  |           |           |
| 8365125  | Dissolved Zinc (Zn)       | 2022/11/25 | 97           | 80 - 120  | 98           | 80 - 120  | <5.0         | ug/L  |           |           |
| 8366174  | 1,1,2-Tetrachloroethane   | 2022/11/26 | 97           | 70 - 130  | 102          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8366174  | 1,1,1-Trichloroethane     | 2022/11/26 | 95           | 70 - 130  | 99           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |

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### QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

| QC Batch | Parameter                           | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|-------------------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                                     |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8366174  | 1,1,2,2-Tetrachloroethane           | 2022/11/26 | 105          | 70 - 130  | 114          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8366174  | 1,1,2-Trichloroethane               | 2022/11/26 | 101          | 70 - 130  | 106          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8366174  | 1,1-Dichloroethane                  | 2022/11/26 | 95           | 70 - 130  | 98           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8366174  | 1,1-Dichloroethylene                | 2022/11/26 | 96           | 70 - 130  | 99           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8366174  | 1,2-Dichlorobenzene                 | 2022/11/26 | 88           | 70 - 130  | 90           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8366174  | 1,2-Dichloroethane                  | 2022/11/26 | 94           | 70 - 130  | 98           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8366174  | 1,2-Dichloropropane                 | 2022/11/26 | 97           | 70 - 130  | 101          | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8366174  | 1,3-Dichlorobenzene                 | 2022/11/26 | 90           | 70 - 130  | 90           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8366174  | 1,4-Dichlorobenzene                 | 2022/11/26 | 101          | 70 - 130  | 99           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8366174  | Acetone (2-Propanone)               | 2022/11/26 | 110          | 60 - 140  | 116          | 60 - 140  | <10          | ug/L  | 18        | 30        |
| 8366174  | Benzene                             | 2022/11/26 | 91           | 70 - 130  | 94           | 70 - 130  | <0.17        | ug/L  | NC        | 30        |
| 8366174  | Bromodichloromethane                | 2022/11/26 | 102          | 70 - 130  | 107          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8366174  | Bromoform                           | 2022/11/26 | 103          | 70 - 130  | 112          | 70 - 130  | <1.0         | ug/L  | NC        | 30        |
| 8366174  | Bromomethane                        | 2022/11/26 | 91           | 60 - 140  | 96           | 60 - 140  | <0.50        | ug/L  | NC        | 30        |
| 8366174  | Carbon Tetrachloride                | 2022/11/26 | 98           | 70 - 130  | 102          | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8366174  | Chlorobenzene                       | 2022/11/26 | 92           | 70 - 130  | 95           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8366174  | Chloroform                          | 2022/11/26 | 97           | 70 - 130  | 101          | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8366174  | cis-1,2-Dichloroethylene            | 2022/11/26 | 98           | 70 - 130  | 101          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8366174  | cis-1,3-Dichloropropene             | 2022/11/26 | 80           | 70 - 130  | 86           | 70 - 130  | <0.30        | ug/L  | NC        | 30        |
| 8366174  | Dibromochloromethane                | 2022/11/26 | 101          | 70 - 130  | 107          | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8366174  | Dichlorodifluoromethane (FREON 12)  | 2022/11/26 | 91           | 60 - 140  | 98           | 60 - 140  | <1.0         | ug/L  | NC        | 30        |
| 8366174  | Ethylbenzene                        | 2022/11/26 | 85           | 70 - 130  | 88           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8366174  | Ethylene Dibromide                  | 2022/11/26 | 94           | 70 - 130  | 99           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8366174  | F1 (C6-C10) - BTEX                  | 2022/11/26 |              |           |              |           | <25          | ug/L  | NC        | 30        |
| 8366174  | F1 (C6-C10)                         | 2022/11/26 | 98           | 60 - 140  | 92           | 60 - 140  | <25          | ug/L  | NC        | 30        |
| 8366174  | Hexane                              | 2022/11/26 | 99           | 70 - 130  | 101          | 70 - 130  | <1.0         | ug/L  | NC        | 30        |
| 8366174  | Methyl Ethyl Ketone (2-Butanone)    | 2022/11/26 | 112          | 60 - 140  | 119          | 60 - 140  | <10          | ug/L  | NC        | 30        |
| 8366174  | Methyl Isobutyl Ketone              | 2022/11/26 | 99           | 70 - 130  | 108          | 70 - 130  | <5.0         | ug/L  | NC        | 30        |
| 8366174  | Methyl t-butyl ether (MTBE)         | 2022/11/26 | 84           | 70 - 130  | 89           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8366174  | Methylene Chloride(Dichloromethane) | 2022/11/26 | 101          | 70 - 130  | 104          | 70 - 130  | <2.0         | ug/L  | NC        | 30        |
| 8366174  | o-Xylene                            | 2022/11/26 | 86           | 70 - 130  | 89           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |



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## QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

| QC Batch | Parameter                         | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|-----------------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                                   |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8366174  | p+m-Xylene                        | 2022/11/26 | 86           | 70 - 130  | 88           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8366174  | Styrene                           | 2022/11/26 | 92           | 70 - 130  | 97           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8366174  | Tetrachloroethylene               | 2022/11/26 | 85           | 70 - 130  | 86           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8366174  | Toluene                           | 2022/11/26 | 91           | 70 - 130  | 94           | 70 - 130  | <0.20        | ug/L  | 5.3       | 30        |
| 8366174  | Total Xylenes                     | 2022/11/26 |              |           |              |           | <0.20        | ug/L  | NC        | 30        |
| 8366174  | trans-1,2-Dichloroethylene        | 2022/11/26 | 94           | 70 - 130  | 96           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8366174  | trans-1,3-Dichloropropene         | 2022/11/26 | 81           | 70 - 130  | 88           | 70 - 130  | <0.40        | ug/L  | NC        | 30        |
| 8366174  | Trichloroethylene                 | 2022/11/26 | 97           | 70 - 130  | 99           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8366174  | Trichlorofluoromethane (FREON 11) | 2022/11/26 | 94           | 70 - 130  | 98           | 70 - 130  | <0.50        | ug/L  | NC        | 30        |
| 8366174  | Vinyl Chloride                    | 2022/11/26 | 87           | 70 - 130  | 91           | 70 - 130  | <0.20        | ug/L  | NC        | 30        |
| 8368559  | Benzene                           | 2022/11/25 | 92           | 50 - 140  | 92           | 50 - 140  | <0.20        | ug/L  | NC        | 30        |
| 8368559  | Ethylbenzene                      | 2022/11/25 | 97           | 50 - 140  | 99           | 50 - 140  | <0.20        | ug/L  | NC        | 30        |
| 8368559  | F1 (C6-C10) - BTEX                | 2022/11/25 |              |           |              |           | <25          | ug/L  | NC        | 30        |
| 8368559  | F1 (C6-C10)                       | 2022/11/25 | 101          | 60 - 140  | 102          | 60 - 140  | <25          | ug/L  | NC        | 30        |
| 8368559  | o-Xylene                          | 2022/11/25 | 93           | 50 - 140  | 94           | 50 - 140  | <0.20        | ug/L  | NC        | 30        |
| 8368559  | p+m-Xylene                        | 2022/11/25 | 94           | 50 - 140  | 97           | 50 - 140  | <0.40        | ug/L  | NC        | 30        |
| 8368559  | Toluene                           | 2022/11/25 | 90           | 50 - 140  | 91           | 50 - 140  | <0.20        | ug/L  | NC        | 30        |
| 8368559  | Total Xylenes                     | 2022/11/25 |              |           |              |           | <0.40        | ug/L  | NC        | 30        |
| 8369338  | 1-Methylnaphthalene               | 2022/11/26 | 118          | 50 - 130  | 122          | 50 - 130  | <0.050       | ug/L  | 12        | 30        |
| 8369338  | 2-Methylnaphthalene               | 2022/11/26 | 110          | 50 - 130  | 114          | 50 - 130  | <0.050       | ug/L  | 12        | 30        |
| 8369338  | Acenaphthene                      | 2022/11/26 | 113          | 50 - 130  | 116          | 50 - 130  | <0.050       | ug/L  | 11        | 30        |
| 8369338  | Acenaphthylene                    | 2022/11/26 | 111          | 50 - 130  | 115          | 50 - 130  | <0.050       | ug/L  | 8.9       | 30        |
| 8369338  | Anthracene                        | 2022/11/26 | 113          | 50 - 130  | 116          | 50 - 130  | <0.050       | ug/L  | 9.8       | 30        |
| 8369338  | Benzo(a)anthracene                | 2022/11/26 | 109          | 50 - 130  | 113          | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8369338  | Benzo(a)pyrene                    | 2022/11/26 | 105          | 50 - 130  | 109          | 50 - 130  | <0.0090      | ug/L  | 2.0       | 30        |
| 8369338  | Benzo(b,j)fluoranthene            | 2022/11/26 | 110          | 50 - 130  | 110          | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8369338  | Benzo(g,h,i)perylene              | 2022/11/26 | 111          | 50 - 130  | 118          | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8369338  | Benzo(k)fluoranthene              | 2022/11/26 | 108          | 50 - 130  | 114          | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8369338  | Chrysene                          | 2022/11/26 | 110          | 50 - 130  | 114          | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8369338  | Dibenzo(a,h)anthracene            | 2022/11/26 | 99           | 50 - 130  | 106          | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8369338  | Fluoranthene                      | 2022/11/26 | 118          | 50 - 130  | 122          | 50 - 130  | <0.050       | ug/L  | 4.3       | 30        |



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## QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

| QC Batch | Parameter                 | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank |       | RPD       |           |
|----------|---------------------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|          |                           |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| 8369338  | Fluorene                  | 2022/11/26 | 111          | 50 - 130  | 114          | 50 - 130  | <0.050       | ug/L  | 9.6       | 30        |
| 8369338  | Indeno(1,2,3-cd)pyrene    | 2022/11/26 | 106          | 50 - 130  | 114          | 50 - 130  | <0.050       | ug/L  | NC        | 30        |
| 8369338  | Naphthalene               | 2022/11/26 | 110          | 50 - 130  | 113          | 50 - 130  | <0.050       | ug/L  | 12        | 30        |
| 8369338  | Phenanthrene              | 2022/11/26 | 111          | 50 - 130  | 115          | 50 - 130  | <0.030       | ug/L  | 8.4       | 30        |
| 8369338  | Pyrene                    | 2022/11/26 | 119          | 50 - 130  | 122          | 50 - 130  | <0.050       | ug/L  | 6.4       | 30        |
| 8369340  | F2 (C10-C16 Hydrocarbons) | 2022/11/27 | 104          | 60 - 130  | 102          | 60 - 130  | <100         | ug/L  | 3.7       | 30        |
| 8369340  | F3 (C16-C34 Hydrocarbons) | 2022/11/27 | 101          | 60 - 130  | 104          | 60 - 130  | <200         | ug/L  | 1.0       | 30        |
| 8369340  | F4 (C34-C50 Hydrocarbons) | 2022/11/27 | 101          | 60 - 130  | 103          | 60 - 130  | <200         | ug/L  | NC        | 30        |

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

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

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

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

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

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



Bureau Veritas Job #: C2Y4835  
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Soil Engineers Ltd  
Client Project #: 2206-E054  
Site Location: ERIN  
Sampler Initials: ANK

### VALIDATION SIGNATURE PAGE

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

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

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