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A REPORT TO
GREAT GULF HOMES LIMITED

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

PROPOSED RESIDENTIAL DEVELOPMENT

6611 SECOND LINE WEST

CITY OF MISSISSAUGA

Reference No. 1512-S086E

October 30, 2017

DISTRIBUTION

3 Copies - Great Gulf Homes Limited

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It should be noted that the information supplied in this report may not be 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 Great Gulf Homes Limited to carry out a Phase Two Environmental Site Assessment (Phase Two ESA), as defined by Ontario Regulation (O. Reg.) 153/04, as amended. The subject property is located at 6611 Second Line West, in the City of Mississauga (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 environmental concerns identified in our Phase One Environmental Site Assessment (Phase One ESA) for the subject site.

The field work for the investigation conducted in two stages: the first stage consisted of soil and groundwater sampling from boreholes/test pits and monitoring wells at selected locations and the second stage consisted soil remediation along with confirmation soil sampling program at the subject site.

Soil and groundwater samples were submitted for chemical analysis in accordance with the Ministry of the Environment and Climate Change (MOECC) Table 1, Full Depth Background Site Condition Standards, for Residential/Parkland/Institutional/Industrial/Commercial/ Community Property Use, in accordance with "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" (EPA), dated April 15, 2011 (Table 1 Standards).

A review of the soil and groundwater results of the first stage of the investigation indicates that impacted surface soils with Lead and Chromium VI in excess of the Table 1 Standards at the test pit location TP1 (eastern section of the subject site) and Lead, Molybdenum and Chromium VI at testpit location TP4 (southern section of the subject site). The remaining analyzed soil and groundwater samples of the initial stage investigation for the tested parameters meet Table 1 Standards. A soil remedial action was required at the eastern and southern sections of the subject site in order to bring the subject site into compliance with the Table 1 Standards.

Subsequently, the impacted soil was excavated and removed from the southern and eastern sections of the subject site and disposed off-site. Upon completion of the removal of impacted soil, confirmatory soil testing program was conducted. The delineation program was conducted concurrently with confirmation testing program.

A review of the analytical results of the confirmation testing program of the Phase Two ESA indicates the confirmation soil samples meet the Table 1 Standards.

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 Great Gulf Homes Limited to carry out a Phase Two Environmental Site Assessment (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. The subject property is located at 6611 Second Line West, in the City of Mississauga (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 environmental concerns identified in our Phase One Environmental Site Assessment (Phase One ESA).

2.1 Site Description

The subject site, rectangular in shape and approximately 0.81 ha (2.0 ac) in area, is located approximately 230 m to the north side of Highway 401 and east of Second Line West, in the City of Mississauga. The Property Identification Number (PIN) is part of PIN 13213-3809 (LT). The legal description of the subject site is part lot 9, concession 2, west of Hurontario Street, City of Mississauga, Regional Municipality of Peel on the proposed survey plan dated and signed by John F.G. Young, Ontario Land Surveyor, on January 25, 2016.

The subject site and neighboring properties have been mainly used for residential purposes. The subject site has been used for residential purpose since 1953. The neighbouring properties consist mainly of residential buildings and wooded areas to the north, residential properties to the southeast and east; and natural conservation area to the west and south.

An Area of Natural Scientific Interest (ANSI) is located within 30 m from the subject site boundary. The ground surface is descends towards the south.

The Property Survey Plan is attached in Appendix.

2.2 Property Ownership

This Phase Two ESA was commissioned to address the environmental concerns in accordance with our proposal dated April 8, 2016 (Revised). The investigation was approved by Mr. Shaun Joffe of Great Gulf Homes Limited. The subject site owner and our client can be contacted at:

Great Gulf Homes Limited
3751 Victoria Park Avenue
Toronto, Ontario
M1W 3Z4

Attention: Mr. Shaun Joffe

2.3 Current and Proposed Future Uses

The subject site has been used for residential purpose since 1953. 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.

2.4 Applicable Site Condition Standards

SEL has selected the applicable assessment criteria from Ontario Regulation 153/04, as amended including Ont. Reg. 511/09, made under the Environmental Protection Act, June 1, 2004, to assess the analytical data from the submitted soil samples. The following information was used to select the appropriate criteria:

- The subject site is considered to be sensitive due to an Area of Natural Scientific Interest (ANSI) located within 30 m to the west and south side of the subject site.
- The property is not a shallow soil property, as the bedrock was not encountered within 7.6 m below ground surface (mbgs) during the investigation. Therefore, the subject site is not a shallow soil property
- A water well was observed on the subject site.
- No water body is located at the subject site or within 30 m of the subject site.

- Full depth background condition 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, the coarse textured soil standards are automatically applied.

Based on the above considerations, the Ministry of the Environment and Climate Change (MOECC) Table 1, Full Depth Background Site Condition Standards, for Residential/ Parkland/Institutional/Industrial/Commercial/Community Property Use (Table 1 Standards) under part XV.I of EPA 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 our Phase One ESA, the general physical setting of the subject site is summarized below:

The subject site is located within the residential area in the City of Mississauga. The neighbouring properties consist mainly of residential buildings and wooded areas to the north, residential properties to the southeast and east; and natural conservation area to the west and south.

The subject site is located in the City of Mississauga, on Halton Hill Deposits, which predominantly consist of silt to silty clay matrix, high in matrix carbonate content and clast poor. The subject site is located on the Georgian Bay formation. The formation rock consists of shale, limestone, dolostone and siltstone.

The subject site is adjacent to two roadways, Harmony Hill to the north and Second Line west to the south side, and Area of Natural Scientific Interest (ANSI) is located to the south side of the subject site. The ground surface descends towards the south.

The subject site is located in the larger hydrogeological region known as Southern Ontario Lowlands. A Watershed Map provided by the Credit Valley Conservative Authority shows the subject site is located within the Norval to Port Credit Sub-watershed. which is part of the Credit Valley Watershed.

Based on the Ministry of Natural Resources Natural Features Map and the City of Brampton Natural Resources Map, there is an ANSIs located within 30 m to the south side of the subject site.

3.2 Past Investigations

The following previous investigation reports for the subject site were reviewed as part of this Phase Two ESA:

- A Geotechnical Investigation report, Reference No. 0210-S044, dated 2002.
- Phase One Environmental Site Assessment (Phase One ESA) report, Reference No. 1512-S086E, dated January 27, 2016

Geotechnical Investigation (2002)

In 2002, a geotechnical investigation consisting of 5 boreholes was carried out on the subject site. Based on the findings of the geotechnical investigation, beneath a layer of topsoil fill, 5 to 30 cm thick, and/or a layer of silty clay fill or granular fill, the site is underlain by a layer of firm to hard, generally very stiff silty clay till.

Phase One ESA (2016)

The Phase One ESA identified the following Areas of Potential Environmental Concern (APECs) at the subject site:

APEC 1: Potential surface soil impact due to unknown environmental quality of fill material on the subject site. #30. Importation of fill material of unknown quality

APEC 2: Potential soil and groundwater impact due to some truck trailers, which were parked on the subject site. #11. Commercial trucking and container terminals

APEC 3: Potential soil and groundwater impact due to a former underground storage fuel tank on the subject site. #28. Gasoline and associated products in fixed storage

4.0 SCOPE OF THE INVESTIGATION

4.1 Overview of Site Investigation

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

The site investigation for the Phase Two ESA was carried out in two stages:

- The first stage (initial investigation) consisted of soil and groundwater sampling from boreholes/test pits and monitoring wells as related to the environmental concerns identified in our Phase One ESA.
- The second stage (soil remediation along with confirmation testing program) consisted of field superivision of impacted soil removal and soil sampling from the margins of the remedial excavations at the southern and eastern sections of the subject site based on the findings of the first stage investigation.

The scope of work for this investigation is outlined below:

- Locate the underground and overhead utilities.
- Conduct three (3) boreholes to depths ranging from 3.0 mbgs to 7.6 mbgs and five (5) hand dug test pits to depths of 0.5 mbgs.
- Collect representative soil samples from the boreholes and test pits.
- 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, calibrated with hexane and having a minimum detection level of 2 ppm (parts per million by volume).
- Install monitoring wells in three (3) boreholes for groundwater observation, sampling and testing.

- Conduct of groundwater monitoring and collect groundwater samples from monitoring wells for chemical testing.
- Carry out analytical testing program on selected soil samples and groundwater samples (including QA/QC samples) for one or more of the following parameters: petroleum hydrocarbons (PHCs), volatile organics compounds (VOCs), and/or metals and inorganics parameters (M&I).
- Review the analytical results for the tested soil and groundwater samples using applicable Site Condition Standards.
- Soil and groundwater re-sampling and retesting at selected sampling location to vertify the concentrations of contaminants of concerns.
- Undertake field supervision and documentation of the removal of impacted surface soil from southern and eastern section of the subject site, based on the findings of first stage investigation.
- Conduct delineation and confirmation testing program which includes collection of thirteen (13) soil samples from the margins of the remedial excavation pit for analysis of metal and/or inorganic parameters.
- Review the analytical results of the submitted confirmatory soil samples using the applicable Site Condition Standards.
- Prepare a Phase Two ESA report presenting the findings of the investigation

The rationale for the selection of borehole/test pit and monitoring well locations is presented in the Sampling and Analysis Plans, 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 Plans provided in Appendix 'A'. Sediment were not identified as potentially contaminated media in our Phase One ESA. Consequently, no sediment investigation was conducted as part of this Phase Two ESA.

Boreholes were advanced using a conventional drill rig equipped with flight augers and split-spoon samplers. The hand-dug test pits were advanced using a steel spade. Soil samples were logged in the field and head space 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 ppm (parts per million by volume).

Groundwater monitoring wells were installed in selected boreholes. The monitoring wells were constructed using 50 mm-diameter flush-joint threaded PVC monitoring well supplies, and were completed with 3.0 m in length intake screens. Groundwater sampling was conducted using dedicated low-density polyethylene (LDPE) tubing and disposable bailers, and laboratory-supplied containers (prepared with preservative for the analysis being conducted). The samples scheduled for analysis of metals were filtered on-site through a 0.45 micron filter as part of the sampling process.

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 plans 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 Plans provided in Appendix 'A' and in accordance with the SEL Standard Operating Procedures.

The Phase Two ESA consisted of conducting five (5) boreholes to depths ranging from 3.0 mbgs to 7.6 mbgs, three (3) hand dug test pits to a depth of 0.5 mbgs, installation of monitoring wells in three (3) selected boreholes, field measurements, collection of soil and groundwater samples from the sampling locations for chemical analysis, and excavation and removal of impacted soil. The soil and groundwater samples were assessed for the potential contamination with respect to the APECs identified by our 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 in 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 utilities were located and marked out in the field by representatives of the major utility companies through Ontario One Call and a private locator (C.L. Underground Locates).

The field work of the investigation for the Phase Two ESA was carried out, between July 14, 2016 and August 31, 2017 in two stages:

- The first stage was part of the initial investigation and consisted of conducting three (3) boreholes/shallow boreholes and monitoring wells (designated as BH/MW 1 to BH/MW 3, TP4 and TP5), to depths ranging from 3.0 mbgs to 7.6 mbgs and five (5) hand dug test pits (designated as TP 1 to TP3) to a depth of 0.5 mbgs. The sampling locations were placed within the areas of potential environmental concerns based on the findings of the Phase One ESA.
- The second stage was conducted after the removal of the impacted soil from the area from TP1 to TP4 of the first stage investigation and consisted of collection of a total of thirteen (13) soil samples and two (2) duplicate samples (designated as Wall 1-1, Wall 2-2, Wall 3-3, Wall 4, Wall 5, Wall 6, Wall 7, Floor 1, Floor 2-1, Floor 3, Floor 4 and Floor 5, Dup-1 and Dup) from the margins of the remedial excavations at depths ranging from 0.7 mbgs to 2.0 mbgs, for delineation and confirmation testing. Details of soil remediation including confirmation soil testing are discussed in the remediation appendix.

The sampling locations of the investigation are shown on Drawing No. 2.

The boreholes were advanced on using a conventional truck-mounted drill rig, equipped with continuous flight augers and sampling rods, supplied by a specialist drilling contractor, DBW Drilling Limited. The hand-dug test pits were advanced using a steel spade. Soil samples from the boreholes were recovered at regular intervals, using split spoon sampler and from the test pits to depths of 0.5 mbgs using the steel spade.

The drilling, excavating and soil sampling equipment are decontaminated prior to initial use, between the sampling locations and at the completion of field activities. The drilling excavating and sampling equipments are manually scrubbed with a brush using a phosphate-free solution and power washed to remove any adhered soil, foreign material and potential contaminant.

The field work was monitored by a Soil Engineers Ltd. environmental technician who recorded the findings and observations.

5.3 Soil: Sampling

Soil samples from the boreholes were retrieved at regular intervals, using a stainless steel split-spoon sampler. Soil samples from the test pits were retrieved using a steel spade. 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 glass jar 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 F1 and VOCs analyses.

The subsoil conditions indicate a layer of topsoil fill, and/or a layer of silty clay fill or granular fill, the subject site is underlain by a layer of silty clay till at various depths and locations.

Detailed descriptions of the encountered subsurface conditions are presented on the Borehole Logs provided in Appendix 'B'.

Based on the soil vapour measurements and visual and olfactory observations, representative worst case soil samples from the boreholes and test pits were selected and sent to the laboratory for chemical analyses.

5.4 Field Screening Measurements

The headspace vapour concentrations were measured using a portable RKI Eagle gas detector, TYPE 101 (Serial Number: E091015) set to include flammable gases with the exception of methane (methane elimination mode), and having a minimum detection level of 2 ppm (parts per million by volume). Prior to taking the measurements, the instrument was calibrated to hexane standards for both ppm and LEL according to the instruction manual for the instrument. Our technician was trained by the supplier for the proper calibration procedure. The instrument is calibrated or tuned up by the supplier (Pine Environmental Service Inc.) seasonally.

The results of the soil vapour measurement are presented in the Borehole Log, Appendix 'B'.

The representative worst case soil samples based on the soil vapour measurements and visual and olfactory observations were selected from the boreholes and test pits, and sent to the laboratory for chemical analyses.

5.5 Groundwater: Monitoring Well Installation

A total of three (3) monitoring wells were installed at the subject site by DBW Drilling Limited. The monitoring wells were constructed using 50 mm-diameter PVC casing, 3.0 m screen in length at the bottom of the borehole. A PVC riser, capped at the top, was installed from the screen section and extended 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. The top of each monitoring well was sealed with concrete to approximately 0.3 mbgs.

The underground riser was protected by a flush-mounted or monument protective casings, and they sealed into ground with concrete. The details of the monitoring well construction 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 LDPE tubing to facilitate the well development, purging and sampling programs.

Groundwater development was performed. The monitoring wells have been developed to remove any fluids that may have been introduced into the well during drilling and to remove particles that may have become entrained in the well and filter pack (three well casing volumes of groundwater in each well). Purged water was contained and stored at the subject site for future disposal).

5.6 Groundwater: Field Measurement of Water Quality Parameters

Groundwater monitoring and purging was conducted at the subject site on July 21, 2016. Water level measurements and water temperature 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 free product/surface sheen and any odour present during purging the wells. 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 groundwater level measurement and observations are presented in Table II.

5.7 Groundwater: Sampling

The well development was conducted on July 21, 2016. A minimum of three (3) well casing volumes of groundwater from each well was purged to ensure potential contamination from drilling was flushed out of the system. Purged water was contained and stored at the subject site for future disposal.

Groundwater sampling was conducted on July 22, 2016, August 14, 2016, May 29, 2017, August 10 and 31, 2017 after purging and allow the water to stabilize. The groundwater purging and sampling activities were carried out using dedicated LDPE tubing and disposable bailers. Groundwater samples were collected into laboratory-supplied containers, prepared

with preservative for the analysis being conducted. The groundwater samples scheduled for analyses of metals were filtered on-site through a 0.45 micron filter as part of the sampling process.

5.8 Sediment: Sampling

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

5.9 Analytical Testing

The soil and groundwater samples were analysed by SGS Environmental Services (SGS) and Maxxam Analytics (Maxxam). SGS and Maxxam are accredited by 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

Excess soil generated from the drilling program for the investigation was stored at the subject site in metal barrels. Groundwater purged from the monitoring wells was stored in containers, using a separate container for each well. The metal barrels and containers are clearly marked and stored temporarily at the subject site for later disposal.

5.11 Elevation Surveying

The ground surface and groundwater elevations at the monitoring well locations were surveyed using a grade laser surveying equipment. The elevations of the boreholes were established using a catch basin on Harmony Hill as a benchmark (BM). The geodetic elevation of the BM is 176.21 m, which is located approximately 7 m north of the subject site. The elevations at the boreholes locations are presented in the borehole log in Appendix 'B'.

5.12 Quality Assurance and Quality Control Measures

The soil and ground water Sampling and Analysis Plan, provided in Appendix 'A', was prepared and executed based on the findings of our 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.

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 notebook 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 site for every sampling media (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 ^{o}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 locations.

- If trace organics in the collected samples are anticipated (organic chemicals with a concentration of less than 1 µg/g in soil and 1 µg/L in groundwater), 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 between sampling locations.
- 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 for the field duplicate and trip blank samples are discussed later in Section 6 of this report.

6.0 REVIEW AND EVALUATION

6.1 Geology

Detailed descriptions of the encountered subsurface conditions are presented on the Borehole Logs provided in Appendix 'B'. The subsoil conditions indicate a layer of topsoil fill, and/or a layer of silty clay fill or granular fill, the subject site is underlain by a layer of silty clay till at various depths and locations. No bedrock was encountered during the Phase Two ESA.

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

Topsoil / Topsoil Fill

Topsoil or Topsoil fill, approximately 0.05 m to 0.3 m in thickness, is contacted at the ground surface of the boreholes and test pits.

Silty Clay Fill

A silty clay fill was encountered below the topsoil fill at the borehole and testpit locations. The fill contains gravel, extending to depths ranging from 0.5 mugs to 3.8 mbgs.

Silty Clay Till

Silty clay till deposit was encountered below the silty clay fill. The boreholes were terminated in the silty clay till deposit at depths ranging from 1.5 mbgs to 7.6 mbgs.

Hydrogeology

On completion of the drilling, water level was recorded at depths of 4.2, 2.04 and 3.4 mbgs in the borehole BH/MW 1, BH/MW 2 and BH/MW 3, respectively.

6.2 Groundwater: Elevations and Flow Direction

Three (3) monitoring wells were installed at the selected borehole locations during the field investigation for the Phase Two ESA on July 14, 2016. Groundwater records were documented during the groundwater monitoring/purging round on July 21, 2016.

On July 21, 2016 during groundwater monitoring round, water levels were recorded at depths of 5.6 mbgs, 3.1 mbgs and 4.7 mbgs at BH/MW1, BH/MW2 and BH/MW3, respectively. The corresponding water table elevations are 171.7 masl, 174.0 masl and 172.1 masl (meters above sea level).

The ground elevations of the monitoring wells were surveyed using a grade laser surveying equipment. Water level measurements and water temperature were taken using a water level meter (Dipper-T). The top of the well casings was used as the reference point to determine the groundwater table. The measurements were reduced to static elevations based on the monitoring well survey data. Shallow groundwater levels were used to determine the groundwater flow direction. Based on the measured groundwater levels, the groundwater flow direction appears to be towards the south. No free product or surface sheen was observed in any of the monitoring wells.

The groundwater levels measured in the monitoring wells are summarized in Table II. The shallow groundwater contours and interpreted groundwater flow direction are shown on Drawing No. 4.

6.3 Groundwater: Hydraulic Gradients

Based on the groundwater levels measured on July 21, 2016, the horizontal hydraulic gradient for the investigated aquifer within the glacial till deposit at the subject site is between 0.046 m/m and 0.071 m/m (average 0.059 m/m).

6.4 Fine-Medium Soil Texture

No grain size analysis was performed as part of the Phase Two ESA.

6.5 Soil: Field Screening

Head space 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 ppm (parts per million by volume).

Soil vapour readings from 0 ppmv to 20 ppmv were recorded for collected soil samples.

6.6 Soil Quality

The soil sampling and testing program was carried out in two stages. Representative "worst case" soil samples during the first and second stage investigation 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 petroleum hydrocarbons (PHCs), volatile organic compounds (VOCs), and/or metals and/or inorganic parameters.

The soil test results were reviewed using the Table 1, Full Depth Background Site Condition Standards, for Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use (Table 1 Standards), as published in the "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" (EPA), April 15, 2011.

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

The Certificates of Analyses for the soil samples are presented in Appendix 'C'.

The findings of the soil test results are summarized below:

Petroleum Hydrocarbons (PHCs)

Three (3) soil samples were submitted for analysis of PHCs. The test results indicate the tested soil samples were below the laboratory reported detection limits and meet the Table 1 Standards.

Volatile Organic Compounds (VOCs)

Three (3) soil samples and one (1) duplicate sample were submitted for analysis of VOCs. The test results indicate the tested soil samples were below the laboratory reported detection limits and meet the Table 1 Standards.

Metals and Inorganics (M&I)

Eight (8) original soil samples and one (1) duplicate sample were submitted for analysis of metal and inorganic parameters. The concentrations of metals and inorganic parameters in the tested soil samples meet the Table 1 Standards, with the exception of Lead, Chromium VI and Molybdenum concentrations in two of the tested soil samples (TP 1 and TP4/2). Details of the exceeding parameters are presented in table below:

Sample ID	Exceeded Parameters	Result (ug/g)	Table 1 Standards (ug/g)
TP1	Lead	240	120
	Chromium VI	0.8	0.66
TP4/2	Lead	1400	120
	Chromium VI	2.2	0.66
	Molybdenum	2.5	2
TP5/2	Cyanide	0.07	0.051

An additional samples (TP-S') were retrieved in the vicinity of TP5 within 2 m radius from the location of TP5/2 at depths ranging from 0.3 mbgs to 0.6 mbgs. The analytical result of TP-S' indicated that the concentrations of the cyanide are less than 0.01 ug/g. The averaged concentration of the cyanide in the sample TP5/2 and TP-S' are 0.04 ug/g, respectively, which meet the Table 1 Standards.

During the second stage investigation (after the removal of impacted soil from the areas between TP1 and TP4), a total of thirteen (12) original soil samples and two (2) duplicate samples were obtained from the margins of the remedial excavations area as part of delineation and confirmation testing program. The samples were submitted for analysis of metals. The test results indicate the tested soil samples during the second stage investigation meet the Table 1 Standards.

6.7 Groundwater Quality

Groundwater samples collected from monitoring wells MW1, MW2 and MW3 were submitted to the laboratory for analyses of one or more of the following parameters: PHCs, VOCs, and metals and inorganics.

The groundwater analytical results were reviewed using the Table 1 Standards.

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

A copy of Certificate of Analysis for the groundwater samples is presented in Appendix 'D'.

The findings of the groundwater analytical results are summarized below:

Petroleum Hydrocarbons (PHCs)

Three (3) original groundwater samples from the monitoring wells were submitted for analysis of PHCs. The analytical results indicate that the concentrations of PHC parameters in the tested groundwater samples meet the Table 1 Standards, with the exception of F3 in one water sample (MW2) with the F3 concentration of 1410 ug/l in comparison with the Table 1 Standards of 500 ug/l. MW2 is located in the northern portion of the subject site. Subsequently, two rounds of water sampling and testing were conducted to verify the concentration of F3 in water at MW2 location. Details of the results are presented in table below:

MW2	1st round	2nd round	3rd round	
Sampling Date	Jul. 22, 2016	Aug. 14, 2016	May 29, 2016	Table 1 Standards
PHC (F3)	1410	<200	<200	500

A review of the additional water testing at MW2 location indicates the concentration of F3 meet the Table 1 Standards. The analytical results of the subsequent groundwater testings confirmed that there is no PHCs impact at MW2 location. Therefore, the PHC (F3) fraction initially detected in the groundwater at MW2 location was considered to be anomalous.

Volatile Organic Compounds (VOCs)

Three (3) original groundwater samples and one (1) duplicate groundwater sample from the monitoring wells and one (1) trip blank sample were submitted for analysis of VOCs. The analytical results indicate that the concentrations of VOC parameters meet the Table 1 Standards in the tested groundwater samples and the trip blank sample, with the exception of Tetrachloroethylene in one water sample (MW1) with the tetrachloroethylene concentration of 5.5 ug/l in comparison with the Table 1 Standards of 0.5 ug/l. MW1 is located in the northeastern portion of the subject site. Subsequently, two rounds of water sampling and testing were conducted to verify the concentration of F3 in water at MW2 location. Details of the results are presented in table below:

MW1	1st round	2nd round	3rd round	
Sampling Date	Jul. 22, 2016	Aug. 14, 16	Jul. 10, 2017	Table 1 Standards
Tetrachloroethylene	5.5	<0.5	<0.2	0.5

The analytical result of the second and third rounds groundwater testing program indicate the samples meet the Table 1 Standards. Therefore, the tetrachloroethylene initially detected in the groundwater at MW1 locations were considered to be anomalous.

Metals and Inorganics (M&I)

Three (3) original groundwater samples and one (1) field duplicate sample were submitted for analyses of metals and inorganics. The analytical results indicate the concentrations of metals and inorganics in the tested groundwater samples meet the Table 1 Standards, with the exception of several metals parameters (Arsenic, Beryllium, Chromium, Cobalt, Copper, Lead, Nickel, Vanadium and Mercury) in three water samples (MW1, MW2 and/or MW3). Subsequently, a total of two additional rounds of the groundwater sampling and testing were conducted to vertify the concentration of metals at MW1, MW2 and MW3 locations. Details of the results are presented in table below:

MW1	1st round	2nd round	3rd round	
Sampling Date	July 22, 2016	August 14, 2016	May 29, 2017	Table 1 Standards
Cobalt	12.7	2.97	0.5	3.8
Mercury	0.41	<0.1	<0.1	0.1

MW2	1st round	2nd round	3rd round	
Sampling Date	July 22, 2016	August 14, 2016	May 29, 2017	Table 1 Standards
Cobalt	3.92	0.636	<0.5	3.8
Copper	5.78	0.84	<1.0	5
Lead	3.17	0.02	<0.5	1.9

MW3	1st round	2nd round	3rd round	
Sampling Date	July 22, 2016	May 29, 2017	August 31, 2017	Table 1 Standards
Arsenic	18.9	13.1	8.6	13
Beryllium	1.27	<0.007	<0.5	0.5
Chromium	16.7	0.21	<5.0	11
Cobalt	19.5	0.925	<0.5	3.8
Copper	166	0.34	0.58	5
Lead	28.2	0.04	<0.5	1.9
Nickel	26.3	0.6	1.0	14
Vanadium	28.4	0.17	<0.5	3.9

The analytical result of the additional rounds groundwater testing program indicate the samples meet the Table 1 Standards. The analytical results of the subsequent groundwater testings confirmed that there is no metals impact at MW1, MW2 and MW3 locations. Therefore, the metals (Arsenic, Beryllium, Chromium, Cobalt, Copper, Lead, Nickel and Vanadium) initially detected in the groundwater at MW1, MW2 and MW3 locations were considered to be anomalous.

6.8 Sediment Quality

Sediment was not assessed as part of this investigation.

6.9 Quality Assurance and Quality Control Results

The Phase Two ESA was carried out in accordance with the Sampling and Analysis Plans and in accordance with the SEL Standard Operating Procedures.

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/Quality Control Samples

A total of four (4) field duplicate soil samples and two (2) field duplicate groundwater samples were collected and submitted for chemical analysis. Details of duplicate sampling and analysis are presented in the Table below:

Duplicate Sample ID	Original Sample ID	Media	Test Conducted
DUP 1	BH3/9	Soil	VOCs
DUP 2	TP3	Soil	M&I
Dup-1	Floor 1	Soil	Metals
Dup	Floor 2-1	Soil	Metals
DupW1	MW3	Groundwater	Metals
Dup1	MW2	Groundwater	VOCs

The result of the analysis of the field duplicate sample is similar to the results for the original sample and relative percent differences for the detectable tested parameters are within acceptable range. However, the relative percent differences 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

A total of two (2) trip blank samples were submitted to the laboratory for analysis of VOCs. The trip blank samples were found to be below the reported laboratory detection limits.

There was no issue with the trip blanks that were shipped with the batches 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 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 of this investigation, the Chain of Custody forms and the laboratory Certificate of Analysis, it is certified that:

- All Certificates of Analysis or Analytical Reports 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.

- The Reported Detection Limits were met for all tested parameters.

- The result of the laboratory duplicate samples is similar to the results for the original sample 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 is prepared based on the findings of the Phase One ESA and this Phase Two ESA.

6.10.1 **Description and Assessment**

The subject site, rectangular in shape and approximately 0.81 ha (2.0 ac) in area, is located at approximately 230 m to the north side of Highway 401 and east of Second Line West, in the City of Mississauga. The Property Identification Number (PIN) is part of PIN 13213-3809 (LT). The legal description of the subject site is part lot 9, concession 2, west of Hurontario Street, City of Mississauga, Regional Municipality of Peel on the proposed survey plan dated and signed by John F.G. Young, Ontario Land Surveyor, on January 25, 2016.

6.10.1.1 Areas where Potentially Contaminating Activity Has Occurred

Potentially Contaminating Activities (PCAs) were identified at the subject site and in the Phase One Study Area based on the records review, interviews and site reconnaissance. The areas of PCAs along with the corresponding list in Table 2 Schedule D of O. Reg. 153/04 are summarized below:

On-site PCAs:

- Fill material of unknown quality was located at the subject site. #30. Importation of fill material of unknown quality
- Truck trailers were parked at the subject site. #11. Commercial trucking and container terminals
- A former fuel underground storage tank was located at the subject site. #28. Gasoline and associated products in fixed storage

6.10.1.2 Areas of Potential Environmental Concern

The following Areas of Potential Environmental Concern (APECs) were identified at the subject site:

APEC 1: Potential soil impact in the fill material of unknown quality at the subject site.

APEC 2: Potential soil and groundwater impact due to truck trailers parked at the subject site.

APEC 3: Potential soil and groundwater impact due to a former underground storage fuel tank located at the subject site.

The PCAs and APECs are shown in the Drawing No. 2.

6.10.1.3 Subsurface Structures and Utilities

At the time of the assessment, the subject site is occupied by one residence building. There are underground utilities located in vicinity of the residential building.

Contaminant, Boron (Lean, Chromium VI and Molybdenum) was identified in the fill material at the subject site. Since no subsurface structures or utilities was not located at the location of the cotnamination, no subsurface structures or utilities with potential to affect contaminants distribution or transport are identified at the subject site.

6.10.2 **Physical Setting**

6.10.2.1 Stratigraphy

The subject site is located in the City of Mississauga, on Halton Hill Deposits, which predominantly consist of silt to silty clay matrix, high in matrix carbonate content and clast poor. The subject site is located on the Georgian Bay formation. The formation rock consists of shale, limestone, dolostone and siltstone.

The field investigation for this Phase Two ESA consisted of three (3) boreholes to depths ranging from 3.0 mbgs to 7.6 mbgs and five (5) hand dug test pits to depths of 0.5 mbgs. The subsoil conditions, at the borehole and test pit location indicate beneath a layer of topsoil fill, and/or a layer of silty clay fill or granular fill, the site is underlain by a layer of silty clay till at various depths and locations. No bedrock was encountered during the Phase Two ESA.

6.10.2.2 Hydrogeological Characteristics

The subject site is located in the larger hydrogeological region known as Southern Ontario Lowlands. A Watershed Map provided by the Credit Valley Conservative Authority shows the subject site is located within the Norval to Port Credit Sub-watershed. which is part of the Credit Valley Watershed. The ground surface is relatively flat, and the grade at the subject site generally descends towards the south.

Three (3) monitoring wells were installed at selected borehole locations during the field investigation for this Phase Two ESA. Based on the groundwater records on July 21, 2016, the groundwater flow direction appears to be to the south. The shallow groundwater contours and interpreted groundwater flow direction are shown on Drawing No. 5.

Based on the groundwater records on July 21, 2016, the horizontal hydraulic gradient for the investigated aquifer at the subject site is 0.046 m/m and 0.071 m/m (average 0.059 m/m).

6.10.2.3 Approximate Depth to Bedrock

Bedrock was not encountered at the subject site during the investigation of the Phase Two ESA and during our previous geotechnical investigation. Based on information acquired through the Bedrock Cross Section Viewer (Ontario Geological Survey, 2010), the depth to bedrock at the subject site is approximately 143 metres below ground surface.

6.10.2.4 Approximate Depth to Water Table

Based on the groundwater records of July 21, 2016, the approximate depth to the water table at the subject site ranges from 3.1 mbgs to 5.6 mbgs.

6.10.2.5 Section 41 or 43.1 of the Regulation

The subject site is within an area of natural significance due to the Area of Natural Scientific Interests (ANSIs) located within 30 m from the subject site boundary. The analytical testing indicated the pH of the tested soil samples is between 5 and 9. Therefore, Section 41 of the regulation (Site Condition Standards, Environmental Sensitive Areas) applies to the subject site.

The subject site is not a shallow soil property, as the bedrock was not encountered within 2 mbgs during the investigation. There is no water body at the subject site or within 30 m from the subject site boundaries. Therefore, Section 43.1 of the Ontario Regulation 153/04 (Site Condition Standards, Shallow Soil Property or Water Body) does not apply to the subject site.

6.10.2.6 Soils Placed On, In or Under the Phase Two Property

The findings of the Phase One ESA indicate fill material at the subject site based on the review of the previous geotechnical investigation. The encountered fill material was assessed during the Phase Two ESA.

6.10.2.7 Proposed Building and Other Structures

The subject site is not a shallow soil property, as the bedrock was not encountered within 2 mbgs during the investigation. There is no water body at the subject site or within 30 m from the subject site boundaries. Therefore, Section 43.1 of the Ontario Regulation 153/04 (Site Condition Standards, Shallow Soil Property or Water Body) does not apply to the subject site.

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 the 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.

Based on the information obtained from the Phase One ESA and Phase Two ESA, the Ministry of the Environment and Climate Change (MOECC) Table 1, Full Depth Background Site Condition Standards, for Residential/Parkland/Institutional/Industrial/Commercial/ Community Property Use (Table 1 Standards) under Part XV.1 of EPA has been selected for assessing the soil and groundwater condition at the subject site.

6.10.3.1 Area Where Contaminants are Present

The site investigation of the Phase Two ESA identified impacted surface soil with some parameters of metals exceeding Table 1 Standards, at the locations of TP1 (eastern section of the subject site) and TP4 (southern section of the subject site).

The remaining analysed soil and groundwater samples of the site investigation meet the Table 1 Standards.

The figures showing the lateral and vertical boundary of impacted soil is given on Drawing Nos. 3 to 7.

6.10.3.2 Contaminants Associated with Each Area

The contaminants, at concentrations above Table 1 Standards, found during the site investigation for the Phase Two ESA consisted of the following parameters: Lead, Chromium VI and Molybdenum.

6.10.3.3 Medium in which Each Contaminant were Found

Contaminants, Lead, Chromium VI and Molybdenum were identified in the surface soil at the depths ranging from 0.3 to 0.6 mbgs at TP1 and TP4 locations at concentrations above the Table 1 Standards.

6.10.3.4 Description and Assessment of the Area Where Contaminant Found

During the site investigation of the Phase Two ESA, soil samples retrieved from the boreholes and test pits conducted at the subject site were analyzed for the parameters of petroleum hydrocarbons (PHCs), volatile organic compounds (VOCs), and metals and inorganics (M&I).

Based on the review of the analytical results of the site investigation, the surface soil at TP1 and TP4 locations at the depths ranging from 0.3 mbgs to 0.6 mbgs was found to contain contaminants of Lead, Chromium VI and Molybdenum in excess of the Table 1 Standards.

Details of the soil exceedance are tabulated below:

Sample ID	Exceeded Parameters	Result (ug/g)	Table 1 Standards (ug/g)
TP1	Lead	**240**	120
	Chromium VI	**0.8**	0.66
TP4/2	Lead	**1400**	120
	Chromium VI	**2.2**	0.66
	Molybdenum	**2.5**	2

The remaining analyzed soil samples of the site investigation for the tested parameters meet Table 1 Standards. A soil remedial action was required in the area between TP1 and TP4 in order to bring the impacted areas, into compliance with the Table 1 Standards.

Subsequently, the impacted surface soil was excavated and removed from the area of TP1 and TP4 located at the eastern and southern section of subject site, respectively, and disposed off-site. The confirmation sampling program was conducted concurrently with the delineation program.

A review of the analytical results of the confirmation testing program of the Phase Two ESA indicates the confirmation soil samples meet the Table 1 Standards.

6.10.3.5 Distribution of Contaminants

Contaminants, Lead, Chromium VI and Molybdenum, were identified in the surface soil at the depths ranging from 0.3 mbgs to 0.6 mbgs at the locations of TP1 (eastern section of the subject site) and TP4 (southern section of the subject site) locations at concentrations above the Table 1 Standards. Based on the delineation and confirmation soil testing program, the impacted soil in the vicinity of TP1 and TP4 at the eastern and southern section of the subject site is approximately 6.5 m by 45 m in area, extending up to a depth of 2.0 mbgs.

6.10.3.6 Reasons for Discharge

The subject site has been used for residential purpose. Therefore, the presence of Lead, Chromium VI and Molybdenum impact at the subject site is most likely related to the poor quality of fill material at the subject site.

6.10.3.7 Migration of Contaminants

The soil impact at the locations of TP1 and TP4 was related to parameters of metals identified in the surface soil to a maximum depth of 2.0 mbgs. Based on the findings of the field investigation for the Phase Two ESA, the approximate depth to the water table at the subject site ranges from 3.1 mbgs to 5.6 mbgs which is below the impacted area. Consequently, no migration of contaminants is expected from the area of potential environmental concern.

6.10.3.8 Climatic or Meteorological Conditions Influencing Contaminant Distribution of Migration

As the impact at the subject site was related to metals and identified in the surface soil, climatic or meteorological conditions are not anticipated to influence the distribution or migrations of contaminants.

6.10.3.9 Soil Vapour Intrusion into Buildings

No soil vapour intrusion is anticipated at the subject site, as the identified impacted surface soil was related to metals.

6.10.4 **Potential Exposure Pathways and Receptors**

The human and ecological receptor conceptual model is presented in Drawing No. 8.

6.10.4.1 Release Mechanisms

Contaminants, Lead, Chromium VI and Molydibium, in excess of the Table 1 Standards, were identified in soil layer near the surface at the subject site. The release of the identified contaminants was likely related to the poor quality of fill material at the subject site.

6.10.4.2 Contaminant Transport Pathway

The impact at the locations of TP1 and TP4 were identified in surface soil to a maximum depth of 2.0 mbgs. In addition, no subsurface structures or buried utilities were at close to these locations. Therefore, no contaminant transport pathways were identified.

6.10.4.3 Receptors

With respect to the identified impact, potential receptors located on, in or under the subject site are workers on-site, site vegetation, burrowing animals and soil organisms.

The impacted surface soil has subsequently been remediated; no potential receptors are anticipated at present.

6.10.4.4 Receptor Exposure Point

Prior to the removal of the impacted surface soil, the receptor exposure points for the contaminant found at the subject site is soil based contamination.

The impacted surface soil has subsequently been remediated; no receptor exposure points are anticipated at present.

6.10.4.5 Routes of Exposure

The routes of exposure for the identified soil impact at the subject site would be dermal contact, ingestion and/or inhalation. As no significant ecological habitat was identified at the subject site, the risk to ecological receptors is expected to be minimal. Workers may have come into contact with soil during remediation excavation, but this is expected to be minimal as excavation equipment was used to remove the impacted surface soil from the subject site. Therefore, the exposure to impacted soil is expected to be minimal.

Furthermore, the impacted soil was excavated and removed from the subject site and no routes of exposure are anticipated at present.

7.0 CONCLUSIONS

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

APEC 1: Potential soil impact in the fill material of unknown quality at the subject site.

APEC 2: Potential soil and groundwater impact due to truck trailers parked at the subject site.

APEC 3: Potential soil and groundwater impact due to a former underground storage fuel tank located at the subject site.

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

- The field investigation for this Phase Two ESA was carried out in two stages:
    - The first stage (initial investigation) consisted of soil sampling from three (3) boreholes to depths ranging from 3.0 mbgs to 7.6 mbgs and five (5) hand dug test pits to depths of 0.5 mbgs and water sampling from three monitoring wells, to determine the quality of the soil and groundwater as related to the environmental concern identified in our Phase One ESA.
    - The second stage (further investigation) was conducted after the removal of the impacted soil from the area between TP1 and TP4 of the first stage investigation and consisted of soil remediation along with soil confirmation sampling from the margins of the remedial excavation, at depths ranging from 1.5 mbgs to 2.0 mbgs. Delineation program was conducted in conjunction with confirmation sampling program.
- The subsoil conditions indicate a layer of topsoil fill and/or a layer of silty clay fill or granular fill, the site is underlain by a layer of silty clay till at various depths locations.

- Head space 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 (parts per million by volume). Soil vapour readings of 0 ppmv to 20 ppmv were recorded for all collected soil samples.
- Based on the soil vapour measurements and visual and olfactory observations, representative "worst case" soil samples were selected from each borehole and test pits of the first stage investigation for chemical analyses of PHCs, VOCs and metals and/or inorganic parameters.
- Groundwater samples collected from the monitoring wells were submitted for analysis of PHCs, VOCs, and metals and inorganic parameters.
- 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 metals and/or inorganics and VOCs in soil, and for VOCs and metals in groundwater. Two (2) trip blanks for VOCs were shipped with the batches of the groundwater samples submitted for analysis.
- The analytical test results were reviewed using the Table 1 Full Depth Background Site Condition Standards, for Residential/ Parkland/Institutional/Industrial/Commercial/ Community Property Use (Table 1 Standards), as published in the "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" (EPA), April 15, 2011.
- The test results of the first stage investigation indicate an exceedance of Table 1 Standards for contaminants of Lead, Chromium VI and Molybdium in sample TP1 (located at the eastern section of the subject site) and sample TP4/2 (located at the southern section of the subject site).
- Subsequently, the impacted soil was excavated and removed from the area of TP1 and TP4 and disposed off-site. Details of soil remediation is discussed in the remediation appendix.
- The test results of the second stage investigation indicate all the confirmatory soil samples meet the Table 1 Standards. The delineation program was conducted concurrently with confirmatory testing program during the second stage investigation.

- The result of the analysis of the duplicate samples is similar to the results for the original sample and relative percent differences for the detectable tested parameters are within acceptable range. However, the relative percent differences 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 result of the trip blank sample indicates that the sample was below the reported laboratory detection limit. There was no issue with the trip blank that was shipped with the batch of the groundwater samples submitted for analysis.

A review of the analytical results of the first and second stage investigation for the Phase Two ESA indicates the final test results meet the Table 1 Standards.

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.

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LT/SL/EGB:lt

8.0 REFERENCES

MOE. "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.

MOE. "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.

MOE. "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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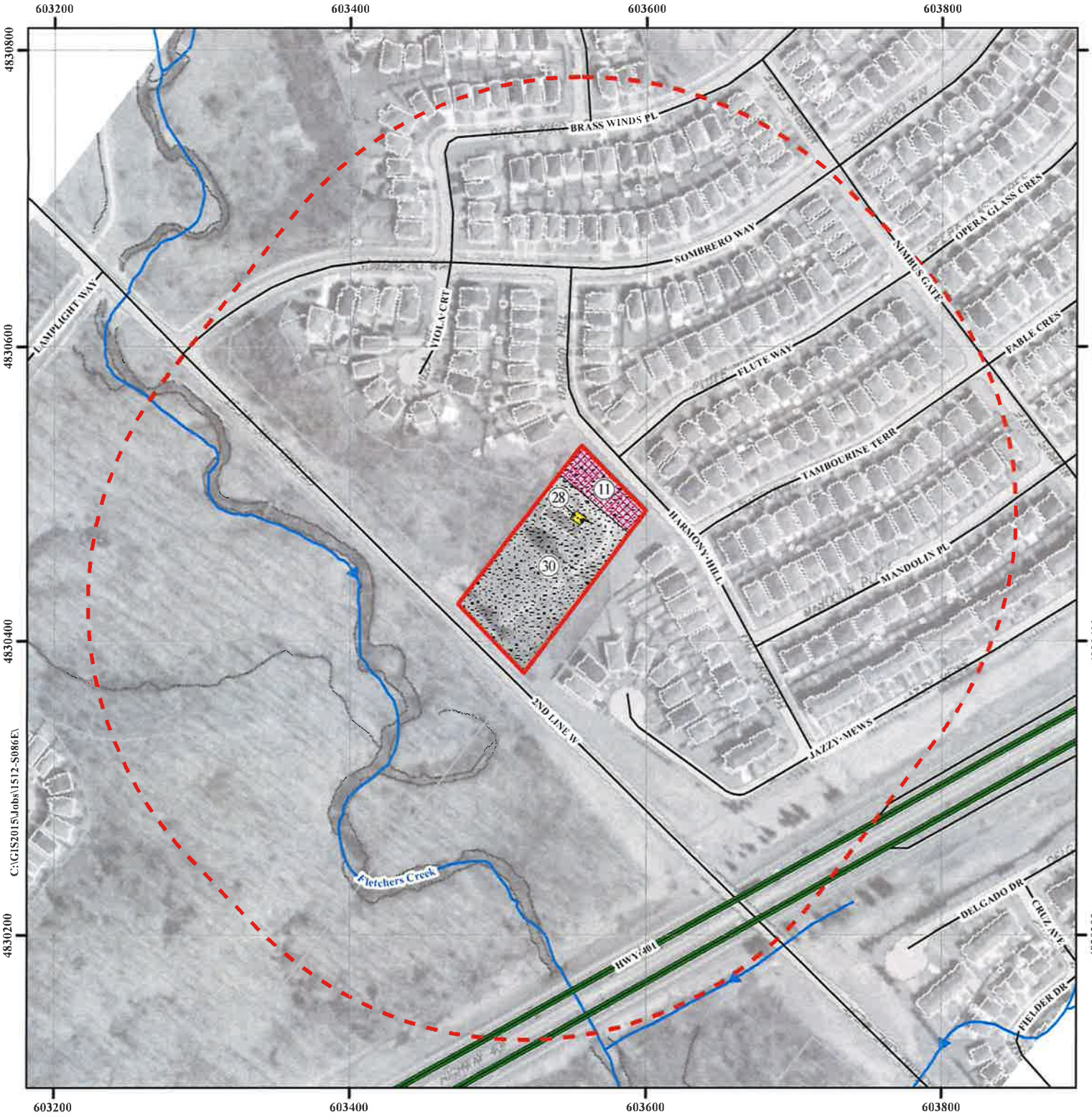
FIGURES

REFERENCE NO. 1512-S086E



N

Subject Site

Phase One Study Area

Watercourse

Expressway/Freeway

Local Road

Potentially Contaminating Activities

(11) Commercial Trucking and Container Terminals

(28) Gasoline and Associated Products Storage in Fixed Tanks

(30) Importation of Fill Material of Unknown Quality

Additional Potential Sources of Contamination

Former Fuel Oil Underground Storage Tank

Areas of Potential Environmental Concern (APEC)

APEC 1

APEC 2

APEC 3

Soil Engineers Ltd.

Title: Site Location Plan

Project:
Proposed Residential Development
6611 Second Line West
City of Mississauga

Reference No. 1512-S086E

Date: September 25, 2017

Scale:
0 15 30 60 90 120 150
Metres

Drawing No. 1

N

Subject Site

Borehole with Monitoring Well

Test Pit

Local Road

Soil Engineers Ltd.

Title: Borehole and Monitoring Well Location Plan

Project:
Proposed Residential Development
6611 Second Line West
City of Mississauga

Reference No. 1512-S086E

Date: September 25, 2017

Scale:
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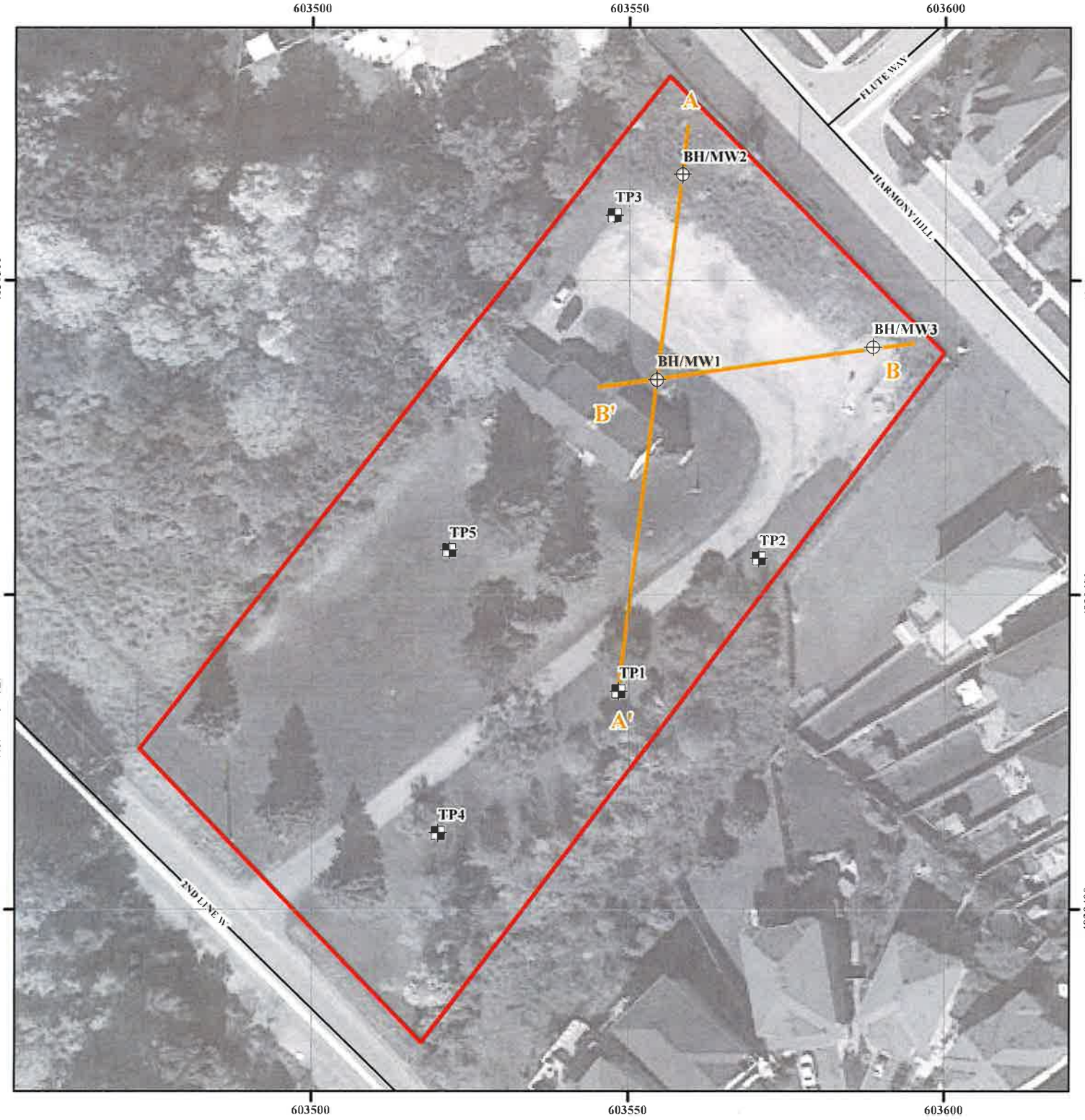
Metres

Drawing No. 2



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Subject Site

Borehole with Monitoring Well

Test Pit

Cross-Section Direction

Local Road

Soil Engineers Ltd.

Title: Cross-Section Key Plan

Project:
Proposed Residential Development
6611 Second Line West
City of Mississauga

Reference No. 1512-S086E

Date: September 25, 2017

Scale:
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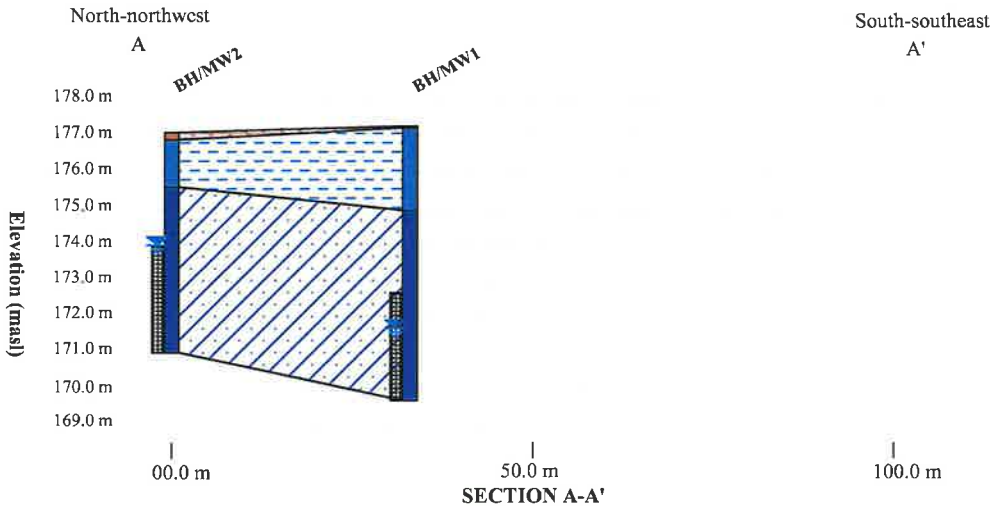
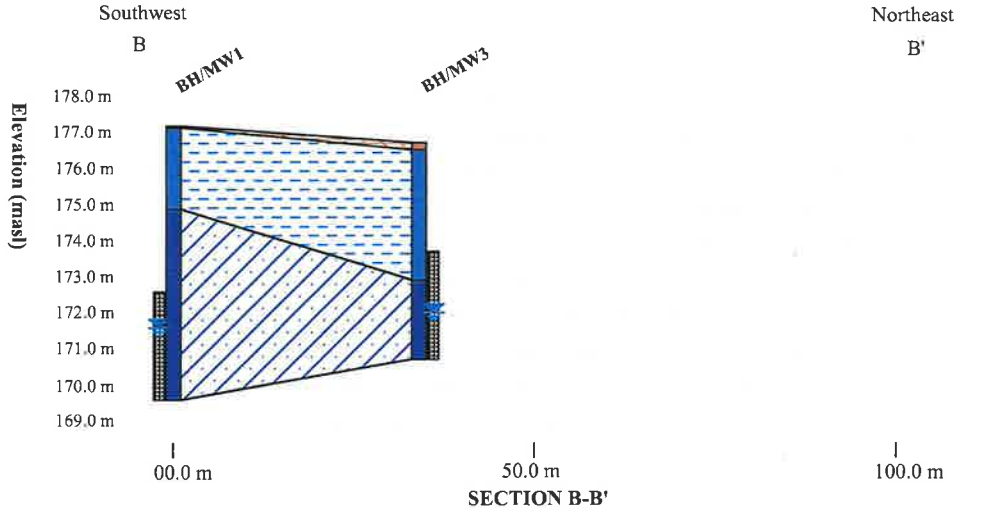
Metres

Drawing No. 3



SECTION A-A'



SECTION B-B'

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Topsoil

Silty Clay, Fill

Silty Clay, Till

Water Table

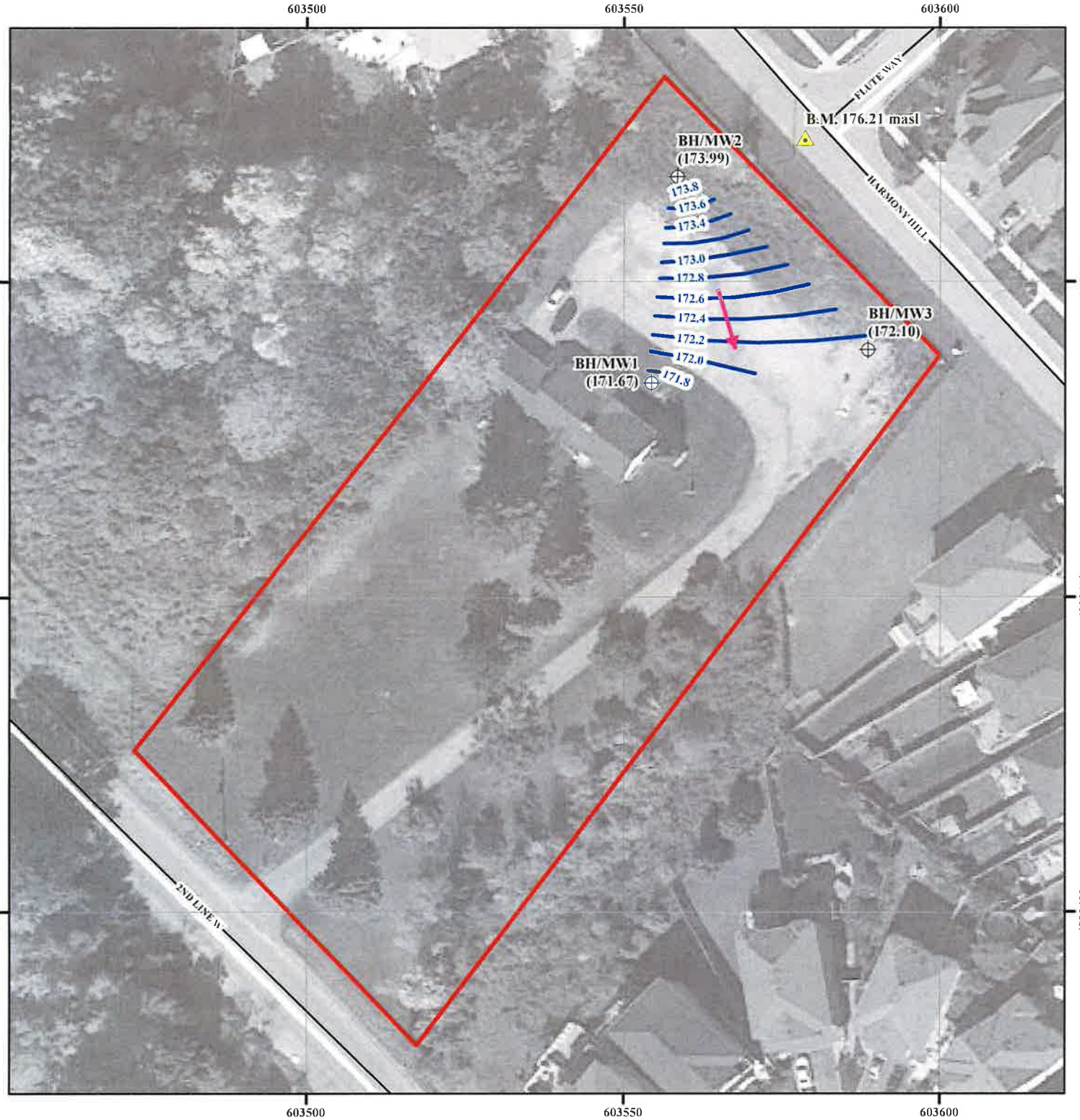
Screen

Soil Engineers Ltd.
CONSULTING SOIL, FOUNDATION & ENVIRONMENTAL ENGINEERS

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

Project: Proposed Residential Development
6611 Second Line West
City of Mississauga

Reference No:	Date:	Scale: V	Scale: H	Drawing No.
1512-S086E	September 25, 2017	1:200	1:1000	4



N

Subject Site

Borehole with Monitoring Well

Interpreted Shallow Groundwater Flow Direction

Groundwater Elevation Contour

Local Road

Soil Engineers Ltd.

Title: Shallow Groundwater Contour Map

Project:
Proposed Residential Development
6611 Second Line West
City of Mississauga

Reference No. 1512-S086E

Date: September 25, 2017

Scale:
0 4.5 9 18 27 36 45
Metres

Drawing No. 5

C:\GIS2015\Jobs\1512-S086E\

Sample ID	Floor-1	Floor2-1	Floor-3	Floor-4	Floor-5	TP1	TP4	
Depth (m)	2	2	1.5	1.5	1.5	0 - 0.5	0.3 - 0.6	Table 1 Standards
Lead	21	9.2	9.2	10	9.1	**240**	**1400**	120
Molybdenum	1.2	<0.5	<0.5	<0.5	<0.5	**0.8**	**2.5**	2
Cr VI	<0.2	<0.2	<0.2	<0.2	<0.2	**0.8**	**2.2**	0.66

Sample ID	Wall 1-1	Wall 2-2	Wall 3-3	Wall 4	Wall 5	Wall 6	Wall 7	
Depth (m)	0.4 - 0.6	0.4 - 0.6	0.4 - 0.6	0.4 - 0.6	0.4 - 0.6	0.4 - 0.6	0.4 - 0.6	Table 1 Standards
Lead	14	52	12	3	10	11	12	120
Molybdenum	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2
Cr VI	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.66

603510 603525 603540 603555

4830430 4830415 4830400

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C C' D D' W1-1 W2-2 W4 W5 W6 W7 W8 Wall 3-3 F1 F2-1 F3 F4 F5 TP1 TP4

N

Subject Site

Test Pits with Exceedances

Confirmatory Floor Samples

Confirmatory Wall Samples

Extent of Remedial Excavation

Cross Section Direction

Soil Engineers Ltd.

Title: Lateral Delineation Plan

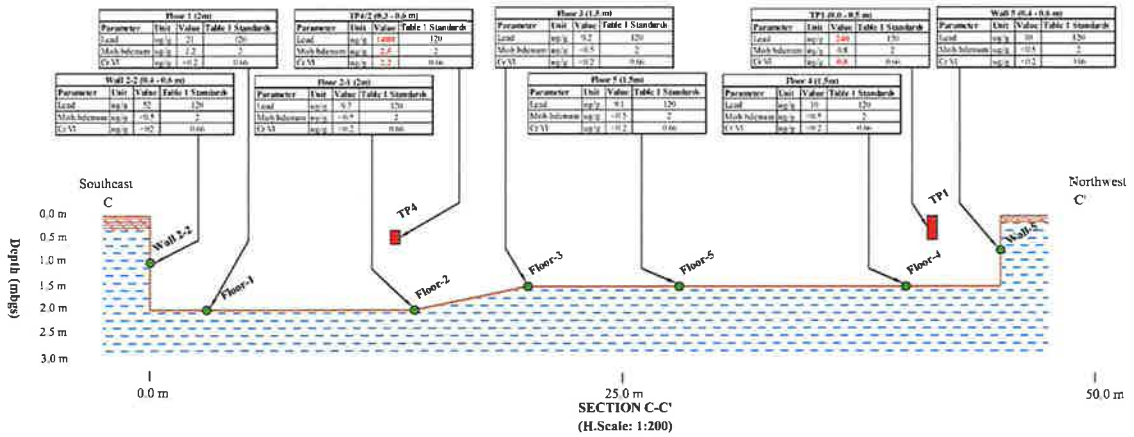
Project:
Proposed Residential Development
6611 Second Line West
City of Mississauga

Reference No. 1512-S086E

Date: September 25, 2017

Scale:
0 1.5 3 6 9 12 15
Metres

Drawing No. 6



SECTION C-C'
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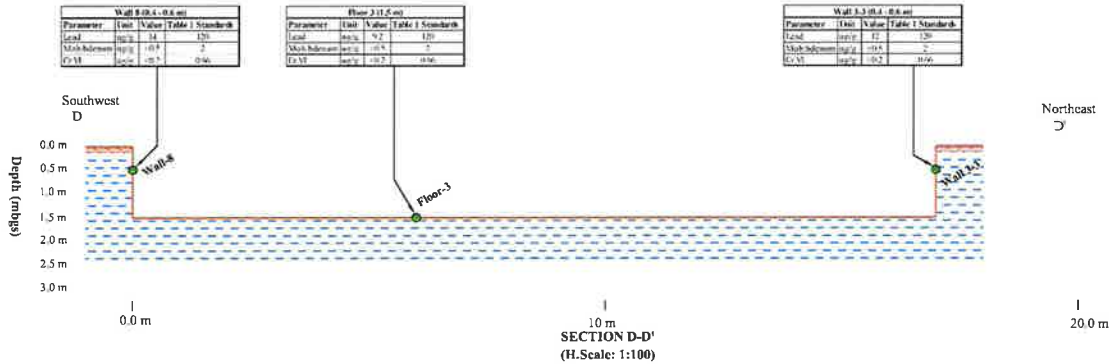


SECTION D-D'
(H.Scale: 1:100)

Approximate Location of Confirmation Samples Meeting Table 1 Standards

Approximate Location of Confirmation Samples Exceeding Table 1 Standards

Topsoil

Silty Clay, Fill

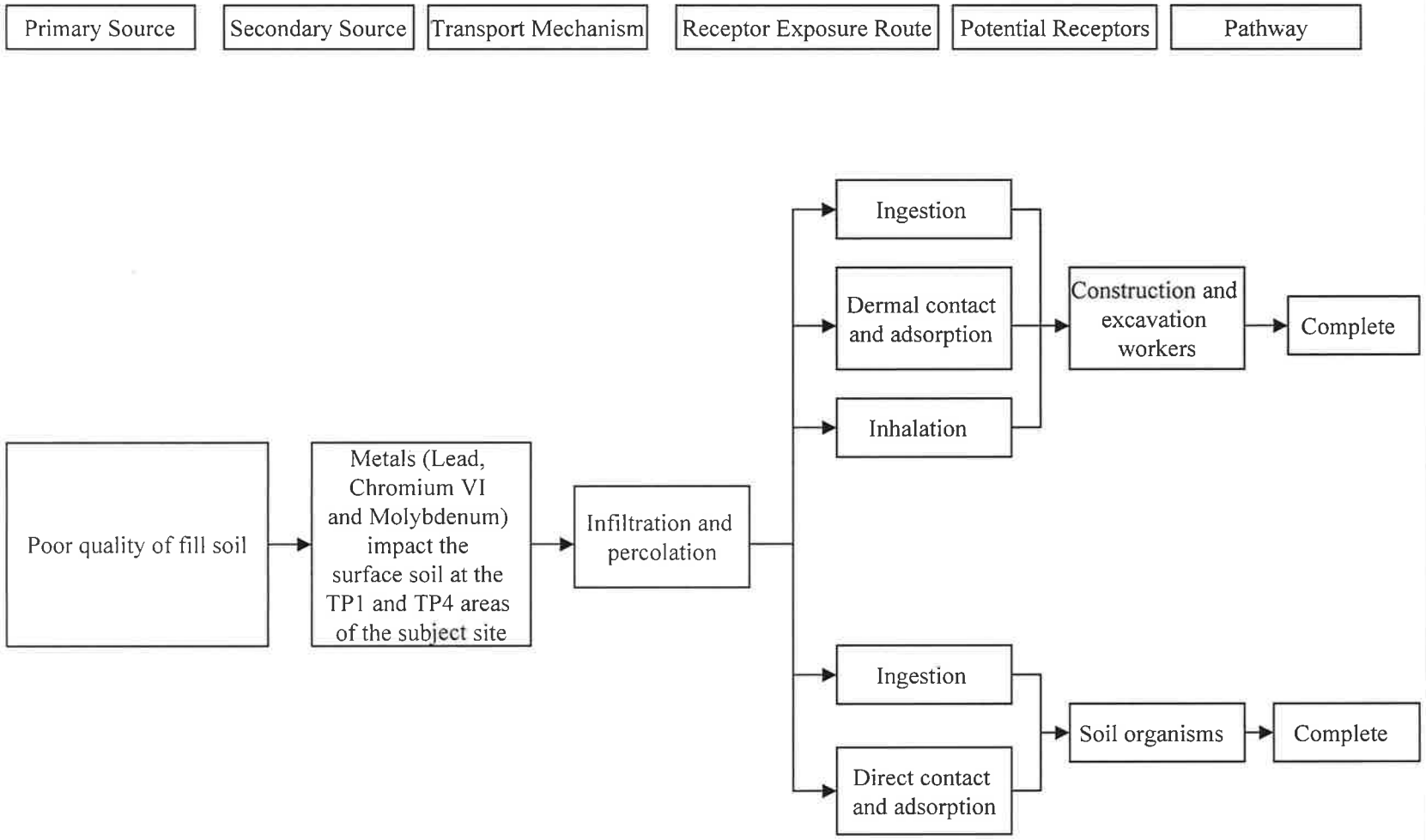
Soil Engineers Ltd.

Title: Cross-Sections (C-C' and D-D')

Project: Proposed Residential Development
6611 Second Line West
City of Mississauga

Reference No	Date	Scale	Drawing No
1512-S086E	September 26, 2017	V Scale 1:200 H Scale See Drawing	7

Human Ecological Receptor Conceptual Site Model



Soil Engineers Ltd.

Title
Site Location Plan

Project
Proposed Residential Development
6611 Second Line West
City of Mississauga

Reference No.
1512-S086E

Date
August 31, 2017

Scale
N/A

Drawing No.
8

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APPENDIX 'A'

SAMPLING AND ANALYSIS PLANS

REFERENCE NO. 1512-S086E

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 subject property is located approximately 230 m to the north side of Highway 401 and east of Second Line West, in the City of Mississauga. (hereinafter referred to as "the subject site").

The Sampling and Analysis Plan is based on the findings of our Phase One Environmental Site Assessment (Phase One ESA, Reference No. 1512-S086E, dated January 27, 2016).

1) OBJECTIVE

The objective of the initial investigation of the Phase Two ESA was 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 soil impact in the fill material of unknown quality at the subject site.

APEC 2: Potential soil and groundwater impact due to truck trailers parked at the subject site.

APEC 3: Potential soil and groundwater impact due to a former underground storage fuel tank located at the subject site.

2) SCOPE OF WORK

The scope of work for the initial investigation of the Phase Two ESA includes:

- Locate the underground and overhead utilities.
- Conduct three (3) boreholes to depths ranging from 3.0 mbgs to 7.6 mbgs and five (5) hand dug test pits to depths of 0.5 mbgs.
- Collect representative soil samples from the boreholes and test pits.
- 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, calibrated with hexane and having a minimum detection level of 2 ppm (parts per million by volume).
- Install monitoring wells in three (3) boreholes for groundwater observation, sampling and testing.
- Conduct of groundwater monitoring and collect groundwater samples from monitoring wells for chemical testing.
- Carry out analytical testing program on selected soil samples and groundwater samples (including QA/QC samples) for one or more of the following parameters: petroleum hydrocarbons (PHCs), volatile organics compounds (VOCs), and/or metals and inorganics parameters.
- Review the analytical results for the tested soil and groundwater samples using applicable Site Condition Standards.
- Undertake further activities of Phase Two ESA such as soil and groundwater re-sampling and testings, delineation, remediation, confirmation testings etc. (if required), based on the analytical results of the submitted soil samples. If further Phase Two ESA activities other than re-sampling and testing are required, a second sampling and analysis plan is to be prepared.
- Prepare a Phase Two ESA report presenting the findings of the investigation.

3) RATIONALE FOR BOREHOLE / TEST PITS/ MONITORING WELL LOCATIONS

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

Areas of Potential Environmental Concerns (APECs)	**Borehole / Monitoring Well ID.**
APEC 1: Potential soil impact in the fill material of unknown quality at the subject site.	TP1 to TP5
APEC 2: Potential soil and groundwater impact due to truck trailers parked at the subject site.	BH/MW2 and BH/MW3
APEC 3: Potential soil and groundwater impact due to a former underground storage fuel tank located at the subject site.	BH/MW1

The location of proposed sampling locations for the Phase Two ESA is shown in Drawing No. 2.

4) SOIL AND GROIUNDWATER 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:

Soil Sample (QA/QC samples)

Borehole / Test Pit	Metals and Inorganics	PHC	VOC
BH 1	1	1	1
BH 2	1	1	1
BH 3	1	1	1
TP 1	1	-	-
TP 2	1	-	-
TP 3	1	-	-
TP 4	1	-	-
TP 5	1	-	-
Field Duplicate	3	-	1

Groundwater Sample (QA/QC samples)

Monitoring Well	Metals and Inorganics	PHC	VOC
MW 1	1	1	1
MW 2	1	1	1
MW3	1	1	1
Field Duplicate	1	-	1
Trip Blank	-	-	2

5) SOIL AND GROUNDWATER 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 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 spilt-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 reinstate waste is collected.
- Reagent-grade 10% nitric acid solution and distilled water are used for suspected metals soil sampling. The reinstate 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 sample are selected for chemical analysis.

The organic vapour readings are measured using a portable RKI Eagle gas detector, TYPE 101 (Serial Number: E091015) 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 Polychlorinated Biphenyls, Polyaromatic Hydrocarbons, 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**

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 are equipped with threaded end caps. The appropriate number 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 will be 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.

For flush-mount (or subgrade) completions, a street box or vault is set and cemented in position. The top of the street box or vault will be raised slightly above grade and the cement sloped to grade to promote surface drainage away 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

This Sampling and Analysis Plan is prepared for a second stage investigation (soil remediation along with delineation and confirmation soil testings program) the Phase Two Environmental Site Assessment (Phase Two ESA) as defined by Ontario Regulation (O. Reg.) 153/04, as amended. The subject property is located approximately 230 m to the north side of Highway 401 and east of Second Line West, in the City of Mississauga (hereinafter referred to as "the subject site").

This Sampling and Analysis Plan is based on the findings of the first stage investigation of the Phase Two ESA, as part of the confirmation testing program after the removal of the impacted soil from the eastern and southern portions of the subject site. The findings of the preliminary investigations and the current investigation are incorporated into the Phase Two ESA report.

1) OBJECTIVE

The objective of this investigation of the Phase Two ESA was to further characterize the remaining soil in the vicinity of TP1 and TP4/2 located at the eastern and southern portions of subject site, upon the removal of the identified impacted soil. The impacted soil in the vicinity of TP1 and TP4/2 are connected.

Prior to the soil sampling at this stage of investigation, the impacted soil from the vicinity of TP1 and TP4/2 at the subject site was excavated and removed for off-site disposal, based on the findings of our first stage investigation of the Phase Two ESA.

2) SCOPE OF WORK

The scope of work for this investigation of the Phase Two ESA includes:

- Undertake field supervision and document the removal of the previously identified impacted surface soil from the northeastern portion of the subject site, based on the findings of our preliminary investigation.
- Conduct confirmation testing program which includes collection of soil samples and duplicate soil samples from the margin of the remedial excavation pit for analysis of metals.
- Review the analytical results of the submitted soil samples using the applicable Site Condition Standards.
- The findings of the initial investigation and the current investigation will be incorporated into the Phase Two ESA report.

3) RATIONALE FOR SAMPLING LOCATIONS

Soil samples and field duplicate samples are to be collected from the margin of the remedial excavation for confirmation testing program. The number of soil samples for metal analysis are to be determined in the field based on the final area.

4) SOIL SAMPLES (INCLUDING QA/QC SAMPLES) ANALYTICAL SCHEDULE

Confirmation soil samples (including QA/QC samples) are to be submitted for metals analysis.

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, the Ministry of the Environment (MOE) Guidance Manual, 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.

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FAX: (705) 721-7864	FAX: (905) 542-2769	FAX: (905) 725-1315	FAX: (416) 754-8516	FAX: (705) 684-8522	FAX: (905) 725-1315	FAX: (905) 542-2769

TABLES

REFERENCE NO. 1512-S086E

Table I: Monitoring Well Installation

Monitoring Well ID.	Bottom of Monitoring Well (mbgs)*	Screen Length	Screen Interval	Filter Pack (m)	Bentonite Plug (m)
MW1	7.6	3	4.6-7.6	4.0-7.6	0.0-4.0
MW2	6.1	3	3.1-6.1	2.5-6.1	0.0-2.5
MW3	6	3	3.0-6.0	2.4-3.0	0.0-2.4

mbgs – metres below ground surface

Table II: Water Levels (March 21, 2016)

Monitoring Well ID.	Ground Elevation (masl)	Depth to Groundwater (mbgs)	Elevation of Groundwater (masl)	Field Observations		
				Odour	Colour	Sheen or Free Product
MW1	177.27	5.6	171.67	None	Blear	None
MW2	177.09	3.1	173.99	None	Blear	None
MW3	176.8	4.7	172.1	None	Blear	None

masl – metres above sea level

Table III-A: Soil Data - Inorganic Parameters

Sample ID	BH1/3	BH2/2	BH3/5	TP1	TP2	TP3	TP4/2	TP5/2	TP5/3	Dup2	Table 1 Standards**
Sample Depth (mbgs*)	1.5-2.0	0.8-1.5	3.0-3.8	0.0-0.5	0.0-0.5	0.0-0.5	0.3-0.6	0.3-0.9	0.9-1.5	0.0-0.5	
Sample Date	14-Jul-16	14-Jul-16	14-Jul-16	14-Jul-16	14-Jul-16	14-Jul-16	14-Jul-16	14-Jul-16	14-Jul-16	14-Jul-16	
Laboratory ID	8	10	12	15	16	17	18	19	21	20	
Antimony	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	---	<0.8	1.3
Arsenic	6.4	4.3	4.8	4.3	4.3	4.9	4.7	4.5	---	5.2	18
Barium	78	44	45	65	69	72	63	62	---	76	220
Beryllium	0.75	0.47	0.6	0.48	0.5	0.19	0.22	0.68	---	0.2	2.5
Cadmium	0.11	0.09	0.09	0.46	0.37	0.23	1.1	0.12	---	0.26	1.2
Chromium	19	13	18	17	15	8.7	22	18	---	8.9	70
Chromium VI	< 0.2	< 0.2	< 0.2	0.8	0.5	< 0.2	2.2	< 0.2	---	<0.2	0.66
Cobalt	15	9.3	13	8.3	7.8	5.9	5.4	12	---	6.1	21
Copper	42	28	35	33	30	44	57	35	---	46	92
Lead	9.3	6	7.5	240	99	18	1400	14	---	19	120
Mercury	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	---	<0.05	0.27
Molybdenum	0.4	0.4	0.5	0.8	0.6	0.8	2.5	0.4	---	0.8	2
Nickel	31	19	26	18	17	12	16	25	---	13	82
Selenium	1.1	0.7	0.8	0.8	0.9	2.1	1.5	< 0.7	---	2.1	1.5
Silver	0.02	0.02	0.03	0.08	0.07	0.04	0.11	0.04	---	0.04	0.5
Thallium	0.14	0.1	0.14	0.11	0.12	0.1	0.06	0.14	---	0.11	1
Vanadium	24	18	23	20	22	13	21	23	---	13	86
Zinc	59	40	53	110	100	120	280	58	---	150	290
Conductivity (ms/cm)	0.17	0.15	0.16	0.18	0.18	0.15	0.12	0.2	---	0.15	0.57
Sodium Adsorption Ratio	0.22	0.28	0.3	0.08	0.07	0.23	0.09	0.16	---	0.25	2.4
Cyanide, Free	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.07	---	<0.05	0.051
Boron (Total)	8	7	10	6	6	5	5	7	---	5	36
Uranium	0.66	0.39	0.52	0.41	0.4	0.34	0.36	0.47	---	0.37	2.5
pH, 2:1 CaCl2 Extraction	7.67	7.78	7.85	7.55	7.48	8.04	7.95	7.14	7.46	8.03	NV

* metres below ground surface

** Table 1, Full Depth Background Site Condition Standards

Table III-A: Soil Data - Inorganic Parameters

Sample ID	TP-S'	Wall 1	Wall2	Wall3	Wall4	Wall5	Wall6	Wall7	Wall8	Wall1-1	Table 1 Standards**
Sample Depth (mbgs*)	0.3-0.9	0.4 - 0.6	0.4 - 0.6	0.4 - 0.6	0.4 - 0.6	0.4 - 0.6	0.4 - 0.6	0.4 - 0.6	0.4 - 0.6	0.4 - 0.6	
Sample Date	19-Ma-17	2017	18-May-17	18-May-17	18-May-17	18-May-17	18-May-17	18-May-17	19-May-17	19-May-17	
Laboratory ID	16	EKL261	EKL262	EKL264	B7A3406	B7A3406	B7A3406	B7H8922	B7H8922	B7B2790	
Antimony	---	0.53	0.49	1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	1.3
Arsenic	---	5.6	5	3.7	4.8	5.1	5.7	7.2	7.4	4.8	18
Barium	---	94	120	52	63	69	64	60	69	61	220
Beryllium	---	0.84	0.49	0.3	0.76	0.69	0.78	1	1.1	0.62	2.5
Cadmium	---	0.33	0.57	0.93	<0.10	<0.10	<0.10	<0.10	<0.10	0.16	1.2
Chromium	---	24	15	24	20	19	21	28	26	18	70
Chromium VI	---	<0.2	<0.2	1.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.66
Cobalt	---	12	8	6	13	12	14	14	16	11	21
Copper	---	32	31	50	35	37	42	52	54	28	92
Lead	---	130	180	1000	34	10	11	12	14	14	120
Mercury	---	0.1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.27
Molybdenum	---	0.69	0.83	2.1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2
Nickel	---	26	17	18	25	25	26	31	33	20	82
Selenium	---	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.5
Silver	---	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.5
Thallium	---	0.19	0.16	0.31	0.15	0.13	0.16	0.2	0.19	0.13	1
Vanadium	---	34	25	22	29	27	28	38	36	31	86
Zinc	---	110	110	250	62	56	60	73	70	61	290
Conductivity (ms/cm)	---	---	---	---	---	---	---	---	---	---	0.57
Sodium Adsorption Ratio	---	---	---	---	---	---	---	---	---	---	2.4
Cyanide, Free	0.01	---	---	---	---	---	---	---	---	---	0.051
Boron (Total)	---	8.5	5.4	5.2	8.4	8.9	9.3	7.2	8.1	<5.0	36
Uranium	---	0.67	0.52	0.4	0.47	0.58	0.49	0.52	0.54	0.46	2.5
pH, 2:1 CaCl2 Extraction	---	---	---	---	---	---	---	---	---	---	NV

* metres below ground surface

** Table 1, Full Depth Background Site Condition Standards

Table III-A: Soil Data - Inorganic Parameters

Sample ID	Wall2-2	Wall3-3	Table 1 Standards**
Sample Depth (mbgs*)	0.4 - 0.6	0.4 - 0.6	
Sample Date	19-May-17	19-May-17	
Laboratory ID	B7B2790	B7B2790	
Antimony	<0.20	<0.20	1.3
Arsenic	4.9	4.8	18
Barium	65	80	220
Beryllium	0.66	0.79	2.5
Cadmium	0.14	0.12	1.2
Chromium	21	24	70
Chromium VI	<0.2	<0.2	0.66
Cobalt	12	13	21
Copper	38	35	92
Lead	52	12	120
Mercury	<0.050	<0.050	0.27
Molybdenum	<0.50	<0.50	2
Nickel	25	28	82
Selenium	<0.50	<0.50	1.5
Silver	<0.20	<0.20	0.5
Thallium	0.15	0.15	1
Vanadium	29	30	86
Zinc	79	70	290
Conductivity (ms/cm)	---	---	0.57
Sodium Adsorption Ratio	---	---	2.4
Cyanide, Free	---	---	0.051
Boron (Total)	7.8	7.6	36
Uranium	0.56	0.6	2.5
pH, 2:1 CaCl2 Extraction	---	---	NV

* metres below ground surface

** Table 1, Full Depth Background Site Condition Standards

Table III-B: Soil Data - Petroleum Hydrocarbon Compounds (PHCs)

Sample ID	BH1/5	BH2/8	BH3/9	Table 1 Standards**
Depth (mbgs)*	3.0-3.5	5.3-5.8	5.5-6.0	
Sample Date	14-Jul-16	14-Jul-16	14-Jul-16	
Laboratory ID	9	11	13	
Benzene	< 0.02	< 0.02	< 0.02	0.02
Toluene	< 0.05	< 0.05	< 0.05	0.2
Ethylbenzene	< 0.05	< 0.05	< 0.05	0.05
Xylene Mixture	< 0.05	< 0.05	< 0.05	0.05
F1 (C6-C10)	< 10	< 10	< 10	25
F2 (C10-C16)	< 10	< 10	< 10	10
F3 (C16-C34)	< 50	< 50	77	240
F4 (C34-C50)	< 50	< 50	< 50	120

* metres below ground surface

** Table 1, Full Depth Background Site Condition Standards

Table III-C: Soil Data - Volatile Organic Compounds (VOCs)

Sample ID	BH1/5	BH2/8	BH3/9	Dup 1	Table 1 Standards
Depth (mbgs*)	3.0-3.5	5.3-5.8	5.5-6.0	5.5-6.0	
Sample Date	14-Jul-16	14-Jul-16	14-Jul-16	14-Jul-16	
Laboratory ID	9	11	13	14	
Acetone	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Benzene	< 0.05	< 0.05	< 0.05	< 0.05	0.02
Bromodichloromethane	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Bromoform	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Bromomethane	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Carbon Tetrachloride	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Chlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Chloroform	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Dibromochloromethane	< 0.05	< 0.05	< 0.05	< 0.05	0.05
1,2-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05	0.05
1,3-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05	0.05
1,4-Dichlorobenzene	< 0.05	< 0.05	< 0.05	< 0.05	0.05
1,1-Dichloroethane	< 0.05	< 0.05	< 0.05	< 0.05	0.05
1,2-Dichloroethane	< 0.05	< 0.05	< 0.05	< 0.05	0.05
1,1-Dichloroethylene	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Cis-1,2-Dichloroethylene	< 0.03	< 0.03	< 0.03	< 0.03	0.05
Trans-1,2-Dichloroethylene	< 0.03	< 0.03	< 0.03	< 0.03	0.05
1,2-Dichloropropane	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Ethylbenzene	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Ethylene Dibromide	<0.05	<0.05	<0.05	<0.05	0.05
Methyl Ethyl Ketone	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Methylene Chloride	< 0.5	< 0.5	< 0.5	< 0.5	0.05
Methyl Isobutyl Ketone	< 0.05	< 0.05	< 0.05	< 0.05	0.5
Methyl-t-Butyl Ether	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Styrene	< 0.05	< 0.05	< 0.05	< 0.05	0.05
1,1,1,2-Tetrachloroethane	< 0.05	< 0.05	< 0.05	< 0.05	0.05
1,1,2,2-Tetrachloroethane	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Toluene	< 0.05	< 0.05	< 0.05	< 0.05	0.2
Tetrachloroethylene	< 0.05	< 0.05	< 0.05	< 0.05	0.05
1,1,1-Trichloroethane	< 0.05	< 0.05	< 0.05	< 0.05	0.05
1,1,2-Trichloroethane	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Trichloroethylene	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Vinyl Chloride	<0.02	<0.02	<0.02	<0.02	0.02
Xylenes Mixtures	<0.02	<0.02	<0.02	<0.02	0.05
Dichlorodifluoromethane	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Hexane(n)	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Trichlorofluoromethane	< 0.05	< 0.05	< 0.05	< 0.05	0.25
1,3-Dichloropropene (cis + trans)	< 0.05	< 0.05	< 0.05	< 0.05	0.05

* metres below ground surface

** Table 1, Full Depth Background Site Condition Standards

Table IV: Groundwater Data - Inorganic Parameters

Sample ID	MW1	MW2	MW3	MW1	MW2	MW3	MW1	MW2	MW3	MW3	Table 1 Standards
Sample Depth/Screen Depth (m)	4.6-7.6	3.1-6.1	3.0-6.0	4.6-7.6	3.1-6.1	3.0-6.0	4.6-7.6	3.1-6.1	3.0-6.0	3.0-6.0	
Sample Date	22-Jul-16	22-Jul-16	22-Jul-16	14-Aug-16	14-Aug-16	14-Aug-16	29-May-17	29-May-17	29-May-17	31-Aug-17	
Laboratory ID	7	8	9	7	8	9	ELP260	ELP261	ELP262	FAU207	
Antimony	< 0.02	< 0.02	< 0.02	0.75	0.13	0.3	<0.50	<0.50	0.54	0.54	1.5
Arsenic	7.7	1.5	**18.9**	3.3	0.4	**13.1**	<1.0	<1.0	8.6	4.7	13
Barium	548	68.8	95.8	127	29.1	47.4	65	21	40	38	610
Beryllium	0.074	0.084	**1.27**	< 0.007	< 0.007	< 0.007	<0.50	<0.50	<0.50	<0.50	0.5
Boron	276	116	565	286	134	565	140	84	610	620	1700
Cadmium	0.376	0.068	0.256	0.02	0.015	0.012	<0.10	<0.10	<0.10	<0.10	0.5
Chromium	0.4	2.69	**16.7**	0.27	0.43	0.21	<5.0	<5.0	<5.0	<5.0	11
Chromium VI	< 0.2	0.3	< 0.2	---	---	< 0.2	---	---	---	---	25
Cobalt	**12.7**	**3.92**	**19.5**	2.97	0.636	0.925	<0.50	<0.50	0.58	0.64	3.8
Copper	1.74	**5.78**	**166**	0.4	0.84	0.34	1.3	<1.0	<1.0	4.5	5
Lead	0.05	**3.17**	**28.2**	0.07	0.02	0.04	<0.50	<0.50	<0.50	<0.50	1.9
Mercury	**0.41**	< 0.01	< 0.01	<0.1		< 0.01	<0.1	-	-		0.1
Molybdenum	4.56	2.06	2.29	6.16	3.11	4.36	3.2	1.4	4.7	5.2	23
Nickel	12.3	4.6	**26.3**	2.6	2	0.6	1.5	1.2	<1.0	<1.0	14
Sodium	34600	25600	34500	---	---	---	---	---	---	---	490000
Selenium	0.81	0.43	0.27	2.35	0.57	0.07	<2.0	<2.0	<2.0	<2.0	5
Silver	< 0.002	0.003	0.008	< 0.002	< 0.002	< 0.002	<0.10	<0.10	<0.10	<0.10	0.3
Thallium	0.047	0.052	0.091	0.014	0.021	0.013	<0.050	<0.050	<0.050	<0.050	0.5
Vanadium	0.54	1.88	**28.4**	0.29	0.14	0.17	<0.50	<0.50	<0.50	<0.50	3.9
Zinc	5	12	68	< 2	4	2	<5.0	<5.0	<5.0	<5.0	160
Cyanide, Free	< 2	< 2	< 2	---	---	< 2	---	---	---	---	5
Chloride (mg/L)	8900	42000	13000	---	---	9900	---	---	---	---	790000
Uranium	8.46	6.47	2.51	5.26	6.47	0.8	4.8	6	1.4	2.4	8.9

** Table 1, Full Depth Background Site Condition Standards

Table IV: Groundwater Data - Inorganic Parameters

Sample ID	MW1	DUP-W1	
Sample Depth/Screen Depth (m)	4.6-7.6	3.0-6.0	Table 1
Sample Date	31-Aug-17	29-May-17	Standards
Laboratory ID	FAU206	ELP263	
Antimony	-	**<0.50**	**1.5**
Arsenic	-	9.2	13
Barium	-	41	610
Beryllium	-	<0.50	0.5
Boron	-	620	1700
Cadmium	-	<0.10	0.5
Chromium	-	<5.0	11
Chromium VI	-	-	25
Cobalt	-	0.67	3.8
Copper	-	<1.0	5
Lead	-	<0.50	1.9
Mercury	<0.1	-	0.1
Molybdenum	-	**4.7**	23
Nickel	-	<1.0	14
Sodium	-	-	490000
Selenium	-	<2.0	5
Silver	-	<0.10	0.3
Thallium	-	<0.050	0.5
Vanadium	-	<0.50	3.9
Zinc	-	<5.0	160
Cyanide, Free	-	-	5
Chloride (mg/L)	-	-	790000
Uranium	-	1.4	8.9

** Table 1, Full Depth Background Site Condition Standards

Table IV: Groundwater Data - Petroleum Parameters

Sample ID	MW1	MW2	MW2	MW2	MW3	
Sample Depth/Screen Depth (m)	4.6-7.6	3.1-6.1	3.1-6.1	3.1-6.1	3.0-6.0	Table 1
Sample Date	28-Jul-16	22-Jul-16	14-Aug-16	29-May-17	22-Jul-16	Standards
Laboratory ID	7	8	8	8	9	
Benzene	---	**< 0.5**	**< 0.5**	**< 0.5**	**< 0.5**	**0.5**
Toluene	---	< 0.5	< 0.5	< 0.5	< 0.5	0.8
Ethylbenzene	---	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Xylene Mixture	---	< 0.5	< 0.5	< 0.5	< 0.5	72
F1 (C6-C10)	<25	**< 25**	<25	<25	< 25	**420**
F2 (C10-C16)	<100	**< 100**	<100	<100	< 100	150
F3 (C16-C34)	<200	1410	<200	<200	236	500
F4 (C34-C50)	<200	< 200	<200	<200	< 200	500

** Table 1, Full Depth Background Site Condition Standards

Table IV: Groundwater Data - Volatile Organic Compounds (VOCs)

Sample ID	MW2	MW3	TRIP BLANK	Table 1 Standards
Sample Depth/Screen Depth (m)	3.1-6.1	3.0-6.0	-	
Sample Date	29-May-17	17-Aug-17	17-Aug-17	
Laboratory ID	8	9		
Acetone	< 30	< 30	< 30	2700
Benzene	< 0.5	< 0.5	< 0.5	0.5
Bromodichloromethane	< 0.5	< 0.5	< 0.5	2
Bromoform	< 0.5	< 0.5	< 0.5	5
Bromomethane	< 0.5	< 0.5	< 0.5	0.89
Carbon Tetrachloride	<0.2	<0.2	<0.2	0.2
Chlorobenzene	<0.5	<0.5	<0.5	0.5
Chloroform	<0.5	<0.5	<0.5	2
Dibromochloromethane	<2	<2	<2	2
1,2-Dichlorobenzene	< 0.5	< 0.5	< 0.5	0.5
1,3-Dichlorobenzene	< 0.5	< 0.5	< 0.5	0.5
1,4-Dichlorobenzene	< 0.5	< 0.5	< 0.5	0.5
1,1-Dichloroethane	< 0.5	< 0.5	< 0.5	0.5
1,2-Dichloroethane	< 0.5	< 0.5	< 0.5	0.5
1,1-Dichloroethylene	< 0.5	< 0.5	< 0.5	0.5
Cis-1,2-Dichloroethylene	< 0.5	< 0.5	< 0.5	1.6
Trans-1,2-Dichloroethylene	< 0.5	< 0.5	< 0.5	1.6
1,2-Dichloropropane	< 0.5	< 0.5	< 0.5	0.5
Ethylbenzene	< 0.5	< 0.5	< 0.5	0.5
Ethylene Dibromide	< 0.2	< 0.2	< 0.2	0.2
Methyl Ethyl Ketone	< 20	< 20	< 20	400
Methylene Chloride	<0.5	<0.5	<0.5	5
Methyl Isobutyl Ketone	<20	<20	<20	640
Methyl-t-Butyl Ether	<2.0	<2.0	<2.0	15
Styrene	<0.50	<0.50	<0.50	0.5
1,1,1,2-Tetrachloroethane	<0.50	<0.50	<0.50	1.1
1,1,2,2-Tetrachloroethane	<0.50	<0.50	<0.50	0.5
Toluene	<0.5	<0.5	<0.5	0.8
Tetrachloroethylene	<0.5	<0.5	<0.5	0.5
1,1,1-Trichloroethane	<0.5	<0.5	<0.5	0.5
1,1,2-Trichloroethane	<0.5	<0.5	<0.5	0.5
Trichloroethylene	<0.5	<0.5	<0.5	0.5
Vinyl Chloride	<0.2	<0.2	<0.2	0.5
Xylene Mixture	<0.5	<0.5	<0.5	72
Dichlorodifluoromethane	<2.0	<2.0	<2.0	590
Hexane(n)	<1.0	<1.0	<1.0	5
Trichlorofluoromethane	<5.0	<5.0	<5.0	150
1,3-Dichloropropene (cis + trans)	<0.5	<0.5	<0.5	0.5

** Table 1, Full Depth Background Site Condition Standards

Table IV: Groundwater Data - Volatile Organic Compounds (VOCs)(Rounds Second and Third)

Sample ID	MW1	MW1	MW1	TRIP BLANK	Table 1 Standards
Sample Depth/Screen Depth (m)	4.6-7.6	4.6-7.6	4.6-7.6	-	
Sample Date	14-Aug-16	29-May-17	10-Aug-17	10-Aug-17	
Laboratory ID	7	7	EXZ716	EXZ717	
Acetone	52	22	<10	<10	2700
Benzene	<0.50	<0.20	<0.20	<0.20	0.5
Bromodichloromethane	<0.50	<0.50	<0.50	<0.50	2
Bromoform	<0.50	<1.0	<1.0	<1.0	5
Bromomethane	<0.5	<0.50	<0.50	<0.50	0.89
Carbon Tetrachloride	<2.0	<0.20	<0.20	<0.20	0.2
Chlorobenzene	<0.50	<0.20	<0.20	<0.20	0.5
Chloroform	<0.50	<0.20	<0.20	<0.20	2
Dibromochloromethane	<2.0	<0.50	<0.50	<0.50	2
1,2-Dichlorobenzene	< 0.50	<0.50	<0.50	<0.50	0.5
1,3-Dichlorobenzene	< 0.50	<0.50	<0.50	<0.50	0.5
1,4-Dichlorobenzene	< 0.50	<0.50	<0.50	<0.50	0.5
1,1-Dichloroethane	< 0.50	<0.20	<0.20	<0.20	0.5
1,2-Dichloroethane	< 0.50	<0.50	<0.50	<0.50	0.5
1,1-Dichloroethylene	< 0.50	<0.20	<0.20	<0.20	0.5
Cis-1,2-Dichloroethylene	<0.50	<0.50	<0.50	<0.50	1.6
Trans-1,2-Dichloroethylene	<0.50	<0.50	<0.50	<0.50	1.6
1,2-Dichloropropane	<0.50	<0.20	<0.20	<0.20	0.5
Ethylbenzene	<0.20	<0.20	<0.20	<0.20	0.5
Ethylene Dibromide	<0.20	<0.20	<0.20	<0.20	0.2
Methyl Ethyl Ketone	<10	<10	<10	<10	400
Methylene Chloride	<2.0	<2.0	<2.0	<2.0	5
Methyl Isobutyl Ketone	<5.0	<5.0	<5.0	<5.0	640
Methyl-t-Butyl Ether	<0.50	<0.50	<0.50	<0.50	15
Styrene	<0.50	<0.50	<0.50	<0.50	0.5
1,1,1,2-Tetrachloroethane	<0.50	<0.50	<0.50	<0.50	1.1
1,1,2,2-Tetrachloroethane	<0.50	<0.50	<0.50	<0.50	0.5
Toluene	<0.50	<0.20	<0.20	<0.20	0.8
Tetrachloroethylene	<0.50	<0.20	<0.20	<0.20	0.5
1,1,1-Trichloroethane	<0.50	<0.20	<0.20	<0.20	0.5
1,1,2-Trichloroethane	<0.50	<0.50	<0.50	<0.50	0.5
Trichloroethylene	<0.50	<0.20	<0.20	<0.20	0.5
Vinyl Chloride	<5	<0.20	<0.20	<0.20	0.5
Xylene Mixture	<0.50	0.29	<0.20	<0.20	72
Dichlorodifluoromethane	<0.50	<1.0	<1.0	<1.0	590
Hexane(n)	<1	<1.0	<1.0	<1.0	5
Trichlorofluoromethane	<5	<0.50	<0.50	<0.50	150
1,3-Dichloropropene (cis + trans)	<0.50	<0.50	<0.50	<0.50	0.5

** Table 1, Full Depth Background Site Condition Standards

Table V – Maximum Concentration (Soil)

Summary of Inorganics

Parameter	Unit	Max.Conc.*	Sample ID	Sample Depth
Antimony	ug/g	<0.2	---	---
Arsenic	ug/g	7.4	Wall8	0.4 - 0.6
Barium	ug/g	8	Wall3-3	0.4 - 0.6
Beryllium	ug/g	1.1	Wall8	0.4 - 0.6
Cadmium	ug/g	<0.1	---	---
Chromium	ug/g	28	Wall7	0.4 - 0.6
Chromium VI	ug/g	<0.2	---	---
Cobalt	ug/g	16	Wall8	0.4 - 0.6
Copper	ug/g	54	Wall8	0.4 - 0.6
Lead	ug/g	52	Wall2-2	0.4 - 0.6
Mercury	ug/g	<0.05	---	---
Molybdenum	ug/g	<0.5	---	---
Nickel	ug/g	33	Wall8	0.4 - 0.6
Selenium	ug/g	<0.5	---	---
Silver	ug/g	<0.2	---	---
Thallium	ug/g	0.2	Wall7	0.4 - 0.6
Vanadium	ug/g	38	Wall7	0.4 - 0.6
Zinc	ug/g	79	wall2-2	0.4 - 0.6
Conductivity	mS/cm	---	---	---
Sodium Adsorption Ratio	-	---	---	---
Cyanide, Free	ug/g	---	---	---
Boron (Total)	ug/g	9.3	Wall6	0.4 - 0.6
Uranium	ug/g	1	---	---

*Max. Conc. - Maximum Concentration

Table V – Maximum Concentration (Soil)

Summary of CCME F1-F4

Parameter	Unit	Max.Conc.*	Sample ID	Sampling Depth (m)
F1 (C6-C10)	µg/L	<10	---	---
F2 (C10-C16)	µg/L	<10	---	---
F3 (C16-C34)	µg/L	77	BH3/9	5.5-6.0
F4 (C34-C50)	µg/L	<50	---	---

*Max. Conc. - Maximum Concentration

Table V – Maximum Concentration (Soil)

Summary of VOCs

Parameter	Unit	Max.Conc.*	Sample ID	Sampling Depth (m)
Acetone	µg/g	<0.05	---	---
Benzene	µg/g	<0.05	---	---
Bromodichloromethane	µg/g	<0.05	---	---
Bromoform	µg/g	<0.05	---	---
Bromomethane	µg/g	<0.05	---	---
Carbon Tetrachloride	µg/g	<0.05	---	---
Chlorobenzene	µg/g	<0.05	---	---
Chloroform	µg/g	<0.05	---	---
Dibromochloromethane	µg/g	<0.05	---	---
1,2-Dichlorobenzene	µg/g	<0.05	---	---
1,3-Dichlorobenzene	µg/g	<0.05	---	---
1,4-Dichlorobenzene	µg/g	<0.05	---	---
1,1-Dichloroethane	µg/g	<0.05	---	---
1,2-Dichloroethane	µg/g	<0.05	---	---
1,1-Dichloroethylene	µg/g	<0.05	---	---
Cis-1,2-Dichloroethylene	µg/g	<0.03	---	---
Trans-1,2-Dichloroethylene	µg/g	<0.03	---	---
1,2-Dichloropropane	µg/g	<0.05	---	---
Ethylbenzene	µg/g	<0.05	---	---
Ethylene Dibromide	µg/g	<0.05	---	---
Methyl Ethyl Ketone	µg/g	<0.5	---	---
Methylene Chloride	µg/g	<0.5	---	---
Methyl Isobutyl Ketone	µg/g	<0.05	---	---
Methyl-t-Butyl Ether	µg/g	<0.05	---	---
Styrene	µg/g	<0.05	---	---
Vinyl Chloride	µg/g	<0.02	---	---
Xylenes Mixtures	µg/g	<0.02	---	---
Dichlorodifluoromethane	µg/g	<0.05	---	---
Hexane(n)	µg/g	<0.05	---	---
Trichlorofluoromethane	µg/g	<0.05	---	---
1,3-Dichloropropene (cis + trans)	µg/g	<0.05	---	---

*Max. Conc. = Maximum Concentration

Table VI – Maximum Concentration (Groundwater)

Summary of CCME F1-F4

Parameter	Unit	Max.Conc.*	Sample ID	Sampling Depth (m)
F1 (C6-C10)	µg/L	<25	---	---
F2 (C10-C16)	µg/L	<100	---	---
F3 (C16-C34)	µg/L	<200	---	---
F4 (C34-C50)	µg/L	<200	---	---

*Max. Conc. - Maximum Concentration

Table VI – Maximum Concentration (Groundwater)

Summary of Inorganics

Parameter	Unit	Max.Conc.*	Sample ID	Sampling Depth (m)
Antimony	ug/L	1	MW3	3.0-6.0
Arsenic	ug/L	8.6	MW3	3.0-6.0
Barium	ug/L	548	MW1	4.6-7.6
Beryllium	ug/L	<0.5	---	---
Boron	ug/L	565	MW3	3.0-6.0
Cadmium	ug/L	0.37	MW1	4.6-7.6
Chromium	ug/L	0.43	MW2	3.1-6.1
Chromium VI	ug/L	0.3	MW2	3.1-6.1
Cobalt	ug/L	0.92	MW3	3.0-6.0
Copper	ug/L	4.5	MW3	3.0-6.0
Lead	ug/L	0.07	MW1	4.6-7.6
Mercury	ug/L	<0.1	MW1	4.6-7.6
Molybdenum	ug/L	6.16	MW1	4.6-7.6
Nickel	ug/L	12.3	MW1	4.6-7.6
Sodium	ug/L	34600	MW1	4.6-7.6
Selenium	ug/L	2.35	MW1	4.6-7.6
Silver	ug/L	0.008	MW3	3.0-6.0
Thallium	ug/L	0.09	MW3	3.0-6.0
Vanadium	ug/L	0.29	MW1	4.6-7.6
Zinc	ug/L	68	MW3	3.0-6.0
Chloride	ug/L	42000	MW2	3.1-6.1
Cyanide, Free	ug/L	<2	MW3	3.0-6.0
Uranium	ug/L	8.46	MW1	4.6-7.6

*Max. Conc. - Maximum Concentration

Table VI – Maximum Concentration (Groundwater)

Summary of VOCs

Parameter	Unit	Max.Conc.*	Sample ID	Sampling Depth (m)
Acetone	µg/L	52	MW1	
Benzene	µg/L	<0.5	---	---
Bromodichloromethane	µg/L	<0.5	---	---
Bromoform	µg/L	<0.5	---	---
Bromomethane	µg/L	<0.5	---	---
Carbon Tetrachloride	µg/L	<0.5	---	---
Chlorobenzene	µg/L	<0.5	---	---
Chloroform	µg/L	<0.5	---	---
Dibromochloromethane	µg/L	<0.5	---	---
1,2-Dichlorobenzene	µg/L	<0.5	---	---
1,3-Dichlorobenzene	µg/L	<0.5	---	---
1,4-Dichlorobenzene	µg/L	<0.5	---	---
1,1-Dichloroethane	µg/L	<0.5	---	---
1,2-Dichloroethane	µg/L	<0.5	---	---
1,1-Dichloroethylene	µg/L	<0.5	---	---
Cis-1,2-Dichloroethylene	µg/L	<0.5	---	---
Trans-1,2-Dichloroethylene	µg/L	<0.5	---	---
1,2-Dichloropropane	µg/L	<0.5	---	---
Ethylbenzene	µg/L	<0.5	---	---
Ethylene Dibromide	µg/L	<0.2	---	---
Methyl Ethyl Ketone	µg/L	<20	---	---
Methylene Chloride	µg/L	<2	---	---
Methyl Isobutyl Ketone	µg/L	<5	---	---
Methyl-t-Butyl Ether	µg/L	<0.5	---	---
Styrene	µg/L	<0.5	---	---
1,1,1,2-Tetrachloroethane	µg/L	<0.5	---	---
1,1,2,2-Tetrachloroethane	µg/L	<0.5	---	---
Toluene	µg/L	<0.5	---	---
Tetrachloroethylene	µg/L	<0.5	---	---
1,1,1-Trichloroethane	µg/L	<0.5	---	---
1,1,2-Trichloroethane	µg/L	<0.5	---	---
Trichloroethylene	µg/L	<0.5	---	---
Vinyl Chloride	µg/L	<5	---	---
Total Xylenes	µg/L	0.29	MW1	3.1-6.1
Dichlorodifluoromethane	µg/L	<2	---	---
Hexane(n)	µg/L	<1	---	---
Trichlorofluoromethane	µg/L	<5	---	---
1,3-Dichloropropene (cis + trans)	µg/L	<0.5	---	---

*Max. Conc. - Maximum Concentration

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APPENDIX 'B'

BORHEOLE LOGS

REFERENCE NO. 1512-S086E

JOB NO.: 1512-S086E

LOG OF BOREHOLE NO.: 1

FIGURE NO.: 1

PROJECT DESCRIPTION: Proposed Residential Development

METHOD OF BORING: Split-Spoon

PROJECT LOCATION: 6611 Second Line West
City of Mississauga

DRILLING DATE: July 14, 2016

El. (masl) / Depth (mbgs)	SOIL DESCRIPTION	SAMPLES Number	Type	Gas Reading	Depth Scale (mbgs)	● Gas Reading (ppm) 20 60 100 140 180	REMARKS	WATER LEVEL
177.27	Ground Surface							
0.0	**5 cm TOPSOIL**				0			
	Brown	1	DO	5		● 5		
	SILTY CLAY, FILL a trace of gravel	2	DO	20	1	● 20		
	dry / moist	3	DO	15	2	● 15	BH1/3: M&I	
175.0 2.3		4	DO	10		● 10		
		5	DO	20	3	● 20	BH1/5: PHC, VOC	
	SILTY CLAY, TILL brown / grey	6	DO	10	4	● 10		
		7	DO	10	5	● 10		
	wet	8	DO	10		● 10		
		9	DO	15	7	● 15		
169.7 7.6	END OF BOREHOLE Installed 51 mm standpipe to 7.6 m. Bentonite seal from 0.0 to 4.0 m. Sand backfill from 4.0 to 7.6 m. 3.0 m screen from 4.6 to 7.6 m. Provided with flushmount protective casing.				6 8 9 10			W.L. @ 5.60 mbgs on July 21, 2016

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JOB NO.: 1512-S086E

LOG OF BOREHOLE NO.: 2

FIGURE NO.: 2

PROJECT DESCRIPTION: Proposed Residential Development

METHOD OF BORING: Split-Spoon

PROJECT LOCATION: 6611 Second Line West
City of Mississauga

DRILLING DATE: July 14, 2016

El. (masl) / Depth (mbgs)	SOIL DESCRIPTION	SAMPLES Number	Type	Gas Reading	Depth Scale (mbgs)	Gas Reading (ppm) 20 60 100 140 180	REMARKS	WATER LEVEL
177.09 / 0.0	Ground Surface							
	TOPSOIL FILL	1	DO	0	0	0		
	Brown, dry							
	SILTY CLAY, FILL a trace of gravel	2	DO	0	1	0	BH2/2: M&I	
175.6 / 1.5	Brown	3	DO	0	2	0		
	dry / moist	4	DO	5		5		
	SILTY CLAY, TILL a trace of gravel	5	DO	0	3	0		
		6	DO	0	4	0		
	moist / wet	7	DO	5	5	5		
		8	DO	15		15	BH2/8: PHC, VOC	
171.0 / 6.1	END OF BOREHOLE Installed 51 mm standpipe to 6.1 m. Bentonite seal from 0.0 to 2.5 m. Sand backfill from 2.5 to 6.1 m. 3.0 m screen from 3.1 to 6.1 m. Provided with flushmount protective casing.				6			
					7			
					8			
					9			
					10			

W.L. @ 3.10 mbgs on July 21, 2016

Soil Engineers Ltd.

JOB NO.: 1512-S086E

LOG OF BOREHOLE NO.: 3

FIGURE NO.: 3

PROJECT DESCRIPTION: Proposed Residential Development

METHOD OF BORING: Split-Spoon

PROJECT LOCATION: 6611 Second Line West
City of Mississauga

DRILLING DATE: July 14, 2016

El. (masl) / Depth (mbgs)	SOIL DESCRIPTION	SAMPLES Number	Type	Gas Reading	Depth Scale (mbgs)	● Gas Reading (ppm) 20 60 100 140 180	REMARKS	WATER LEVEL
176.80	Ground Surface							
0.0	**20 cm TOPSOIL**				0			
	Brown	1	DO	5		● 5		
		2	DO	15	1	● 15		
	SILTY CLAY, FILL a trace of gravel — dry / moist	3	DO	15		● 15		
		4	DO	15	2	● 15		
		5	DO	20	3	● 20	BH3/5: M&I	
173.0 3.8	Grey, moist	6	DO	20	4	● 20		
		7	DO	20		● 20		
	SILTY CLAY, TILL a trace of gravel	8	DO	20	5	● 20		
		9	DO	20		● 20	BH3/9: PHC, VOC	
170.8 6.0	END OF BOREHOLE Installed 51 mm standpipe to 6.0 m. Bentonite seal from 0.0 to 2.4 m. Sand backfill from 2.4 to 3.0 m. 3 m screen from 3.0 to 6.0 m. Provided with monument protective casing.				6			
					7			
					8			
					9			
					10			

W.L. @ 4.70 mbgs on July 21, 2016

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JOB NO.: 1512-S086E

LOG OF BOREHOLE NO.: TP1

FIGURE NO.: 4

PROJECT DESCRIPTION: Proposed Residential Development

METHOD OF BORING: Hand-Dug

PROJECT LOCATION: 6611 Second Line West
City of Mississauga

DRILLING DATE: July 14, 2016

El. (masl) / Depth (mbgs)	SOIL DESCRIPTION	SAMPLES Number	SAMPLES Type	SAMPLES Gas Reading	Depth Scale (mbgs)	Gas Reading (ppm) 20 60 100 140 180	REMARKS	WATER LEVEL
173.40	Ground Surface							
0.0	**15 cm TOPSOIL**				0			
0.1	**SILTY CLAY, FILL**	1	CS	0		● 0	TP1/1: M&I	
172.9	END OF TEST PIT				1			
0.5		2	CS	0		● 0		
					2			
					3			
					4			
					5			
					6			

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JOB NO.: 1512-S086E

LOG OF BOREHOLE NO.: TP2

FIGURE NO.: 5

PROJECT DESCRIPTION: Proposed Residential Development

METHOD OF BORING: Hand-Dug

PROJECT LOCATION: 6611 Second Line West
City of Mississauga

DRILLING DATE: July 14, 2016

El. (masl) / Depth (mbgs)	SOIL DESCRIPTION	SAMPLES: Number	SAMPLES: Type	SAMPLES: Gas Reading	Depth Scale (mbgs)	● Gas Reading (ppm) 20 60 100 140 180	REMARKS	WATER LEVEL
175.90	Ground Surface							
0.0	**5 cm TOPSOIL**				0			
	SILTY CLAY, FILL	1	CS	0		● 0	TP2/1: M&I	
175.5 / 0.5	END OF TEST PIT				1			
					2			
					3			
					4			
					5			
					6			

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JOB NO.: 1512-S086E

LOG OF BOREHOLE NO.: TP3

FIGURE NO.: 6

PROJECT DESCRIPTION: Proposed Residential Development

METHOD OF BORING: Hand-Dug

PROJECT LOCATION: 6611 Second Line West
City of Mississauga

DRILLING DATE: July 14, 2016

El. (masl) / Depth (mbgs)	SOIL DESCRIPTION	SAMPLES: Number	SAMPLES: Type	SAMPLES: Gas Reading	Depth Scale (mbgs)	● Gas Reading (ppm) 20 60 100 140 180	REMARKS	WATER LEVEL
176.30	Ground Surface							
0.0	**10 cm TOPSOIL**				0			
0.1	**SILTY CLAY, FILL**	1	CS	0		● 0		
175.8					1			
0.5	END OF TEST PIT							
					2			
					3			
					4			
					5			
					6			

JOB NO.: 1512-S086E

LOG OF BOREHOLE NO.: TP4

FIGURE NO.: 7

PROJECT DESCRIPTION: Proposed Residential Development

METHOD OF BORING: Hand-Dug

PROJECT LOCATION: 6611 Second Line West
City of Mississauga

DRILLING DATE: July 14, 2016

El. (masl) / Depth (mbgs)	SOIL DESCRIPTION	SAMPLES Number	Type	Gas Reading	Depth Scale (mbgs)	● Gas Reading (ppm) 20 60 100 140 180	REMARKS	WATER LEVEL
169.70	Ground Surface							
0.0	**30 cm TOPSOIL FILL**	1	CS	0	0	● 0		
		2	CS	0		● 0	TP4/2: M&I	
	SILTY CLAY, FILL	3	CS	0	1	● 0		
		4	CS	0	2	● 0		
		5	CS	0		● 0		
166.7					3			
3.0	END OF TEST PIT							
					4			
					5			
					6			

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JOB NO.: 1512-S086E

LOG OF BOREHOLE NO.: TP5

FIGURE NO.: 8

PROJECT DESCRIPTION: Proposed Residential Development

METHOD OF BORING: Hand-Dug

PROJECT LOCATION: 6611 Second Line West
City of Mississauga

DRILLING DATE: July 14, 2016

El. (masl) / Depth (mbgs)	SOIL DESCRIPTION	SAMPLES Number	Type	Gas Reading	Depth Scale (mbgs)	● Gas Reading (ppm) 20 60 100 140 180	REMARKS	WATER LEVEL
171.80	Ground Surface							
0.0	**30 cm TOPSOIL FILL**	1	CS	0	0	● 0		
		2	CS	0		● 0		
	SILTY CLAY, FILL with topsoil and wood inclusions	3	CS	0	1	● 0		
		4	CS	0		● 0		
		5	CS	0	2	● 0		
		6	CS	0	3	● 0		
168.1								
3.7	END OF TEST PIT				4			
					5			
					6			

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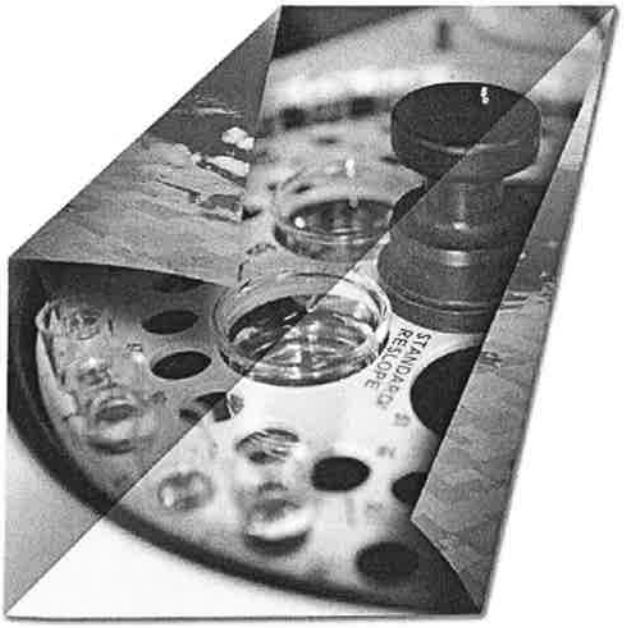
APPENDIX 'C'

CERTIFICATE OF ANALYSIS (SOIL SAMPLES)

REFERENCE NO. 1512-S086E

SGS



FINAL REPORT

CA14367-JUL16 R

1512-5086E

Prepared for

Soil Engineers Ltd.

FINAL REPORT

CA14367-JUL16 R

First Page

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Project	1512-5086E	Received	07/15/2016
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		Date Reported	07/21/2016

COMMENTS

This Report/Certificate cancels and supersedes the Report No.: CA14367-JUL16 R0 issued by: SGS Canada Inc.

CCME Method Compliance: Analyses were conducted using analytical procedures that comply with the Reference Method for the CWS for Petroleum Hydrocarbons in Soil and have been validated for use at the SGS laboratory, Lakefield, ON site.

Quality Compliance: Instrument performance / calibration quality criteria were met and extraction and analysis limits for holding times were met.

- nC6 and nC10 response factors within 30% of response factor for toluene: YES
- nC10, nC16 and nC34 response factors within 10% of the average response for the three compounds: YES
- C50 response factors within 70% of nC10 + nC16 + nC34 average: YES
- Linearity is within 15%: YES

F4G - gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.
The results for F4 and F4G are both reported and the greater of the two values is to be used in application to the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

Temperature of samples upon receipt 16.5 degrees C
Cooling initiated by placing in working refrigerator
Cooling agent added for transport
Custody seal not present

SIGNATORIES

Deanna Edwards, B.Sc, C.Chem

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RESULTS

	Sample Number	8	9	10	11	
	Sample Name	BH1/3	BH1/5	BH2/2	BH2/8	
	Sample Matrix	Soil	Soil	Soil	Soil	
	Sampled By	Vincent	Vincent	Vincent	Vincent	
	Sample Date	14/07/2016	14/07/2016	14/07/2016	14/07/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**
							REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED
Anions by IC							
Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001							
Chloride	µg/g	0.4	20	---	8.7	---	
Conductivity							
Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006							
Conductivity	mS/cm	0.002	0.17	---	0.15	---	0.57
Cyanide by SFA							
Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005							
Free Cyanide	µg/g	0.05	< 0.05	---	< 0.05	---	0.051
Hexavalent Chromium by IC							
Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008							
Chromium VI	µg/g	0.2	< 0.2	---	< 0.2	---	0.66
Mercury by CVAAS							
Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004							
Mercury	µg/g	0.05	< 0.05	---	< 0.05	---	0.27
Metals in Soil - Aqua-regia/ICP-MS							
Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005							
Barium	µg/g	0.01	78	---	44	---	220
Beryllium	µg/g	0.02	0.75	---	0.47	---	2.5
Boron	µg/g	1	8	---	7	---	36
Cadmium	µg/g	0.02	0.11	---	0.09	---	1.2
Chromium	µg/g	0.5	19	---	13	---	70
Cobalt	µg/g	0.01	15	---	9.3	---	21
Copper	µg/g	0.1	42	---	28	---	92
Lead	µg/g	0.1	9.3	---	6.0	---	120
Molybdenum	µg/g	0.1	0.4	---	0.4	---	2
Nickel	µg/g	0.1	31	---	19	---	82
Silver	µg/g	0.01	0.02	---	0.02	---	0.5
Thallium	µg/g	0.02	0.14	---	0.10	---	1
Uranium	µg/g	0.002	0.66	---	0.39	---	2.5
Vanadium	µg/g	3	24	---	18	---	86
Zinc	µg/g	0.7	59	---	40	---	290
Antimony	µg/g	0.8	< 0.8	---	< 0.8	---	1.3
Arsenic	µg/g	0.5	6.4	---	4.3	---	18

RESULTS

	Sample Number	8	9	10	11	
	Sample Name	BH1/3	BH1/5	BH2/2	BH2/8	
	Sample Matrix	Soil	Soil	Soil	Soil	
	Sampled By	Vincent	Vincent	Vincent	Vincent	
	Sample Date	14/07/2016	14/07/2016	14/07/2016	14/07/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**
							REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED
Metals in Soil - Aqua-regia/ICP-MS (continued)							
Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005							
Selenium	µg/g	0.7	1.1	---	0.7	---	1.5
Moisture							
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010							
Moisture Content	%	-	11.0	10.1	9.5	11.1	
Petroleum Hydrocarbons (F1)							
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010							
CCME F1 (C6-C10)	µg/g	10	---	< 10	---	< 10	25
CCME F1-BTEX (C6-C10)	µg/g	10	---	< 10	---	< 10	
Petroleum Hydrocarbons (F2-F4)							
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010							
CCME F2 (C10-C16)	µg/g	10	---	< 10	---	< 10	10
CCME F3 (C16-C34)	µg/g	50	---	< 50	---	< 50	240
CCME F4 (C34-C50)	µg/g	50	---	< 50	---	< 50	120
Chromatogram returned to baseline at nC50	Yes / No	-	---	YES	---	YES	
pH							
Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001							
pH	no unit	0.05	7.67	---	7.78	---	
Sodium adsorption ratio (SAR)							
Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021							
Sodium Adsorption Ratio	---	0.01	0.22	---	0.28	---	2.4
Volatile Organics							
Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004							
Acetone	µg/g	0.5	---	< 0.5	---	< 0.5	0.5
Bromomethane	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
Carbon tetrachloride	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
Chlorobenzene	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
Chloroform	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
1,2-Dichlorobenzene	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
1,3-Dichlorobenzene	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
1,4-Dichlorobenzene	µg/g	0.05	---	< 0.05	---	< 0.05	0.05

RESULTS

	Sample Number	8	9	10	11	
	Sample Name	BH1/3	BH1/5	BH2/2	BH2/8	
	Sample Matrix	Soil	Soil	Soil	Soil	
	Sampled By	Vincent	Vincent	Vincent	Vincent	
	Sample Date	14/07/2016	14/07/2016	14/07/2016	14/07/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**
							REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED
Volatile Organics (continued)							
Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004							
Dichlorodifluoromethane	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
1,1-Dichloroethane	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
1,2-Dichloroethane	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
1,1-Dichloroethylene	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
trans-1,2-Dichloroethylene	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
cis-1,2-Dichloroethylene	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
1,2-Dichloropropane	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
cis-1,3-dichloropropene	µg/g	0.03	---	< 0.03	---	< 0.03	
trans-1,3-dichloropropene	µg/g	0.03	---	< 0.03	---	< 0.03	
1,3-dichoropropene (total)	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
Ethylenedibromide	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
n-Hexane	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
Methyl ethyl ketone	µg/g	0.5	---	< 0.5	---	< 0.5	0.5
Methyl isobutyl ketone	µg/g	0.5	---	< 0.5	---	< 0.5	0.5
Methyl-t-butyl Ether	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
Methylene Chloride	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
Styrene	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
Tetrachloroethylene	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
1,1,1,2-Tetrachloroethane	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
1,1,2,2-Tetrachloroethane	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
1,1,1-Trichloroethane	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
1,1,2-Trichloroethane	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
Trichloroethylene	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
Trichlorofluoromethane	µg/g	0.05	---	< 0.05	---	< 0.05	0.25
Vinyl Chloride	µg/g	0.02	---	< 0.02	---	< 0.02	0.02
Benzene	µg/g	0.02	---	< 0.02	---	< 0.02	0.02
Ethylbenzene	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
Toluene	µg/g	0.05	---	< 0.05	---	< 0.05	0.2
Xylene (total)	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
m/p-xylene	µg/g	0.05	---	< 0.05	---	< 0.05	
o-xylene	µg/g	0.05	---	< 0.05	---	< 0.05	
Bromodichloromethane	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
Bromoform	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
Dibromochloromethane	µg/g	0.05	---	< 0.05	---	< 0.05	0.05
Surr 1,2-Dichloroethane-d4	Surr Rec %	-	---	97	---	99	
Surr 4-Bromofluorobenzene	Surr Rec %	-	---	94	---	95	
Surr 2-Bromo-1-Chloropropane	Surr Rec %	-	---	82	---	83	

RESULTS

		Sample Number	8	9	10	11	
		Sample Name	BH1/3	BH1/5	BH2/2	BH2/8	
		Sample Matrix	Soil	Soil	Soil	Soil	
		Sampled By	Vincent	Vincent	Vincent	Vincent	
		Sample Date	14/07/2016	14/07/2016	14/07/2016	14/07/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**
							REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED
Water Soluble Boron							
Method: O.Reg. 153/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003							
Water Soluble Boron	µg/g	0.5	< 0.5	---	< 0.5	---	

RESULTS

	Sample Number	12	13	14	15	
	Sample Name	BH3/5	BH3/9	Dup 1	TP1	
	Sample Matrix	Soil	Soil	Soil	Soil	
	Sampled By	Vincent	Vincent	Vincent	Vincent	
	Sample Date	14/07/2016	14/07/2016	14/07/2016	14/07/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**
							REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED
Anions by IC							
Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001							
Chloride	µg/g	0.4	6.9	---	---	8.9	
Conductivity							
Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006							
Conductivity	mS/cm	0.002	0.16	---	---	0.18	0.57
Cyanide by SFA							
Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005							
Free Cyanide	µg/g	0.05	< 0.05	---	---	< 0.05	0.051
Hexavalent Chromium by IC							
Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008							
Chromium VI	µg/g	0.2	< 0.2	---	---	0.8	0.66
Mercury by CVAAS							
Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004							
Mercury	µg/g	0.05	< 0.05	---	---	< 0.05	0.27
Metals in Soil - Aqua-regia/ICP-MS							
Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005							
Barium	µg/g	0.01	45	---	---	65	220
Beryllium	µg/g	0.02	0.60	---	---	0.48	2.5
Boron	µg/g	1	10	---	---	6	36
Cadmium	µg/g	0.02	0.09	---	---	0.46	1.2
Chromium	µg/g	0.5	18	---	---	17	70
Cobalt	µg/g	0.01	13	---	---	8.3	21
Copper	µg/g	0.1	35	---	---	33	92
Lead	µg/g	0.1	7.5	---	---	240	120
Molybdenum	µg/g	0.1	0.5	---	---	0.8	2
Nickel	µg/g	0.1	26	---	---	18	82
Silver	µg/g	0.01	0.03	---	---	0.08	0.5
Thallium	µg/g	0.02	0.14	---	---	0.11	1
Uranium	µg/g	0.002	0.52	---	---	0.41	2.5
Vanadium	µg/g	3	23	---	---	20	86
Zinc	µg/g	0.7	53	---	---	110	290
Antimony	µg/g	0.8	< 0.8	---	---	< 0.8	1.3
Arsenic	µg/g	0.5	4.8	---	---	4.3	18

RESULTS

	Sample Number		12	13	14	15	
	Sample Name		BH3/5	BH3/9	Dup 1	TP1	
	Sample Matrix		Soil	Soil	Soil	Soil	
	Sampled By		Vincent	Vincent	Vincent	Vincent	
	Sample Date		14/07/2016	14/07/2016	14/07/2016	14/07/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**
							REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED
Metals in Soil - Aqua-regia/ICP-MS (continued)							
Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005							
Selenium	µg/g	0.7	0.8	---	---	0.8	1.5
Moisture							
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010							
Moisture Content	%	-	11.4	18.9	15.5	9.1	
Petroleum Hydrocarbons (F1)							
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010							
CCME F1 (C6-C10)	µg/g	10	---	< 10	---	---	25
CCME F1-BTEX (C6-C10)	µg/g	10	---	< 10	---	---	
Petroleum Hydrocarbons (F2-F4)							
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010							
CCME F2 (C10-C16)	µg/g	10	---	< 10	---	---	10
CCME F3 (C16-C34)	µg/g	50	---	77	---	---	240
CCME F4 (C34-C50)	µg/g	50	---	< 50	---	---	120
Chromatogram returned to baseline at nC50	Yes / No	-	---	YES	---	---	
pH							
Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001							
pH	no unit	0.05	7.85	---	---	7.55	
Sodium adsorption ratio (SAR)							
Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021							
Sodium Adsorption Ratio	---	0.01	0.30	---	---	0.08	2.4
Volatile Organics							
Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004							
Acetone	µg/g	0.5	---	< 0.5	< 0.5	---	0.5
Bromomethane	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
Carbon tetrachloride	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
Chlorobenzene	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
Chloroform	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
1,2-Dichlorobenzene	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
1,3-Dichlorobenzene	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
1,4-Dichlorobenzene	µg/g	0.05	---	< 0.05	< 0.05	---	0.05

RESULTS

	Sample Number	12	13	14	15	
	Sample Name	BH3/5	BH3/9	Dup 1	TP1	
	Sample Matrix	Soil	Soil	Soil	Soil	
	Sampled By	Vincent	Vincent	Vincent	Vincent	
	Sample Date	14/07/2016	14/07/2016	14/07/2016	14/07/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**
							REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED
Volatile Organics (continued)							
Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004							
Dichlorodifluoromethane	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
1,1-Dichloroethane	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
1,2-Dichloroethane	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
1,1-Dichloroethylene	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
trans-1,2-Dichloroethylene	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
cis-1,2-Dichloroethylene	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
1,2-Dichloropropane	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
cis-1,3-dichloropropene	µg/g	0.03	---	< 0.03	< 0.03	---	
trans-1,3-dichloropropene	µg/g	0.03	---	< 0.03	< 0.03	---	
1,3-dichoropropene (total)	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
Ethylenedibromide	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
n-Hexane	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
Methyl ethyl ketone	µg/g	0.5	---	< 0.5	< 0.5	---	0.5
Methyl isobutyl ketone	µg/g	0.5	---	< 0.5	< 0.5	---	0.5
Methyl-t-butyl Ether	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
Methylene Chloride	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
Styrene	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
Tetrachloroethylene	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
1,1,1,2-Tetrachloroethane	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
1,1,2,2-Tetrachloroethane	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
1,1,1-Trichloroethane	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
1,1,2-Trichloroethane	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
Trichloroethylene	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
Trichlorofluoromethane	µg/g	0.05	---	< 0.05	< 0.05	---	0.25
Vinyl Chloride	µg/g	0.02	---	< 0.02	< 0.02	---	0.02
Benzene	µg/g	0.02	---	< 0.02	< 0.02	---	0.02
Ethylbenzene	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
Toluene	µg/g	0.05	---	< 0.05	< 0.05	---	0.2
Xylene (total)	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
m/p-xylene	µg/g	0.05	---	< 0.05	< 0.05	---	
o-xylene	µg/g	0.05	---	< 0.05	< 0.05	---	
Bromodichloromethane	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
Bromoform	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
Dibromochloromethane	µg/g	0.05	---	< 0.05	< 0.05	---	0.05
Surr 1,2-Dichloroethane-d4	Surr Rec %	-	---	96	97	---	
Surr 4-Bromofluorobenzene	Surr Rec %	-	---	94	94	---	
Surr 2-Bromo-1-Chloropropane	Surr Rec %	-	---	82	82	---	

RESULTS

	Sample Number		12	13	14	15	
	Sample Name		BH3/5	BH3/9	Dup 1	TP1	
	Sample Matrix		Soil	Soil	Soil	Soil	
	Sampled By		Vincent	Vincent	Vincent	Vincent	
	Sample Date		14/07/2016	14/07/2016	14/07/2016	14/07/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**
							REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED
Water Soluble Boron							
Method: O.Reg. 153/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003							
Water Soluble Boron	µg/g	0.5	< 0.5	---	---	< 0.5	

RESULTS

	Sample Number		16	17	18	19	
	Sample Name		TP2	TP3	TP4/2	TP5/2	
	Sample Matrix		Soil	Soil	Soil	Soil	
	Sampled By		Vincent	Vincent	Vincent	Vincent	
	Sample Date		14/07/2016	14/07/2016	14/07/2016	14/07/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**
							REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED
Anions by IC							
Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001							
Chloride	µg/g	0.4	13	11	6.6	2.0	
Conductivity							
Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006							
Conductivity	mS/cm	0.002	0.18	0.15	0.12	0.20	0.57
Cyanide by SFA							
Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005							
Free Cyanide	µg/g	0.05	< 0.05	< 0.05	< 0.05	0.07	0.051
Hexavalent Chromium by IC							
Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008							
Chromium VI	µg/g	0.2	0.5	< 0.2	2.2	< 0.2	0.66
Mercury by CVAAS							
Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004							
Mercury	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.27
Metals in Soil - Aqua-regia/ICP-MS							
Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005							
Barium	µg/g	0.01	69	72	63	62	220
Beryllium	µg/g	0.02	0.50	0.19	0.22	0.68	2.5
Boron	µg/g	1	6	5	5	7	36
Cadmium	µg/g	0.02	0.37	0.23	1.1	0.12	1.2
Chromium	µg/g	0.5	15	8.7	22	18	70
Cobalt	µg/g	0.01	7.8	5.9	5.4	12	21
Copper	µg/g	0.1	30	44	57	35	92
Lead	µg/g	0.1	99	18	1400	14	120
Molybdenum	µg/g	0.1	0.6	0.8	2.5	0.4	2
Nickel	µg/g	0.1	17	12	16	25	82
Silver	µg/g	0.01	0.07	0.04	0.11	0.04	0.5
Thallium	µg/g	0.02	0.12	0.10	0.06	0.14	1
Uranium	µg/g	0.002	0.40	0.34	0.36	0.47	2.5
Vanadium	µg/g	3	22	13	21	23	86
Zinc	µg/g	0.7	100	120	280	58	290
Antimony	µg/g	0.8	< 0.8	< 0.8	< 0.8	< 0.8	1.3
Arsenic	µg/g	0.5	4.3	4.9	4.7	4.5	18

RESULTS

	Sample Number	16	17	18	19	
	Sample Name	TP2	TP3	TP4/2	TP5/2	
	Sample Matrix	Soil	Soil	Soil	Soil	
	Sampled By	Vincent	Vincent	Vincent	Vincent	
	Sample Date	14/07/2016	14/07/2016	14/07/2016	14/07/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**
							REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED
Metals in Soil - Aqua-regia/ICP-MS (continued)							
Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005							
Selenium	µg/g	0.7	0.9	2.1	1.5	< 0.7	1.5
Moisture							
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010							
Moisture Content	%	-	6.3	2.4	4.3	17.7	
pH							
Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001							
pH	no unit	0.05	7.48	8.04	7.95	7.14	
Sodium adsorption ratio (SAR)							
Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021							
Sodium Adsorption Ratio	---	0.01	0.07	0.23	0.09	0.16	2.4
Water Soluble Boron							
Method: O.Reg. 153/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003							
Water Soluble Boron	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5	

RESULTS :

		Sample Number	20	21		
		Sample Name	Dup 2	TP5/3		
		Sample Matrix	Soil	Soil		
		Sampled By	Vincent	Vincent		
		Sample Date	14/07/2016	14/07/2016		
Parameter	**Units**	**RL**	**Result**	**Result**		**L1**
					REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED	
Anions by IC						
Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001						
Chloride	µg/g	0.4	11	---		
Conductivity						
Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006						
Conductivity	mS/cm	0.002	0.15	---		0.57
Cyanide by SFA						
Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005						
Free Cyanide	µg/g	0.05	< 0.05	---		0.051
Hexavalent Chromium by IC						
Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008						
Chromium VI	µg/g	0.2	< 0.2	---		0.66
Mercury by CVAAS						
Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004						
Mercury	µg/g	0.05	< 0.05	---		0.27
Metals in Soil - Aqua-regia/ICP-MS						
Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005						
Barium	µg/g	0.01	76	---		220
Beryllium	µg/g	0.02	0.20	---		2.5
Boron	µg/g	1	5	---		36
Cadmium	µg/g	0.02	0.26	---		1.2
Chromium	µg/g	0.5	8.9	---		70
Cobalt	µg/g	0.01	6.1	---		21
Copper	µg/g	0.1	46	---		92
Lead	µg/g	0.1	19	---		120
Molybdenum	µg/g	0.1	0.8	---		2
Nickel	µg/g	0.1	13	---		82
Silver	µg/g	0.01	0.04	---		0.5
Thallium	µg/g	0.02	0.11	---		1
Uranium	µg/g	0.002	0.37	---		2.5
Vanadium	µg/g	3	13	---		86
Zinc	µg/g	0.7	150	---		290
Antimony	µg/g	0.8	< 0.8	---		1.3
Arsenic	µg/g	0.5	5.2	---		18

RESULTS

	Sample Number		20	21	
	Sample Name		Dup 2	TP5/3	
	Sample Matrix		Soil	Soil	
	Sampled By		Vincent	Vincent	
	Sample Date		14/07/2016	14/07/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**L1**
					REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED
Metals in Soil - Aqua-regia/ICP-MS (continued)					
Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005					
Selenium	µg/g	0.7	2.1	---	1.5
Moisture					
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010					
Moisture Content	%	-	1.8	16.8	
pH					
Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001					
pH	no unit	0.05	8.03	7.46	
Sodium adsorption ratio (SAR)					
Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021					
Sodium Adsorption Ratio	---	0.01	0.25	---	2.4
Water Soluble Boron					
Method: O.Reg. 153/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003					
Water Soluble Boron	µg/g	0.5	< 0.5	---	

EXCEEDANCE SUMMARY

Parameter	Method	Units	Result	REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED L1
Dup 2				
Selenium	EPA 3050/EPA 200.8	µg/g	2.1	1.50
TP1				
Lead	EPA 3050/EPA 200.8	µg/g	240	120
Chromium VI	EPA218.6/EPA3060A	µg/g	0.8	0.66
TP3				
Selenium	EPA 3050/EPA 200.8	µg/g	2.1	1.50
TP4/2				
Lead	EPA 3050/EPA 200.8	µg/g	1400	120
Molybdenum	EPA 3050/EPA 200.8	µg/g	2.5	2
Chromium VI	EPA218.6/EPA3060A	µg/g	2.2	0.66
TP5/2				
Cyanide	SM 4500	µg/g	0.07	0.05

HOLDING TIME SUMMARY

Sample Name	QC Batch Reference	Sample Number	Sampled	Received	Extracted/ Prepared	Analysed	Holding Time	Approved
Anions by IC								
Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001								
BH1/3	DIO0286-JUL16	8	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/21/2016
BH2/2	DIO0286-JUL16	10	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/21/2016
BH3/5	DIO0286-JUL16	12	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/21/2016
TP1	DIO0286-JUL16	15	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/21/2016
TP2	DIO0286-JUL16	16	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/21/2016
TP3	DIO0286-JUL16	17	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/21/2016
TP4/2	DIO0286-JUL16	18	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/21/2016
TP5/2	DIO0286-JUL16	19	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/21/2016
Dup 2	DIO0286-JUL16	20	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/21/2016
Conductivity								
Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-008								
BH1/3	EWL0254-JUL16	8	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/20/2016
BH2/2	EWL0254-JUL16	10	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/20/2016
BH3/5	EWL0254-JUL16	12	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/20/2016
TP1	EWL0254-JUL16	15	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/20/2016
TP2	EWL0254-JUL16	16	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/20/2016
TP3	EWL0254-JUL16	17	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/20/2016
TP4/2	EWL0254-JUL16	18	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/20/2016
TP5/2	EWL0254-JUL16	19	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/20/2016
Dup 2	EWL0254-JUL16	20	07/14/2016	07/15/2016	07/19/2016	07/19/2016	08/13/2016	07/20/2016
Cyanide by SFA								
Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005								
BH1/3	SKA5035-JUL16	8	07/14/2016	07/15/2016	07/18/2016	07/19/2016	07/28/2016	07/21/2016
BH2/2	SKA5035-JUL16	10	07/14/2016	07/15/2016	07/18/2016	07/19/2016	07/28/2016	07/21/2016
BH3/5	SKA5035-JUL16	12	07/14/2016	07/15/2016	07/18/2016	07/19/2016	07/28/2016	07/21/2016
TP1	SKA5031-JUL16	15	07/14/2016	07/15/2016	07/18/2016	07/19/2016	07/28/2016	07/21/2016
TP2	SKA5031-JUL16	16	07/14/2016	07/15/2016	07/18/2016	07/19/2016	07/28/2016	07/21/2016
TP3	SKA5035-JUL16	17	07/14/2016	07/15/2016	07/18/2016	07/19/2016	07/28/2016	07/21/2016
TP4/2	SKA5035-JUL16	18	07/14/2016	07/15/2016	07/18/2016	07/19/2016	07/28/2016	07/21/2016
TP5/2	SKA5031-JUL16	19	07/14/2016	07/15/2016	07/18/2016	07/19/2016	07/28/2016	07/21/2016
Dup 2	SKA5035-JUL16	20	07/14/2016	07/15/2016	07/18/2016	07/19/2016	07/28/2016	07/21/2016
Hexavalent Chromium by IC								
Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008								
BH1/3	DIO0302-JUL16	8	07/14/2016	07/15/2016	07/19/2016	07/20/2016	08/13/2016	07/21/2016
BH2/2	DIO0302-JUL16	10	07/14/2016	07/15/2016	07/19/2016	07/20/2016	08/13/2016	07/21/2016
BH3/5	DIO0302-JUL16	12	07/14/2016	07/15/2016	07/19/2016	07/20/2016	08/13/2016	07/21/2016
TP1	DIO0302-JUL16	15	07/14/2016	07/15/2016	07/19/2016	07/20/2016	08/13/2016	07/21/2016

HOLDING TIME SUMMARY

Sample Name	QC Batch Reference	Sample Number	Sampled	Received	Extracted/ Prepared	Analysed	Holding Time	Approved
Hexavalent Chromium by IC (continued)								
Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008								
TP2	DIO0302-JUL16	16	07/14/2016	07/15/2016	07/19/2016	07/20/2016	08/13/2016	07/21/2016
TP3	DIO0302-JUL16	17	07/14/2016	07/15/2016	07/19/2016	07/20/2016	08/13/2016	07/21/2016
TP4/2	DIO0302-JUL16	18	07/14/2016	07/15/2016	07/19/2016	07/20/2016	08/13/2016	07/21/2016
TP5/2	DIO0302-JUL16	19	07/14/2016	07/15/2016	07/19/2016	07/20/2016	08/13/2016	07/21/2016
Dup 2	DIO0302-JUL16	20	07/14/2016	07/15/2016	07/19/2016	07/20/2016	08/13/2016	07/21/2016
Mercury by CVAAS								
Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004								
BH1/3	EHG0023-JUL16	8	07/14/2016	07/15/2016	07/18/2016	07/19/2016	08/11/2016	07/19/2016
BH2/2	EHG0023-JUL16	10	07/14/2016	07/15/2016	07/18/2016	07/19/2016	08/11/2016	07/19/2016
BH3/5	EHG0023-JUL16	12	07/14/2016	07/15/2016	07/18/2016	07/19/2016	08/11/2016	07/19/2016
TP1	EHG0023-JUL16	15	07/14/2016	07/15/2016	07/18/2016	07/19/2016	08/11/2016	07/19/2016
TP2	EHG0023-JUL16	16	07/14/2016	07/15/2016	07/18/2016	07/19/2016	08/11/2016	07/19/2016
TP3	EHG0023-JUL16	17	07/14/2016	07/15/2016	07/18/2016	07/19/2016	08/11/2016	07/19/2016
TP4/2	EHG0023-JUL16	18	07/14/2016	07/15/2016	07/18/2016	07/19/2016	08/11/2016	07/19/2016
TP5/2	EHG0023-JUL16	19	07/14/2016	07/15/2016	07/18/2016	07/19/2016	08/11/2016	07/19/2016
Dup 2	EHG0023-JUL16	20	07/14/2016	07/15/2016	07/18/2016	07/19/2016	08/11/2016	07/19/2016
Metals in Soil - Aqua-regia/ICP-MS								
Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005								
BH1/3	EMS0071-JUL16	8	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/20/2016
BH2/2	EMS0071-JUL16	10	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/20/2016
BH3/5	EMS0071-JUL16	12	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/20/2016
TP1	EMS0071-JUL16	15	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/20/2016
TP2	EMS0071-JUL16	16	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/20/2016
TP3	EMS0071-JUL16	17	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/20/2016
TP4/2	EMS0071-JUL16	18	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/20/2016
TP5/2	EMS0083-JUL16	19	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/20/2016
Dup 2	EMS0083-JUL16	20	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/20/2016
Moisture								
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010								
BH1/3	GCM0160-JUL16	8	07/14/2016	07/15/2016	07/18/2016	07/19/2016	09/12/2016	07/19/2016
BH1/5	GCM0160-JUL16	9	07/14/2016	07/15/2016	07/18/2016	07/19/2016	09/12/2016	07/19/2016
BH2/2	GCM0160-JUL16	10	07/14/2016	07/15/2016	07/18/2016	07/19/2016	09/12/2016	07/19/2016
BH2/8	GCM0160-JUL16	11	07/14/2016	07/15/2016	07/18/2016	07/19/2016	09/12/2016	07/19/2016
BH3/5	GCM0160-JUL16	12	07/14/2016	07/15/2016	07/18/2016	07/19/2016	09/12/2016	07/19/2016
BH3/9	GCM0160-JUL16	13	07/14/2016	07/15/2016	07/18/2016	07/19/2016	09/12/2016	07/19/2016
Dup 1	GCM0160-JUL16	14	07/14/2016	07/15/2016	07/18/2016	07/19/2016	09/12/2016	07/19/2016
TP1	GCM0160-JUL16	15	07/14/2016	07/15/2016	07/18/2016	07/19/2016	09/12/2016	07/19/2016

HOLDING TIME SUMMARY

Sample Name	QC Batch Reference	Sample Number	Sampled	Received	Extracted/ Prepared	Analysed	Holding Time	Approved
Moisture (continued)								
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010								
TP2	GCM0160-JUL16	16	07/14/2016	07/15/2016	07/18/2016	07/19/2016	09/12/2016	07/19/2016
TP3	GCM0160-JUL16	17	07/14/2016	07/15/2016	07/18/2016	07/19/2016	09/12/2016	07/19/2016
TP4/2	GCM0160-JUL16	18	07/14/2016	07/15/2016	07/18/2016	07/19/2016	09/12/2016	07/19/2016
TP5/2	GCM0160-JUL16	19	07/14/2016	07/15/2016	07/18/2016	07/19/2016	09/12/2016	07/19/2016
Dup 2	GCM0160-JUL16	20	07/14/2016	07/15/2016	07/18/2016	07/19/2016	09/12/2016	07/19/2016
TP5/3	GCM0160-JUL16	21	07/14/2016	07/15/2016	07/18/2016	07/19/2016	09/12/2016	07/19/2016
Petroleum Hydrocarbons (F1)								
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010								
BH1/5	GCM0159-JUL16	9	07/14/2016	07/15/2016	07/18/2016	07/19/2016	07/28/2016	07/20/2016
BH2/8	GCM0159-JUL16	11	07/14/2016	07/15/2016	07/18/2016	07/19/2016	07/28/2016	07/20/2016
BH3/9	GCM0159-JUL16	13	07/14/2016	07/15/2016	07/18/2016	07/19/2016	07/28/2016	07/20/2016
Petroleum Hydrocarbons (F2-F4)								
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010								
BH1/5	GCM0155-JUL16	9	07/14/2016	07/15/2016	07/18/2016	07/19/2016	07/28/2016	07/21/2016
BH2/8	GCM0155-JUL16	11	07/14/2016	07/15/2016	07/18/2016	07/19/2016	07/28/2016	07/21/2016
BH3/9	GCM0155-JUL16	13	07/14/2016	07/15/2016	07/18/2016	07/19/2016	07/28/2016	07/21/2016
pH								
Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001								
BH1/3	ARD0048-JUL16	8	07/14/2016	07/15/2016	07/18/2016	07/18/2016	08/13/2016	07/19/2016
BH2/2	ARD0048-JUL16	10	07/14/2016	07/15/2016	07/18/2016	07/18/2016	08/13/2016	07/19/2016
BH3/5	ARD0048-JUL16	12	07/14/2016	07/15/2016	07/18/2016	07/18/2016	08/13/2016	07/19/2016
TP1	ARD0048-JUL16	15	07/14/2016	07/15/2016	07/18/2016	07/18/2016	08/13/2016	07/19/2016
TP2	ARD0048-JUL16	16	07/14/2016	07/15/2016	07/18/2016	07/18/2016	08/13/2016	07/19/2016
TP3	ARD0048-JUL16	17	07/14/2016	07/15/2016	07/18/2016	07/18/2016	08/13/2016	07/19/2016
TP4/2	ARD0048-JUL16	18	07/14/2016	07/15/2016	07/18/2016	07/18/2016	08/13/2016	07/19/2016
TP5/2	ARD0048-JUL16	19	07/14/2016	07/15/2016	07/18/2016	07/18/2016	08/13/2016	07/19/2016
Dup 2	ARD0048-JUL16	20	07/14/2016	07/15/2016	07/18/2016	07/18/2016	08/13/2016	07/19/2016
TP5/3	ARD0048-JUL16	21	07/14/2016	07/15/2016	07/18/2016	07/18/2016	08/13/2016	07/19/2016
Sodium adsorption ratio (SAR)								
Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021								
BH1/3		8	07/14/2016	07/15/2016	07/20/2016	07/20/2016	01/10/2017	07/20/2016
BH2/2	NA	10	07/14/2016	07/15/2016	07/20/2016	07/20/2016	01/10/2017	07/20/2016
BH3/5	NA	12	07/14/2016	07/15/2016	07/20/2016	07/20/2016	01/10/2017	07/20/2016
TP1		15	07/14/2016	07/15/2016	07/20/2016	07/20/2016	01/10/2017	07/20/2016
TP2		16	07/14/2016	07/15/2016	07/20/2016	07/20/2016	01/10/2017	07/20/2016
TP3		17	07/14/2016	07/15/2016	07/20/2016	07/20/2016	01/10/2017	07/20/2016

HOLDING TIME SUMMARY

Sample Name	QC Batch Reference	Sample Number	Sampled	Received	Extracted/ Prepared	Analysed	Holding Time	Approved
Sodium adsorption ratio (SAR) (continued)								
Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021								
TP4/2		18	07/14/2016	07/15/2016	07/20/2016	07/20/2016	01/10/2017	07/20/2016
TP5/2		19	07/14/2016	07/15/2016	07/20/2016	07/20/2016	01/10/2017	07/20/2016
Dup 2		20	07/14/2016	07/15/2016	07/20/2016	07/20/2016	01/10/2017	07/20/2016
Volatile Organics								
Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004								
BH1/5	GCM0158-JUL16	9	07/14/2016	07/15/2016	07/18/2016	07/18/2016	07/28/2016	07/19/2016
BH2/8	GCM0158-JUL16	11	07/14/2016	07/15/2016	07/18/2016	07/18/2016	07/28/2016	07/19/2016
BH3/9	GCM0158-JUL16	13	07/14/2016	07/15/2016	07/18/2016	07/18/2016	07/28/2016	07/19/2016
Dup 1	GCM0158-JUL16	14	07/14/2016	07/15/2016	07/18/2016	07/18/2016	07/28/2016	07/19/2016
Water Soluble Boron								
Method: O.Reg. 153/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003								
BH1/3	ESG0053-JUL16	8	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/19/2016
BH2/2	ESG0053-JUL16	10	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/19/2016
BH3/5	ESG0053-JUL16	12	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/19/2016
TP1	ESG0053-JUL16	15	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/19/2016
TP2	ESG0053-JUL16	16	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/19/2016
TP3	ESG0053-JUL16	17	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/19/2016
TP4/2	ESG0053-JUL16	18	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/19/2016
TP5/2	ESG0053-JUL16	19	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/19/2016
Dup 2	ESG0053-JUL16	20	07/14/2016	07/15/2016	07/18/2016	07/19/2016	01/10/2017	07/19/2016

QC SUMMARY

Anions by IC

Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Chloride	DIO0286-JUL16	µg/g	0.40	<0.4	2	20	102	80	120	103	75	125

Conductivity

Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Conductivity	EWL0254-JUL16	mS/cm	0.0020	0.01	0	10	99	90	110	NA		

Cyanide by SFA

Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Free Cyanide	SKA5031-JUL16	µg/g	0.050	<0.05	ND	20	89	80	120	93	75	125
Free Cyanide	SKA5035-JUL16	µg/g	0.050	<0.05	ND	20	98	80	120	91	75	125

QC SUMMARY

Hexavalent Chromium by IC

Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-IENVIC-LAK-AN-008

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
Chromium VI	DIO0302-JUL16	µg/g	0.20	<0.2	4	20	99	80	120	104	75	125

Mercury by CVAAS

Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-IENVISPE-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
Mercury	EHG0023-JUL16	µg/g	0.050	<0.05	8	20	101	80	120	89	70	130

Metals in aqueous samples - ICP-OES

Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-IENVISPE-LAK-AN-003

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
SAR Calcium	ESG8010-JUL16	mg/L	0.020	<0.02	1	20	98	80	120	90	70	130
SAR Magnesium	ESG8010-JUL16	mg/L	0.0030	<0.003	1	20	94	80	120	94	70	130
SAR Sodium	ESG8010-JUL16	mg/L	0.010	<0.01	1	20	92	80	120	96	70	130

QC SUMMARY

Metals in Soil - Aqua-regia/ICP-MS

Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
Silver	EMS0071-JUL16	µg/g	0.010	<0.01	5	20	97	70	130	86	70	130
Arsenic	EMS0071-JUL16	µg/g	0.50	<0.5	2	20	97	70	130	99	70	130
Uranium	EMS0071-JUL16	µg/g	0.0020	<0.002	3	20	98	70	130	100	70	130
Vanadium	EMS0071-JUL16	µg/g	3	<3	3	20	97	70	130	93	70	130
Zinc	EMS0071-JUL16	µg/g	0.70	<0.7	3	20	96	70	130	107	70	130
Barium	EMS0071-JUL16	µg/g	0.010	<0.01	4	20	97	70	130	99	70	130
Beryllium	EMS0071-JUL16	µg/g	0.020	<0.02	9	20	96	70	130	97	70	130
Boron	EMS0071-JUL16	µg/g	1	<1	10	20	105	70	130	85	70	130
Cadmium	EMS0071-JUL16	µg/g	0.020	<0.02	2	20	97	70	130	89	70	130
Cobalt	EMS0071-JUL16	µg/g	0.010	<0.01	4	20	97	70	130	92	70	130
Chromium	EMS0071-JUL16	µg/g	0.50	<0.5	17	20	98	70	130	100	70	130
Copper	EMS0071-JUL16	µg/g	0.10	<0.1	5	20	98	70	130	105	70	130
Molybdenum	EMS0071-JUL16	µg/g	0.10	<0.1	2	20	100	70	130	104	70	130
Nickel	EMS0071-JUL16	µg/g	0.10	<0.1	19	20	103	70	130	98	70	130
Lead	EMS0071-JUL16	µg/g	0.10	<0.1	5	20	99	70	130	107	70	130
Antimony	EMS0071-JUL16	µg/g	0.80	<0.8	ND	20	105	70	130	107	70	130
Selenium	EMS0071-JUL16	µg/g	0.70	<0.7	ND	20	97	70	130	99	70	130
Thallium	EMS0071-JUL16	µg/g	0.020	<0.02	5	20	97	70	130	96	70	130

QC SUMMARY

Petroleum Hydrocarbons (F1)

Method: CCME Tier 1 | Internal ref.: ME-CA-IENVIGC-LAK-AN-010

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
CCME F1 (C6-C10)	GCM0159-JUL16	µg/g	10	<10	ND	30	104	80	120	92	60	140

Petroleum Hydrocarbons (F2-F4)

Method: CCME Tier 1 | Internal ref.: ME-CA-IENVIGC-LAK-AN-010

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
CCME F2 (C10-C16)	GCM0155-JUL16	µg/g	10	< 10	ND	30	120	80	120	114	60	140
CCME F3 (C16-C34)	GCM0155-JUL16	µg/g	50	< 50	ND	30	120	80	120	114	60	140
CCME F4 (C34-C50)	GCM0155-JUL16	µg/g	50	< 50	ND	30	120	80	120	114	60	140

pH

Method: SM 4500 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
pH	ARD0048-JUL16	no unit	0.050		0	20	100	80	120			

QC SUMMARY

Volatile Organics

Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
1,1,1,2-Tetrachloroethane	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	93	60	130	91	50	140
1,1,1-Trichloroethane	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	94	60	130	93	50	140
1,2-Dichloropropane	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	92	60	130	92	50	140
1,3-Dichlorobenzene	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	94	60	130	90	50	140
1,4-Dichlorobenzene	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	93	60	130	89	50	140
Acetone	GCM0158-JUL16	µg/g	0.50	< 0.5	ND	50	93	50	140	89	50	140
Benzene	GCM0158-JUL16	µg/g	0.020	< 0.02	ND	50	92	60	130	93	50	140
Bromodichloromethane	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	91	60	130	88	50	140
Bromoform	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	88	60	130	81	50	140
Bromomethane	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	89	50	140	82	50	140
Carbon tetrachloride	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	94	60	130	93	50	140
Chlorobenzene	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	93	60	130	92	50	140
Chloroform	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	93	60	130	94	50	140
cis-1,2-Dichloroethylene	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	93	60	130	93	50	140
cis-1,3-dichloropropene	GCM0158-JUL16	µg/g	0.030	< 0.03	ND	50	94	60	130	88	50	140
Dibromochloromethane	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	91	60	130	86	50	140
Dichlorodifluoromethane	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	71	50	140	65	50	140
Ethylbenzene	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	93	60	130	92	50	140
Ethylenedibromide	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	91	60	130	89	50	140
n-Hexane	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	98	60	130	87	50	140

QC SUMMARY

Volatile Organics (continued)

Method: EPA 5035A/5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
m/p-xylene	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	93	60	130	92	50	140
Methyl ethyl ketone	GCM0158-JUL16	µg/g	0.50	< 0.5	ND	50	95	50	140	89	50	140
Methyl isobutyl ketone	GCM0158-JUL16	µg/g	0.50	< 0.5	ND	50	95	50	140	93	50	140
Methyl-t-butyl Ether	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	93	60	130	92	50	140
Methylene Chloride	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	93	60	130	90	50	140
o-xylene	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	91	60	130	90	50	140
Styrene	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	93	60	130	91	50	140
Tetrachloroethylene	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	94	60	130	93	50	140
Toluene	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	91	60	130	91	50	140
trans-1,2-Dichloroethylene	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	93	60	130	93	50	140
trans-1,3-dichloropropene	GCM0158-JUL16	µg/g	0.030	< 0.03	ND	50	92	60	130	86	50	140
Trichloroethylene	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	94	60	130	99	50	140
Trichlorofluoromethane	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	101	50	140	72	50	140
Vinyl Chloride	GCM0158-JUL16	µg/g	0.020	< 0.02	ND	50	84	50	140	84	50	140
1,1,2,2-Tetrachloroethane	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	90	60	130	82	50	140
1,1,2-Trichloroethane	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	91	60	130	90	50	140
1,1-Dichloroethane	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	93	60	130	93	50	140
1,1-Dichloroethylene	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	92	60	130	95	50	140
1,2-Dichlorobenzene	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	93	60	130	89	50	140
1,2-Dichloroethane	GCM0158-JUL16	µg/g	0.050	< 0.05	ND	50	92	60	130	92	50	140

QC SUMMARY

Water Soluble Boron

Method: O.Reg. 153/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Water Soluble Boron	ESG0053-JUL16	µg/g	0.50	<0.5	ND	20	98	80	120	120	70	130

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

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

Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

Multielement Scan Qualifier: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

Duplicate Qualifier: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Matrix Spike Qualifier: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

LEGEND

FOOTNOTES

NSS Insufficient sample for analysis.
RL Reporting Limit.
↑ Reporting limit raised.
↓ Reporting limit lowered.
NA The sample was not analysed for this analyte
ND Non Detect

Samples analysed as received. Solid samples expressed on a dry weight basis. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated. This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents.

-- End of Analytical Report --

SGS

Request for Laboratory Services and CHAIN OF CUSTODY

No:

Page 1 of 2

SGS Environmental Services - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Toll Free: 877-747-7658 Fax: 705-652-6365
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361 Web: www.ca.sgs.com

Laboratory Information Section - Lab use only IN FRIG

Received By: Rob Wood
Received Date (mm/dd/yyyy): 7 15 16 (mm/dd/yy)
Received Time: 4 15

Received By (signature):
Custody Seal Present: ☐
Custody Seal Intact: ☐

Cooling Agent Present: ☒
Temperature Upon Receipt (°C): 14.3 17.7 17.6

LAB LIMS #: JW014367-

REPORT INFORMATION

Company: Soil Engineers Ltd
Contact: Laila
Address: 100 Nugget Ave
Phone: 416 754 8515
Fax:
Email: laila@soilengineers.com

INVOICE INFORMATION

☒ Same as Report Information)
Company:
Contact:
Address:
Phone:

PROJECT INFORMATION

Quotation #:
P.O. #:
Project #: 1512-S86E
Site Location/ID: 6611 2nd line W.

TURNAROUND TIME (TAT) REQUIRED

☒ Regular TAT (5-7days)
TAT's are quoted in business days (exclude statutory holidays & weekends).
Samples received after 3pm or on weekends : TAT begins the next business day

RUSH TAT (Additional Charges May Apply) ☐ 1 Day ☐ 2 Days ☐ 3-4 Days

PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

Specify Due Date: Rush Confirmation ID:

REGULATIONS

Regulation 153 (2011):
☒ Table 1 ☐ Res/Park ☐ Soil Texture: Coarse
☐ Table 2 ☐ Ind/Com ☐ Medium
☐ Table 3 ☐ Agri/Other ☐ Fine
☐ Table

Other Regulations:
☐ Reg 347/558 (3 Day min TAT)
☐ PWQO ☐ MMER
☐ CCME ☐ Other:
☐ MISA

Sewer By-Law:
☐ Sanitary
☐ Storm
Municipality:

DRINKING WATER SAMPLES (POTABLE WATER FOR HUMAN CONSUMPTION) MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

RECORD OF SITE CONDITION (RSC) ☐ YES ☐ NO

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	# OF BOTTLES	MATRIX	PHC F1-F4 BTEX	O.Reg153 Metals (ICP & hydride metals)	☐Hg ☐B-HWS ☐Cr(VI)	O.Reg 153 VOCs	Metal & Inorganics	COMMENTS: Field Filtered (F) Preserved (P)
1	BH1/3	July 14, 2016		1	S					X	
2	BH1/5	"		4	"	X			X		
3	BH2/7	"		1	"					X	
4	BH2/8	"		4	"	X			X		
5	BH3/5	"		1	"				X	X	
6	BH3/9	"		4	"	X			X		
7	Dup 1	"		3	"				X		
8											
9											
10											

Observations/Comments/Special Instructions

Sampled By (NAME): Vincent Chan Signature: Date: 14/07/16 (mm/dd/yy)
Relinquished by (NAME): Signature: Date: ___/___/___ (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.0
Date of Issue: 01 June, 2014

SGS

Request for Laboratory Services and CHAIN OF CUSTODY

No:

Page 2 of 2

SGS Environmental Services - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Toll Free: 877-747-7658 Fax: 705-652-6365
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361 Web: www.ca.sgs.com

Laboratory Information Section - Lab use only

Received By: Rob Wood
Received Date (mm/dd/yyyy): 7/15/16 (mm/dd/yy)
Received Time: 4:16
Received By (signature):
Custody Seal Present: ☐
Custody Seal Intact: ☐
Cooling Agent Present: ☒ IN FRIG
Temperature Upon Receipt (°C): 14.3 17.7 17.6
LAB LIMS #:

REPORT INFORMATION

Company: Sgl Engineering Ltd
Contact: Carla
Address: 100 Nugget Ave
Phone: 416 754 8515
Fax:
Email: carla@soilengineers.ca

INVOICE INFORMATION

☐ (same as Report Information)
Company:
Contact:
Address:
Phone:
Email:

PROJECT INFORMATION

Quotation #:
P.O. #:
Project #: 1512-5086E
Site Location/ID: 6611 2nd Line W

TURNAROUND TIME (TAT) REQUIRED

☒ Regular TAT (5-7days) TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 3pm or on weekends : TAT begins the next business day

RUSH TAT (Additional Charges May Apply) ☐ 1 Day ☐ 2 Days ☐ 3-4 Days

PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

Specify Due Date: Rush Confirmation ID:

REGULATIONS

Regulation 153 (2011):
☐ Table 1 ☐ Res/Park ☐ Soil Texture: ☐ Coarse
☐ Table 2 ☐ Ind/Com ☐ Medium
☐ Table 3 ☐ Agri/Other ☐ Fine
☐ Table

Other Regulations:
☐ Reg 347/558 (3 Day min TAT)
☐ PWQO ☐ MMER
☐ CCME ☐ Other:
☐ MISA

Sewer By-Law:
☐ Sanitary
☐ Storm
Municipality:

DRINKING WATER SAMPLES (POTABLE WATER FOR HUMAN CONSUMPTION) MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

RECORD OF SITE CONDITION (RSC) ☐ YES ☐ NO

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	# OF BOTTLES	MATRIX
1	TP1	July 14/16		1	S
2	TP2				
3	TP3				
4	TP4 / 2				
5	TP5 / 2				
6	Dup2 TP5/3				
7					
8					
9					
10					

PHC F1-F4 BTEX | O.Reg153 Metals (ICP & hydride metals) | ☐Hg ☐B-HWS ☐CrVI | O.Reg 153 VOCs | Metals & Inorganics | PAH

1					X	X											
2					X	X											
3					X	X											
4					X	X											
5					X	X											
6					X	X											
7							+										
8																	
9																	
10																	

COMMENTS:
Field Filtered (F)
Preserved (P)

Observations/Comments/Special Instructions

Sampled By (NAME): Vincent Chan
Signature:
Date: 14/07/16 (mm/dd/yy)

Relinquished by (NAME):
Signature:
Date: ___/___/___ (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.0
Date of Issue: 01 June, 2014

SGS

SAMPLE INTEGRITY REPORT

Project Number:

ONTARIO REGULATION 153/04

SGS Sample ID Jul 14367.

Date / Time Sampled Jul 14/16

Client Sample ID

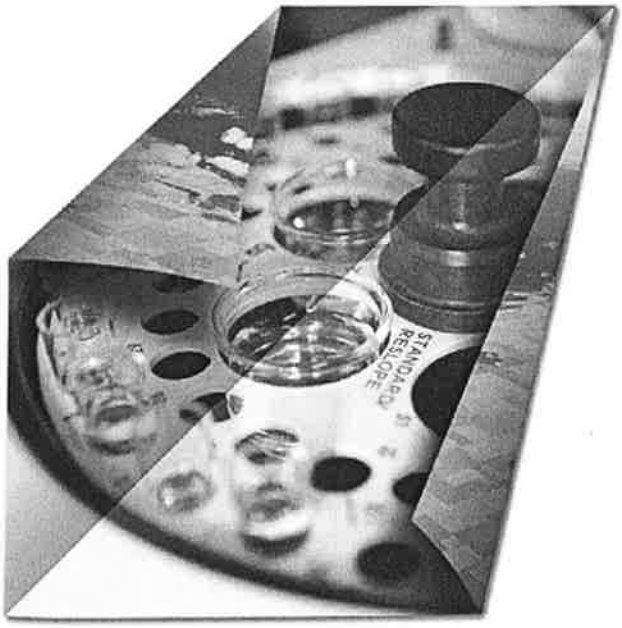
	ALL
Sample Submission General Sample Integrity Violations	
Temperature >10 C upon receipt if not sampled same day	☐
No evidence of cooling trend initiated if sampled same day	☐
Chain of Custody not submitted	☐
Chain of Custody incomplete	☐
Chain of Custody not signed / dated	☐
Chain of Custody not a current version	☐
Bottles / Samples listed on CoC but not received	☐
Bottles / Samples received but not listed on the CoC	☐
Sample container received empty	☐

Sample Specific Sample Integrity Violations							
Sample received past hold time	☐	☐	☐	☐	☐	☐	☐
Incorrect preservation (including no preservation where required)	☐	☐	☐	☐	☐	☐	☐
Headspace present in VOC vial (aqueous)	☐	☐	☐	☐	☐	☐	☐
Sample(s) received frozen	☐	☐	☐	☐	☐	☐	☐
Bottle(s) broken or damaged in transport	☐	☐	☐	☐	☐	☐	☐
Discrepancy between sample label and chain of custody	☐	☐	☐	☐	☐	☐	☐
Analysis requirements absent / unclear	☐	☐	☐	☐	☐	☐	☐
Missing or incorrect sample label(s)	☐	☐	☐	☐	☐	☐	☐
Inappropriate sample container used	☐	☐	☐	☐	☐	☐	☐
Insufficient number of bottles received	☐	☐	☐	☐	☐	☐	☐
Insufficient sample volume	☐	☐	☐	☐	☐	☐	☐
Sample contains multiple phases	☐	☐	☐	☐	☐	☐	☐
Sediment Log							
Groundwater samples contain visible sediment / particulate	☐	☐	☐	☐	☐	☐	☐
Groundwater contains greater than 1cm of sediment / particulate matter in bottle	☐	☐	☐	☐	☐	☐	☐

Additional Comments/Remarks:

No issues upon receipt ☑ Initials:

SGS



FINAL REPORT

CA15254-AUG16 R

1512-S086E

Prepared for

Soil Engineers Ltd.

FINAL REPORT

CA15254-AUG16 R

First Page

CLIENT DETAILS		LABORATORY DETAILS	
Client	Soil Engineers Ltd.	Project Specialist	Deanna Edwards, B.Sc, C.Chem
		Laboratory	SGS Canada Inc.
Address	100 Nugget Ave Scarborough, ON M1S 3A7.	Address	185 Concession St., Lakefield ON, K0L 2H0
Contact	Laila Torabansari	Telephone	705-652-2000
Telephone	416-754-8515	Facsimile	705-652-6365
Facsimile	416-754-8516	Email	deanna.edwards@sgs.com
Email	laila@soilengineersltd.com; ebeyene@soilengineersltd.com	SGS Reference	CA15254-AUG16
Project	1512-S086E	Received	08/15/2016
Order Number		Approved	08/19/2016
Samples	Soil (10)	Report Number	CA15254-AUG16 R
		Date Reported	08/19/2016

COMMENTS

Temperature of Samples uon receipt 23 degrees C
Cooling Agent Present
Custody seal not present

SIGNATORIES

Deanna Edwards, B.Sc, C.Chem

Deanna Edwards

TABLE OF CONTENTS

RESULTS

	Sample Number	8	9	10	11		
	Sample Name	TP1-1	TP1-2	TP1-3	TP1-4		
	Sample Matrix	Soil	Soil	Soil	Soil		
	Sampled By	Vincont	Vincont	Vincont	Vincont		
	Sample Date	12/08/2016	12/08/2016	12/08/2016	12/08/2016		
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**	**L2**

L1 = REG153 / SOIL / COARSE - TABLE 1 - Agricultural/Other - UNDEFINED
L2 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED

Anions by IC

Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001

Chloride	µg/g	0.4	19	6.1	7.4	10		

Conductivity

Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006

Conductivity	mS/cm	0.002	0.25	0.17	0.12	0.16	0.47	0.57

Cyanide by SFA

Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005

Free Cyanide	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.051	0.051

Hexavalent Chromium by IC

Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008

Chromium VI	µg/g	0.2	0.5	3.1	< 0.2	0.4	0.66	0.66

Mercury by CVAAS

Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004

Mercury	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.16	0.27

Metals in Soil - Aqua-regia/ICP-MS

Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005

Barium	µg/g	0.01	80	85	90	76	210	220
Beryllium	µg/g	0.02	0.64	0.66	0.70	0.65	2.5	2.5
Boron	µg/g	1	7	7	8	8	36	36
Cadmium	µg/g	0.02	0.33	0.45	0.45	0.35	1	1.2
Chromium	µg/g	0.5	18	20	19	19	67	70
Cobalt	µg/g	0.01	8.1	9.2	9.3	9.4	19	21
Copper	µg/g	0.1	28	32	30	32	62	92
Lead	µg/g	0.1	110	260	150	77	45	120
Molybdenum	µg/g	0.1	0.6	0.7	0.6	0.5	2	2
Nickel	µg/g	0.1	18	19	20	19	37	82
Silver	µg/g	0.01	0.08	0.09	0.09	0.08	0.5	0.5
Thallium	µg/g	0.02	0.13	0.16	0.15	0.14	1	1
Uranium	µg/g	0.002	0.51	0.63	0.70	0.64	1.9	2.5
Vanadium	µg/g	3	25	28	28	26	86	86
Zinc	µg/g	0.7	85	99	88	80	290	290
Antimony	µg/g	0.8	< 0.8	< 0.8	< 0.8	< 0.8	1	1.3

RESULTS

	Sample Number	8	9	10	11		
	Sample Name	TP1-1	TP1-2	TP1-3	TP1-4		
	Sample Matrix	Soil	Soil	Soil	Soil		
	Sampled By	Vincont	Vincont	Vincont	Vincont		
	Sample Date	12/08/2016	12/08/2016	12/08/2016	12/08/2016		
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**	**L2**

L1 = REG153 / SOIL / COARSE - TABLE 1 - Agricultural/Other - UNDEFINED
L2 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED

Metals in Soil - Aqua-regia/ICP-MS (continued)

Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005

Arsenic	µg/g	0.5	3.8	4.4	4.4	4.5	11	18
Selenium	µg/g	0.7	< 0.7	0.7	< 0.7	< 0.7	1.2	1.5

Moisture

Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

Moisture Content	%	-	6.7	6.1	6.8	6.2		

pH

Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001

pH	no unit	0.05	8.00	7.54	7.48	7.55		

Sodium adsorption ratio (SAR)

Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021

Sodium Adsorption Ratio	---	0.01	0.04	0.06	0.07	0.06	1	2.4

Water Soluble Boron

Method: O.Reg. 153/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003

Water Soluble Boron	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5		

RESULTS

	Sample Number		12	13	14	15		
	Sample Name		TP1-A	TP4/2-1	TP4/2-2	TP4/2-3		
	Sample Matrix		Soil	Soil	Soil	Soil		
	Sampled By		Vincent	Vincent	Vincent	Vincent		
	Sample Date		12/08/2016	12/08/2016	12/08/2016	12/08/2016		
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**	**L2**

L1 = REG153 / SOIL / COARSE - TABLE 1 - Agricultural/Other - UNDEFINED
L2 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED

Anions by IC

Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001

Chloride	µg/g	0.4	5.6	13	12	8.0		

Conductivity

Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006

Conductivity	mS/cm	0.002	0.13	0.22	0.20	0.19	0.47	0.57

Cyanide by SFA

Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005

Free Cyanide	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.051	0.051

Hexavalent Chromium by IC

Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008

Chromium VI	µg/g	0.2	1.7	0.2	0.5	0.5	0.66	0.66

Mercury by CVAAS

Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004

Mercury	µg/g	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.16	0.27

Metals in Soil - Aqua-regia/ICP-MS

Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005

Barium	µg/g	0.01	75	78	78	86	210	220
Beryllium	µg/g	0.02	0.50	0.71	0.63	0.59	2.5	2.5
Boron	µg/g	1	8	10	10	9	36	36
Cadmium	µg/g	0.02	0.59	0.18	0.32	0.74	1	1.2
Chromium	µg/g	0.5	18	20	20	20	67	70
Cobalt	µg/g	0.01	7.8	11	10	9.2	19	21
Copper	µg/g	0.1	35	34	34	37	62	92
Lead	µg/g	0.1	360	26	91	310	45	120
Molybdenum	µg/g	0.1	0.9	0.5	0.8	1.0	2	2
Nickel	µg/g	0.1	18	24	22	21	37	82
Silver	µg/g	0.01	0.09	0.07	0.07	0.09	0.5	0.5
Thallium	µg/g	0.02	0.13	0.16	0.15	0.15	1	1
Uranium	µg/g	0.002	0.51	0.62	0.62	0.58	1.9	2.5
Vanadium	µg/g	3	24	27	27	28	86	86
Zinc	µg/g	0.7	110	64	83	120	290	290
Antimony	µg/g	0.8	< 0.8	< 0.8	< 0.8	< 0.8	1	1.3

RESULTS

	Sample Number	12	13	14	15		
	Sample Name	TP1-A	TP4/2-1	TP4/2-2	TP4/2-3		
	Sample Matrix	Soil	Soil	Soil	Soil		
	Sampled By	Vincont	Vincont	Vincont	Vincont		
	Sample Date	12/08/2016	12/08/2016	12/08/2016	12/08/2016		
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**	**L2**

L1 = REG153 / SOIL / COARSE - TABLE 1 - Agricultural/Other - UNDEFINED
L2 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED

Metals in Soil - Aqua-regia/ICP-MS (continued)

Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005

Arsenic	µg/g	0.5	3.9	4.7	4.3	5.3	11	18
Selenium	µg/g	0.7	< 0.7	0.8	< 0.7	0.8	1.2	1.5

Moisture

Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

Moisture Content	%	-	3.5	10.1	9.1	5.0		

pH

Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001

pH	no unit	0.05	7.60	7.54	7.57	7.55		

Sodium adsorption ratio (SAR)

Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021

Sodium Adsorption Ratio	---	0.01	0.06	0.10	0.07	0.08	1	2.4

Water Soluble Boron

Method: O.Reg. 153/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003

Water Soluble Boron	µg/g	0.5	< 0.5	< 0.5	< 0.5	< 0.5		

RESULTS

	Sample Number		16	17		
	Sample Name		TP4/2-4	TP4/2-A		
	Sample Matrix		Soil	Soil		
	Sampled By		Vincont	Vincont		
	Sample Date		12/08/2016	12/08/2016		
Parameter	**Units**	**RL**	**Result**	**Result**	**L1**	**L2**

L1 = REG153 / SOIL / COARSE - TABLE 1 - Agricultural/Other - UNDEFINED
L2 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED

Anions by IC

Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001

Chloride	µg/g	0.4	7.9	4.2		

Conductivity

Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006

Conductivity	mS/cm	0.002	0.20	0.15	0.47	0.57

Cyanide by SFA

Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005

Free Cyanide	µg/g	0.05	< 0.05	< 0.05	0.051	0.051

Hexavalent Chromium by IC

Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008

Chromium VI	µg/g	0.2	0.4	0.3	0.66	0.66

Mercury by CVAAS

Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004

Mercury	µg/g	0.05	< 0.05	< 0.05	0.16	0.27

Metals in Soil - Aqua-regia/ICP-MS

Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005

Barium	µg/g	0.01	95	84	210	220
Beryllium	µg/g	0.02	0.79	0.83	2.5	2.5
Boron	µg/g	1	10	11	36	36
Cadmium	µg/g	0.02	0.17	0.16	1	1.2
Chromium	µg/g	0.5	22	21	67	70
Cobalt	µg/g	0.01	11	12	19	21
Copper	µg/g	0.1	29	37	62	92
Lead	µg/g	0.1	19	17	45	120
Molybdenum	µg/g	0.1	0.5	0.4	2	2
Nickel	µg/g	0.1	25	26	37	82
Silver	µg/g	0.01	0.06	0.06	0.5	0.5
Thallium	µg/g	0.02	0.17	0.18	1	1
Uranium	µg/g	0.002	0.74	0.77	1.9	2.5
Vanadium	µg/g	3	30	30	86	86
Zinc	µg/g	0.7	65	64	290	290
Antimony	µg/g	0.8	< 0.8	< 0.8	1	1.3

RESULTS

	Sample Number		16	17		
	Sample Name		TP4/2-4	TP4/2-A		
	Sample Matrix		Soil	Soil		
	Sampled By		Vincont	Vincont		
	Sample Date		12/08/2016	12/08/2016		
Parameter	**Units**	**RL**	**Result**	**Result**	**L1**	**L2**

L1 = REG153 / SOIL / COARSE - TABLE 1 - Agricultural/Other - UNDEFINED
L2 = REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED

Metals in Soil - Aqua-regia/ICP-MS (continued)

Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005

Arsenic	µg/g	0.5	4.8	5.3	11	18
Selenium	µg/g	0.7	< 0.7	0.8	1.2	1.5

Moisture

Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

Moisture Content	%	-	9.7	7.7		

pH

Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001

pH	no unit	0.05	7.53	7.61		

Sodium adsorption ratio (SAR)

Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021

Sodium Adsorption Ratio	---	0.01	0.06	0.05	1	2.4

Water Soluble Boron

Method: O.Reg. 153/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003

Water Soluble Boron	µg/g	0.5	< 0.5	< 0.5		

EXCEEDANCE SUMMARY

Parameter	Method	Units	Result	REG153 / SOIL / COARSE - TABLE 1 - Agricultural/Other - UNDEFINED L1	REG153 / SOIL / COARSE - TABLE 1 - Residential/Parkland - UNDEFINED L2
TP1-1					
Lead	EPA 3050/EPA 200.8	µg/g	110	45	
TP1-2					
Lead	EPA 3050/EPA 200.8	µg/g	260	45	120
Chromium VI	EPA218.6/EPA3060A	µg/g	3.1	0.66	0.66
TP1-3					
Lead	EPA 3050/EPA 200.8	µg/g	150	45	120
TP1-4					
Lead	EPA 3050/EPA 200.8	µg/g	77	45	
TP1-A					
Lead	EPA 3050/EPA 200.8	µg/g	360	45	120
Chromium VI	EPA218.6/EPA3060A	µg/g	1.7	0.66	0.66
TP4/2-2					
Lead	EPA 3050/EPA 200.8	µg/g	91	45	
TP4/2-3					
Lead	EPA 3050/EPA 200.8	µg/g	310	45	120

HOLDING TIME SUMMARY

Sample Name	QC Batch Reference	Sample Number	Sampled	Received	Extracted/ Prepared	Analysed	Holding Time	Approved
Anions by IC								
Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001								
TP1-1	DIO0257-AUG16	8	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP1-2	DIO0257-AUG16	9	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP1-3	DIO0257-AUG16	10	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP1-4	DIO0257-AUG16	11	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP1-A	DIO0257-AUG16	12	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP4/2-1	DIO0257-AUG16	13	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP4/2-2	DIO0257-AUG16	14	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP4/2-3	DIO0257-AUG16	15	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP4/2-4	DIO0257-AUG16	16	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP4/2-A	DIO0257-AUG16	17	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
Conductivity								
Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006								
TP1-1	EWL0277-AUG16	8	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP1-2	EWL0277-AUG16	9	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP1-3	EWL0277-AUG16	10	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP1-4	EWL0277-AUG16	11	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP1-A	EWL0277-AUG16	12	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP4/2-1	EWL0277-AUG16	13	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP4/2-2	EWL0277-AUG16	14	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP4/2-3	EWL0297-AUG16	15	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP4/2-4	EWL0277-AUG16	16	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
TP4/2-A	EWL0277-AUG16	17	08/12/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
Cyanide by SFA								
Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005								
TP1-1	SKA5041-AUG16	8	08/12/2016	08/15/2016	08/16/2016	08/17/2016	08/26/2016	08/18/2016
TP1-2	SKA5041-AUG16	9	08/12/2016	08/15/2016	08/16/2016	08/17/2016	08/26/2016	08/18/2016
TP1-3	SKA5041-AUG16	10	08/12/2016	08/15/2016	08/16/2016	08/17/2016	08/26/2016	08/18/2016
TP1-4	SKA5041-AUG16	11	08/12/2016	08/15/2016	08/16/2016	08/17/2016	08/26/2016	08/18/2016
TP1-A	SKA5041-AUG16	12	08/12/2016	08/15/2016	08/16/2016	08/17/2016	08/26/2016	08/18/2016
TP4/2-1	SKA5041-AUG16	13	08/12/2016	08/15/2016	08/16/2016	08/17/2016	08/26/2016	08/18/2016
TP4/2-2	SKA5041-AUG16	14	08/12/2016	08/15/2016	08/16/2016	08/17/2016	08/26/2016	08/18/2016
TP4/2-3	SKA5041-AUG16	15	08/12/2016	08/15/2016	08/16/2016	08/17/2016	08/26/2016	08/18/2016
TP4/2-4	SKA5041-AUG16	16	08/12/2016	08/15/2016	08/16/2016	08/17/2016	08/26/2016	08/18/2016
TP4/2-A	SKA5041-AUG16	17	08/12/2016	08/15/2016	08/16/2016	08/17/2016	08/26/2016	08/18/2016
Hexavalent Chromium by IC								
Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008								
TP1-1	DIO0237-AUG16	8	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/11/2016	08/19/2016

HOLDING TIME SUMMARY

Sample Name	QC Batch Reference	Sample Number	Sampled	Received	Extracted/ Prepared	Analysed	Holding Time	Approved
Hexavalent Chromium by IC (continued)								
Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008								
TP1-2	DIO0237-AUG16	9	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/11/2016	08/19/2016
TP1-3	DIO0237-AUG16	10	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/11/2016	08/19/2016
TP1-4	DIO0237-AUG16	11	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/11/2016	08/19/2016
TP1-A	DIO0237-AUG16	12	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/11/2016	08/19/2016
TP4/2-1	DIO0237-AUG16	13	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/11/2016	08/19/2016
TP4/2-2	DIO0237-AUG16	14	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/11/2016	08/19/2016
TP4/2-3	DIO0237-AUG16	15	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/11/2016	08/19/2016
TP4/2-4	DIO0237-AUG16	16	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/11/2016	08/19/2016
TP4/2-A	DIO0237-AUG16	17	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/11/2016	08/19/2016
Mercury by CVAAS								
Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004								
TP1-1	EHG0023-AUG16	8	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/09/2016	08/18/2016
TP1-2	EHG0023-AUG16	9	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/09/2016	08/18/2016
TP1-3	EHG0023-AUG16	10	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/09/2016	08/18/2016
TP1-4	EHG0023-AUG16	11	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/09/2016	08/18/2016
TP1-A	EHG0023-AUG16	12	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/09/2016	08/18/2016
TP4/2-1	EHG0023-AUG16	13	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/09/2016	08/18/2016
TP4/2-2	EHG0023-AUG16	14	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/09/2016	08/18/2016
TP4/2-3	EHG0023-AUG16	15	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/09/2016	08/18/2016
TP4/2-4	EHG0023-AUG16	16	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/09/2016	08/18/2016
TP4/2-A	EHG0023-AUG16	17	08/12/2016	08/15/2016	08/17/2016	08/18/2016	09/09/2016	08/18/2016
Metals in Soil - Aqua-regia/ICP-MS								
Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-005								
TP1-1	EMS0074-AUG16	8	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/19/2016
TP1-2	EMS0074-AUG16	9	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/19/2016
TP1-3	EMS0074-AUG16	10	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/19/2016
TP1-4	EMS0074-AUG16	11	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/19/2016
TP1-A	EMS0074-AUG16	12	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/19/2016
TP4/2-1	EMS0074-AUG16	13	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/19/2016
TP4/2-2	EMS0074-AUG16	14	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/19/2016
TP4/2-3	EMS0074-AUG16	15	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/19/2016
TP4/2-4	EMS0074-AUG16	16	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/19/2016
TP4/2-A	EMS0074-AUG16	17	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/19/2016
Moisture								
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010								
TP1-1	GCM0148-AUG16	8	08/12/2016	08/15/2016	08/16/2016	08/16/2016	10/11/2016	08/17/2016
TP1-2	GCM0148-AUG16	9	08/12/2016	08/15/2016	08/16/2016	08/16/2016	10/11/2016	08/17/2016

HOLDING TIME SUMMARY

Sample Name	QC Batch Reference	Sample Number	Sampled	Received	Extracted/ Prepared	Analysed	Holding Time	Approved
Moisture (continued)								
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010								
TP1-3	GCM0148-AUG16	10	08/12/2016	08/15/2016	08/16/2016	08/16/2016	10/11/2016	08/17/2016
TP1-4	GCM0148-AUG16	11	08/12/2016	08/15/2016	08/16/2016	08/16/2016	10/11/2016	08/17/2016
TP1-A	GCM0148-AUG16	12	08/12/2016	08/15/2016	08/16/2016	08/16/2016	10/11/2016	08/17/2016
TP4/2-1	GCM0148-AUG16	13	08/12/2016	08/15/2016	08/16/2016	08/16/2016	10/11/2016	08/17/2016
TP4/2-2	GCM0148-AUG16	14	08/12/2016	08/15/2016	08/16/2016	08/16/2016	10/11/2016	08/17/2016
TP4/2-3	GCM0148-AUG16	15	08/12/2016	08/15/2016	08/16/2016	08/16/2016	10/11/2016	08/17/2016
TP4/2-4	GCM0148-AUG16	16	08/12/2016	08/15/2016	08/16/2016	08/16/2016	10/11/2016	08/17/2016
TP4/2-A	GCM0148-AUG16	17	08/12/2016	08/15/2016	08/16/2016	08/16/2016	10/11/2016	08/17/2016
pH								
Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-001								
TP1-1	ARD0055-AUG16	8	08/12/2016	08/15/2016	08/17/2016	08/17/2016	09/11/2016	08/17/2016
TP1-2	ARD0055-AUG16	9	08/12/2016	08/15/2016	08/17/2016	08/17/2016	09/11/2016	08/17/2016
TP1-3	ARD0055-AUG16	10	08/12/2016	08/15/2016	08/17/2016	08/17/2016	09/11/2016	08/17/2016
TP1-4	ARD0055-AUG16	11	08/12/2016	08/15/2016	08/17/2016	08/17/2016	09/11/2016	08/17/2016
TP1-A	ARD0055-AUG16	12	08/12/2016	08/15/2016	08/17/2016	08/17/2016	09/11/2016	08/17/2016
TP4/2-1	ARD0055-AUG16	13	08/12/2016	08/15/2016	08/17/2016	08/17/2016	09/11/2016	08/17/2016
TP4/2-2	ARD0055-AUG16	14	08/12/2016	08/15/2016	08/17/2016	08/17/2016	09/11/2016	08/17/2016
TP4/2-3	ARD0055-AUG16	15	08/12/2016	08/15/2016	08/17/2016	08/17/2016	09/11/2016	08/17/2016
TP4/2-4	ARD0055-AUG16	16	08/12/2016	08/15/2016	08/17/2016	08/17/2016	09/11/2016	08/17/2016
TP4/2-A	ARD0055-AUG16	17	08/12/2016	08/15/2016	08/17/2016	08/17/2016	09/11/2016	08/17/2016
Sodium adsorption ratio (SAR)								
Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021								
TP1-1		8	08/12/2016	08/15/2016	08/19/2016	08/19/2016	02/08/2017	08/19/2016
TP1-2		9	08/12/2016	08/15/2016	08/19/2016	08/19/2016	02/08/2017	08/19/2016
TP1-3		10	08/12/2016	08/15/2016	08/19/2016	08/19/2016	02/08/2017	08/19/2016
TP1-4		11	08/12/2016	08/15/2016	08/19/2016	08/19/2016	02/08/2017	08/19/2016
TP1-A		12	08/12/2016	08/15/2016	08/19/2016	08/19/2016	02/08/2017	08/19/2016
TP4/2-1		13	08/12/2016	08/15/2016	08/19/2016	08/19/2016	02/08/2017	08/19/2016
TP4/2-2		14	08/12/2016	08/15/2016	08/19/2016	08/19/2016	02/08/2017	08/19/2016
TP4/2-3		15	08/12/2016	08/15/2016	08/19/2016	08/19/2016	02/08/2017	08/19/2016
TP4/2-4		16	08/12/2016	08/15/2016	08/19/2016	08/19/2016	02/08/2017	08/19/2016
TP4/2-A		17	08/12/2016	08/15/2016	08/19/2016	08/19/2016	02/08/2017	08/19/2016
Water Soluble Boron								
Method: O.Reg. 153/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003								
TP1-1	ESG0067-AUG16	8	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/18/2016
TP1-2	ESG0067-AUG16	9	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/18/2016
TP1-3	ESG0067-AUG16	10	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/18/2016

HOLDING TIME SUMMARY

Sample Name	QC Batch Reference	Sample Number	Sampled	Received	Extracted/ Prepared	Analysed	Holding Time	Approved
Water Soluble Boron (continued)								
Method: O.Reg. 153/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003								
TP1-4	ESG0067-AUG16	11	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/18/2016
TP1-A	ESG0067-AUG16	12	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/18/2016
TP4/2-1	ESG0067-AUG16	13	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/18/2016
TP4/2-2	ESG0067-AUG16	14	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/18/2016
TP4/2-3	ESG0067-AUG16	15	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/18/2016
TP4/2-4	ESG0067-AUG16	16	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/18/2016
TP4/2-A	ESG0067-AUG16	17	08/12/2016	08/15/2016	08/17/2016	08/18/2016	02/08/2017	08/18/2016

QC SUMMARY

Anions by IC

Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
Chloride	DIO0257-AUG16	µg/g	0.40	<0.4	12	20	97	80	120	120	75	125

Conductivity

Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
Conductivity	EWL0277-AUG16	mS/cm	0.0020	<0.002	0	10	99	90	110	NA		

Cyanide by SFA

Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
Free Cyanide	SKA5041-AUG16	µg/g	0.050	<0.05	ND	20	110	80	120	NV	75	125

QC SUMMARY

Hexavalent Chromium by IC

Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENVIIC-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Chromium VI	DIO0237-AUG16	µg/g	0.20	<0.2	ND	20	95	80	120	96	75	125

Mercury by CVAAS

Method: EPA 7471A/EPA 245 | Internal ref.: ME-CA-[ENVISPE-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Mercury	EHG0023-AUG16	µg/g	0.050	<0.05	ND	20	102	80	120	117	70	130

Metals in aqueous samples - ICP-OES

Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENVISPE-LAK-AN-003

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
SAR Calcium	ESG0076-AUG16	mg/L	0.020	<0.02	19	20	98	80	120	96	70	130
SAR Magnesium	ESG0076-AUG16	mg/L	0.0030	<0.003	ND	20	97	80	120	96	70	130
SAR Sodium	ESG0076-AUG16	mg/L	0.010	<0.01	9	20	96	80	120	97	70	130

QC SUMMARY

Metals In Soil - Aqua-regia/ICP-MS

Method: EPA 3050/EPA 200.8 | Internal ref.: ME-CA-[ENVISPE-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Silver	EMS0074-AUG16	µg/g	0.010	<0.01	ND	20	97	70	130	87	70	130
Arsenic	EMS0074-AUG16	µg/g	0.50	<0.5	2	20	95	70	130	89	70	130
Thallium	EMS0074-AUG16	µg/g	0.020	<0.02	ND	20	96	70	130	98	70	130
Uranium	EMS0074-AUG16	µg/g	0.0020	<0.002	6	20	98	70	130	96	70	130
Vanadium	EMS0074-AUG16	µg/g	3	<3	2	20	96	70	130	88	70	130
Zinc	EMS0074-AUG16	µg/g	0.70	<0.7	1	20	98	70	130	102	70	130
Barium	EMS0074-AUG16	µg/g	0.010	<0.01	4	20	92	70	130	102	70	130
Beryllium	EMS0074-AUG16	µg/g	0.020	<0.02	10	20	97	70	130	93	70	130
Boron	EMS0074-AUG16	µg/g	1	<1	2	20	101	70	130	80	70	130
Cadmium	EMS0074-AUG16	µg/g	0.020	<0.02	ND	20	98	70	130	117	70	130
Cobalt	EMS0074-AUG16	µg/g	0.010	<0.01	7	20	97	70	130	95	70	130
Chromium	EMS0074-AUG16	µg/g	0.50	<0.5	2	20	97	70	130	119	70	130
Copper	EMS0074-AUG16	µg/g	0.10	<0.1	3	20	96	70	130	103	70	130
Molybdenum	EMS0074-AUG16	µg/g	0.10	<0.1	20	20	100	70	130	89	70	130
Nickel	EMS0074-AUG16	µg/g	0.10	<0.1	1	20	96	70	130	103	70	130
Lead	EMS0074-AUG16	µg/g	0.10	<0.1	2	20	99	70	130	112	70	130
Antimony	EMS0074-AUG16	µg/g	0.80	<0.8	ND	20	104	70	130	92	70	130
Selenium	EMS0074-AUG16	µg/g	0.70	<0.7	ND	20	95	70	130	97	70	130

QC SUMMARY

pH

Method: SM 4500 | Internal ref.: ME-CA-[ENVIEWL-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
pH	ARD0055-AUG16	no unit	0.050		0	20	100	80	120			

Water Soluble Boron

Method: O.Reg. 153/04 | Internal ref.: ME-CA-[ENV] SPE-LAK-AN-003

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Water Soluble Boron	ESG0067-AUG16	µg/g	0.50	<0.5	ND	20	105	80	120	120	70	130

QC SUMMARY

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

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

Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

Multielement Scan Qualifier: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

Duplicate Qualifier: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Matrix Spike Qualifier: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

LEGEND

FOOTNOTES

NSS Insufficient sample for analysis.
RL Reporting Limit.
↑ Reporting limit raised.
↓ Reporting limit lowered.
NA The sample was not analysed for this analyte
ND Non Detect

Samples analysed as received. Solid samples expressed on a dry weight basis. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated. This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents.

-- End of Analytical Report --

SGS

Request for Laboratory Services and CHAIN OF CUSTODY

No:

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Laboratory Information Section - Lab use only

Received By: Jeanette Barker
Received Date (mm/dd/yyyy): 08/15/16
Received Time:
Received By (signature): Jeanette Barker
Custody Seal Present: ☐
Custody Seal Intact: ☐
Cooling Agent Present: ☑
Temperature Upon Receipt (°C): 2 x 3
LAB LIMS #: Aug 15254

REPORT INFORMATION

Company: Soil Eng
Contact: Laila
Address: 100 Nugget Ave
Toronto
Phone: 416-754-8515
Fax:
Email: laila@soilengineers.ca

INVOICE INFORMATION

☑ (same as Report Information)
Company:
Contact:
Address:
Phone:
Email:

PROJECT INFORMATION

Quotation #:
P.O. #:
Project #: 1512-S086E
Site Location/ID: 6611 Harmony Hill

TURNAROUND TIME (TAT) REQUIRED

☒ Regular TAT (5-7days) — TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 3pm or on weekends : TAT begins the next business day

RUSH TAT (Additional Charges May Apply) ☐ 1 Day ☐ 2 Days ☐ 3-4 Days

PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

Specify Due Date: Rush Confirmation ID:

REGULATIONS

Regulation 153 (2011):
☒ Table 1 ☐ Res/Park ☐ Soil Texture:
☐ Table 2 ☐ Ind/Com ☐ Coarse
☐ Table 3 ☐ Agri/Other ☐ Medium
☐ Table ____ ☐ Fine

Other Regulations:
☐ Reg 347/558 (3 Day min TAT)
☐ PWQO ☐ MMER
☐ CCME ☐ Other:
☐ MISA

Sewer By-Law:
☐ Sanitary
☐ Storm
Municipality:

DRINKING WATER SAMPLES (POTABLE WATER FOR HUMAN CONSUMPTION) MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

RECORD OF SITE CONDITION (RSC) ☐ YES ☐ NO

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	# OF BOTTLES	MATRIX	Hold											COMMENTS: Field Filtered (F) Preserved (P)
1	TP1-1	Aug 12/16	13:00	1	Soil	✓											
2	TP1-2			1		✓											
3	TP1-3			1		✓											
4	TP1-4			1		✓											
5	TP1-A		13:45	1		✓											
6	TP½-1			1		✓											
7	TP½-2			1		✓											
8	TP½-3			1		✓											
9	TP½-4			1		✓											
10	TP½-A		13:45	1		✓											

Observations/Comments/Special Instructions

Sampled By (NAME): Vincent Signature: Date: 08/12/16 (mm/dd/yy)
Relinquished by (NAME): Signature: Date: (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.0
Date of Issue: 01 June, 2014

SGS

SAMPLE INTEGRITY REPORT

Project Number:

ONTARIO REGULATION 153/04

SGS Sample ID: Aug 15254

Date / Time Sampled: Aug 12/16

Client Sample ID:

	ALL
Sample Submission General Sample Integrity Violations	
Temperature >10 C upon receipt if not sampled same day	☐
No evidence of cooling trend initiated if sampled same day	☐
Chain of Custody not submitted	☐
Chain of Custody incomplete	☐
Chain of Custody not signed / dated	☐
Chain of Custody not a current version	☐
Bottles / Samples listed on CoC but not received	☐
Bottles / Samples received but not listed on the CoC	☐
Sample container received empty	☐

Sample Specific Sample Integrity Violations							
Sample received past hold time	☐	☐	☐	☐	☐	☐	☐
Incorrect preservation (including no preservation where required)	☐	☐	☐	☐	☐	☐	☐
Headspace present in VOC vial (aqueous)	☐	☐	☐	☐	☐	☐	☐
Sample(s) received frozen	☐	☐	☐	☐	☐	☐	☐
Bottle(s) broken or damaged in transport	☐	☐	☐	☐	☐	☐	☐
Discrepancy between sample label and chain of custody	☐	☐	☐	☐	☐	☐	☐
Analysis requirements absent / unclear	☐	☐	☐	☐	☐	☐	☐
Missing or incorrect sample label(s)	☐	☐	☐	☐	☐	☐	☐
Inappropriate sample container used	☐	☐	☐	☐	☐	☐	☐
Insufficient number of bottles received	☐	☐	☐	☐	☐	☐	☐
Insufficient sample volume	☐	☐	☐	☐	☐	☐	☐
Sample contains multiple phases	☐	☐	☐	☐	☐	☐	☐
Sediment Log							
Groundwater samples contain visible sediment / particulate	☐	☐	☐	☐	☐	☐	☐
Groundwater contains greater than 1cm of sediment / particulate matter in bottle	☐	☐	☐	☐	☐	☐	☐

Additional Comments/Remarks:

No issues upon receipt ☑ Initials:

Maxxam
A Bureau Veritas Group Company

Your Project #: 1512-S086E
Your C.O.C. #: 611530-02-01

Attention:Laila Torabansari

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

Report Date: 2017/05/30
Report #: R4493001
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7A3406
Received: 2017/05/19, 17:30

Sample Matrix: Soil
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Hexavalent Chromium in Soil by IC (1)	11	2017/05/25	2017/05/30	CAM SOP-00436	EPA 3060/7199 m
Strong Acid Leachable Metals by ICPMS	11	2017/05/26	2017/05/26	CAM SOP-00447	EPA 6020B m
Moisture	11	N/A	2017/05/26	CAM SOP-00445	Carter 2nd ed 51.2 m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam 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.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam 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 Maxxam, unless otherwise agreed in writing.

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.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam
A Bureau Veritas Group Company

Your Project #: 1512-S086E
Your C.O.C. #: 611530-02-01

Attention:Laila Torabansari

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

Report Date: 2017/05/30
Report #: R4493001
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7A3406
Received: 2017/05/19, 17:30

Encryption Key

Ashton Gibson
Project Manager
30 May 2017 18:17:29

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Antonella Brasil, Senior Project Manager
Email: ABrasil@maxxam.ca
Phone# (905)817-5817

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Maxxam
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Maxxam Job #: B7A3406
Report Date: 2017/05/30

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: PC

O.REG 153 ICPMS METALS (SOIL)

Maxxam ID		EKL261	EKL262	EKL263	EKL264	EKL265		
Sampling Date		2017/05/18 09:35	2017/05/18 09:45	2017/05/18 09:50	2017/05/18 09:55	2017/05/18 10:00		
COC Number		611530-02-01	611530-02-01	611530-02-01	611530-02-01	611530-02-01		
	UNITS	WALL-1	WALL-2	FLOOR-1	WALL-3	FLOOR-2	RDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	ug/g	17000	9500	19000	5800	11000	50	5000180
Acid Extractable Antimony (Sb)	ug/g	0.53	0.49	ND	1.0	1.6	0.20	5000180
Acid Extractable Arsenic (As)	ug/g	5.6	5.0	4.7	3.7	4.9	1.0	5000180
Acid Extractable Barium (Ba)	ug/g	94	120	88	52	100	0.50	5000180
Acid Extractable Beryllium (Be)	ug/g	0.84	0.49	0.95	0.30	0.54	0.20	5000180
Acid Extractable Boron (B)	ug/g	8.5	5.4	7.5	5.2	6.2	5.0	5000180
Acid Extractable Cadmium (Cd)	ug/g	0.33	0.57	0.48	0.93	0.56	0.10	5000180
Acid Extractable Chromium (Cr)	ug/g	24	15	23	24	19	1.0	5000180
Acid Extractable Cobalt (Co)	ug/g	12	8.0	11	6.0	8.2	0.10	5000180
Acid Extractable Copper (Cu)	ug/g	32	31	30	50	33	0.50	5000180
Acid Extractable Lead (Pb)	ug/g	130	180	21	1000	150	1.0	5000180
Acid Extractable Molybdenum (Mo)	ug/g	0.69	0.83	ND	2.1	1.2	0.50	5000180
Acid Extractable Nickel (Ni)	ug/g	26	17	24	18	21	0.50	5000180
Acid Extractable Selenium (Se)	ug/g	ND	ND	ND	ND	ND	0.50	5000180
Acid Extractable Silver (Ag)	ug/g	ND	ND	ND	ND	ND	0.20	5000180
Acid Extractable Thallium (Tl)	ug/g	0.19	0.16	0.17	0.31	0.16	0.050	5000180
Acid Extractable Uranium (U)	ug/g	0.67	0.52	1.2	0.40	0.54	0.050	5000180
Acid Extractable Vanadium (V)	ug/g	34	25	32	22	26	5.0	5000180
Acid Extractable Zinc (Zn)	ug/g	110	110	86	250	130	5.0	5000180
Acid Extractable Mercury (Hg)	ug/g	0.10	ND	ND	ND	ND	0.050	5000180

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B7A3406
Report Date: 2017/05/30

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: PC

O.REG 153 ICPMS METALS (SOIL)

Maxxam ID		EKL265	EKL267	EKL268	EKL269	EKL270		
Sampling Date		2017/05/18 10:15	2017/05/18 10:30	2017/05/18 10:45	2017/05/18 11:00	2017/05/18 11:15		
COC Number		611530-02-01	611530-02-01	611530-02-01	611530-02-01	611530-02-01		
	UNITS	FLOOR-3	WALL-4	WALL-5	FLOOR-4	WALL-6	RDL	QC Batch
Metals								
Acid Extractable Aluminum (Al)	ug/g	15000	15000	13000	14000	15000	50	5000180
Acid Extractable Antimony (Sb)	ug/g	0.20	ND	ND	ND	ND	0.20	5000180
Acid Extractable Arsenic (As)	ug/g	5.0	4.8	5.1	4.8	5.7	1.0	5000180
Acid Extractable Barium (Ba)	ug/g	65	63	69	68	64	0.50	5000180
Acid Extractable Beryllium (Be)	ug/g	0.77	0.76	0.69	0.71	0.78	0.20	5000180
Acid Extractable Boron (B)	ug/g	7.1	8.4	8.9	9.1	9.3	5.0	5000180
Acid Extractable Cadmium (Cd)	ug/g	ND	ND	ND	ND	ND	0.10	5000180
Acid Extractable Chromium (Cr)	ug/g	20	20	19	20	21	1.0	5000180
Acid Extractable Cobalt (Co)	ug/g	12	13	12	12	14	0.10	5000180
Acid Extractable Copper (Cu)	ug/g	43	35	37	38	42	0.50	5000180
Acid Extractable Lead (Pb)	ug/g	9.2	34	10	10	11	1.0	5000180
Acid Extractable Molybdenum (Mo)	ug/g	ND	ND	ND	ND	ND	0.50	5000180
Acid Extractable Nickel (Ni)	ug/g	24	25	25	24	26	0.50	5000180
Acid Extractable Selenium (Se)	ug/g	ND	ND	ND	ND	ND	0.50	5000180
Acid Extractable Silver (Ag)	ug/g	ND	ND	ND	ND	ND	0.20	5000180
Acid Extractable Thallium (Tl)	ug/g	0.17	0.15	0.13	0.15	0.16	0.050	5000180
Acid Extractable Uranium (U)	ug/g	0.44	0.47	0.58	0.51	0.49	0.050	5000180
Acid Extractable Vanadium (V)	ug/g	30	29	27	29	28	5.0	5000180
Acid Extractable Zinc (Zn)	ug/g	57	62	56	59	60	5.0	5000180
Acid Extractable Mercury (Hg)	ug/g	ND	ND	ND	ND	ND	0.050	5000180

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam
A Bureau Veritas Group Company

Maxxam Job #: B7A3406
Report Date: 2017/05/30

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: PC

O.REG 153 ICPMS METALS (SOIL)

Maxxam ID		EKL271		
Sampling Date		2017/05/18		
COC Number		611530-02-01		
	UNITS	DUP-1	RDL	QC Batch
Metals				
Acid Extractable Aluminum (Al)	ug/g	14000	50	5000180
Acid Extractable Antimony (Sb)	ug/g	0.20	0.20	5000180
Acid Extractable Arsenic (As)	ug/g	4.7	1.0	5000180
Acid Extractable Barium (Ba)	ug/g	65	0.50	5000180
Acid Extractable Beryllium (Be)	ug/g	0.74	0.20	5000180
Acid Extractable Boron (B)	ug/g	8.2	5.0	5000180
Acid Extractable Cadmium (Cd)	ug/g	ND	0.10	5000180
Acid Extractable Chromium (Cr)	ug/g	20	1.0	5000180
Acid Extractable Cobalt (Co)	ug/g	12	0.10	5000180
Acid Extractable Copper (Cu)	ug/g	34	0.50	5000180
Acid Extractable Lead (Pb)	ug/g	8.8	1.0	5000180
Acid Extractable Molybdenum (Mo)	ug/g	ND	0.50	5000180
Acid Extractable Nickel (Ni)	ug/g	24	0.50	5000180
Acid Extractable Selenium (Se)	ug/g	ND	0.50	5000180
Acid Extractable Silver (Ag)	ug/g	ND	0.20	5000180
Acid Extractable Thallium (Tl)	ug/g	0.14	0.050	5000180
Acid Extractable Uranium (U)	ug/g	0.51	0.050	5000180
Acid Extractable Vanadium (V)	ug/g	29	5.0	5000180
Acid Extractable Zinc (Zn)	ug/g	59	5.0	5000180
Acid Extractable Mercury (Hg)	ug/g	ND	0.050	5000180

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B7A3406
Report Date: 2017/05/30

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: PC

RESULTS OF ANALYSES OF SOIL

Maxxam ID		EKL261	EKL262	EKL263	EKL264	EKL265	EKL266		
Sampling Date		2017/05/18 09:35	2017/05/18 09:45	2017/05/18 09:50	2017/05/18 09:55	2017/05/18 10:00	2017/05/18 10:15		
COC Number		611530-02-01	611530-02-01	611530-02-01	611530-02-01	611530-02-01	611530-02-01		
	UNITS	WALL-1	WALL-2	FLOOR-1	WALL-3	FLOOR-2	FLOOR-3	RDL	QC Batch
Inorganics									
Moisture	%	14	15	28	6.3	20	16	1.0	4999931

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		EKL267	EKL268	EKL269	EKL270	EKL271		
Sampling Date		2017/05/18 10:30	2017/05/18 10:45	2017/05/18 11:00	2017/05/18 11:15	2017/05/18		
COC Number		611530-02-01	611530-02-01	611530-02-01	611530-02-01	611530-02-01		
	UNITS	WALL-4	WALL-5	FLOOR-4	WALL-6	DUP-1	RDL	QC Batch
Inorganics								
Moisture	%	13	12	13	13	13	1.0	4999931

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7A3406
Report Date: 2017/05/30

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: PC

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		EKL261	EKL262	EKL263	EKL264	EKL265	EKL266		
Sampling Date		2017/05/18 09:35	2017/05/18 09:45	2017/05/18 09:50	2017/05/18 09:55	2017/05/18 10:00	2017/05/18 10:15		
COC Number		611530-02-01	611530-02-01	611530-02-01	611530-02-01	611530-02-01	611530-02-01		
	UNITS	WALL-1	WALL-2	FLOOR-1	WALL-3	FLOOR-2	FLOOR-3	RDL	QC Batch
Inorganics									
Chromium (VI)	ug/g	ND	ND	ND	1.1	ND	ND	0.2	4998696

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

Maxxam ID		EKL267	EKL268	EKL269	EKL270	EKL271		
Sampling Date		2017/05/18 10:30	2017/05/18 10:45	2017/05/18 11:00	2017/05/18 11:15	2017/05/18		
COC Number		611530-02-01	611530-02-01	611530-02-01	611530-02-01	611530-02-01		
	UNITS	WALL-4	WALL-5	FLOOR-4	WALL-6	DUP-1	RDL	QC Batch
Inorganics								
Chromium (VI)	ug/g	ND	ND	ND	ND	ND	0.2	4998696

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B7A3406
Report Date: 2017/05/30

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: PC

TEST SUMMARY

Maxxam ID: EKL261
Sample ID: WALL-1
Matrix: Soil

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4998696	2017/05/25	2017/05/30	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5000180	2017/05/26	2017/05/26	Daniel Teclu
Moisture	BAL	4999931	N/A	2017/05/26	Prgya Panchal

Maxxam ID: EKL262
Sample ID: WALL-2
Matrix: Soil

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4998696	2017/05/25	2017/05/30	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5000180	2017/05/26	2017/05/26	Daniel Teclu
Moisture	BAL	4999931	N/A	2017/05/26	Prgya Panchal

Maxxam ID: EKL263
Sample ID: FLOOR-1
Matrix: Soil

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4998696	2017/05/25	2017/05/30	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5000180	2017/05/26	2017/05/26	Daniel Teclu
Moisture	BAL	4999931	N/A	2017/05/26	Prgya Panchal

Maxxam ID: EKL264
Sample ID: WALL-3
Matrix: Soil

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4998696	2017/05/25	2017/05/30	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5000180	2017/05/26	2017/05/26	Daniel Teclu
Moisture	BAL	4999931	N/A	2017/05/26	Prgya Panchal

Maxxam ID: EKL265
Sample ID: FLOOR-2
Matrix: Soil

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4998696	2017/05/25	2017/05/30	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5000180	2017/05/26	2017/05/26	Daniel Teclu
Moisture	BAL	4999931	N/A	2017/05/26	Prgya Panchal

Maxxam ID: EKL266
Sample ID: FLOOR-3
Matrix: Soil

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4998696	2017/05/25	2017/05/30	Sally Coughlin

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Maxxam Job #: B7A3406
Report Date: 2017/05/30

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: PC

TEST SUMMARY

Maxxam ID: EKL266
Sample ID: FLOOR-3
Matrix: Soil

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Strong Acid Leachable Metals by ICPMS	ICP/MS	5000180	2017/05/26	2017/05/26	Daniel Teclu
Moisture	BAL	4999931	N/A	2017/05/26	Prgya Panchal

Maxxam ID: EKL267
Sample ID: WALL-4
Matrix: Soil

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4998696	2017/05/25	2017/05/30	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5000180	2017/05/26	2017/05/26	Daniel Teclu
Moisture	BAL	4999931	N/A	2017/05/26	Prgya Panchal

Maxxam ID: EKL268
Sample ID: WALL-5
Matrix: Soil

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4998696	2017/05/25	2017/05/30	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5000180	2017/05/26	2017/05/26	Daniel Teclu
Moisture	BAL	4999931	N/A	2017/05/26	Prgya Panchal

Maxxam ID: EKL269
Sample ID: FLOOR-4
Matrix: Soil

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4998696	2017/05/25	2017/05/30	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5000180	2017/05/26	2017/05/26	Daniel Teclu
Moisture	BAL	4999931	N/A	2017/05/26	Prgya Panchal

Maxxam ID: EKL270
Sample ID: WALL-6
Matrix: Soil

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4998696	2017/05/25	2017/05/30	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5000180	2017/05/26	2017/05/26	Daniel Teclu
Moisture	BAL	4999931	N/A	2017/05/26	Prgya Panchal

Maxxam ID: EKL271
Sample ID: DUP-1
Matrix: Soil

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4998696	2017/05/25	2017/05/30	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5000180	2017/05/26	2017/05/26	Daniel Teclu

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Maxxam Job #: B7A3406
Report Date: 2017/05/30

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: PC

TEST SUMMARY

Maxxam ID: EKL271
Sample ID: DUP-1
Matrix: Soil

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4999931	N/A	2017/05/26	Prgya Panchal

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Maxxam Job #: B7A3406
Report Date: 2017/05/30

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: PC

GENERAL COMMENTS

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

Package 1	9.3°C

Results relate only to the items tested.

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Maxxam Job #: B7A3406
Report Date: 2017/05/30

QUALITY ASSURANCE REPORT

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: PC

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
4998696	Chromium (VI)	2017/05/30	87	75 - 125	91	80 - 120	ND, RDL=0.2	ug/g	NC	35
4999931	Moisture	2017/05/26							1.8	20
5000180	Acid Extractable Aluminum (Al)	2017/05/26	NC	75 - 125	98	80 - 120	ND, RDL=50	ug/g		
5000180	Acid Extractable Antimony (Sb)	2017/05/26	103	75 - 125	105	80 - 120	ND, RDL=0.20	ug/g	NC	30
5000180	Acid Extractable Arsenic (As)	2017/05/26	96	75 - 125	95	80 - 120	ND, RDL=1.0	ug/g	NC	30
5000180	Acid Extractable Barium (Ba)	2017/05/26	89	75 - 125	101	80 - 120	ND, RDL=0.50	ug/g	1.1	30
5000180	Acid Extractable Beryllium (Be)	2017/05/26	100	75 - 125	100	80 - 120	ND, RDL=0.20	ug/g	NC	30
5000180	Acid Extractable Boron (B)	2017/05/26	96	75 - 125	96	80 - 120	ND, RDL=5.0	ug/g	NC	30
5000180	Acid Extractable Cadmium (Cd)	2017/05/26	98	75 - 125	100	80 - 120	ND, RDL=0.10	ug/g	NC	30
5000180	Acid Extractable Chromium (Cr)	2017/05/26	90	75 - 125	96	80 - 120	ND, RDL=1.0	ug/g	7.1	30
5000180	Acid Extractable Cobalt (Co)	2017/05/26	97	75 - 125	97	80 - 120	ND, RDL=0.10	ug/g	6.4	30
5000180	Acid Extractable Copper (Cu)	2017/05/26	99	75 - 125	99	80 - 120	ND, RDL=0.50	ug/g	7.9	30
5000180	Acid Extractable Lead (Pb)	2017/05/26	102	75 - 125	99	80 - 120	ND, RDL=1.0	ug/g	1.0	30
5000180	Acid Extractable Mercury (Hg)	2017/05/26	106	75 - 125	99	80 - 120	ND, RDL=0.050	ug/g	NC	30
5000180	Acid Extractable Molybdenum (Mo)	2017/05/26	97	75 - 125	100	80 - 120	ND, RDL=0.50	ug/g	NC	30
5000180	Acid Extractable Nickel (Ni)	2017/05/26	96	75 - 125	95	80 - 120	ND, RDL=0.50	ug/g	3.3	30
5000180	Acid Extractable Selenium (Se)	2017/05/26	100	75 - 125	97	80 - 120	ND, RDL=0.50	ug/g	NC	30
5000180	Acid Extractable Silver (Ag)	2017/05/26	100	75 - 125	103	80 - 120	ND, RDL=0.20	ug/g	NC	30
5000180	Acid Extractable Thallium (Tl)	2017/05/26	102	75 - 125	97	80 - 120	ND, RDL=0.050	ug/g	NC	30
5000180	Acid Extractable Uranium (U)	2017/05/26	104	75 - 125	96	80 - 120	ND, RDL=0.050	ug/g	11	30
5000180	Acid Extractable Vanadium (V)	2017/05/26	92	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	5.4	30
5000180	Acid Extractable Zinc (Zn)	2017/05/26	98	75 - 125	99	80 - 120	ND, RDL=5.0	ug/g	4.6	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.

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).

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Maxxam Job #: B7A3406
Report Date: 2017/05/30

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: PC

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

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

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Your Project #: 1512-S086E
Your C.O.C. #: 52419

Attention:Laila Torabansari

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

Report Date: 2017/06/08
Report #: R4504474
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B7B2790
Received: 2017/06/01, 14:40

Sample Matrix: Soil
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Free (WAD) Cyanide	1	2017/06/03	2017/06/06	CAM SOP-00457	OMOE E3015 m
Hexavalent Chromium in Soil by IC (1)	2	2017/06/05	2017/06/05	CAM SOP-00436	EPA 3060/7199 m
Hexavalent Chromium in Soil by IC (1)	1	2017/06/05	2017/06/06	CAM SOP-00436	EPA 3060/7199 m
Strong Acid Leachable Metals by ICPMS	3	2017/06/06	2017/06/06	CAM SOP-00447	EPA 6020B m
Moisture	4	N/A	2017/06/03	CAM SOP-00445	Carter 2nd ed 51.2 m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam 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.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam 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 Maxxam, unless otherwise agreed in writing.

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.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.

Maxxam
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Your Project #: 1512-S086E
Your C.O.C. #: 52419

Attention:Laila Torabansari

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

Report Date: 2017/06/08
Report #: R4504474
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B7B2790
Received: 2017/06/01, 14:40

Encryption Key

Antonella Brasil
Senior Project Manager
08 Jun 2017 15:27:02

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Antonella Brasil, Senior Project Manager
Email: ABrasil@maxxam.ca
Phone# (905)817-5817

==========

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Maxxam Job #: B7B2790
Report Date: 2017/06/08

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: AB

O.REG 153 ICPMS METALS (SOIL)

Maxxam ID		EMF949	EMF950	EMF951		
Sampling Date		2017/05/19 10:00	2017/05/19 10:00	2017/05/19 10:00		
COC Number		52419	52419	52419		
	UNITS	WALL-1-1	WALL-2-2	WALL-3-3	RDL	QC Batch
Metals						
Acid Extractable Aluminum (Al)	ug/g	13000	14000	16000	50	5014352
Acid Extractable Antimony (Sb)	ug/g	ND	ND	ND	0.20	5014352
Acid Extractable Arsenic (As)	ug/g	4.8	4.9	4.8	1.0	5014352
Acid Extractable Barium (Ba)	ug/g	61	65	80	0.50	5014352
Acid Extractable Beryllium (Be)	ug/g	0.62	0.66	0.79	0.20	5014352
Acid Extractable Boron (B)	ug/g	ND	7.8	7.6	5.0	5014352
Acid Extractable Cadmium (Cd)	ug/g	0.16	0.14	0.12	0.10	5014352
Acid Extractable Chromium (Cr)	ug/g	18	21	24	1.0	5014352
Acid Extractable Cobalt (Co)	ug/g	11	12	13	0.10	5014352
Acid Extractable Copper (Cu)	ug/g	28	38	35	0.50	5014352
Acid Extractable Lead (Pb)	ug/g	14	52	12	1.0	5014352
Acid Extractable Molybdenum (Mo)	ug/g	ND	ND	ND	0.50	5014352
Acid Extractable Nickel (Ni)	ug/g	20	25	28	0.50	5014352
Acid Extractable Selenium (Se)	ug/g	ND	ND	ND	0.50	5014352
Acid Extractable Silver (Ag)	ug/g	ND	ND	ND	0.20	5014352
Acid Extractable Thallium (Tl)	ug/g	0.13	0.15	0.15	0.050	5014352
Acid Extractable Uranium (U)	ug/g	0.46	0.56	0.60	0.050	5014352
Acid Extractable Vanadium (V)	ug/g	31	29	30	5.0	5014352
Acid Extractable Zinc (Zn)	ug/g	61	79	70	5.0	5014352
Acid Extractable Mercury (Hg)	ug/g	ND	ND	ND	0.050	5014352

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B7B2790
Report Date: 2017/06/08

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: AB

RESULTS OF ANALYSES OF SOIL

Maxxam ID		EMF949	EMF950	EMF951		EMF952		
Sampling Date		2017/05/19 10:00	2017/05/19 10:00	2017/05/19 10:00		2017/05/19 10:00		
COC Number		52419	52419	52419		52419		
	UNITS	WALL-1-1	WALL-2-2	WALL-3-3	QC Batch	TP-S'	RDL	QC Batch
Inorganics								
Moisture	%	11	17	15	5012406	18	1.0	5012133
WAD Cyanide (Free)	ug/g					0.01	0.01	5012111

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B7B2790
Report Date: 2017/06/08

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: AB

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		EMF949		EMF950		EMF951		
Sampling Date		2017/05/19 10:00		2017/05/19 10:00		2017/05/19 10:00		
COC Number		52419		52419		52419		
	UNITS	WALL-1-1	QC Batch	WALL-2-2	QC Batch	WALL-3-3	RDL	QC Batch
Inorganics								
Chromium (VI)	ug/g	ND	5012775	ND	5013229	ND	0.2	5012775

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B7B2790
Report Date: 2017/06/08

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: EMF949
Sample ID: WALL-1-1
Matrix: Soil

Collected: 2017/05/19
Shipped:
Received: 2017/06/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	5012775	2017/06/05	2017/06/05	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5014352	2017/06/06	2017/06/06	Daniel Teclu
Moisture	BAL	5012406	N/A	2017/06/03	Valentina Kaftani

Maxxam ID: EMF950
Sample ID: WALL-2-2
Matrix: Soil

Collected: 2017/05/19
Shipped:
Received: 2017/06/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	5013229	2017/06/05	2017/06/06	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5014352	2017/06/06	2017/06/06	Daniel Teclu
Moisture	BAL	5012406	N/A	2017/06/03	Valentina Kaftani

Maxxam ID: EMF951
Sample ID: WALL-3-3
Matrix: Soil

Collected: 2017/05/19
Shipped:
Received: 2017/06/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	5012775	2017/06/05	2017/06/05	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5014352	2017/06/06	2017/06/06	Daniel Teclu
Moisture	BAL	5012406	N/A	2017/06/03	Valentina Kaftani

Maxxam ID: EMF952
Sample ID: TP-S'
Matrix: Soil

Collected: 2017/05/19
Shipped:
Received: 2017/06/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	5012111	2017/06/03	2017/06/06	Louise Harding
Moisture	BAL	5012133	N/A	2017/06/03	Valentina Kaftani

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Maxxam Job #: B7B2790
Report Date: 2017/06/08

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: AB

GENERAL COMMENTS

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

Package 1	5.3°C

Custody Seal is Present and Intact

Revised Report (2017/06/08): Project # adjusted as per client request.

Results relate only to the items tested.

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Maxxam Job #: B7B2790
Report Date: 2017/06/08

QUALITY ASSURANCE REPORT

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: AB

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5012111	WAD Cyanide (Free)	2017/06/06	96	75 - 125	91	80 - 120	ND, RDL=0.01	ug/g	0.089	35
5012133	Moisture	2017/06/03							1.1	20
5012406	Moisture	2017/06/03							0	20
5012775	Chromium (VI)	2017/06/05	64 (1)	75 - 125	91	80 - 120	ND, RDL=0.2	ug/g	NC	35
5013229	Chromium (VI)	2017/06/06	0.43 (1)	75 - 125	88	80 - 120	ND, RDL=0.2	ug/g	NC	35
5014352	Acid Extractable Aluminum (Al)	2017/06/06	NC	75 - 125	104	80 - 120	ND, RDL=50	ug/g		
5014352	Acid Extractable Antimony (Sb)	2017/06/06	92	75 - 125	100	80 - 120	ND, RDL=0.20	ug/g	NC	30
5014352	Acid Extractable Arsenic (As)	2017/06/06	100	75 - 125	101	80 - 120	ND, RDL=1.0	ug/g	3.8	30
5014352	Acid Extractable Barium (Ba)	2017/06/06	NC	75 - 125	105	80 - 120	ND, RDL=0.50	ug/g	0.67	30
5014352	Acid Extractable Beryllium (Be)	2017/06/06	96	75 - 125	99	80 - 120	ND, RDL=0.20	ug/g	NC	30
5014352	Acid Extractable Boron (B)	2017/06/06	93	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	NC	30
5014352	Acid Extractable Cadmium (Cd)	2017/06/06	96	75 - 125	99	80 - 120	ND, RDL=0.10	ug/g	NC	30
5014352	Acid Extractable Chromium (Cr)	2017/06/06	102	75 - 125	103	80 - 120	ND, RDL=1.0	ug/g	3.6	30
5014352	Acid Extractable Cobalt (Co)	2017/06/06	96	75 - 125	105	80 - 120	ND, RDL=0.10	ug/g	1.6	30
5014352	Acid Extractable Copper (Cu)	2017/06/06	91	75 - 125	105	80 - 120	ND, RDL=0.50	ug/g	0.50	30
5014352	Acid Extractable Lead (Pb)	2017/06/06	94	75 - 125	104	80 - 120	ND, RDL=1.0	ug/g	2.5	30
5014352	Acid Extractable Mercury (Hg)	2017/06/06	94	75 - 125	101	80 - 120	ND, RDL=0.050	ug/g		
5014352	Acid Extractable Molybdenum (Mo)	2017/06/06	98	75 - 125	100	80 - 120	ND, RDL=0.50	ug/g	14	30
5014352	Acid Extractable Nickel (Ni)	2017/06/06	86	75 - 125	104	80 - 120	ND, RDL=0.50	ug/g	11	30
5014352	Acid Extractable Selenium (Se)	2017/06/06	97	75 - 125	103	80 - 120	ND, RDL=0.50	ug/g	NC	30
5014352	Acid Extractable Silver (Ag)	2017/06/06	96	75 - 125	102	80 - 120	ND, RDL=0.20	ug/g	NC	30
5014352	Acid Extractable Thallium (Tl)	2017/06/06	93	75 - 125	103	80 - 120	ND, RDL=0.050	ug/g	NC	30
5014352	Acid Extractable Uranium (U)	2017/06/06	94	75 - 125	102	80 - 120	ND, RDL=0.050	ug/g	14	30
5014352	Acid Extractable Vanadium (V)	2017/06/06	101	75 - 125	100	80 - 120	ND, RDL=5.0	ug/g	8.9	30

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Maxxam Job #: B7B2790
Report Date: 2017/06/08

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: AB

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5014352	Acid Extractable Zinc (Zn)	2017/06/06	NC	75 - 125	107	80 - 120	ND, RDL=5.0	ug/g	0.95	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.

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 matrix spike was reanalyzed to confirm result.

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Maxxam Job #: B7B2790
Report Date: 2017/06/08

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: AB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Brad Newman, Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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A Bureau Veritas Group Company

Your Project #: 1512-S086E
Your C.O.C. #: 624932-41-01

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

Report Date: 2017/08/24
Report #: R4673655
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7H8922
Received: 2017/08/18, 14:20

Sample Matrix: Soil
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Hot Water Extractable Boron	5	2017/08/24	2017/08/24	CAM SOP-00408	R153 Ana. Prot. 2011
Hexavalent Chromium in Soil by IC (1)	5	2017/08/22	2017/08/23	CAM SOP-00436	EPA 3060/7199 m
Strong Acid Leachable Metals by ICPMS	5	2017/08/23	2017/08/23	CAM SOP-00447	EPA 6020B m
Moisture	5	N/A	2017/08/21	CAM SOP-00445	Carter 2nd ed 51.2 m
pH CaCl2 EXTRACT	5	2017/08/23	2017/08/23	CAM SOP-00413	EPA 9045 D m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam 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.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam 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 Maxxam, unless otherwise agreed in writing.

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.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.

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Maxxam
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Your Project #: 1512-S086E
Your C.O.C. #: 624932-41-01

Attention:Laila Torabansari

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

Report Date: 2017/08/24
Report #: R4673655
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7H8922
Received: 2017/08/18, 14:20

Encryption Key

Antonella Brasil
Senior Project Manager
24 Aug 2017 16:02:40

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Antonella Brasil, Senior Project Manager
Email: ABrasil@maxxam.ca
Phone# (905)817-5817

==========

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Maxxam
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Maxxam Job #: B7H8922
Report Date: 2017/08/24

Soil Engineers Ltd
Client Project #: 1512-S086E

O.REG 153 METALS PACKAGE (SOIL)

Maxxam ID		EYW565	EYW566	EYW567	EYW567	EYW568		
Sampling Date		2017/08/10 09:30	2017/08/10 10:00	2017/08/10 11:20	2017/08/10 11:20	2017/08/10 10:30		
COC Number		624932-41-01	624932-41-01	624932-41-01	624932-41-01	624932-41-01		
	UNITS	WALL 7	WALL 8	FLOOR -2-1	FLOOR -2-1 Lab-Dup	FLOOR 5	RDL	QC Batch
Inorganics								
Moisture	%	18	18	15		14	1.0	5129015
Chromium (VI)	ug/g	ND	ND	ND	ND	ND	0.2	5130633
Metals								
Hot Water Ext. Boron (B)	ug/g	0.15	0.15	0.12		0.14	0.050	5133920
Acid Extractable Antimony (Sb)	ug/g	ND	ND	ND		ND	0.20	5131813
Acid Extractable Arsenic (As)	ug/g	7.2	7.4	4.7		4.3	1.0	5131813
Acid Extractable Barium (Ba)	ug/g	60	69	48		45	0.50	5131813
Acid Extractable Beryllium (Be)	ug/g	1.0	1.1	0.72		0.70	0.20	5131813
Acid Extractable Boron (B)	ug/g	7.2	8.1	ND		ND	5.0	5131813
Acid Extractable Cadmium (Cd)	ug/g	ND	ND	ND		ND	0.10	5131813
Acid Extractable Chromium (Cr)	ug/g	28	26	21		21	1.0	5131813
Acid Extractable Cobalt (Co)	ug/g	14	16	13		14	0.10	5131813
Acid Extractable Copper (Cu)	ug/g	52	54	27		25	0.50	5131813
Acid Extractable Lead (Pb)	ug/g	12	14	9.2		9.1	1.0	5131813
Acid Extractable Molybdenum (Mo)	ug/g	ND	ND	ND		ND	0.50	5131813
Acid Extractable Nickel (Ni)	ug/g	31	33	24		23	0.50	5131813
Acid Extractable Selenium (Se)	ug/g	ND	ND	ND		ND	0.50	5131813
Acid Extractable Silver (Ag)	ug/g	ND	ND	ND		ND	0.20	5131813
Acid Extractable Thallium (Tl)	ug/g	0.20	0.19	0.12		0.12	0.050	5131813
Acid Extractable Uranium (U)	ug/g	0.52	0.54	0.45		0.42	0.050	5131813
Acid Extractable Vanadium (V)	ug/g	38	36	30		28	5.0	5131813
Acid Extractable Zinc (Zn)	ug/g	73	70	59		57	5.0	5131813
Acid Extractable Mercury (Hg)	ug/g	ND	ND	ND		ND	0.050	5131813

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

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Maxxam Job #: B7H8922
Report Date: 2017/08/24

Soil Engineers Ltd
Client Project #: 1512-S086E

O.REG 153 METALS PACKAGE (SOIL)

Maxxam ID		EYW568	EYW569		
Sampling Date		2017/08/10 10:30	2017/08/10		
COC Number		624932-41-01	624932-41-01		
	UNITS	FLOOR 5 Lab-Dup	DUP	RDL	QC Batch
Inorganics					
Moisture	%		14	1.0	5129015
Chromium (VI)	ug/g		ND	0.2	5130633
Metals					
Hot Water Ext. Boron (B)	ug/g	0.15	0.15	0.050	5133920
Acid Extractable Antimony (Sb)	ug/g		ND	0.20	5131813
Acid Extractable Arsenic (As)	ug/g		3.9	1.0	5131813
Acid Extractable Barium (Ba)	ug/g		44	0.50	5131813
Acid Extractable Beryllium (Be)	ug/g		0.67	0.20	5131813
Acid Extractable Boron (B)	ug/g		ND	5.0	5131813
Acid Extractable Cadmium (Cd)	ug/g		ND	0.10	5131813
Acid Extractable Chromium (Cr)	ug/g		19	1.0	5131813
Acid Extractable Cobalt (Co)	ug/g		13	0.10	5131813
Acid Extractable Copper (Cu)	ug/g		24	0.50	5131813
Acid Extractable Lead (Pb)	ug/g		8.4	1.0	5131813
Acid Extractable Molybdenum (Mo)	ug/g		ND	0.50	5131813
Acid Extractable Nickel (Ni)	ug/g		22	0.50	5131813
Acid Extractable Selenium (Se)	ug/g		ND	0.50	5131813
Acid Extractable Silver (Ag)	ug/g		ND	0.20	5131813
Acid Extractable Thallium (Tl)	ug/g		0.11	0.050	5131813
Acid Extractable Uranium (U)	ug/g		0.42	0.050	5131813
Acid Extractable Vanadium (V)	ug/g		27	5.0	5131813
Acid Extractable Zinc (Zn)	ug/g		55	5.0	5131813
Acid Extractable Mercury (Hg)	ug/g		ND	0.050	5131813

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not detected

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Maxxam Job #: B7H8922
Report Date: 2017/08/24

Soil Engineers Ltd
Client Project #: 1512-S086E

RESULTS OF ANALYSES OF SOIL

Maxxam ID		EYW565	EYW566	EYW567	EYW568	EYW569	
Sampling Date		2017/08/10 09:30	2017/08/10 10:00	2017/08/10 11:20	2017/08/10 10:30	2017/08/10	
COC Number		624932-41-01	624932-41-01	624932-41-01	624932-41-01	624932-41-01	
	UNITS	WALL 7	WALL 8	FLOOR -2-1	FLOOR 5	DUP	QC Batch
Inorganics							
Available (CaCl2) pH	pH	7.55	7.55	7.05	7.07	7.04	5131817
QC Batch = Quality Control Batch							

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Maxxam Job #: B7H8922
Report Date: 2017/08/24

Soil Engineers Ltd
Client Project #: 1512-S086E

TEST SUMMARY

Maxxam ID: EYW565
Sample ID: WALL 7
Matrix: Soil

Collected: 2017/08/10
Shipped:
Received: 2017/08/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	5133920	2017/08/24	2017/08/24	Jolly John
Hexavalent Chromium in Soil by IC	IC/SPEC	5130633	2017/08/22	2017/08/23	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5131813	2017/08/23	2017/08/23	Daniel Teclu
Moisture	BAL	5129015	N/A	2017/08/21	Min Yang
pH CaCl2 EXTRACT	AT	5131817	2017/08/23	2017/08/23	Tahir Anwar

Maxxam ID: EYW566
Sample ID: WALL 8
Matrix: Soil

Collected: 2017/08/10
Shipped:
Received: 2017/08/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	5133920	2017/08/24	2017/08/24	Jolly John
Hexavalent Chromium in Soil by IC	IC/SPEC	5130633	2017/08/22	2017/08/23	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5131813	2017/08/23	2017/08/23	Daniel Teclu
Moisture	BAL	5129015	N/A	2017/08/21	Min Yang
pH CaCl2 EXTRACT	AT	5131817	2017/08/23	2017/08/23	Tahir Anwar

Maxxam ID: EYW567
Sample ID: FLOOR -2-1
Matrix: Soil

Collected: 2017/08/10
Shipped:
Received: 2017/08/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	5133920	2017/08/24	2017/08/24	Jolly John
Hexavalent Chromium in Soil by IC	IC/SPEC	5130633	2017/08/22	2017/08/23	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5131813	2017/08/23	2017/08/23	Daniel Teclu
Moisture	BAL	5129015	N/A	2017/08/21	Min Yang
pH CaCl2 EXTRACT	AT	5131817	2017/08/23	2017/08/23	Tahir Anwar

Maxxam ID: EYW567 Dup
Sample ID: FLOOR -2-1
Matrix: Soil

Collected: 2017/08/10
Shipped:
Received: 2017/08/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	5130633	2017/08/22	2017/08/23	Sally Coughlin

Maxxam ID: EYW568
Sample ID: FLOOR 5
Matrix: Soil

Collected: 2017/08/10
Shipped:
Received: 2017/08/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	5133920	2017/08/24	2017/08/24	Jolly John
Hexavalent Chromium in Soil by IC	IC/SPEC	5130633	2017/08/22	2017/08/23	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5131813	2017/08/23	2017/08/23	Daniel Teclu
Moisture	BAL	5129015	N/A	2017/08/21	Min Yang
pH CaCl2 EXTRACT	AT	5131817	2017/08/23	2017/08/23	Tahir Anwar

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Maxxam Job #: B7H8922
Report Date: 2017/08/24

Soil Engineers Ltd
Client Project #: 1512-S086E

TEST SUMMARY

Maxxam ID: EYW568 Dup
Sample ID: FLOOR 5
Matrix: Soil

Collected: 2017/08/10
Shipped:
Received: 2017/08/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	5133920	2017/08/24	2017/08/24	Jolly John

Maxxam ID: EYW569
Sample ID: DUP
Matrix: Soil

Collected: 2017/08/10
Shipped:
Received: 2017/08/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	5133920	2017/08/24	2017/08/24	Jolly John
Hexavalent Chromium in Soil by IC	IC/SPEC	5130633	2017/08/22	2017/08/23	Sally Coughlin
Strong Acid Leachable Metals by ICPMS	ICP/MS	5131813	2017/08/23	2017/08/23	Daniel Teclu
Moisture	BAL	5129015	N/A	2017/08/21	Min Yang
pH CaCl2 EXTRACT	AT	5131817	2017/08/23	2017/08/23	Tahir Anwar

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GENERAL COMMENTS

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

Package 1	8.7°C

Custody Seal Present/Intact

Results relate only to the items tested.

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Maxxam Job #: B7H8922
Report Date: 2017/08/24

QUALITY ASSURANCE REPORT

Soil Engineers Ltd
Client Project #: 1512-S086E

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5129015	Moisture	2017/08/21							1.1	20
5130633	Chromium (VI)	2017/08/23	75	75 - 125	86	80 - 120	ND, RDL=0.2	ug/g	NC	35
5131813	Acid Extractable Antimony (Sb)	2017/08/23	92	75 - 125	94	80 - 120	ND, RDL=0.20	ug/g		
5131813	Acid Extractable Arsenic (As)	2017/08/23	99	75 - 125	95	80 - 120	ND, RDL=1.0	ug/g	19	30
5131813	Acid Extractable Barium (Ba)	2017/08/23	NC	75 - 125	98	80 - 120	ND, RDL=0.50	ug/g		
5131813	Acid Extractable Beryllium (Be)	2017/08/23	97	75 - 125	96	80 - 120	ND, RDL=0.20	ug/g		
5131813	Acid Extractable Boron (B)	2017/08/23	96	75 - 125	95	80 - 120	ND, RDL=5.0	ug/g		
5131813	Acid Extractable Cadmium (Cd)	2017/08/23	94	75 - 125	94	80 - 120	ND, RDL=0.10	ug/g	30	30
5131813	Acid Extractable Chromium (Cr)	2017/08/23	NC	75 - 125	97	80 - 120	ND, RDL=1.0	ug/g	2.9	30
5131813	Acid Extractable Cobalt (Co)	2017/08/23	98	75 - 125	97	80 - 120	ND, RDL=0.10	ug/g	2.1	30
5131813	Acid Extractable Copper (Cu)	2017/08/23	NC	75 - 125	97	80 - 120	ND, RDL=0.50	ug/g	5.5	30
5131813	Acid Extractable Lead (Pb)	2017/08/23	NC	75 - 125	97	80 - 120	ND, RDL=1.0	ug/g	14	30
5131813	Acid Extractable Mercury (Hg)	2017/08/23	99	75 - 125	102	80 - 120	ND, RDL=0.050	ug/g	20	30
5131813	Acid Extractable Molybdenum (Mo)	2017/08/23	97	75 - 125	94	80 - 120	ND, RDL=0.50	ug/g		
5131813	Acid Extractable Nickel (Ni)	2017/08/23	NC	75 - 125	95	80 - 120	ND, RDL=0.50	ug/g	5.5	30
5131813	Acid Extractable Selenium (Se)	2017/08/23	94	75 - 125	99	80 - 120	ND, RDL=0.50	ug/g		
5131813	Acid Extractable Silver (Ag)	2017/08/23	108	75 - 125	95	80 - 120	ND, RDL=0.20	ug/g		
5131813	Acid Extractable Thallium (Tl)	2017/08/23	96	75 - 125	97	80 - 120	ND, RDL=0.050	ug/g		
5131813	Acid Extractable Uranium (U)	2017/08/23	93	75 - 125	95	80 - 120	ND, RDL=0.050	ug/g		
5131813	Acid Extractable Vanadium (V)	2017/08/23	NC	75 - 125	95	80 - 120	ND, RDL=5.0	ug/g		
5131813	Acid Extractable Zinc (Zn)	2017/08/23	NC	75 - 125	99	80 - 120	ND, RDL=5.0	ug/g	6.8	30
5131817	Available (CaCl2) pH	2017/08/23			100	97 - 103			1.2	N/A
5133920	Hot Water Ext. Boron (B)	2017/08/24	105	75 - 125	102	75 - 125	ND, RDL=0.050	ug/g	4.2	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.

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).

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Maxxam Job #: B7H8922
Report Date: 2017/08/24

Soil Engineers Ltd
Client Project #: 1512-S086E

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Service Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Soil Engineers Ltd.
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APPENDIX 'D'

CERTIFICATE OF ANALYSIS (GROUNDWATER SAMPLES)

REFERENCE NO. 1512-S086E

SGS

FINAL REPORT

CA15476-JUL16 R

1512-S086E

Prepared for

Soil Engineers Ltd.

FINAL REPORT

CA15476-JUL16 R

First Page

CLIENT DETAILS		LABORATORY DETAILS	
Client	Soil Engineers Ltd.	Project Specialist	Deanna Edwards, B.Sc, C.Chem
		Laboratory	SGS Canada Inc.
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Email	laila@soilengineersltd.com; ebeyene@soilengineersltd.com	SGS Reference	CA15476-JUL16
Project	1512-S086E	Received	07/27/2016
Order Number		Approved	08/03/2016
Samples	Ground Water (5)	Report Number	CA15476-JUL16 R
		Date Reported	08/03/2016

COMMENTS

CCME Method Compliance: Analyses were conducted using analytical procedures that comply with the Reference Method for the CWS for Petroleum Hydrocarbons in Soil and have been validated for use at the SGS laboratory, Lakefield, ON site.

Quality Compliance: Instrument performance / calibration quality criteria were met and extraction and analysis limits for holding times were met.

nC6 and nC10 response factors within 30% of response factor for toluene: YES

nC10, nC16 and nC34 response factors within 10% of the average response for the three compounds: YES

C50 response factors within 70% of nC10 + nC16 + nC34 average: YES

Linearity is within 15%: YES

F4G - gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.
The results for F4 and F4G are both reported and the greater of the two values is to be used in application to the CWS PHC.

Temperature of samples upon receipt 10.8 degrees C
Cooling Agent Present
No Custody Seal Present

Samples MW1, MW2,MW3, Dup 1 contained visible sediment
Sample MW1 contained >1 cm of sediment. F1-F4 and VOC analysis for Sample MW1 to be resampled by client due to high sediment.

SIGNATORIES

Deanna Edwards, B.Sc, C.Chem

Deanna Edwards

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RESULTS

	Sample Number	7	8	9	10	
	Sample Name	MW1	MW2	MW3	Dup 1	
	Sample Matrix	Ground Water	Ground Water	Ground Water	Ground Water	
	Sampled By	Vincent Chay	Vincent Chay	Vincent Chay	Vincent Chay	
	Sample Date	22/07/2016	22/07/2016	22/07/2016	22/07/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**
				L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED			
Anions by IC							
Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001							
Chloride	µg/L	200	8900	42000	13000	---	790000
Conductivity							
Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006							
Conductivity	mS/cm	0.002	0.95	1.2	1.1	---	
Cyanide by SFA							
Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005							
Cyanide (free)	µg/L	2	< 2	< 2	< 2	---	5
Hexavalent Chromium by IC							
Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008							
Chromium VI	µg/L	0.2	< 0.2	0.3	< 0.2	---	25
Mercury by CVAAS							
Method: SM 3112/SM 3112B | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004							
Mercury (total)	µg/L	0.01	0.41	< 0.01	< 0.01	---	0.1
Metals in aqueous samples - ICP-MS							
Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-006							
Barium	µg/L	0.02	548	68.8	95.8	---	610
Beryllium	µg/L	0.007	0.074	0.084	1.27	---	0.5
Boron	µg/L	2	276	116	565	---	1700
Cadmium	µg/L	0.003	0.376	0.068	0.256	---	0.5
Chromium	µg/L	0.03	0.40	2.69	16.7	---	11
Cobalt	µg/L	0.004	12.7	3.92	19.5	---	3.8
Copper	µg/L	0.02	1.74	5.78	166	---	5
Lead	µg/L	0.01	0.05	3.17	28.2	---	1.9
Molybdenum	µg/L	0.01	4.56	2.06	2.29	---	23
Nickel	µg/L	0.1	12.3	4.6	26.3	---	14
Silver	µg/L	0.002	< 0.002	0.003	0.008	---	0.3
Thallium	µg/L	0.005	0.047	0.052	0.091	---	0.5
Uranium	µg/L	0.002	8.46	6.47	2.51	---	8.9
Vanadium	µg/L	0.01	0.54	1.88	28.4	---	3.9
Zinc	µg/L	2	5	12	68	---	160
Antimony	µg/L	0.02	< 0.02	< 0.02	< 0.02	---	1.5
Arsenic	µg/L	0.2	7.7	1.5	18.9	---	13

RESULTS

	Sample Number	7	8	9	10	
	Sample Name	MW1	MW2	MW3	Dup 1	
	Sample Matrix	Ground Water	Ground Water	Ground Water	Ground Water	
	Sampled By	Vincent Chay	Vincent Chay	Vincent Chay	Vincent Chay	
	Sample Date	22/07/2016	22/07/2016	22/07/2016	22/07/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**
							L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED
Metals in aqueous samples - ICP-MS (continued)							
Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-006							
Selenium	µg/L	0.04	0.81	0.43	0.27	---	5
Sodium	µg/L	10	34600	25600	34500	---	490000
Petroleum Hydrocarbons (F1)							
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010							
CCME F1 (C6-C10)	µg/L	25	---	< 25	< 25	---	420
CCME F1-BTEX (C6-C10)	µg/L	25	---	< 25	< 25	---	
Petroleum Hydrocarbons (F2-F4)							
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010							
CCME F2 (C10-C16)	µg/L	100	---	< 100	< 100	---	150
CCME F3 (C16-C34)	µg/L	200	---	1410	236	---	500
CCME F4 (C34-C50)	µg/L	200	---	< 200	< 200	---	500
Chromatogram returned to baseline at nC50	Yes / No	-	---	YES	YES	---	
pH							
Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006							
pH	no unit	0.05	7.58	7.78	7.78	---	
Sodium adsorption ratio (SAR)							
Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021							
Sodium Adsorption Ratio	---	0.01	0.23	0.42	0.40	---	
Volatile Organics							
Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004							
Acetone	µg/L	30	---	< 30	< 30	< 30	2700
Bromomethane	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.89
Carbon tetrachloride	µg/L	0.2	---	< 0.2	< 0.2	< 0.2	0.2
Chlorobenzene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
Chloroform	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	2
1,2-Dichlorobenzene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
1,3-Dichlorobenzene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
1,4-Dichlorobenzene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
Dichlorodifluoromethane	µg/L	2.0	---	< 2	< 2	< 2	590
1,1-Dichloroethane	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
1,2-Dichloroethane	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5

RESULTS

	Sample Number	7	8	9	10	
	Sample Name	MW1	MW2	MW3	Dup 1	
	Sample Matrix	Ground Water	Ground Water	Ground Water	Ground Water	
	Sampled By	Vincent Chay	Vincent Chay	Vincent Chay	Vincent Chay	
	Sample Date	22/07/2016	22/07/2016	22/07/2016	22/07/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**Result**	**L1**

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

Volatile Organics (continued)

Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

1,1-Dichloroethylene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
trans-1,2-Dichloroethene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	1.6
cis-1,2-Dichloroethene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	1.6
1,2-Dichloropropane	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
cis-1,3-Dichloropropene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	
trans-1,3-Dichloropropene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	
1,3-dichoropropene (total)	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
Ethylenedibromide	µg/L	0.2	---	< 0.2	< 0.2	< 0.2	0.2
n-Hexane	µg/L	1.0	---	< 1	< 1	< 1	5
Methyl ethyl ketone	µg/L	20	---	< 20	< 20	< 20	400
Methyl Isobutyl Ketone	µg/L	20	---	< 20	< 20	< 20	640
Methyl-t-butyl Ether	µg/L	2.0	---	< 2	< 2	< 2	15
Methylene Chloride	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	5
Styrene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
Tetrachloroethylene (perchloroethylene)	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
1,1,1,2-Tetrachloroethane	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	1.1
1,1,2,2-Tetrachloroethane	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
1,1,1-Trichloroethane	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
1,1,2-Trichloroethane	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
Trichloroethylene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
Trichlorofluoromethane	µg/L	5.0	---	< 5	< 5	< 5	150
Vinyl Chloride	µg/L	0.2	---	< 0.2	< 0.2	< 0.2	0.5
Benzene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
Ethylbenzene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.5
Toluene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	0.8
Xylene (total)	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	72
m/p-xylene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	
o-xylene	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	
Bromodichloromethane	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	2
Bromoform	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	5
Dibromochloromethane	µg/L	0.5	---	< 0.5	< 0.5	< 0.5	2
Surr 1,2-Dichloroethane-d4	Surr Rec %	-	---	110	112	110	
Surr 2-Bromo-1-Chloropropane	Surr Rec %	-	---	101	103	102	
Surr 4-Bromofluorobenzene	Surr Rec %	-	---	84	83	82	

RESULTS :

Sample Number	11
Sample Name	Trip Blank
Sample Matrix	Ground Water
Sampled By	Vincent Chay
Sample Date	22/07/2016

Parameter	Units	RL	Result	L1

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

Volatile Organics

Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

Acetone	µg/L	30	< 30	2700
Bromomethane	µg/L	0.5	< 0.5	0.89
Carbon tetrachloride	µg/L	0.2	< 0.2	0.2
Chlorobenzene	µg/L	0.5	< 0.5	0.5
Chloroform	µg/L	0.5	< 0.5	2
1,2-Dichlorobenzene	µg/L	0.5	< 0.5	0.5
1,3-Dichlorobenzene	µg/L	0.5	< 0.5	0.5
1,4-Dichlorobenzene	µg/L	0.5	< 0.5	0.5
Dichlorodifluoromethane	µg/L	2.0	< 2	590
1,1-Dichloroethane	µg/L	0.5	< 0.5	0.5
1,2-Dichloroethane	µg/L	0.5	< 0.5	0.5
1,1-Dichloroethylene	µg/L	0.5	< 0.5	0.5
trans-1,2-Dichloroethene	µg/L	0.5	< 0.5	1.6
cis-1,2-Dichloroethene	µg/L	0.5	< 0.5	1.6
1,2-Dichloropropane	µg/L	0.5	< 0.5	0.5
cis-1,3-Dichloropropene	µg/L	0.5	< 0.5	
trans-1,3-Dichloropropene	µg/L	0.5	< 0.5	
1,3-dichoropropene (total)	µg/L	0.5	< 0.5	0.5
Ethylenedibromide	µg/L	0.2	< 0.2	0.2
n-Hexane	µg/L	1.0	< 1	5
Methyl ethyl ketone	µg/L	20	< 20	400
Methyl Isobutyl Ketone	µg/L	20	< 20	640
Methyl-t-butyl Ether	µg/L	2.0	< 2	15
Methylene Chloride	µg/L	0.5	< 0.5	5
Styrene	µg/L	0.5	< 0.5	0.5
Tetrachloroethylene (perchloroethylene)	µg/L	0.5	< 0.5	0.5
1,1,1,2-Tetrachloroethane	µg/L	0.5	< 0.5	1.1
1,1,2,2-Tetrachloroethane	µg/L	0.5	< 0.5	0.5
1,1,1-Trichloroethane	µg/L	0.5	< 0.5	0.5
1,1,2-Trichloroethane	µg/L	0.5	< 0.5	0.5
Trichloroethylene	µg/L	0.5	< 0.5	0.5
Trichlorofluoromethane	µg/L	5.0	< 5	150
Vinyl Chloride	µg/L	0.2	< 0.2	0.5
Benzene	µg/L	0.5	< 0.5	0.5
Ethylbenzene	µg/L	0.5	< 0.5	0.5
Toluene	µg/L	0.5	< 0.5	0.8
Xylene (total)	µg/L	0.5	< 0.5	72

RESULTS

Sample Number	11
Sample Name	Trip Blank
Sample Matrix	Ground Water
Sampled By	Vincent Chay
Sample Date	22/07/2016

Parameter	Units	RL	Result	L1
				L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED
Volatile Organics (continued)				
Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004				
m/p-xylene	µg/L	0.5	< 0.5	
o-xylene	µg/L	0.5	< 0.5	
Bromodichloromethane	µg/L	0.5	< 0.5	2
Bromoform	µg/L	0.5	< 0.5	5
Dibromochloromethane	µg/L	0.5	< 0.5	2
Surr 1,2-Dichloroethane-d4	Surr Rec %	-	110	
Surr 2-Bromo-1-Chloropropane	Surr Rec %	-	99	
Surr 4-Bromofluorobenzene	Surr Rec %	-	85	

EXCEEDANCE SUMMARY

Parameter	Method	Units	Result	REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED L1
MW1				
Cobalt	SM 3030/EPA 200.8	µg/L	12.7	3.80
Mercury	SM 3112/SM 3112B	µg/L	0.41	0.10
MW2				
F3 (C16 to C34)	CCME Tier 1	µg/L	1410	500
Cobalt	SM 3030/EPA 200.8	µg/L	3.92	3.80
Copper	SM 3030/EPA 200.8	µg/L	5.78	5
Lead	SM 3030/EPA 200.8	µg/L	3.17	1.90
MW3				
Arsenic	SM 3030/EPA 200.8	µg/L	18.9	13
Beryllium	SM 3030/EPA 200.8	µg/L	1.27	0.50
Chromium	SM 3030/EPA 200.8	µg/L	16.7	11
Cobalt	SM 3030/EPA 200.8	µg/L	19.5	3.80
Copper	SM 3030/EPA 200.8	µg/L	166	5
Lead	SM 3030/EPA 200.8	µg/L	28.2	1.90
Nickel	SM 3030/EPA 200.8	µg/L	26.3	14
Vanadium	SM 3030/EPA 200.8	µg/L	28.4	3.90

HOLDING TIME SUMMARY

Sample Name	QC Batch Reference	Sample Number	Sampled	Received	Extracted/ Prepared	Analysed	Holding Time	Approved
Anions by IC								
Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001								
MW1	DIO0481-JUL16	7	07/22/2016	07/27/2016	07/28/2016	07/28/2016	08/19/2016	08/02/2016
MW2	DIO0455-JUL16	8	07/22/2016	07/27/2016	07/28/2016	07/28/2016	08/19/2016	08/02/2016
MW3	DIO0481-JUL16	9	07/22/2016	07/27/2016	07/28/2016	07/28/2016	08/19/2016	08/02/2016
Conductivity								
Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006								
MW1	EWL0410-JUL16	7	07/22/2016	07/27/2016	07/28/2016	07/28/2016	08/21/2016	07/28/2016
MW2	EWL0410-JUL16	8	07/22/2016	07/27/2016	07/28/2016	07/28/2016	08/21/2016	07/28/2016
MW3	EWL0410-JUL16	9	07/22/2016	07/27/2016	07/28/2016	07/28/2016	08/21/2016	07/28/2016
Cyanide by SFA								
Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005								
MW1	SKA0206-JUL16	7	07/22/2016	07/27/2016	07/28/2016	07/28/2016	08/05/2016	07/28/2016
MW2	SKA0206-JUL16	8	07/22/2016	07/27/2016	07/28/2016	07/28/2016	08/05/2016	07/28/2016
MW3	SKA0206-JUL16	9	07/22/2016	07/27/2016	07/28/2016	07/28/2016	08/05/2016	07/28/2016
Hexavalent Chromium by IC								
Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008								
MW1	DIO0463-JUL16	7	07/22/2016	07/27/2016	08/02/2016	08/02/2016	08/19/2016	08/03/2016
MW2	DIO0463-JUL16	8	07/22/2016	07/27/2016	08/02/2016	08/02/2016	08/19/2016	08/03/2016
MW3	DIO0463-JUL16	9	07/22/2016	07/27/2016	08/02/2016	08/02/2016	08/19/2016	08/03/2016
Mercury by CVAAS								
Method: SM 3112/SM 3112B | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004								
MW1	EHG0037-JUL16	7	07/22/2016	07/27/2016	07/28/2016	07/28/2016	08/19/2016	07/28/2016
MW2	EHG0037-JUL16	8	07/22/2016	07/27/2016	07/28/2016	07/28/2016	08/19/2016	07/28/2016
MW3	EHG0037-JUL16	9	07/22/2016	07/27/2016	07/28/2016	07/28/2016	08/19/2016	07/28/2016
Metals in aqueous samples - ICP-MS								
Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-006								
MW1	EMS0128-JUL16	7	07/22/2016	07/27/2016	07/27/2016	07/28/2016	09/20/2016	07/29/2016
MW2	EMS0128-JUL16	8	07/22/2016	07/27/2016	07/27/2016	07/28/2016	09/20/2016	07/29/2016
MW3	EMS0128-JUL16	9	07/22/2016	07/27/2016	07/27/2016	07/28/2016	09/20/2016	07/29/2016
Petroleum Hydrocarbons (F1)								
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010								
MW2	GCM0008-AUG16	8	07/22/2016	07/27/2016	07/28/2016	07/29/2016	08/05/2016	08/03/2016
MW3	GCM0008-AUG16	9	07/22/2016	07/27/2016	07/28/2016	07/29/2016	08/05/2016	08/03/2016
Petroleum Hydrocarbons (F2-F4)								
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010								

HOLDING TIME SUMMARY

Sample Name	QC Batch Reference	Sample Number	Sampled	Received	Extracted/ Prepared	Analysed	Holding Time	Approved
Petroleum Hydrocarbons (F2-F4) (continued)								
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010								
MW2	GCM0313-JUL16	8	07/22/2016	07/27/2016	07/28/2016	07/29/2016	08/05/2016	08/02/2016
MW3	GCM0313-JUL16	9	07/22/2016	07/27/2016	07/28/2016	07/29/2016	08/05/2016	08/02/2016
pH								
Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006								
MW1	EWL0410-JUL16	7	07/22/2016	07/27/2016	07/28/2016	07/28/2016	08/19/2016	07/28/2016
MW2	EWL0410-JUL16	8	07/22/2016	07/27/2016	07/28/2016	07/28/2016	08/19/2016	07/28/2016
MW3	EWL0410-JUL16	9	07/22/2016	07/27/2016	07/28/2016	07/28/2016	08/19/2016	07/28/2016
Sodium adsorption ratio (SAR)								
Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021								
MW1		7	07/22/2016	07/27/2016	08/02/2016	08/02/2016	01/18/2017	08/02/2016
MW2		8	07/22/2016	07/27/2016	08/02/2016	08/02/2016	01/18/2017	08/02/2016
MW3		9	07/22/2016	07/27/2016	08/02/2016	08/02/2016	01/18/2017	08/02/2016
Volatile Organics								
Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004								
MW2	GCM0011-AUG16	8	07/22/2016	07/27/2016	08/02/2016	08/02/2016	08/05/2016	08/03/2016
MW3	GCM0011-AUG16	9	07/22/2016	07/27/2016	08/02/2016	08/02/2016	08/05/2016	08/03/2016
Dup 1	GCM0011-AUG16	10	07/22/2016	07/27/2016	08/02/2016	08/02/2016	08/05/2016	08/03/2016
Trip Blank	GCM0011-AUG16	11	07/22/2016	07/27/2016	08/02/2016	08/02/2016	08/05/2016	08/03/2016

QC SUMMARY

Anions by IC

Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
Chloride	DIO0455-JUL16	µg/L	200	<200	5	20	92	80	120	99	75	125
Chloride	DIO0481-JUL16	µg/L	200	<200	ND	20	95	80	120	104	75	125

Conductivity

Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
Conductivity	EWL0410-JUL16	mS/cm	0.0020	< 0.002	0	10	98	90	110	NA		

Cyanide by SFA

Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
Cyanide (free)	SKA0206-JUL16	µg/L	2	<2	ND	10	100	90	110	121	75	125

QC SUMMARY

Hexavalent Chromium by IC

Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Chromium VI	DIO0463-JUL16	ug/L	0.20	<0.2	10	20	97	80	120	90	75	125

Mercury by CVAAS

Method: SM 3112/SM 3112B | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Mercury (total)	EHG0037-JUL16	ug/L	0.010	<0.01	ND	20	83	90	110	107	70	130

QC SUMMARY

Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-[ENVISPE-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Silver	EMS0128-JUL16	µg/L	0.0020	<0.002	ND	20	96	90	110	98	70	130
Arsenic	EMS0128-JUL16	µg/L	0.20	<0.2	7	20	94	90	110	114	70	130
Barium	EMS0128-JUL16	µg/L	0.020	<0.02	6	20	99	90	110	NV	70	130
Beryllium	EMS0128-JUL16	µg/L	0.0070	<0.007	ND	20	98	90	110	113	70	130
Boron	EMS0128-JUL16	µg/L	2	<2	5	20	97	90	110	NV	70	130
Cadmium	EMS0128-JUL16	µg/L	0.0030	<0.003	ND	20	98	90	110	99	70	130
Cobalt	EMS0128-JUL16	µg/L	0.0040	<0.004	1	20	94	90	110	97	70	130
Chromium	EMS0128-JUL16	µg/L	0.030	<0.03	2	20	95	90	110	90	70	130
Copper	EMS0128-JUL16	µg/L	0.020	<0.02	10	20	95	90	110	87	70	130
Molybdenum	EMS0128-JUL16	µg/L	0.010	<0.01	ND	20	101	90	110	NV	70	130
Sodium	EMS0128-JUL16	µg/L	10	<10	1	20	100	90	110	NV	70	130
Nickel	EMS0128-JUL16	µg/L	0.10	<0.1	3	20	93	90	110	101	70	130
Lead	EMS0128-JUL16	µg/L	0.010	<0.01	9	20	98	90	110	NV	70	130
Antimony	EMS0128-JUL16	µg/L	0.020	<0.02	18	20	103	90	110	NV	70	130
Selenium	EMS0128-JUL16	µg/L	0.040	<0.04	7	20	98	90	110	111	70	130
Thallium	EMS0128-JUL16	µg/L	0.0050	<0.005	ND	20	98	90	110	97	70	130
Uranium	EMS0128-JUL16	µg/L	0.0020	<0.002	6	20	94	90	110	NV	70	130
Vanadium	EMS0128-JUL16	µg/L	0.010	<0.01	7	20	95	90	110	NV	70	130
Zinc	EMS0128-JUL16	µg/L	2	<2	ND	20	97	90	110	99	70	130

QC SUMMARY

Petroleum Hydrocarbons (F1)

Method: CCME Tier 1 | Internal ref.: ME-CA-[ENVIGC-LAK-AN-010

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
CCME F1 (C6-C10)	GCM0008-AUG16	µg/L	25	<25	ND	30	96	60	140	114	60	140

Petroleum Hydrocarbons (F2-F4)

Method: CCME Tier 1 | Internal ref.: ME-CA-[ENVIGC-LAK-AN-010

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
CCME F2 (C10-C16)	GCM0313-JUL16	µg/L	100	<100	NSS	30	106	60	140	NSS	60	140
CCME F3 (C16-C34)	GCM0313-JUL16	µg/L	200	<200	NSS	30	106	60	140	NSS	60	140
CCME F4 (C34-C50)	GCM0313-JUL16	µg/L	200	<200	NSS	30	106	60	140	NSS	60	140

pH

Method: SM 4500 | Internal ref.: ME-CA-[ENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
pH	EWL0410-JUL16	no unit	0.050	NA	1		100			NA		

QC SUMMARY

Volatile Organics

Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
1,1,1,2-Tetrachloroethane	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	91	60	130	NSS	50	140
1,1,1-Trichloroethane	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	91	60	130	NSS	50	140
1,2-Dichloropropane	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	90	60	130	NSS	50	140
1,3-Dichlorobenzene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	92	60	130	NSS	50	140
1,4-Dichlorobenzene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	92	60	130	NSS	50	140
Acetone	GCM0011-AUG16	µg/L	30	<30	NSS	30	97	60	130	NSS	50	140
Benzene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	93	60	130	NSS	50	140
Bromodichloromethane	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	88	60	130	NSS	50	140
Bromoform	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	92	60	130	NSS	50	140
Bromomethane	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	95	50	140	NSS	50	140
Carbon tetrachloride	GCM0011-AUG16	µg/L	0.20	<0.2	NSS	30	90	60	130	NSS	50	140
Chlorobenzene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	90	60	130	NSS	50	140
Chloroform	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	92	60	130	NSS	50	140
cis-1,2-Dichloroethene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	87	60	130	NSS	50	140
cis-1,3-Dichloropropene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	88	60	130	NSS	50	140
Dibromochloromethane	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	90	60	130	NSS	50	140
Dichlorodifluoromethane	GCM0011-AUG16	µg/L	2.0	<2	NSS	30	107	50	140	NSS	50	140
Ethylbenzene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	90	60	130	NSS	50	140
Ethylenedibromide	GCM0011-AUG16	µg/L	0.20	<0.2	NSS	30	92	60	130	NSS	50	140
n-Hexane	GCM0011-AUG16	µg/L	1.0	<1	NSS	30	97	60	130	NSS	50	140

QC SUMMARY

Volatile Organics (continued)

Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
m/p-xylene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	92	60	130	NSS	50	140
Methyl ethyl ketone	GCM0011-AUG16	µg/L	20	<20	NSS	30	102	60	130	NSS	50	140
Methyl Isobutyl Ketone	GCM0011-AUG16	µg/L	20	<20	NSS	30	101	50	140	NSS	50	140
Methyl-t-butyl Ether	GCM0011-AUG16	µg/L	2.0	<2	NSS	30	103	60	130	NSS	50	140
Methylene Chloride	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	94	60	130	NSS	50	140
o-xylene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	89	60	130	NSS	50	140
Styrene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	94	60	130	NSS	50	140
Tetrachloroethylene (perchloroethylene)	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	89	60	130	NSS	50	140
Toluene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	90	60	130	NSS	50	140
trans-1,2-Dichloroethene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	94	60	130	NSS	50	140
trans-1,3-Dichloropropene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	96	60	130	NSS	50	140
Trichloroethylene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	90	60	130	NSS	50	140
Trichlorofluoromethane	GCM0011-AUG16	µg/L	5.0	<5	NSS	30	94	50	140	NSS	50	140
Vinyl Chloride	GCM0011-AUG16	µg/L	0.20	<0.2	NSS	30	96	60	130	NSS	50	140
1,1,2,2-Tetrachloroethane	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	95	60	130	NSS	50	140
1,1,2-Trichloroethane	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	93	60	130	NSS	50	140
1,1-Dichloroethane	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	93	60	130	NSS	50	140
1,1-Dichloroethylene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	96	60	130	NSS	50	140
1,2-Dichlorobenzene	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	92	60	130	NSS	50	140
1,2-Dichloroethane	GCM0011-AUG16	µg/L	0.50	<0.5	NSS	30	95	60	130	NSS	50	140

QC SUMMARY

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

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

Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

Multielement Scan Qualifier: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

Duplicate Qualifier: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Matrix Spike Qualifier: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

LEGEND

FOOTNOTES

NSS Insufficient sample for analysis.
RL Reporting Limit.
↑ Reporting limit raised.
↓ Reporting limit lowered.
NA The sample was not analysed for this analyte
ND Non Detect

Samples analysed as received. Solid samples expressed on a dry weight basis. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

-- End of Analytical Report --

SGS

Request for Laboratory Services and CHAIN OF CUSTODY

No:

Page 1 of 1

SGS Environmental Services - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Toll Free: 877-747-7658 Fax: 705-652-6365
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361 Web: www.ca.sgs.com

Laboratory Information Section - Lab use only

Received By: Dave Matthews
Received Date (mm/dd/yyyy): 07/27/16 (mm/dd/yy)
Received Time: 1:20 19:40

Received By (signature):
Custody Seal Present: ☐
Custody Seal Intact: ☐ No Seal

Cooling Agent Present: ☑
Temperature Upon Receipt (°C): 10.4 10.9 11.1 9.3

LAB LIMS #: JUL 15476 ~~JUL 15472~~

REPORT INFORMATION

Company: Soil Engineers Ltd.
Contact: Laila
Address: 120 Nugget Ave

Phone: 416 754 8515
Fax:
Email: laila@soilengineersltd.com

INVOICE INFORMATION

☑ (same as Report Information)
Company:
Contact:
Address:

Phone:
Email:

PROJECT INFORMATION

Quotation #: P.O. #:
Project #: 1512-S086 Site Location/ID:

TURNAROUND TIME (TAT) REQUIRED

☑ Regular TAT (5-7days) TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 3pm or on weekends : TAT begins the next business day

RUSH TAT (Additional Charges May Apply) ☐ 1 Day ☐ 2 Days ☐ 3-4 Days

PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

Specify Due Date: Rush Confirmation ID:

REGULATIONS

Regulation 153 (2011):
☒ Table 1 ☐ Res/Park ☐ Soil Texture: ☐ Coarse
☐ Table 2 ☐ Ind/Com ☐ Medium
☐ Table 3 ☐ Agri/Other ☐ Fine
☐ Table

Other Regulations:
☐ Reg 347/558 (3 Day min TAT)
☐ PWQO ☐ MMER
☐ CCME ☐ Other:
☐ MISA

Sewer By-Law:
☐ Sanitary
☐ Storm
Municipality:

DRINKING WATER SAMPLES (POTABLE WATER FOR HUMAN CONSUMPTION) MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

RECORD OF SITE CONDITION (RSC) ☐ YES ☐ NO

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	# OF BOTTLES	MATRIX	PHC F1-F4 BTEX	O.Reg153 Metals (ICP & hydride metals)	Hg ☐ B-HWS ☐ Cr(VI)	O.Reg 153 VOCs	Metals & Inorganics	COMMENTS: Field Filtered (F) Preserved (P)
1	MW1	July 27/16	1500	11	GW	X			X	X	
2	MW2	↓	1530	11	↓	X			X	X	
3	MW3		1600	11		X			X	X	
4	Dup1		1500	2					X		
5	Trip Blank		/	~~2~~					X		
6											
7											
8											
9											
10											

Non-Filtered

Observations/Comments/Special Instructions

Sampled By (NAME): Vincent Chan Signature: Date: 07/27/16 (mm/dd/yy)
Relinquished by (NAME): Signature: Date: ___/___/___ (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.0
Date of Issue: 01 June, 2014

SGS

SAMPLE INTEGRITY REPORT

Project Number: 1512-5086E

ONTARIO REGULATION 153/04

SGS Sample ID JUL 15476

Date / Time Sampled July 22/16

Client Sample ID See CofC

	ALL
Sample Submission General Sample Integrity Violations	
Temperature >10 C upon receipt if not sampled same day	☑
No evidence of cooling trend initiated if sampled same day	☐
Chain of Custody not submitted	☐
Chain of Custody incomplete	☑
Chain of Custody not signed / dated	☑
Chain of Custody not a current version	☐
Bottles / Samples listed on CoC but not received	☐
Bottles / Samples received but not listed on the CoC	☐
Sample container received empty	☐

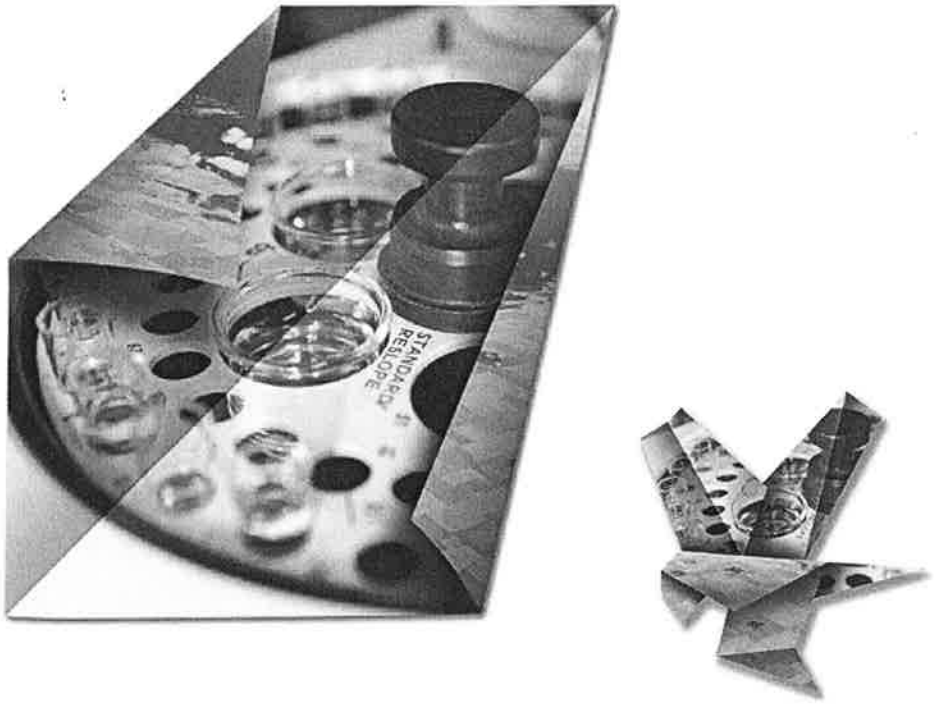
Sample Specific Sample Integrity Violations							
Sample received past hold time	☐	☐	☐	☐	☐	☐	☐
Incorrect preservation (including no preservation where required)	☐	☐	☐	☐	☐	☐	☐
Headspace present in VOC vial (aqueous)	☐	☐	☐	☐	☐	☐	☐
Sample(s) received frozen	☐	☐	☐	☐	☐	☐	☐
Bottle(s) broken or damaged in transport	☐	☐	☐	☐	☐	☐	☐
Discrepancy between sample label and chain of custody	☐	☐	☐	☐	☐	☐	☐
Analysis requirements absent / unclear	☐	☐	☐	☐	☐	☐	☐
Missing or incorrect sample label(s)	☐	☐	☐	☐	☐	☐	☐
Inappropriate sample container used	☐	☐	☐	☐	☐	☐	☐
Insufficient number of bottles received	☐	☐	☐	☐	☐	☐	☐
Insufficient sample volume	☐	☐	☐	☐	☐	☐	☐
Sample contains multiple phases	☐	☐	☐	☐	☐	☐	☐

Sediment Log							
Groundwater samples contain visible sediment / particulate	All ☑	☐	☐	☐	☐	☐	☐
Groundwater contains greater than 1cm of sediment / particulate matter in bottle	MW1 ☑	☐	☐	☐	☐	☐	☐

Additional Comments/Remarks:

No issues upon receipt ☐ Initials: KH

SGS



FINAL REPORT

CA15253-AUG16 R

1512-S086E

Prepared for

Soil Engineers Ltd.

FINAL REPORT

CA15253-AUG16 R

First Page

CLIENT DETAILS		LABORATORY DETAILS	
Client	Soil Engineers Ltd.	Project Specialist	Deanna Edwards, B.Sc, C.Chem
		Laboratory	SGS Canada Inc.
Address	100 Nugget Ave Scarborough, ON M1S 3A7.	Address	185 Concession St., Lakefield ON, K0L 2H0
Contact	Laila Torabansari	Telephone	705-652-2000
Telephone	416-754-8515	Facsimile	705-652-6365
Facsimile	416-754-8516	Email	deanna.edwards@sgs.com
Email	laila@soilengineersltd.com; ebeyene@soilengineersltd.com	SGS Reference	CA15253-AUG16
Project	1512-S086E	Received	08/15/2016
Order Number		Approved	08/19/2016
Samples	Ground Water (3)	Report Number	CA15253-AUG16 R
		Date Reported	08/19/2016

COMMENTS

CCME Method Compliance: Analyses were conducted using analytical procedures that comply with the Reference Method for the CWS for Petroleum Hydrocarbons in Soil and have been validated for use at the SGS laboratory, Lakefield, ON site.

Quality Compliance: Instrument performance / calibration quality criteria were met and extraction and analysis limits for holding times were met.

nC6 and nC10 response factors within 30% of response factor for toluene: YES

nC10, nC16 and nC34 response factors within 10% of the average response for the three compounds: YES

C50 response factors within 70% of nC10 + nC16 + nC34 average: YES

Linearity is within 15%: YES

F4G - gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

The results for F4 and F4G are both reported and the greater of the two values is to be used in application to the CWS PHC.

Temperature of Samples uon receipt 23 degrees C

Cooling Agent Present

Custody seal not present

SIGNATORIES

Deanna Edwards, B.Sc, C.Chem

TABLE OF CONTENTS

RESULTS

	Sample Number	7	8	9	
	Sample Name	MW1	MW2	MW3	
	Sample Matrix	Ground Water	Ground Water	Ground Water	
	Sampled By	Vincent	Vincent	Vincent	
	Sample Date	14/08/2016	14/08/2016	14/08/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**L1**

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

Anions by IC

Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001

Chloride	µg/L	200	---	---	9900	790000

Conductivity

Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006

Conductivity	mS/cm	0.002	---	---	1.1	

Cyanide by SFA

Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005

Cyanide (free)	µg/L	2	---	---	< 2	5

Hexavalent Chromium by IC

Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008

Chromium VI	µg/L	0.2	---	---	< 0.2	25

Mercury by CVAAS

Method: SM 3112/SM 3112B | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004

Mercury (total)	µg/L	0.01	---	---	< 0.01	0.1

Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-006

Barium	µg/L	0.02	127	29.1	47.4	610
Beryllium	µg/L	0.007	< 0.007	< 0.007	< 0.007	0.5
Boron	µg/L	2	286	134	565	1700
Cadmium	µg/L	0.003	0.020	0.015	0.012	0.5
Chromium	µg/L	0.03	0.27	0.43	0.21	11
Cobalt	µg/L	0.004	2.97	0.636	0.925	3.8
Copper	µg/L	0.02	0.40	0.84	0.34	5
Lead	µg/L	0.01	0.07	0.02	0.04	1.9
Molybdenum	µg/L	0.01	6.16	3.11	4.36	23
Nickel	µg/L	0.1	2.6	2.0	0.6	14
Silver	µg/L	0.002	< 0.002	< 0.002	< 0.002	0.3
Thallium	µg/L	0.005	0.014	0.021	0.013	0.5
Uranium	µg/L	0.002	5.26	6.47	0.800	8.9
Vanadium	µg/L	0.01	0.29	0.14	0.17	3.9
Zinc	µg/L	2	< 2	4	2	160
Antimony	µg/L	0.02	0.75	0.13	0.30	1.5
Arsenic	µg/L	0.2	3.3	0.4	13.1	13

RESULTS

	Sample Number	7	8	9	
	Sample Name	MW1	MW2	MW3	
	Sample Matrix	Ground Water	Ground Water	Ground Water	
	Sampled By	Vincent	Vincent	Vincent	
	Sample Date	14/08/2016	14/08/2016	14/08/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**L1**

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

Metals in aqueous samples - ICP-MS (continued)

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-006

Selenium	µg/L	0.04	2.35	0.57	0.07	5
Sodium	µg/L	10	27400	25300	41500	490000

Petroleum Hydrocarbons (F1)

Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

CCME F1 (C6-C10)	µg/L	25	---	< 25	---	420
CCME F1-BTEX (C6-C10)	µg/L	25	---	< 25	---	

Petroleum Hydrocarbons (F2-F4)

Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010

CCME F2 (C10-C16)	µg/L	100	---	< 100	---	150
CCME F3 (C16-C34)	µg/L	200	---	< 200	---	500
CCME F4 (C34-C50)	µg/L	200	---	< 200	---	500
Chromatogram returned to baseline at nC50	Yes / No	-	---	YES	---	

pH

Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006

pH	no unit	0.05	---	---	7.95	

Sodium adsorption ratio (SAR)

Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021

Sodium Adsorption Ratio	---	0.01	---	---	0.77	

Volatile Organics

Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

Acetone	µg/L	30	52	---	---	2700
Bromomethane	µg/L	0.5	< 0.5	---	---	0.89
Carbon tetrachloride	µg/L	0.2	< 0.2	---	---	0.2
Chlorobenzene	µg/L	0.5	< 0.5	---	---	0.5
Chloroform	µg/L	0.5	< 0.5	---	---	2
1,2-Dichlorobenzene	µg/L	0.5	< 0.5	---	---	0.5
1,3-Dichlorobenzene	µg/L	0.5	< 0.5	---	---	0.5
1,4-Dichlorobenzene	µg/L	0.5	< 0.5	---	---	0.5
Dichlorodifluoromethane	µg/L	2.0	< 2	---	---	590
1,1-Dichloroethane	µg/L	0.5	< 0.5	---	---	0.5
1,2-Dichloroethane	µg/L	0.5	< 0.5	---	---	0.5

RESULTS

	Sample Number	7	8	9	
	Sample Name	MW1	MW2	MW3	
	Sample Matrix	Ground Water	Ground Water	Ground Water	
	Sampled By	Vincent	Vincent	Vincent	
	Sample Date	14/08/2016	14/08/2016	14/08/2016	
Parameter	**Units**	**RL**	**Result**	**Result**	**Result**	**L1**

L1 = REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED

Volatile Organics (continued)

Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004

1,1-Dichloroethylene	µg/L	0.5	< 0.5	---	---	0.5
trans-1,2-Dichloroethene	µg/L	0.5	< 0.5	---	---	1.6
cis-1,2-Dichloroethene	µg/L	0.5	< 0.5	---	---	1.6
1,2-Dichloropropane	µg/L	0.5	< 0.5	---	---	0.5
cis-1,3-Dichloropropene	µg/L	0.5	< 0.5	---	---	
trans-1,3-Dichloropropene	µg/L	0.5	< 0.5	---	---	
1,3-dichoropropene (total)	µg/L	0.5	< 0.5	---	---	0.5
Ethylenedibromide	µg/L	0.2	< 0.2	---	---	0.2
n-Hexane	µg/L	1.0	< 1	---	---	5
Methyl ethyl ketone	µg/L	20	< 20	---	---	400
Methyl Isobutyl Ketone	µg/L	20	< 20	---	---	640
Methyl-t-butyl Ether	µg/L	2.0	< 2	---	---	15
Methylene Chloride	µg/L	0.5	< 0.5	---	---	5
Styrene	µg/L	0.5	< 0.5	---	---	0.5
Tetrachloroethylene (perchloroethylene)	µg/L	0.5	< 0.5	---	---	0.5
1,1,1,2-Tetrachloroethane	µg/L	0.5	< 0.5	---	---	1.1
1,1,2,2-Tetrachloroethane	µg/L	0.5	< 0.5	---	---	0.5
1,1,1-Trichloroethane	µg/L	0.5	< 0.5	---	---	0.5
1,1,2-Trichloroethane	µg/L	0.5	< 0.5	---	---	0.5
Trichloroethylene	µg/L	0.5	5.5	---	---	0.5
Trichlorofluoromethane	µg/L	5.0	< 5	---	---	150
Vinyl Chloride	µg/L	0.2	< 0.2	---	---	0.5
Benzene	µg/L	0.5	< 0.5	< 0.5	---	0.5
Ethylbenzene	µg/L	0.5	< 0.5	< 0.5	---	0.5
Toluene	µg/L	0.5	< 0.5	< 0.5	---	0.8
Xylene (total)	µg/L	0.5	< 0.5	< 0.5	---	72
m/p-xylene	µg/L	0.5	< 0.5	< 0.5	---	
o-xylene	µg/L	0.5	< 0.5	< 0.5	---	
Bromodichloromethane	µg/L	0.5	< 0.5	---	---	2
Bromoform	µg/L	0.5	< 0.5	---	---	5
Dibromochloromethane	µg/L	0.5	< 0.5	---	---	2
Surr 1,2-Dichloroethane-d4	Surr Rec %	-	101	---	---	
Surr 2-Bromo-1-Chloropropane	Surr Rec %	-	96	---	---	
Surr 4-Bromofluorobenzene	Surr Rec %	-	95	---	---	

EXCEEDANCE SUMMARY

Parameter	Method	Units	Result	REG153 / GROUND WATER / COARSE - TABLE 1 - All Types of Property Uses - UNDEFINED L1
MW1				
Trichloroethylene	EPA 5030B/8260C	µg/L	5.5	0.50
MW3				
Arsenic	SM 3030/EPA 200.8	µg/L	13.1	13

HOLDING TIME SUMMARY

Sample Name	QC Batch Reference	Sample Number	Sampled	Received	Extracted/ Prepared	Analysed	Holding Time	Approved
Anions by IC								
Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENV]IC-LAK-AN-001								
MW3	DIO0277-AUG16	9	08/14/2016	08/15/2016	08/16/2016	08/16/2016	09/11/2016	08/19/2016
Conductivity								
Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006								
MW3	EWL0237-AUG16	9	08/14/2016	08/15/2016	08/16/2016	08/16/2016	09/13/2016	08/18/2016
Cyanide by SFA								
Method: SM 4500 | Internal ref.: ME-CA-[ENV]SFA-LAK-AN-005								
MW3	SKA0116-AUG16	9	08/14/2016	08/15/2016	08/16/2016	08/16/2016	08/28/2016	08/16/2016
Hexavalent Chromium by IC								
Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008								
MW3	DIO0263-AUG16	9	08/14/2016	08/15/2016	08/18/2016	08/18/2016	09/11/2016	08/19/2016
Mercury by CVAAS								
Method: SM 3112/SM 3112B | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004								
MW3	EHG0022-AUG16	9	08/14/2016	08/15/2016	08/17/2016	08/17/2016	09/11/2016	08/17/2016
Metals in aqueous samples - ICP-MS								
Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-006								
MW1	EMS0072-AUG16	7	08/14/2016	08/15/2016	08/16/2016	08/16/2016	10/13/2016	08/17/2016
MW2	EMS0072-AUG16	8	08/14/2016	08/15/2016	08/16/2016	08/16/2016	10/13/2016	08/17/2016
MW3	EMS0072-AUG16	9	08/14/2016	08/15/2016	08/16/2016	08/16/2016	10/13/2016	08/17/2016
Petroleum Hydrocarbons (F1)								
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010								
MW2	GCM0147-AUG16	8	08/14/2016	08/15/2016	08/17/2016	08/17/2016	08/28/2016	08/19/2016
Petroleum Hydrocarbons (F2-F4)								
Method: CCME Tier 1 | Internal ref.: ME-CA-[ENV]GC-LAK-AN-010								
MW2	GCM0152-AUG16	8	08/14/2016	08/15/2016	08/17/2016	08/17/2016	08/28/2016	08/19/2016
pH								
Method: SM 4500 | Internal ref.: ME-CA-[ENV]EWL-LAK-AN-006								
MW3	EWL0226-AUG16	9	08/14/2016	08/15/2016	08/16/2016	08/16/2016	09/11/2016	08/16/2016
Sodium adsorption ratio (SAR)								
Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-[ENV]ARD-LAK-AN-021								
MW3		9	08/14/2016	08/15/2016	08/17/2016	08/17/2016	02/10/2017	08/17/2016
Volatile Organics								
Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004								
MW1	GCM0131-AUG16	7	08/14/2016	08/15/2016	08/16/2016	08/16/2016	08/28/2016	08/16/2016

HOLDING TIME SUMMARY

Sample Name	QC Batch Reference	Sample Number	Sampled	Received	Extracted/ Prepared	Analysed	Holding Time	Approved
Volatile Organics (continued)								
Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENV]GC-LAK-AN-004								
MW2	GCM0131-AUG16	8	08/14/2016	08/15/2016	08/16/2016	08/16/2016	08/28/2016	08/16/2016

QC SUMMARY

Anions by IC

Method: EPA300/MA300-Ions1.3 | Internal ref.: ME-CA-[ENVIIC-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
Chloride	DIO0220-AUG16	µg/L	200	<200	NV	20	101	80	120	NV	75	125
Chloride	DIO0277-AUG16	µg/L	200	<200	1	20	96	80	120	107	75	125

Conductivity

Method: EPA 6010/SM 2510 | Internal ref.: ME-CA-[ENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
Conductivity	EWL0237-AUG16	mS/cm	0.0020	<0.002	0	10	99	90	110	NA		

Cyanide by SFA

Method: SM 4500 | Internal ref.: ME-CA-[ENVISFA-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
Cyanide (free)	SKA0116-AUG16	µg/L	2	<2	ND	10	98	90	110	102	75	125

QC SUMMARY

Hexavalent Chromium by IC

Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-[ENV]IC-LAK-AN-008

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Chromium VI	DIO0263-AUG16	ug/L	0.20	<0.2	16	20	94	80	120	90	75	125

Mercury by CVAAS

Method: SM 3112/SM 3112B | Internal ref.: ME-CA-[ENV]SPE-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Mercury (total)	EHG0022-AUG16	ug/L	0.010	<0.01	ND	20	80	90	110	75	70	130

QC SUMMARY

Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-IENVISPE-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Silver	EMS0072-AUG16	µg/L	0.0020	<0.002	ND	20	98	90	110	85	70	130
Arsenic	EMS0072-AUG16	µg/L	0.20	<0.2	1	20	95	90	110	83	70	130
Uranium	EMS0072-AUG16	µg/L	0.0020	<0.002	8	20	97	90	110	73	70	130
Vanadium	EMS0072-AUG16	µg/L	0.010	<0.01	13	20	92	90	110	94	70	130
Zinc	EMS0072-AUG16	µg/L	2	<2	ND	20	93	90	110	73	70	130
Barium	EMS0072-AUG16	µg/L	0.020	<0.02	1	20	101	90	110	NV	70	130
Beryllium	EMS0072-AUG16	µg/L	0.0070	<0.007	ND	20	94	90	110	110	70	130
Boron	EMS0072-AUG16	µg/L	2	<2	4	20	97	90	110	NV	70	130
Cadmium	EMS0072-AUG16	µg/L	0.0030	<0.003	NV	20	94	90	110	100	70	130
Cobalt	EMS0072-AUG16	µg/L	0.0040	<0.004	0	20	90	90	110	83	70	130
Chromium	EMS0072-AUG16	µg/L	0.030	<0.03	14	20	92	90	110	92	70	130
Copper	EMS0072-AUG16	µg/L	0.020	<0.02	4	20	97	90	110	95	70	130
Molybdenum	EMS0072-AUG16	µg/L	0.010	<0.01	3	20	107	90	110	88	70	130
Sodium	EMS0072-AUG16	µg/L	10	<10	0	20	96	90	110	NV	70	130
Nickel	EMS0072-AUG16	µg/L	0.10	<0.1	7	20	94	90	110	81	70	130
Lead	EMS0072-AUG16	µg/L	0.010	<0.01	1	20	99	90	110	90	70	130
Antimony	EMS0072-AUG16	µg/L	0.020	<0.02	0	20	101	90	110	93	70	130
Selenium	EMS0072-AUG16	µg/L	0.040	<0.04	7	20	103	90	110	NV	70	130
Thallium	EMS0072-AUG16	µg/L	0.0050	<0.005	8	20	97	90	110	103	70	130

QC SUMMARY

Metals in aqueous samples - ICP-OES

Method: MOE 4696e01/EPA 6010 | Internal ref.: ME-CA-IENVISPE-LAK-AN-003

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
SAR Calcium	EMS0072-AUG16	mg/L	0.020	<0.02	1	20	101	80	120	NV	70	130
SAR Magnesium	EMS0072-AUG16	mg/L	0.0030	<0.003	0	20	96	80	120	NV	70	130
SAR Sodium	EMS0072-AUG16	mg/L	0.010	<0.01	0	20	96	80	120	NV	70	130

Petroleum Hydrocarbons (F1)

Method: CCME Tier 1 | Internal ref.: ME-CA-IENVIGC-LAK-AN-010

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
CCME F1 (C6-C10)	GCM0147-AUG16	µg/L	25	<25	ND	30	97	60	140	NV	60	140

QC SUMMARY

Petroleum Hydrocarbons (F2-F4)

Method: CCME Tier 1 | Internal ref.: ME-CA-[ENVIGC-LAK-AN-010

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
CCME F2 (C10-C16)	GCM0152-AUG16	µg/L	100	<100	NSS	30	98	60	140	NSS	60	140
CCME F3 (C16-C34)	GCM0152-AUG16	µg/L	200	<200	NSS	30	98	60	140	NSS	60	140
CCME F4 (C34-C50)	GCM0152-AUG16	µg/L	200	<200	NSS	30	98	60	140	NSS	60	140

pH

Method: SM 4500 | Internal ref.: ME-CA-[ENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
pH	EWL0226-AUG16	no unit	0.050	NA	1		101			NA		

QC SUMMARY

Volatile Organics

Method: EPA 5030B/8260C | Internal ref.: ME-CA-[ENVIGC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
1,1,1,2-Tetrachloroethane	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	89	60	130	104	50	140
1,1,1-Trichloroethane	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	89	60	130	104	50	140
1,2-Dichloropropane	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	90	60	130	103	50	140
1,3-Dichlorobenzene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	89	60	130	103	50	140
1,4-Dichlorobenzene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	89	60	130	103	50	140
Acetone	GCM0131-AUG16	µg/L	30	<30	ND	30	89	60	130	99	50	140
Benzene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	90	60	130	106	50	140
Bromodichloromethane	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	87	60	130	101	50	140
Bromoform	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	88	60	130	103	50	140
Bromomethane	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	89	50	140	101	50	140
Carbon tetrachloride	GCM0131-AUG16	µg/L	0.20	<0.2	ND	30	88	60	130	105	50	140
Chlorobenzene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	89	60	130	103	50	140
Chloroform	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	89	60	130	105	50	140
cis-1,2-Dichloroethene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	90	60	130	106	50	140
cis-1,3-Dichloropropene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	90	60	130	102	50	140
Dibromochloromethane	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	89	60	130	101	50	140
Dichlorodifluoromethane	GCM0131-AUG16	µg/L	2.0	<2	ND	30	90	50	140	104	50	140
Ethylbenzene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	88	60	130	104	50	140
Ethylenedibromide	GCM0131-AUG16	µg/L	0.20	<0.2	ND	30	90	60	130	103	50	140
n-Hexane	GCM0131-AUG16	µg/L	1.0	<1	ND	30	94	60	130	107	50	140

QC SUMMARY

Volatile Organics (continued)

Method: EPA 5030B/8260C | Internal ref.: ME-CA-IENVIGC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High	Spike Recovery (%)	Recovery Limits (%) Low	Recovery Limits (%) High
m/p-xylene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	90	60	130	104	50	140
Methyl ethyl ketone	GCM0131-AUG16	µg/L	20	<20	ND	30	92	60	130	103	50	140
Methyl Isobutyl Ketone	GCM0131-AUG16	µg/L	20	<20	ND	30	93	50	140	105	50	140
Methyl-t-butyl Ether	GCM0131-AUG16	µg/L	2.0	<2	ND	30	91	60	130	104	50	140
Methylene Chloride	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	91	60	130	106	50	140
o-xylene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	88	60	130	101	50	140
Styrene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	90	60	130	104	50	140
Tetrachloroethylene (perchloroethylene)	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	90	60	130	103	50	140
Toluene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	88	60	130	103	50	140
trans-1,2-Dichloroethene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	91	60	130	106	50	140
trans-1,3-Dichloropropene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	92	60	130	103	50	140
Trichloroethylene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	90	60	130	103	50	140
Trichlorofluoromethane	GCM0131-AUG16	µg/L	5.0	<5	ND	30	88	50	140	103	50	140
Vinyl Chloride	GCM0131-AUG16	µg/L	0.20	<0.2	ND	30	88	60	130	104	50	140
1,1,2,2-Tetrachloroethane	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	90	60	130	105	50	140
1,1,2-Trichloroethane	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	90	60	130	104	50	140
1,1-Dichloroethane	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	90	60	130	106	50	140
1,1-Dichloroethylene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	93	60	130	109	50	140
1,2-Dichlorobenzene	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	90	60	130	104	50	140
1,2-Dichloroethane	GCM0131-AUG16	µg/L	0.50	<0.5	ND	30	89	60	130	106	50	140

QC SUMMARY

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

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

Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

Multielement Scan Qualifier: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

Duplicate Qualifier: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Matrix Spike Qualifier: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

LEGEND

FOOTNOTES

NSS Insufficient sample for analysis.
RL Reporting Limit.
↑ Reporting limit raised.
↓ Reporting limit lowered.
NA The sample was not analysed for this analyte
ND Non Detect

Samples analysed as received. Solid samples expressed on a dry weight basis. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

-- End of Analytical Report --

SGS

Request for Laboratory Services and CHAIN OF CUSTODY

No:

Page 1 of 1

SGS Environmental Services - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Toll Free: 877-747-7658 Fax: 705-652-6365
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361 Web: www.ca.sgs.com

Received By: Jeanette Baker
Received Date (mm/dd/yyyy): 08 15 16 (mm\dd\yy)
Received Time: ____ : ____

Laboratory Information Section - Lab Use only
Received By (signature): Jeanette Baker
Custody Seal Present: ☐
Custody Seal Intact: ☐
Cooling Agent Present: ☑
Temperature Upon Receipt (°C): 23X3
LAB LIMS #: Aug 15253

REPORT INFORMATION

Company: Soil Engineers Ltd.
Contact: Laila.
Address: 100 Nugget Ave, Toronto.
Phone: 416 754 8515
Fax:
Email: laila@soilengineersltd.com

INVOICE INFORMATION

☑ (same as Report Information)
Company:
Contact:
Address:
Phone:
Email:

PROJECT INFORMATION

Quotation #:
P.O. #:
Project #: TBD 1512-5086 E
Site Location/ID: 6611 2nd Line

TURNAROUND TIME (TAT) REQUIRED

☑ Regular TAT (5-7days)
TAT's are quoted in business days (exclude statutory holidays & weekends).
Samples received after 3pm or on weekends : TAT begins the next business day

RUSH TAT (Additional Charges May Apply) ☐ 1 Day ☐ 2 Days ☐ 3-4 Days

PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

Specify Due Date:
Rush Confirmation ID:

DRINKING WATER SAMPLES (POTABLE WATER FOR HUMAN CONSUMPTION) MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

REGULATIONS

Regulation 153 (2011):
☑ Table 1 ☐ Res/Park ☐ Soil Texture: ☐ Coarse
☐ Table 2 ☐ Ind/Com ☐ Medium
☐ Table 3 ☐ Agri/Other ☐ Fine
☐ Table ____

Other Regulations:
☐ Reg 347/558 (3 Day min TAT)
☐ PWQO ☐ MMER
☐ CCME ☐ Other:
☐ MISA

Sewer By-Law:
☐ Sanitary
☐ Storm
Municipality:

RECORD OF SITE CONDITION (RSC) ☐ YES ☐ NO

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	# OF BOTTLES	MATRIX	PHC F1-F4 BTEX	O.Reg 153 (Metals (ICP & hydride metals))	☐Hg ☐B-HWS ☐Cr(VI)	O.Reg 153 VOCs	Metals & Inorganics	COMMENTS: Field Filtered (F) Preserved (P)
1	MW1	Aug 14/16	1600	3	GW		X		X		
2	MW2	↓	1530	4		X	X				
3	MW3		1500	6						X	
4											
5											
6											
7											
8											
9											
10											

Observations/Comments/Special Instructions

Sampled By (NAME): Vincent Chong
Signature:
Date: 08/14/16 (mm/dd/yy)

Relinquished by (NAME):
Signature:
Date: ____/____/____ (mm/dd/yy)

Pink Copy - Client
Yellow & White Copy - SGS

Revision #: 1.0
Date of Issue: 01 June, 2014

SGS

SAMPLE INTEGRITY REPORT

Project Number:

ONTARIO REGULATION 153/04

SGS Sample ID: Aug15254
Date / Time Sampled: Aug 14/16
Client Sample ID:

	ALL
Sample Submission General Sample Integrity Violations	
Temperature >10 C upon receipt if not sampled same day	☐
No evidence of cooling trend initiated if sampled same day	☐
Chain of Custody not submitted	☐
Chain of Custody incomplete	☐
Chain of Custody not signed / dated	☐
Chain of Custody not a current version	☐
Bottles / Samples listed on CoC but not received	☐
Bottles / Samples received but not listed on the CoC	☐
Sample container received empty	☐

Sample Specific Sample Integrity Violations							
Sample received past hold time	☐	☐	☐	☐	☐	☐	☐
Incorrect preservation (including no preservation where required)	☐	☐	☐	☐	☐	☐	☐
Headspace present in VOC vial (aqueous)	☐	☐	☐	☐	☐	☐	☐
Sample(s) received frozen	☐	☐	☐	☐	☐	☐	☐
Bottle(s) broken or damaged in transport	☐	☐	☐	☐	☐	☐	☐
Discrepancy between sample label and chain of custody	☐	☐	☐	☐	☐	☐	☐
Analysis requirements absent / unclear	☐	☐	☐	☐	☐	☐	☐
Missing or incorrect sample label(s)	☐	☐	☐	☐	☐	☐	☐
Inappropriate sample container used	☐	☐	☐	☐	☐	☐	☐
Insufficient number of bottles received	☐	☐	☐	☐	☐	☐	☐
Insufficient sample volume	☐	☐	☐	☐	☐	☐	☐
Sample contains multiple phases	☐	☐	☐	☐	☐	☐	☐
Sediment Log							
Groundwater samples contain visible sediment / particulate	☐	☐	☐	☐	☐	☐	☐
Groundwater contains greater than 1cm of sediment / particulate matter in bottle	☐	☐	☐	☐	☐	☐	☐

Additional Comments/Remarks:

No issues upon receipt ☐ Initials:

Maxxam
A Bureau Veritas Group Company

Your Project #: 1512-S086E
Your C.O.C. #: 613136-01-01

Attention:Laila Torabansari

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

Report Date: 2017/06/05
Report #: R4499361
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7A9427
Received: 2017/05/29, 17:33

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	2	N/A	2017/06/02		EPA 8260C m
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2017/06/03	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	1	2017/06/03	2017/06/03	CAM SOP-00316	CCME PHC-CWS m
Mercury	1	2017/06/05	2017/06/05	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	4	N/A	2017/06/01	CAM SOP-00447	EPA 6020B m
Volatile Organic Compounds in Water	2	N/A	2017/06/01	CAM SOP-00228	EPA 8260C m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam 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.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam 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 Maxxam, unless otherwise agreed in writing.

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.

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 Maxxam 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.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam
A Bureau Veritas Group Company

Your Project #: 1512-S086E
Your C.O.C. #: 613136-01-01

Attention:Laila Torabansari

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

Report Date: 2017/06/05
Report #: R4499361
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7A9427
Received: 2017/05/29, 17:33

Encryption Key

Ashton Gibson
Project Manager
05 Jun 2017 17:08:02

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Antonella Brasil, Senior Project Manager
Email: ABrasil@maxxam.ca
Phone# (905)817-5817

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Maxxam
A Bureau Veritas Group Company

Maxxam Job #: B7A9427
Report Date: 2017/06/05

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: JC

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		ELP260		
Sampling Date		2017/05/29 16:00		
COC Number		613136-01-01		
	UNITS	MW1	RDL	QC Batch
Metals				
Mercury (Hg)	ug/L	ND	0.1	5012735

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B7A9427
Report Date: 2017/06/05

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: JC

O.REG 153 DISSOLVED ICPMS METALS (WATER)

Maxxam ID		ELP260	ELP261	ELP262	ELP263		
Sampling Date		2017/05/29 16:00	2017/05/29 16:55	2017/05/29 12:30	2017/05/29		
COC Number		613136-01-01	613136-01-01	613136-01-01	613136-01-01		
	UNITS	MW1	MW2	MW3	DUP-W1	RDL	QC Batch
Metals							
Dissolved Antimony (Sb)	ug/L	ND	ND	0.54	ND	0.50	5006407
Dissolved Arsenic (As)	ug/L	ND	ND	8.6	9.2	1.0	5006407
Dissolved Barium (Ba)	ug/L	65	21	40	41	2.0	5006407
Dissolved Beryllium (Be)	ug/L	ND	ND	ND	ND	0.50	5006407
Dissolved Boron (B)	ug/L	140	84	610	620	10	5006407
Dissolved Cadmium (Cd)	ug/L	ND	ND	ND	ND	0.10	5006407
Dissolved Chromium (Cr)	ug/L	ND	ND	ND	ND	5.0	5006407
Dissolved Cobalt (Co)	ug/L	ND	ND	0.58	0.67	0.50	5006407
Dissolved Copper (Cu)	ug/L	1.3	ND	ND	ND	1.0	5006407
Dissolved Lead (Pb)	ug/L	ND	ND	ND	ND	0.50	5006407
Dissolved Molybdenum (Mo)	ug/L	3.2	1.4	4.7	4.7	0.50	5006407
Dissolved Nickel (Ni)	ug/L	1.5	1.2	ND	ND	1.0	5006407
Dissolved Selenium (Se)	ug/L	ND	ND	ND	ND	2.0	5006407
Dissolved Silver (Ag)	ug/L	ND	ND	ND	ND	0.10	5006407
Dissolved Thallium (Tl)	ug/L	ND	ND	ND	ND	0.050	5006407
Dissolved Uranium (U)	ug/L	4.8	6.0	1.4	1.4	0.10	5006407
Dissolved Vanadium (V)	ug/L	ND	ND	ND	ND	0.50	5006407
Dissolved Zinc (Zn)	ug/L	ND	ND	ND	ND	5.0	5006407

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam
A Bureau Veritas Group Company

Maxxam Job #: B7A9427
Report Date: 2017/06/05

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: JC

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		ELP261		
Sampling Date		2017/05/29 16:55		
COC Number		613136-01-01		
	UNITS	MW2	RDL	QC Batch
BTEX & F1 Hydrocarbons				
Benzene	ug/L	ND	0.20	5011352
Toluene	ug/L	ND	0.20	5011352
Ethylbenzene	ug/L	ND	0.20	5011352
o-Xylene	ug/L	ND	0.20	5011352
p+m-Xylene	ug/L	ND	0.40	5011352
Total Xylenes	ug/L	ND	0.40	5011352
F1 (C6-C10)	ug/L	ND	25	5011352
F1 (C6-C10) - BTEX	ug/L	ND	25	5011352
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/L	ND	100	5012022
F3 (C16-C34 Hydrocarbons)	ug/L	ND	200	5012022
F4 (C34-C50 Hydrocarbons)	ug/L	ND	200	5012022
Reached Baseline at C50	ug/L	Yes		5012022
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	104		5011352
4-Bromofluorobenzene	%	93		5011352
D10-Ethylbenzene	%	91		5011352
D4-1,2-Dichloroethane	%	89		5011352
o-Terphenyl	%	99		5012022

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam
A Bureau Veritas Group Company

Maxxam Job #: B7A9427
Report Date: 2017/06/05

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: JC

O.REG 153 VOCS BY HS (WATER)

Maxxam ID		ELP260	ELP264		
Sampling Date		2017/05/29 16:00			
COC Number		613136-01-01	613136-01-01		
	UNITS	MW1	TRIP BLANK	RDL	QC Batch
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/L	ND	ND	0.50	5004034
Volatile Organics					
Acetone (2-Propanone)	ug/L	ND	ND	10	5003242
Benzene	ug/L	ND	ND	0.20	5003242
Bromodichloromethane	ug/L	ND	ND	0.50	5003242
Bromoform	ug/L	ND	ND	1.0	5003242
Bromomethane	ug/L	ND	ND	0.50	5003242
Carbon Tetrachloride	ug/L	ND	ND	0.20	5003242
Chlorobenzene	ug/L	ND	ND	0.20	5003242
Chloroform	ug/L	ND	ND	0.20	5003242
Dibromochloromethane	ug/L	ND	ND	0.50	5003242
1,2-Dichlorobenzene	ug/L	ND	ND	0.50	5003242
1,3-Dichlorobenzene	ug/L	ND	ND	0.50	5003242
1,4-Dichlorobenzene	ug/L	ND	ND	0.50	5003242
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	1.0	5003242
1,1-Dichloroethane	ug/L	ND	ND	0.20	5003242
1,2-Dichloroethane	ug/L	ND	ND	0.50	5003242
1,1-Dichloroethylene	ug/L	ND	ND	0.20	5003242
cis-1,2-Dichloroethylene	ug/L	ND	ND	0.50	5003242
trans-1,2-Dichloroethylene	ug/L	ND	ND	0.50	5003242
1,2-Dichloropropane	ug/L	ND	ND	0.20	5003242
cis-1,3-Dichloropropene	ug/L	ND	ND	0.30	5003242
trans-1,3-Dichloropropene	ug/L	ND	ND	0.40	5003242
Ethylbenzene	ug/L	ND	ND	0.20	5003242
Ethylene Dibromide	ug/L	ND	ND	0.20	5003242
Hexane	ug/L	ND	ND	1.0	5003242
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	2.0	5003242
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	10	5003242
Methyl Isobutyl Ketone	ug/L	ND	ND	5.0	5003242
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	0.50	5003242
Styrene	ug/L	ND	ND	0.50	5003242
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	0.50	5003242
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	0.50	5003242
Tetrachloroethylene	ug/L	ND	ND	0.20	5003242

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam
A Bureau Veritas Group Company

Maxxam Job #: B7A9427
Report Date: 2017/06/05

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: JC

O.REG 153 VOCS BY HS (WATER)

Maxxam ID		ELP260	ELP264		
Sampling Date		2017/05/29 16:00			
COC Number		613136-01-01	613136-01-01		
	UNITS	MW1	TRIP BLANK	RDL	QC Batch
Toluene	ug/L	ND	ND	0.20	5003242
1,1,1-Trichloroethane	ug/L	ND	ND	0.20	5003242
1,1,2-Trichloroethane	ug/L	ND	ND	0.50	5003242
Trichloroethylene	ug/L	ND	ND	0.20	5003242
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	0.50	5003242
Vinyl Chloride	ug/L	ND	ND	0.20	5003242
p+m-Xylene	ug/L	ND	ND	0.20	5003242
o-Xylene	ug/L	ND	ND	0.20	5003242
Total Xylenes	ug/L	ND	ND	0.20	5003242
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	94	94		5003242
D4-1,2-Dichloroethane	%	110	110		5003242
D8-Toluene	%	93	94		5003242

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam
A Bureau Veritas Group Company

Maxxam Job #: B7A9427
Report Date: 2017/06/05

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: JC

TEST SUMMARY

Maxxam ID: ELP260
Sample ID: MW1
Matrix: Water

Collected: 2017/05/29
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5004034	N/A	2017/06/02	Automated Statchk
Mercury	CV/AA	5012735	2017/06/05	2017/06/05	Ron Morrison
Dissolved Metals by ICPMS	ICP/MS	5006407	N/A	2017/06/01	Thao Nguyen
Volatile Organic Compounds in Water	GC/MS	5003242	N/A	2017/06/01	Xueming Jiang

Maxxam ID: ELP261
Sample ID: MW2
Matrix: Water

Collected: 2017/05/29
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	5011352	N/A	2017/06/03	Jiaxuan (Simon) Xi
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	5012022	2017/06/03	2017/06/03	(Kent) Maolin Li
Dissolved Metals by ICPMS	ICP/MS	5006407	N/A	2017/06/01	Thao Nguyen

Maxxam ID: ELP262
Sample ID: MW3
Matrix: Water

Collected: 2017/05/29
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	5006407	N/A	2017/06/01	Thao Nguyen

Maxxam ID: ELP263
Sample ID: DUP-W1
Matrix: Water

Collected: 2017/05/29
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	5006407	N/A	2017/06/01	Thao Nguyen

Maxxam ID: ELP264
Sample ID: TRIP BLANK
Matrix: Water

Collected:
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5004034	N/A	2017/06/02	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	5003242	N/A	2017/06/01	Xueming Jiang

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Maxxam Job #: B7A9427
Report Date: 2017/06/05

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: JC

GENERAL COMMENTS

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

Package 1	10.0°C

Results relate only to the items tested.

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Maxxam Job #: B7A9427
Report Date: 2017/06/05

QUALITY ASSURANCE REPORT

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: JC

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5003242	4-Bromofluorobenzene	2017/06/01	101	70 - 130	101	70 - 130	99	%		
5003242	D4-1,2-Dichloroethane	2017/06/01	103	70 - 130	98	70 - 130	101	%		
5003242	D8-Toluene	2017/06/01	102	70 - 130	104	70 - 130	96	%		
5011352	1,4-Difluorobenzene	2017/06/02	105	70 - 130	105	70 - 130	103	%		
5011352	4-Bromofluorobenzene	2017/06/02	92	70 - 130	94	70 - 130	94	%		
5011352	D10-Ethylbenzene	2017/06/02	90	70 - 130	91	70 - 130	90	%		
5011352	D4-1,2-Dichloroethane	2017/06/02	91	70 - 130	94	70 - 130	93	%		
5012022	o-Terphenyl	2017/06/03	104	60 - 130	103	60 - 130	102	%		
5003242	1,1,1,2-Tetrachloroethane	2017/06/01	101	70 - 130	94	70 - 130	ND, RDL=0.50	ug/L	NC	30
5003242	1,1,1-Trichloroethane	2017/06/01	99	70 - 130	93	70 - 130	ND, RDL=0.20	ug/L	NC	30
5003242	1,1,2,2-Tetrachloroethane	2017/06/01	112	70 - 130	100	70 - 130	ND, RDL=0.50	ug/L	NC	30
5003242	1,1,2-Trichloroethane	2017/06/01	105	70 - 130	94	70 - 130	ND, RDL=0.50	ug/L	NC	30
5003242	1,1-Dichloroethane	2017/06/01	104	70 - 130	96	70 - 130	ND, RDL=0.20	ug/L	NC	30
5003242	1,1-Dichloroethylene	2017/06/01	107	70 - 130	100	70 - 130	ND, RDL=0.20	ug/L	NC	30
5003242	1,2-Dichlorobenzene	2017/06/01	96	70 - 130	89	70 - 130	ND, RDL=0.50	ug/L	NC	30
5003242	1,2-Dichloroethane	2017/06/01	104	70 - 130	92	70 - 130	ND, RDL=0.50	ug/L	NC	30
5003242	1,2-Dichloropropane	2017/06/01	105	70 - 130	95	70 - 130	ND, RDL=0.20	ug/L	NC	30
5003242	1,3-Dichlorobenzene	2017/06/01	96	70 - 130	91	70 - 130	ND, RDL=0.50	ug/L	NC	30
5003242	1,4-Dichlorobenzene	2017/06/01	99	70 - 130	93	70 - 130	ND, RDL=0.50	ug/L	NC	30
5003242	Acetone (2-Propanone)	2017/06/01	110	60 - 140	105	60 - 140	ND, RDL=10	ug/L	NC	30
5003242	Benzene	2017/06/01	105	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L	NC	30
5003242	Bromodichloromethane	2017/06/01	105	70 - 130	95	70 - 130	ND, RDL=0.50	ug/L	NC	30
5003242	Bromoform	2017/06/01	102	70 - 130	91	70 - 130	ND, RDL=1.0	ug/L	NC	30
5003242	Bromomethane	2017/06/01	112	60 - 140	98	60 - 140	ND, RDL=0.50	ug/L	NC	30
5003242	Carbon Tetrachloride	2017/06/01	102	70 - 130	96	70 - 130	ND, RDL=0.20	ug/L	NC	30
5003242	Chlorobenzene	2017/06/01	106	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5003242	Chloroform	2017/06/01	101	70 - 130	93	70 - 130	ND, RDL=0.20	ug/L	NC	30
5003242	cis-1,2-Dichloroethylene	2017/06/01	108	70 - 130	99	70 - 130	ND, RDL=0.50	ug/L	NC	30
5003242	cis-1,3-Dichloropropene	2017/06/01	110	70 - 130	95	70 - 130	ND, RDL=0.30	ug/L	NC	30
5003242	Dibromochloromethane	2017/06/01	104	70 - 130	93	70 - 130	ND, RDL=0.50	ug/L	NC	30
5003242	Dichlorodifluoromethane (FREON 12)	2017/06/01	106	60 - 140	97	60 - 140	ND, RDL=1.0	ug/L	NC	30

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Maxxam Job #: B7A9427
Report Date: 2017/06/05

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: JC

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5003242	Ethylbenzene	2017/06/01	105	70 - 130	100	70 - 130	ND, RDL=0.20	ug/L	NC	30
5003242	Ethylene Dibromide	2017/06/01	107	70 - 130	95	70 - 130	ND, RDL=0.20	ug/L	NC	30
5003242	Hexane	2017/06/01	112	70 - 130	106	70 - 130	ND, RDL=1.0	ug/L	NC	30
5003242	Methyl Ethyl Ketone (2-Butanone)	2017/06/01	118	60 - 140	108	60 - 140	ND, RDL=10	ug/L	NC	30
5003242	Methyl Isobutyl Ketone	2017/06/01	113	70 - 130	101	70 - 130	ND, RDL=5.0	ug/L	NC	30
5003242	Methyl t-butyl ether (MTBE)	2017/06/01	106	70 - 130	97	70 - 130	ND, RDL=0.50	ug/L	NC	30
5003242	Methylene Chloride(Dichloromethane)	2017/06/01	110	70 - 130	99	70 - 130	ND, RDL=2.0	ug/L	NC	30
5003242	o-Xylene	2017/06/01	99	70 - 130	97	70 - 130	ND, RDL=0.20	ug/L	NC	30
5003242	p+m-Xylene	2017/06/01	105	70 - 130	100	70 - 130	ND, RDL=0.20	ug/L	NC	30
5003242	Styrene	2017/06/01	104	70 - 130	100	70 - 130	ND, RDL=0.50	ug/L	NC	30
5003242	Tetrachloroethylene	2017/06/01	100	70 - 130	95	70 - 130	ND, RDL=0.20	ug/L	NC	30
5003242	Toluene	2017/06/01	103	70 - 130	96	70 - 130	ND, RDL=0.20	ug/L	NC	30
5003242	Total Xylenes	2017/06/01					ND, RDL=0.20	ug/L	NC	30
5003242	trans-1,2-Dichloroethylene	2017/06/01	105	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L	NC	30
5003242	trans-1,3-Dichloropropene	2017/06/01	115	70 - 130	97	70 - 130	ND, RDL=0.40	ug/L	NC	30
5003242	Trichloroethylene	2017/06/01	95	70 - 130	90	70 - 130	ND, RDL=0.20	ug/L	NC	30
5003242	Trichlorofluoromethane (FREON 11)	2017/06/01	104	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L	NC	30
5003242	Vinyl Chloride	2017/06/01	108	70 - 130	100	70 - 130	ND, RDL=0.20	ug/L	NC	30
5006407	Dissolved Antimony (Sb)	2017/06/01	101	80 - 120	100	80 - 120	ND, RDL=0.50	ug/L	NC	20
5006407	Dissolved Arsenic (As)	2017/06/01	92	80 - 120	92	80 - 120	ND, RDL=1.0	ug/L	0.90	20
5006407	Dissolved Barium (Ba)	2017/06/01	91	80 - 120	96	80 - 120	ND, RDL=2.0	ug/L	6.0	20
5006407	Dissolved Beryllium (Be)	2017/06/01	97	80 - 120	99	80 - 120	ND, RDL=0.50	ug/L	NC	20
5006407	Dissolved Boron (B)	2017/06/01	91	80 - 120	96	80 - 120	ND, RDL=10	ug/L	1.9	20
5006407	Dissolved Cadmium (Cd)	2017/06/01	96	80 - 120	98	80 - 120	ND, RDL=0.10	ug/L	NC	20
5006407	Dissolved Chromium (Cr)	2017/06/01	93	80 - 120	94	80 - 120	ND, RDL=5.0	ug/L	NC	20
5006407	Dissolved Cobalt (Co)	2017/06/01	92	80 - 120	95	80 - 120	ND, RDL=0.50	ug/L	NC	20
5006407	Dissolved Copper (Cu)	2017/06/01	93	80 - 120	96	80 - 120	ND, RDL=1.0	ug/L	NC	20
5006407	Dissolved Lead (Pb)	2017/06/01	89	80 - 120	95	80 - 120	ND, RDL=0.50	ug/L	NC	20
5006407	Dissolved Molybdenum (Mo)	2017/06/01	99	80 - 120	97	80 - 120	ND, RDL=0.50	ug/L	4.3	20
5006407	Dissolved Nickel (Ni)	2017/06/01	89	80 - 120	94	80 - 120	ND, RDL=1.0	ug/L	12	20
5006407	Dissolved Selenium (Se)	2017/06/01	94	80 - 120	97	80 - 120	ND, RDL=2.0	ug/L	NC	20

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Maxxam Job #: B7A9427
Report Date: 2017/06/05

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: JC

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5006407	Dissolved Silver (Ag)	2017/06/01	93	80 - 120	94	80 - 120	ND, RDL=0.10	ug/L	NC	20
5006407	Dissolved Thallium (Tl)	2017/06/01	90	80 - 120	94	80 - 120	ND, RDL=0.050	ug/L	NC	20
5006407	Dissolved Uranium (U)	2017/06/01	93	80 - 120	95	80 - 120	ND, RDL=0.10	ug/L	3.5	20
5006407	Dissolved Vanadium (V)	2017/06/01	92	80 - 120	93	80 - 120	ND, RDL=0.50	ug/L	12	20
5006407	Dissolved Zinc (Zn)	2017/06/01	92	80 - 120	96	80 - 120	ND, RDL=5.0	ug/L	NC	20
5011352	Benzene	2017/06/02	97	70 - 130	110	70 - 130	ND, RDL=0.20	ug/L	NC	30
5011352	Ethylbenzene	2017/06/02	89	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
5011352	F1 (C6-C10) - BTEX	2017/06/02					ND, RDL=25	ug/L	NC	30
5011352	F1 (C6-C10)	2017/06/02	101	70 - 130	109	70 - 130	ND, RDL=25	ug/L	NC	30
5011352	o-Xylene	2017/06/02	89	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
5011352	p+m-Xylene	2017/06/02	86	70 - 130	97	70 - 130	ND, RDL=0.40	ug/L	NC	30
5011352	Toluene	2017/06/02	85	70 - 130	96	70 - 130	ND, RDL=0.20	ug/L	NC	30
5011352	Total Xylenes	2017/06/02					ND, RDL=0.40	ug/L	NC	30
5012022	F2 (C10-C16 Hydrocarbons)	2017/06/03	99	50 - 130	95	60 - 130	ND, RDL=100	ug/L	2.3	30
5012022	F3 (C16-C34 Hydrocarbons)	2017/06/03	102	50 - 130	104	60 - 130	ND, RDL=200	ug/L	NC	30
5012022	F4 (C34-C50 Hydrocarbons)	2017/06/03	105	50 - 130	107	60 - 130	ND, RDL=200	ug/L	NC	30
5012735	Mercury (Hg)	2017/06/05	98	75 - 125	95	80 - 120	ND, RDL=0.1	ug/L	NC	20

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).

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Maxxam Job #: B7A9427
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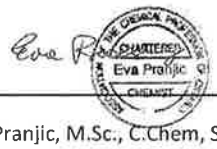
Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: JC

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



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

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Your Project #: 1512-S086E
Your C.O.C. #: 571089-01-01

Attention:Laila Torabansari

Soil Engineers Ltd
100 Nugget Ave
Toronto, ON
M1S 3A7

Report Date: 2016/08/04
Report #: R4092468
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6F9023
Received: 2016/07/28, 15:30

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2016/08/03	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	1	2016/08/02	2016/08/04	CAM SOP-00316	CCME PHC-CWS m

Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

Maxxam Analytics is accredited for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

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 Maxxam 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
04 Aug 2016 15:58:03 -04:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Antonella Brasil, Senior Project Manager
Email: ABrasil@maxxam.ca
Phone# (905)817-5817

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Maxxam Job #: B6F9023
Report Date: 2016/08/04

Soil Engineers Ltd
Client Project #: 1512-S086E

O.REG 153 PETROLEUM HYDROCARBONS (WATER)

Maxxam ID		CUG255		
Sampling Date		2016/07/28 15:00		
COC Number		571089-01-01		
	UNITS	MW1	RDL	QC Batch
BTEX & F1 Hydrocarbons				
Benzene	ug/L	ND	0.20	4603871
Toluene	ug/L	0.55	0.20	4603871
Ethylbenzene	ug/L	ND	0.20	4603871
o-Xylene	ug/L	ND	0.20	4603871
p+m-Xylene	ug/L	0.46	0.40	4603871
Total Xylenes	ug/L	0.46	0.40	4603871
F1 (C6-C10)	ug/L	ND	25	4603871
F1 (C6-C10) - BTEX	ug/L	ND	25	4603871
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/L	ND	100	4602607
F3 (C16-C34 Hydrocarbons)	ug/L	ND	200	4602607
F4 (C34-C50 Hydrocarbons)	ug/L	ND	200	4602607
Reached Baseline at C50	ug/L	Yes		4602607
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	96		4603871
4-Bromofluorobenzene	%	100		4603871
D10-Ethylbenzene	%	91		4603871
D4-1,2-Dichloroethane	%	96		4603871
o-Terphenyl	%	99		4602607

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B6F9023
Report Date: 2016/08/04

Soil Engineers Ltd
Client Project #: 1512-S086E

TEST SUMMARY

Maxxam ID: CUG255
Sample ID: MW1
Matrix: Water

Collected: 2016/07/28
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	4603871	N/A	2016/08/03	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	4602607	2016/08/02	2016/08/04	Dorina Popa

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GENERAL COMMENTS

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

Package 1	19.0°C

Results relate only to the items tested.

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Maxxam Job #: B6F9023
Report Date: 2016/08/04

QUALITY ASSURANCE REPORT

Soil Engineers Ltd
Client Project #: 1512-S086E

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
4602607	o-Terphenyl	2016/08/03	102	60 - 130	101	60 - 130	99	%		
4603871	1,4-Difluorobenzene	2016/08/03	99	70 - 130	99	70 - 130	96	%		
4603871	4-Bromofluorobenzene	2016/08/03	100	70 - 130	101	70 - 130	101	%		
4603871	D10-Ethylbenzene	2016/08/03	93	70 - 130	100	70 - 130	97	%		
4603871	D4-1,2-Dichloroethane	2016/08/03	99	70 - 130	101	70 - 130	100	%		
4602607	F2 (C10-C16 Hydrocarbons)	2016/08/03	108	50 - 130	88	60 - 130	ND, RDL=100	ug/L	4.5	30
4602607	F3 (C16-C34 Hydrocarbons)	2016/08/03	102	50 - 130	92	60 - 130	ND, RDL=200	ug/L	NC	30
4602607	F4 (C34-C50 Hydrocarbons)	2016/08/03	103	50 - 130	97	60 - 130	ND, RDL=200	ug/L	NC	30
4603871	Benzene	2016/08/03	98	70 - 130	101	70 - 130	ND, RDL=0.20	ug/L	NC	30
4603871	Ethylbenzene	2016/08/03	99	70 - 130	107	70 - 130	ND, RDL=0.20	ug/L	NC	30
4603871	F1 (C6-C10) - BTEX	2016/08/03					ND, RDL=25	ug/L	NC	30
4603871	F1 (C6-C10)	2016/08/03	85	70 - 130	88	70 - 130	ND, RDL=25	ug/L	NC	30
4603871	o-Xylene	2016/08/03	99	70 - 130	107	70 - 130	ND, RDL=0.20	ug/L	NC	30
4603871	p+m-Xylene	2016/08/03	86	70 - 130	98	70 - 130	ND, RDL=0.40	ug/L	NC	30
4603871	Toluene	2016/08/03	89	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
4603871	Total Xylenes	2016/08/03					ND, RDL=0.40	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 (one or both samples < 5x RDL).

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Maxxam
A Bureau Veritas Group Company

Your Project #: 1512-S086E
Your C.O.C. #: 81117

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

Report Date: 2017/09/06
Report #: R4688321
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B7I9231
Received: 2017/08/31, 11:15

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Mercury	1	2017/08/31	2017/09/05	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	1	N/A	2017/09/01	CAM SOP-00447	EPA 6020B m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam 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.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam 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 Maxxam, unless otherwise agreed in writing.

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.

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.

Encryption Key

Antonella Brasil
Senior Project Manager
06 Sep 2017 08:58:03

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Antonella Brasil, Senior Project Manager
Email: ABrasil@maxxam.ca
Phone# (905)817-5817

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B7I9231
Report Date: 2017/09/06

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: MK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID			FAU206		
Sampling Date			2017/08/31 10:30		
COC Number			81117		
	UNITS	Criteria	MW1	RDL	QC Batch
Metals					
Mercury (Hg)	ug/L	**0.1**	ND	0.1	5145164

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 1: Full Depth Background Site Condition Standards
Ground Water - All Types of Property Uses
ND = Not detected

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Maxxam Job #: B7I9231
Report Date: 2017/09/06

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: MK

O.REG 153 DISSOLVED ICPMS METALS (WATER)

Maxxam ID			FAU207		
Sampling Date			2017/08/31 10:40		
COC Number			81117		
	UNITS	Criteria	MW3	RDL	QC Batch
Metals					
Dissolved Antimony (Sb)	ug/L	**1.5**	0.54	0.50	5144679
Dissolved Arsenic (As)	ug/L	**13**	4.7	1.0	5144679
Dissolved Barium (Ba)	ug/L	**610**	38	2.0	5144679
Dissolved Beryllium (Be)	ug/L	**0.5**	ND	0.50	5144679
Dissolved Boron (B)	ug/L	**1700**	620	10	5144679
Dissolved Cadmium (Cd)	ug/L	**0.5**	ND	0.10	5144679
Dissolved Chromium (Cr)	ug/L	**11**	ND	5.0	5144679
Dissolved Cobalt (Co)	ug/L	**3.8**	0.64	0.50	5144679
Dissolved Copper (Cu)	ug/L	**5**	4.5	1.0	5144679
Dissolved Lead (Pb)	ug/L	**1.9**	ND	0.50	5144679
Dissolved Molybdenum (Mo)	ug/L	**23**	5.2	0.50	5144679
Dissolved Nickel (Ni)	ug/L	**14**	ND	1.0	5144679
Dissolved Selenium (Se)	ug/L	**5**	ND	2.0	5144679
Dissolved Silver (Ag)	ug/L	**0.3**	ND	0.10	5144679
Dissolved Thallium (Tl)	ug/L	**0.5**	ND	0.050	5144679
Dissolved Uranium (U)	ug/L	**8.9**	2.4	0.10	5144679
Dissolved Vanadium (V)	ug/L	**3.9**	ND	0.50	5144679
Dissolved Zinc (Zn)	ug/L	**160**	ND	5.0	5144679

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 1: Full Depth Background Site Condition Standards
Ground Water - All Types of Property Uses
ND = Not detected

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Maxxam Job #: B7I9231
Report Date: 2017/09/06

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: MK

TEST SUMMARY

Maxxam ID: FAU206
Sample ID: MW1
Matrix: Water

Collected: 2017/08/31
Shipped:
Received: 2017/08/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury	CV/AA	5145164	2017/08/31	2017/09/05	Ron Morrison

Maxxam ID: FAU207
Sample ID: MW3
Matrix: Water

Collected: 2017/08/31
Shipped:
Received: 2017/08/31

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	5144679	N/A	2017/09/01	Matthew Ritenburg

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Maxxam Job #: B7I9231
Report Date: 2017/09/06

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: MK

GENERAL COMMENTS

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

Package 1	10.7°C

Revised Report (2017/09/06): Project changed to 1512-S086E, as per client request.

Results relate only to the items tested.

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Maxxam
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Maxxam Job #: B7I9231
Report Date: 2017/09/06

QUALITY ASSURANCE REPORT

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: MK

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5144679	Dissolved Antimony (Sb)	2017/09/01	102	80 - 120	102	80 - 120	ND, RDL=0.50	ug/L		
5144679	Dissolved Arsenic (As)	2017/09/01	98	80 - 120	97	80 - 120	ND, RDL=1.0	ug/L		
5144679	Dissolved Barium (Ba)	2017/09/01	96	80 - 120	98	80 - 120	ND, RDL=2.0	ug/L		
5144679	Dissolved Beryllium (Be)	2017/09/01	100	80 - 120	101	80 - 120	ND, RDL=0.50	ug/L		
5144679	Dissolved Boron (B)	2017/09/01	98	80 - 120	101	80 - 120	ND, RDL=10	ug/L		
5144679	Dissolved Cadmium (Cd)	2017/09/01	98	80 - 120	99	80 - 120	ND, RDL=0.10	ug/L	14	20
5144679	Dissolved Chromium (Cr)	2017/09/01	94	80 - 120	96	80 - 120	ND, RDL=5.0	ug/L		
5144679	Dissolved Cobalt (Co)	2017/09/01	93	80 - 120	96	80 - 120	ND, RDL=0.50	ug/L		
5144679	Dissolved Copper (Cu)	2017/09/01	97	80 - 120	103	80 - 120	ND, RDL=1.0	ug/L	5.2	20
5144679	Dissolved Lead (Pb)	2017/09/01	93	80 - 120	95	80 - 120	ND, RDL=0.50	ug/L	NC	20
5144679	Dissolved Molybdenum (Mo)	2017/09/01	99	80 - 120	99	80 - 120	ND, RDL=0.50	ug/L		
5144679	Dissolved Nickel (Ni)	2017/09/01	94	80 - 120	97	80 - 120	ND, RDL=1.0	ug/L		
5144679	Dissolved Selenium (Se)	2017/09/01	98	80 - 120	100	80 - 120	ND, RDL=2.0	ug/L		
5144679	Dissolved Silver (Ag)	2017/09/01	97	80 - 120	99	80 - 120	ND, RDL=0.10	ug/L		
5144679	Dissolved Thallium (Tl)	2017/09/01	93	80 - 120	94	80 - 120	ND, RDL=0.050	ug/L		
5144679	Dissolved Uranium (U)	2017/09/01	97	80 - 120	99	80 - 120	ND, RDL=0.10	ug/L		
5144679	Dissolved Vanadium (V)	2017/09/01	93	80 - 120	94	80 - 120	ND, RDL=0.50	ug/L		
5144679	Dissolved Zinc (Zn)	2017/09/01	NC	80 - 120	97	80 - 120	ND, RDL=5.0	ug/L	7.9	20
5145164	Mercury (Hg)	2017/09/05	99	75 - 125	109	80 - 120	ND, RDL=0.1	ug/L	NC	20

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.

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).

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Maxxam Job #: B7I9231
Report Date: 2017/09/06

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: MK

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Service Specialist

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Maxxam Job #: B7I9231
Report Date: 2017/09/06

Soil Engineers Ltd
Client Project #: 1512-S086E
Sampler Initials: MK

Exceedence Summary Table – Reg153/04 T1-GW

Result Exceedences

Sample ID	Maxxam ID	Parameter	Criteria	Result	DL	Units
No Exceedences						

The exceedence summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.

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Maxxam
A Bureau Veritas Group Company

Your Project #: 1512-S086E
Your C.O.C. #: 624105-01-01

Attention:Laila Torabansari

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

Report Date: 2017/08/18
Report #: R4659087
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7H4287
Received: 2017/08/14, 15:20

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
1,3-Dichloropropene Sum	2	N/A	2017/08/17		EPA 8260C m
Volatile Organic Compounds in Water	2	N/A	2017/08/16	CAM SOP-00228	EPA 8260C m

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

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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.
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.

Encryption Key

Antonella Brasil
Senior Project Manager
18 Aug 2017 11:45:39

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Antonella Brasil, Senior Project Manager
Email: ABrasil@maxxam.ca
Phone# (905)817-5817

==========

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O.REG 153 VOCS BY HS (WATER)

Maxxam ID		EXZ716	EXZ717		
Sampling Date		2017/08/10 16:20			
COC Number		624105-01-01	624105-01-01		
	UNITS	MW1	TB	RDL	QC Batch
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/L	ND	ND	0.50	5117572
Volatile Organics					
Acetone (2-Propanone)	ug/L	ND	ND	10	5114898
Benzene	ug/L	ND	ND	0.20	5114898
Bromodichloromethane	ug/L	ND	ND	0.50	5114898
Bromoform	ug/L	ND	ND	1.0	5114898
Bromomethane	ug/L	ND	ND	0.50	5114898
Carbon Tetrachloride	ug/L	ND	ND	0.20	5114898
Chlorobenzene	ug/L	ND	ND	0.20	5114898
Chloroform	ug/L	ND	ND	0.20	5114898
Dibromochloromethane	ug/L	ND	ND	0.50	5114898
1,2-Dichlorobenzene	ug/L	ND	ND	0.50	5114898
1,3-Dichlorobenzene	ug/L	ND	ND	0.50	5114898
1,4-Dichlorobenzene	ug/L	ND	ND	0.50	5114898
Dichlorodifluoromethane (FREON 12)	ug/L	ND	ND	1.0	5114898
1,1-Dichloroethane	ug/L	ND	ND	0.20	5114898
1,2-Dichloroethane	ug/L	ND	ND	0.50	5114898
1,1-Dichloroethylene	ug/L	ND	ND	0.20	5114898
cis-1,2-Dichloroethylene	ug/L	ND	ND	0.50	5114898
trans-1,2-Dichloroethylene	ug/L	ND	ND	0.50	5114898
1,2-Dichloropropane	ug/L	ND	ND	0.20	5114898
cis-1,3-Dichloropropene	ug/L	ND	ND	0.30	5114898
trans-1,3-Dichloropropene	ug/L	ND	ND	0.40	5114898
Ethylbenzene	ug/L	ND	ND	0.20	5114898
Ethylene Dibromide	ug/L	ND	ND	0.20	5114898
Hexane	ug/L	ND	ND	1.0	5114898
Methylene Chloride(Dichloromethane)	ug/L	ND	ND	2.0	5114898
Methyl Ethyl Ketone (2-Butanone)	ug/L	ND	ND	10	5114898
Methyl Isobutyl Ketone	ug/L	ND	ND	5.0	5114898
Methyl t-butyl ether (MTBE)	ug/L	ND	ND	0.50	5114898
Styrene	ug/L	ND	ND	0.50	5114898
1,1,1,2-Tetrachloroethane	ug/L	ND	ND	0.50	5114898
1,1,2,2-Tetrachloroethane	ug/L	ND	ND	0.50	5114898
Tetrachloroethylene	ug/L	ND	ND	0.20	5114898

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B7H4287
Report Date: 2017/08/18

Soil Engineers Ltd
Client Project #: 1512-S086E

O.REG 153 VOCS BY HS (WATER)

Maxxam ID		EXZ716	EXZ717		
Sampling Date		2017/08/10 16:20			
COC Number		624105-01-01	624105-01-01		
	UNITS	MW1	TB	RDL	QC Batch
Toluene	ug/L	ND	ND	0.20	5114898
1,1,1-Trichloroethane	ug/L	ND	ND	0.20	5114898
1,1,2-Trichloroethane	ug/L	ND	ND	0.50	5114898
Trichloroethylene	ug/L	ND	ND	0.20	5114898
Trichlorofluoromethane (FREON 11)	ug/L	ND	ND	0.50	5114898
Vinyl Chloride	ug/L	ND	ND	0.20	5114898
p+m-Xylene	ug/L	ND	ND	0.20	5114898
o-Xylene	ug/L	ND	ND	0.20	5114898
Total Xylenes	ug/L	ND	ND	0.20	5114898
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	89	88		5114898
D4-1,2-Dichloroethane	%	118	118		5114898
D8-Toluene	%	91	91		5114898

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not detected

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Maxxam Job #: B7H4287
Report Date: 2017/08/18

Soil Engineers Ltd
Client Project #: 1512-S086E

TEST SUMMARY

Maxxam ID: EXZ716
Sample ID: MW1
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5117572	N/A	2017/08/17	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	5114898	N/A	2017/08/16	Manpreet Sarao

Maxxam ID: EXZ717
Sample ID: TB
Matrix: Water

Collected:
Shipped:
Received: 2017/08/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	5117572	N/A	2017/08/17	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	5114898	N/A	2017/08/16	Manpreet Sarao

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Maxxam Job #: B7H4287
Report Date: 2017/08/18

Soil Engineers Ltd
Client Project #: 1512-S086E

GENERAL COMMENTS

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

Package 1	9.0°C

All 40mL vials for VOC analysis contained visible sediment for sample MW1

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam
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Maxxam Job #: B7H4287
Report Date: 2017/08/18

QUALITY ASSURANCE REPORT

Soil Engineers Ltd
Client Project #: 1512-S086E

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5114898	4-Bromofluorobenzene	2017/08/16	101	70 - 130	102	70 - 130	94	%		
5114898	D4-1,2-Dichloroethane	2017/08/16	108	70 - 130	101	70 - 130	115	%		
5114898	D8-Toluene	2017/08/16	101	70 - 130	104	70 - 130	91	%		
5114898	1,1,1,2-Tetrachloroethane	2017/08/16	105	70 - 130	107	70 - 130	ND, RDL=0.50	ug/L	NC	30
5114898	1,1,1-Trichloroethane	2017/08/16	94	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
5114898	1,1,2,2-Tetrachloroethane	2017/08/16	116	70 - 130	107	70 - 130	ND, RDL=0.50	ug/L	NC	30
5114898	1,1,2-Trichloroethane	2017/08/16	110	70 - 130	105	70 - 130	ND, RDL=0.50	ug/L	NC	30
5114898	1,1-Dichloroethane	2017/08/16	105	70 - 130	107	70 - 130	ND, RDL=0.20	ug/L	NC	30
5114898	1,1-Dichloroethylene	2017/08/16	106	70 - 130	112	70 - 130	ND, RDL=0.20	ug/L	NC	30
5114898	1,2-Dichlorobenzene	2017/08/16	85	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L	NC	30
5114898	1,2-Dichloroethane	2017/08/16	107	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	NC	30
5114898	1,2-Dichloropropane	2017/08/16	100	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
5114898	1,3-Dichlorobenzene	2017/08/16	84	70 - 130	100	70 - 130	ND, RDL=0.50	ug/L	NC	30
5114898	1,4-Dichlorobenzene	2017/08/16	85	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	NC	30
5114898	Acetone (2-Propanone)	2017/08/16	123	60 - 140	100	60 - 140	ND, RDL=10	ug/L	NC	30
5114898	Benzene	2017/08/16	104	70 - 130	105	70 - 130	ND, RDL=0.20	ug/L	NC	30
5114898	Bromodichloromethane	2017/08/16	102	70 - 130	100	70 - 130	ND, RDL=0.50	ug/L	NC	30
5114898	Bromoform	2017/08/16	116	70 - 130	108	70 - 130	ND, RDL=1.0	ug/L	NC	30
5114898	Bromomethane	2017/08/16	102	60 - 140	104	60 - 140	ND, RDL=0.50	ug/L	NC	30
5114898	Carbon Tetrachloride	2017/08/16	93	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5114898	Chlorobenzene	2017/08/16	100	70 - 130	101	70 - 130	ND, RDL=0.20	ug/L	NC	30
5114898	Chloroform	2017/08/16	98	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
5114898	cis-1,2-Dichloroethylene	2017/08/16	101	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	NC	30
5114898	cis-1,3-Dichloropropene	2017/08/16	107	70 - 130	102	70 - 130	ND, RDL=0.30	ug/L	NC	30
5114898	Dibromochloromethane	2017/08/16	110	70 - 130	105	70 - 130	ND, RDL=0.50	ug/L	NC	30
5114898	Dichlorodifluoromethane (FREON 12)	2017/08/16	105	60 - 140	112	60 - 140	ND, RDL=1.0	ug/L	NC	30
5114898	Ethylbenzene	2017/08/16	96	70 - 130	102	70 - 130	ND, RDL=0.20	ug/L	NC	30
5114898	Ethylene Dibromide	2017/08/16	116	70 - 130	107	70 - 130	ND, RDL=0.20	ug/L	NC	30
5114898	Hexane	2017/08/16	108	70 - 130	119	70 - 130	ND, RDL=1.0	ug/L	NC	30
5114898	Methyl Ethyl Ketone (2-Butanone)	2017/08/16	132	60 - 140	109	60 - 140	ND, RDL=10	ug/L	NC	30
5114898	Methyl Isobutyl Ketone	2017/08/16	121	70 - 130	109	70 - 130	ND, RDL=5.0	ug/L	NC	30
5114898	Methyl t-butyl ether (MTBE)	2017/08/16	100	70 - 130	98	70 - 130	ND, RDL=0.50	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
5114898	Methylene Chloride(Dichloromethane)	2017/08/16	110	70 - 130	108	70 - 130	ND, RDL=2.0	ug/L	NC	30
5114898	o-Xylene	2017/08/16	93	70 - 130	105	70 - 130	ND, RDL=0.20	ug/L	NC	30
5114898	p+m-Xylene	2017/08/16	101	70 - 130	109	70 - 130	ND, RDL=0.20	ug/L	2.7	30
5114898	Styrene	2017/08/16	79	70 - 130	88	70 - 130	ND, RDL=0.50	ug/L	NC	30
5114898	Tetrachloroethylene	2017/08/16	90	70 - 130	95	70 - 130	ND, RDL=0.20	ug/L	4.9	30
5114898	Toluene	2017/08/16	97	70 - 130	101	70 - 130	ND, RDL=0.20	ug/L	NC	30
5114898	Total Xylenes	2017/08/16					ND, RDL=0.20	ug/L	2.7	30
5114898	trans-1,2-Dichloroethylene	2017/08/16	100	70 - 130	105	70 - 130	ND, RDL=0.50	ug/L	NC	30
5114898	trans-1,3-Dichloropropene	2017/08/16	114	70 - 130	107	70 - 130	ND, RDL=0.40	ug/L	NC	30
5114898	Trichloroethylene	2017/08/16	94	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
5114898	Trichlorofluoromethane (FREON 11)	2017/08/16	95	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	NC	30
5114898	Vinyl Chloride	2017/08/16	101	70 - 130	107	70 - 130	ND, RDL=0.20	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 <= 2x RDL).

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Maxxam Job #: B7H4287
Report Date: 2017/08/18

Soil Engineers Ltd
Client Project #: 1512-S086E

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

Cristina Carriere, Scientific Service Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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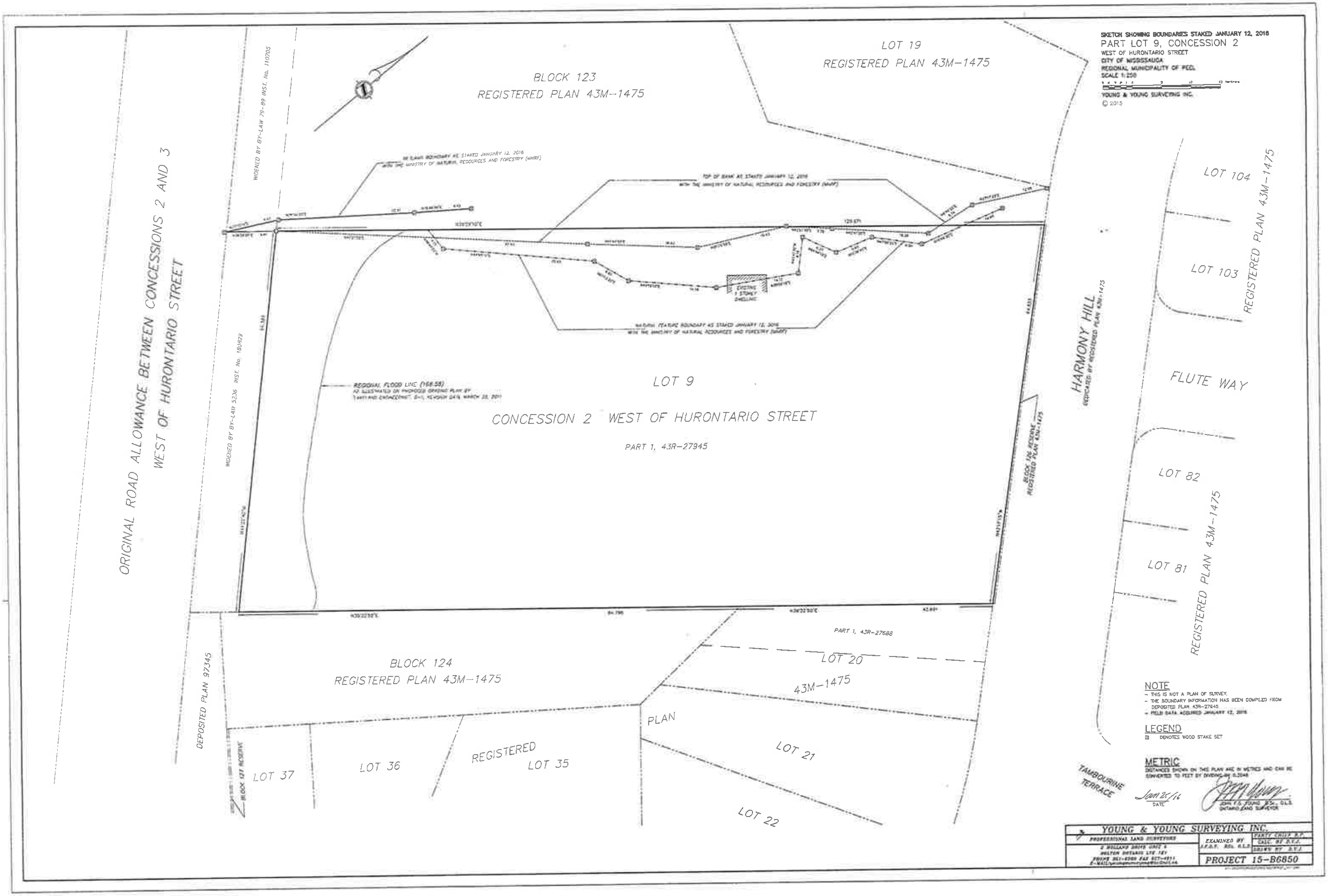
APPENDIX 'E'

SURVEY PLAN

REFERENCE NO. 1512-S086E


SKETCH SHOWING BOUNDARIES STAKED JANUARY 12, 2016
PART LOT 9, CONCESSION 2
WEST OF HURONTARIO STREET
CITY OF MISSISSAUGA
REGIONAL MUNICIPALITY OF PEEL
SCALE 1:250
YOUNG & YOUNG SURVEYING INC.
© 2015
LOT 19
REGISTERED PLAN 43M-1475
BLOCK 123
REGISTERED PLAN 43M-1475
ORIGINAL ROAD ALLOWANCE BETWEEN CONCESSIONS 2 AND 3
WEST OF HURONTARIO STREET
TOP OF BANK AS STAKED JANUARY 12, 2016 WITH THE MINISTRY OF NATURAL RESOURCES AND FORESTRY (MNRF)
NATURAL FEATURE BOUNDARY AS STAKED JANUARY 12, 2016 WITH THE MINISTRY OF NATURAL RESOURCES AND FORESTRY (MNRF)
EXISTING 1 STOREY DWELLING
REGIONAL FLOOD LINE (156.58)
LOT 9
CONCESSION 2 WEST OF HURONTARIO STREET
PART 1, 43R-27945
HARMONY HILL
DEDICATED BY REGISTERED PLAN 43M-1475
LOT 104
LOT 103
REGISTERED PLAN 43M-1475
FLUTE WAY
LOT 82
LOT 81
REGISTERED PLAN 43M-1475
PART 1, 43R-27688
LOT 20
43M-1475
BLOCK 124
REGISTERED PLAN 43M-1475
DEPOSITED PLAN 97345
PLAN
REGISTERED
LOT 37
LOT 36
LOT 35
LOT 21
LOT 22
TAMBOURINE TERRACE
NOTE
- THIS IS NOT A PLAN OF SURVEY.
- THE BOUNDARY INFORMATION HAS BEEN COMPILED FROM DEPOSITED PLAN 43R-27945
LEGEND
DENOTES WOOD STAKE SET
METRIC
Jan 25/16
DATE
YOUNG & YOUNG SURVEYING INC.
EXAMINED BY
PROJECT 15-B6850

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FAX: (705) 721-7864	FAX: (905) 542-2769	FAX: (905) 725-1315	FAX: (416) 754-8516	FAX: (705) 684-8522	FAX: (905) 725-1315	FAX: (905) 542-2769

APPENDIX 'F'

REMEDIATION

REFERENCE NO. 1512-S086E

This section summarizes the background information, the remedial activities including confirmation soil sampling and testing undertaken at the subject site, as a part of the Phase Two Environmental Site Assessment as defined by Ontario Regulation (O. Reg.) 153/04, as amended. The subject site is located approximately 230 m to the north side of Highway 401 and east of Second Line West, in the City of Mississauga. A residential development is being proposed for the subject site.

The findings of the first stage investigation of the Phase Two ESA summarized below:

- A total of three (3) boreholes to depths ranging from 3.0 mbgs to 7.6 mbgs and five (5) hand dug test pits to depths of 0.5 mbgs were advanced during the first stage investigation. The boreholes were completed as monitoring wells for groundwater observation, sampling and/or testing. Selected soil and groundwater samples were assessed for the potential contamination with respect to the APECs identified by the Phase One ESA.
- Based on the analytical results of soil samples from the first stage investigation of the Phase Two ESA, Lead and Chromium VI at the test pit location TP1 up to the depth of 0.5 mbgs at the eastern section of the subject site exceeding the Table 1 Full Depth Background Site Condition Standards, for Residential/ Parkland/ Institutional/ Industrial/ Commercial/ Community Property Use (Table 1 Standards).
- Based on the analytical results of soil samples from the initial investigation of the Phase Two ESA, Lead, Molybdenum and Chromium VI at test pit location TP4 at depths ranging from 0.3 mbgs to 0.6 mbgs at the southern section of the subject site exceeding the Table 1 Standards.
- The remaining analysed soil and groundwater samples during the initial investigation for the tested parameters meet the Table 1 Standards.

Soil remediation was required in the vicinities of TP1 and TP4 at the eastern and southern portions of the subject site in order to bring the impacted areas into compliance with the Table 1 Standards.

1) REMEDIAL ACTIONS

The fieldwork for the remedial excavations and removal of impacted surface soil was carried out from March 17, 2017 to August 10, 2017, under the supervision of a field representative from SEL.

1.1) Site Preparation of Soil Remediation

The areas of remediation were identified and outlined on site by SEL's field representative, based on the findings of the initial investigation, as discussed earlier.

1.2) Methodology

The methodology of the remedial activity includes:

- Excavate and remove the impacted soil from the vicinities of TP1 and TP 4 at the eastern and southern sections of the subject site.
- Dispose the impacted soil at the MOECC licensed landfill facility.
- Confirmation sampling and testing of soil samples retrieved from the margins of the excavations, for analysis of metals.

1.3) Extent of Soil Remediation

The impacted soil in the vicinities of TP1 and TP4 (located at the eastern and southern section of the subject site) was excavated as shown in Drawing Nos. 3, 4, 6 and 7. The area of excavation was approximately 6.5 m by 45 m in area, extending up to a depth of 2.0 mbgs.

1.4) **Disposal of Impacted Soils**

Prior to the disposal of impacted soils, a Toxicity Characteristic Leaching Procedure (TCLP) leachate test was conducted on a representative sample from impacted soil for disposal criteria. The results confirmed that all the tested parameters were below the Schedule 4 of the O. Reg. 558 criteria. Consequently, the material is classified as a non-hazardous/non-registerable waste. Copies of the laboratory Certificates of Analysis are enclosed.

A total of 812.26 metric tone of impacted soils was removed from the northern and central sections of the subject site and transported to GFL in Toronto, an MOE licensed facility, for disposal. Copies of Bills of Lading are enclosed.

2) FREE FLOWING PRODUCT

No signs of groundwater seepage or free flowing product were observed in the cavity.

3) CONFIRMATION SAMPLING AND ANALYSIS

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.

3.1) Confirmation Soil Sampling

Upon completion of the removal of impacted soils from each location, confirmation soil samples were collected from the margins of the excavations for chemical analysis. Details of confirmation soil samples along with the test parameters are presented in the table below.

SAMPLE ID	DEPTH (mbgs)	SAMPLE LOCATION	PARAMETER OF ANALYSIS	NOTE
Wall 1	0.4 - 0.6	North wall of the excavation at TP 4 location	Metals	The analytical results exceed Table 2 Standards. Further excavation is required.
Wall 2	0.4 - 0.6	West wall of the excavation at TP 4 location		
Wall 3	0.4 - 0.6	South wall of the excavation at TP 4 location		
Floor 2	1.5	Floor of the excavation		
Floor 1	2.0	Floor of the excavation		Confirmation samples from the final margin of the excavation
Floor 2-1	2.0	Floor of the excavation		
Floor 3	1.5	Floor of the excavation		
Floor 4	1.5	Floor of the excavation		
Floor 5	1.5	Floor of the excavation		
Wall 1-1	0.4 - 0.6	North wall of the excavation near TP 4 location		
Wall 2-2	0.4 - 0.6	West wall of the excavation near TP 4 location		
Wall 3-3	0.4 - 0.6	South wall of the excavation near TP 4 location		
Wall 4	0.4 - 0.6	South wall of the excavation near TP1 location		
Wall 5	0.4 - 0.6	East wall of the excavation near TP1 location		
Wall 6	0.4 - 0.6	North wall of the excavation near TP1 location		
Wall 7	0.4 - 0.6	South wall of the excavation near TP1 location		
Wall 8	0.4 - 0.6	North wall of the excavation near TP1 location		

Please note that further excavation and additional confirmation sampling program were conducted from the new margins of the excavation when the analytical result of confirmation samples exceed Table 1 Standards.

3.2) Analytical Results

The soil test results were reviewed using the Table 1, Full Depth Background Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/ Community property use (Table 1 Standards) as published in the "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" (EPA), April 15, 2011.

A total of thirteen (13) confirmation soil samples and two (2) field duplicate samples collected from the final margins of the excavations were analysed for metals.

All confirmation soil samples and field duplicate sample meet the Table 1 Standards.
Soil quality data containing results of the chemical analyses for the confirmation samples and duplicate sample is presented in Table III. Maximum concentrations of the tested parameters in soil after the remedial excavation and impacted soil removal are presented in Table V.

The Certificates of Analyses for the confirmation soil samples and field duplicate samples are enclosed.

4) CONCLUSION

- Based on the analytical results of the first investigation soil samples, metals and inorganic parameters (Lead, Molybdenum and Chromium VI) were identified in the soil up to depth of 0.6 mbgs at locations of TP1 and TP4 at concentrations above the Table 1, Full Depth Background Site Condition Standards for Residential/Parkland/ Institutional/Industrial/Commercial/ Community property use (Table 1 Standards).
- The impacted soil between the TP1 and TP4 locations at the eastern and southern sections of the subject site was excavated as shown in Drawing Nos. 3, 4, 6, and 7.

- A total of 812.26 metric tone of impacted soil was removed from the remedial excavation at the subject site and transported to GFL in Toronto, an MOE licensed facility, for disposal.
- The final size of the excavation in the vicinities of TP1 and TP4 was approximately 6.5 m by 45 m in area, extending up to a depth of 2.0 mbgs.
- No signs of groundwater seepage or free flowing product were observed in the remedial excavations.
- In the remedial excavation area, a total of thirteen (13) confirmation soil samples and two (2) field duplicate samples collected from the final margins of the excavation were analysed for metals.
- All confirmation soil samples and field duplicate samples from the final margins of the excavation meet the Table 1 Standards.

Based on the field observation and analytical testing programs, it our judgment that the removal of the impacted soils from the eastern and southern sections of the subject site is completed. No further investigation is required.

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TCLP TESTING

REFERENCE NO. 1512-S086E

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: SOIL ENGINEERS LIMITED
100 NUGGET AVENUE
TORONTO, ON M1S3A7
(416) 754-8515

ATTENTION TO: Laila Torabansari

PROJECT: 1512-S086E

AGAT WORK ORDER: 17T185928

SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Coordinator

DATE REPORTED: Feb 16, 2017

PAGES (INCLUDING COVER): 5

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

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Certificate of Analysis

AGAT WORK ORDER: 17T185928

PROJECT: 1512-S086E

CLIENT NAME: SOIL ENGINEERS LIMITED

ATTENTION TO: Laila Torabansari

SAMPLING SITE:

SAMPLED BY:

O. Reg. 558 Metals

DATE RECEIVED: 2017-02-09

DATE REPORTED: 2017-02-16

		SAMPLE DESCRIPTION:		TCLP
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2017-02-09
Parameter	Unit	G / S	RDL	8181491
Arsenic Leachate	mg/L	2.5	0.010	<0.010
Barium Leachate	mg/L	100	0.100	0.475
Boron Leachate	mg/L	500	0.050	0.076
Cadmium Leachate	mg/L	0.5	0.010	<0.010
Chromium Leachate	mg/L	5	0.010	<0.010
Lead Leachate	mg/L	5	0.010	<0.010
Selenium Leachate	mg/L	1	0.010	<0.010
Silver Leachate	mg/L	5	0.010	<0.010
Uranium Leachate	mg/L	10	0.050	<0.050

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O. Reg. 558 - Schedule IV Leachate Quality Criteria

Certified By: Amanjot Bhela

AGAT Laboratories

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Quality Assurance

CLIENT NAME: SOIL ENGINEERS LIMITED

PROJECT: 1512-S086E

SAMPLING SITE:

AGAT WORK ORDER: 17T185928

ATTENTION TO: Laila Torabansari

SAMPLED BY:

Soil Analysis

RPT Date: Feb 16, 2017			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 558 Metals															
Arsenic Leachate	8181522		<0.010	<0.010	NA	< 0.010	96%	90%	110%	101%	80%	120%	103%	70%	130%
Barium Leachate	8181522		0.548	0.512	6.8%	< 0.100	99%	90%	110%	100%	80%	120%	97%	70%	130%
Boron Leachate	8181522		<0.050	<0.050	NA	< 0.050	100%	90%	110%	101%	80%	120%	91%	70%	130%
Cadmium Leachate	8181522		<0.010	<0.010	NA	< 0.010	100%	90%	110%	106%	80%	120%	102%	70%	130%
Chromium Leachate	8181522		<0.010	<0.010	NA	< 0.010	97%	90%	110%	108%	80%	120%	107%	70%	130%
Lead Leachate	8181522		<0.010	<0.010	NA	< 0.010	101%	90%	110%	94%	80%	120%	94%	70%	130%
Selenium Leachate	8181522		<0.010	<0.010	NA	< 0.010	98%	90%	110%	98%	80%	120%	101%	70%	130%
Silver Leachate	8181522		<0.010	<0.010	NA	< 0.010	99%	90%	110%	106%	80%	120%	102%	70%	130%
Uranium Leachate	8181522		<0.050	<0.050	NA	< 0.050	104%	90%	110%	97%	80%	120%	95%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Certified By: Amanjot Bhela

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Method Summary

CLIENT NAME: SOIL ENGINEERS LIMITED

AGAT WORK ORDER: 17T185928

PROJECT: 1512-S086E

ATTENTION TO: Laila Torabansari

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Arsenic Leachate	MET-93-6103	EPA SW-846 1311 & 3010A & 6020A	ICP-MS
Barium Leachate	MET-93-6103	EPA SW-846 1311 & 3010A & 6020A	ICP-MS
Boron Leachate	MET-93-6103	EPA SW-846 1311 & 3010A & 6020A	ICP-MS
Cadmium Leachate	MET-93-6103	EPA SW-846 1311 & 3010A & 6020A	ICP-MS
Chromium Leachate	MET-93-6103	EPA SW-846 1311 & 3010A & 6020A	ICP-MS
Lead Leachate	MET-93-6103	EPA SW-846 1311 & 3010A & 6020A	ICP-MS
Selenium Leachate	MET-93-6103	EPA SW-846 1311 & 3010A & 6020A	ICP-MS
Silver Leachate	MET-93-6103	EPA SW-846 1311 & 3010A & 6020A	ICP-MS
Uranium Leachate	MET-93-6103	EPA SW-846 1311 & 3010A & 6020A	ICP-MS

AGAT Laboratories

SR - 7

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Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water intended for human consumption)

Laboratory Use Only

Work Order #: 17T185928

Cooler Quantity:

Arrival Temperatures: 2.1 | 2.2 | 2.3 (Cle)

Custody Seal Intact: ☐Yes ☐No ☐N/A

Notes:

Report Information:

Company: Soil Engineers Ltd

Contact: Layla

Address: 100 August Avenue
Scarborough Ontario

Phone: 416-754-8515 Fax: 416 754 8511

Reports to be sent to:

1. Email: layla@soilengineersltd.com
2. Email: ugo.ebiako@soilengineersltd.com

Regulatory Requirements: ☐ No Regulatory Requirement

(Please check all applicable boxes)

☐ Regulation 153/04
Table ____ *Indicate One*
☐ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☐ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm
Region ____ *Indicate One*

☑ Regulation 558
☐ CCME
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
____ *Indicate One*

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): ____

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CPM

Project Information:

Project: 1512 - 5086E

Site Location:

Sampled By:

AGAT Quote #: ____ PO: ____

Please note: If quotation number is not provided, client will be billed full price for analysis.

Is this submission for a **Record of Site Condition?** ☐ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company:

Contact:

Address:

Email:

Sample Matrix Legend

B	Biota
GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Y/N)	O. Reg 153: Metals and Inorganics; ☐ All Metals ☐ 153 Metals (excl. Hydrides); ☐ Hydride Metals	ORPs: ☐ B-HWS ☐ Cl ☐ CN ☐ Cr^{6+} ☐ EC ☐ FOC ☐ Hg ☐ pH ☐ SAR	Full Metals Scan	Regulation/Custom Metals	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2	Volatiles: ☐ VOC ☐ BTEX ☐ THM	CCME Fractions 1 to 4	ABNs	PAHs	PCBs: ☐ Total ☐ Aroclors	Organochlorine Pesticides	TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Sewer Use	Heavy Metals (TCLP)
TCLP	Feb 9/17	1:00pm	1	Soil																✓

Sample Relinquished By (Print Name and Sign): Uzochukwu Ebiako
Date: Feb 9/17 Time: 1:18pm

Samples Received By (Print Name and Sign): Nahin Date: Feb/9/17 Time: 1:30

Samples Relinquished By (Print Name and Sign): Date: Time:

Samples Received By (Print Name and Sign): Date: Time:

Page 1 of 1

N°: T 040142

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Soil Engineers Ltd.
CONSULTING ENGINEERS
GEOTECHNICAL • ENVIRONMENTAL • HYDROGEOLOGICAL • BUILDING SCIENCE
100 NUGGET AVENUE, TORONTO, ONTARIO M1S 3A7 • TEL: (416) 754-8515 • FAX: (416) 754-8516

BARRIE	MISSISSAUGA	OSHAWA	NEWMARKET	GRAVENHURST	PETERBOROUGH	HAMILTON
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) 777-7956
FAX: (705) 721-7864	FAX: (905) 542-2769	FAX: (905) 725-1315	FAX: (416) 754-8516	FAX: (705) 684-8522	FAX: (905) 725-1315	FAX: (905) 542-2769

BILLS

REFERENCE NO. 1512-S086E

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-54801 Weighmaster: KELLY DAVIDSON

Date In	Date Out
17-Mar-2017 8:44 am	17-Mar-2017 8:44 am

Vehicle / Trk ID: 5589VP - Robmar Trucking
Carrier: Robmar Trucking
Reference / Job #:
Bill of Lading: 23453

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

GROSS WEIGHT	35,570.00	kg	Man. WT
TARE WEIGHT	13,630.00	kg	Tare Out
NET WEIGHT	21,940.00	kg	

Quantity	Unit	Description	Rate	Extension	Tax	Total
21.94	MT	SOIL: C	$40.00	$877.60	$114.09	$991.69

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

	Net Amount:	$991.69
MASTERCARD	Tendered:	991.69
	Change:	$0.00

Signature: _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-54809 Weighmaster: KELLY DAVIDSON

Date In	Date Out
17-Mar-2017 8:49 am	17-Mar-2017 8:49 am

Vehicle / Trk ID: 9472VJ - Salo Commercial
Carrier: Salo Commercial
Reference / Job #:
Bill of Lading: 23296

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

GROSS WEIGHT	38,010.00	kg	Man. WT
TARE WEIGHT	14,100.00	kg	Tare Out
NET WEIGHT	23,910.00	kg	

Quantity	Unit	Description	Rate	Extension	Tax	Total
23.91	MT	SOIL: C	$40.00	$956.40	$124.33	$1,080.73

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

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	Net Amount:	$1,080.73
MASTERCARD	Tendered:	1,080.73
	Change:	$0.00

Signature: _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-54812 Weighmaster: KELLY DAVIDSON

Date In: 17-Mar-2017 10:06 am
Date Out: 17-Mar-2017 10:08 am

Vehicle / Trk ID: AJ81901 - Lucky Strike
Carrier: Lucky Strike

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

24515

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

37,380.00	Man. WT
12,960.00	Tare Out
24,420.00	

24.42	MT	SOIL: C	$40.00	$976.80	$126.98	$1,103.78

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

Net Amount: $1,103.78
MASTERCARD Tendered: 1,103.78
Change: $0.00

Signature 

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-54815 Weighmaster: KELLY DAVIDSON

Date In: 17-Mar-2017 10:15 am
Date Out: 17-Mar-2017 10:15 am

Vehicle / Trk ID: 5589VP - Robmar Trucking
Carrier: Robmar Trucking

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

23454

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

37,180.00	Man. WT
13,630.00	Tare Out
23,550.00	

23.55	MT	SOIL: C	$40.00	$942.00	$122.46	$1,064.46

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

Net Amount: $1,064.46
MASTERCARD Tendered: 1,064.46
Change: $0.00

Signature 

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-54818 Weighmaster: KELLY DAVIDSON

Date In: 17-Mar-2017 10:26 am
Date Out: 17-Mar-2017 10:28 am

Vehicle / Trk ID: 9472VJ - Salo Commercial
Carrier: Salo Commercial

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

23297

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

36,310.00	Man. WT
14,100.00	Tare Out
22,210.00	

22.21	MT	SOIL: C	$40.00	$888.40	$115.49	$1,003.89

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

Net Amount: $1,003.89
MASTERCARD Tendered: 1,003.89
Change: $0.00

Signature 

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-54822 Weighmaster: KELLY DAVIDSON

Date In: 17-Mar-2017 10:36 am
Date Out: 17-Mar-2017 10:41 am

Vehicle / Trk ID: AS48901 - Dan 637
Carrier: Dan

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

24275

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

38,250.00	Man. WT
12,950.00	Tare Out
25,300.00	

25.30	MT	SOIL: C	$40.00	$1,012.00	$131.56	$1,143.56

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

Net Amount: $1,143.56
MASTERCARD Tendered: 1,143.56
Change: $0.00

Signature 

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-54823 Weighmaster: KELLY DAVIDSON

Date In: 17-Mar-2017 10:40 am
Date Out: 17-Mar-2017 10:42 am

Vehicle / Trk ID: AE12209 - Dvine 645
Carrier: Dvine Haulage

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

19870

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

36,780.00	Man. WT
12,820.00	Tare Out
23,960.00	

23.96	MT	SOIL: C	$40.00	$958.40	$124.59	$1,082.99

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

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	Net Amount:	$1,082.99
MASTERCARD	Tendered:	1,082.99
	Change:	$0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-54839 Weighmaster: KELLY DAVIDSON

Date In: 17-Mar-2017 11:25 am
Date Out: 17-Mar-2017 11:26 am

Vehicle / Trk ID: AJ81901 - Lucky Strike
Carrier: Lucky Strike

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

24511

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

37,800.00	Man. WT
12,960.00	Tare Out
24,840.00	

24.84	MT	SOIL: C	$40.00	$993.60	$129.17	$1,122.77

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

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	Net Amount:	$1,122.77
MASTERCARD	Tendered:	1,122.77
	Change:	$0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-54842 Weighmaster: KELLY DAVIDSON

Date In: 17-Mar-2017 11:34 am
Date Out: 17-Mar-2017 11:35 am

Vehicle / Trk ID: 5589VP - Robmar Trucking
Carrier: Robmar Trucking

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

23455

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

36,740.00	Man. WT					
13,630.00	Tare Out					
23,110.00						
23.11	MT	SOIL: C	$40.00	$924.40	$120.17	$1,044.57

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

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Net Amount: $1,044.57
MASTERCARD Tendered: 1,044.57
Change: $0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-54853 Weighmaster: KELLY DAVIDSON

Date In: 17-Mar-2017 11:46 am
Date Out: 17-Mar-2017 11:46 am

Vehicle / Trk ID: 9472VJ - Salo Commercial
Carrier: Salo Commercial

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

23298

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

37,630.00	Man. WT					
14,100.00	Tare Out					
23,530.00						
23.53	MT	SOIL: C	$40.00	$941.20	$122.36	$1,063.56

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

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Net Amount: $1,063.56
MASTERCARD Tendered: 1,063.56
Change: $0.00

Signature: _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-54849 Weighmaster: KELLY DAVIDSON

Date In: 17-Mar-2017 12:04 pm
Date Out: 17-Mar-2017 12:05 pm

Vehicle / Trk ID: AS48901 - Dan 637
Carrier: Dan

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

24277

INBOUND

37,270.00 Man. WT
12,950.00 Tare Out
24,320.00

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

24.32	MT	SOIL: C	$40.00	$972.80	$126.46	$1,099.26

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

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Net Amount: $1,099.26
MASTERCARD Tendered: 1,099.26
Change: $0.00

Signature 

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-54850 Weighmaster: KELLY DAVIDSON

Date In: 17-Mar-2017 12:09 pm
Date Out: 17-Mar-2017 12:09 pm

Vehicle / Trk ID: AE12209 - Dvine 645
Carrier: Dvine Haulage

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

19871

INBOUND

36,290.00 Man. WT
12,820.00 Tare Out
23,470.00

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

23.47	MT	SOIL: C	$40.00	$938.80	$122.04	$1,060.84

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

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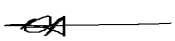
Net Amount: $1,060.84
MASTERCARD Tendered: 1,060.84
Change: $0.00

Signature 

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-54864

Weighmaster: KELLY DAVIDSON

Date In: 17-Mar-2017 12:54 pm

Date Out: 17-Mar-2017 12:57 pm

Vehicle / Trk ID: AJ81901 - Lucky Strike

Carrier: Lucky Strike

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

24512

INBOUND

36,990.00 Man. WT
12,960.00 Tare Out
24,030.00

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

24.03	MT	SOIL: C	$40.00	$961.20	$124.96	$1,086.16

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

Net Amount: $1,086.16
MASTERCARD Tendered: 1,086.16
Change: $0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68340 Weighmaster: TERESA DONATO

Date In: 10-Aug-2017 9:10 am
Date Out: 10-Aug-2017 9:18 am

Vehicle / Trk ID: AC18744 - Freestyle 213
Carrier: Freestyle
Reference / Job #:
Bill of Lading: 25212

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

GROSS WEIGHT	39,560.00	kg	Man. WT
TARE WEIGHT	13,340.00	kg	Tare Out
NET WEIGHT	26,220.00	kg	

Quantity	Unit	Description	Rate	Extension	Tax	Total
26.22	MT	SOIL: C	$40.00	$1,048.80	$136.34	$1,185.14

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

Net Amount: $1,185.14
MASTERCARD Tendered: 1,185.14
Change: $0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68341 Weighmaster: TERESA DONATO

Date In: 10-Aug-2017 9:11 am
Date Out: 10-Aug-2017 9:20 am

Vehicle / Trk ID: AD88192 - 2570734 Ont Inc 1
Carrier: 2570734 Ont Inc
Reference / Job #:
Bill of Lading: 38230

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

GROSS WEIGHT	40,590.00	kg	Man. WT
TARE WEIGHT	13,560.00	kg	Tare Out
NET WEIGHT	27,030.00	kg	

Quantity	Unit	Description	Rate	Extension	Tax	Total
27.03	MT	SOIL: C	$40.00	$1,081.20	$140.56	$1,221.76

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

Net Amount: $1,221.76
MASTERCARD Tendered: 1,221.76
Change: $0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68344 Weighmaster: TERESA DONATO

Date In	Date Out
10-Aug-2017 9:26 am	10-Aug-2017 9:32 am

Vehicle / Trk ID: 9225YT - A Haulage
Carrier: A Haulage

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

18362

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

40,340.00	Man. WT
13,370.00	Tare Out
26,970.00	

26.97	MT	SOIL: C	$40.00	$1,078.80	$140.24	$1,219.04

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

	Net Amount:	$1,219.04
MASTERCARD	Tendered:	1,219.04
	Change:	$0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68345 Weighmaster: TERESA DONATO

Date In	Date Out
10-Aug-2017 9:28 am	10-Aug-2017 9:35 am

Vehicle / Trk ID: AD10339 - Duhok 04
Carrier: Duhok

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

37691

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

38,690.00	Man. WT
13,500.00	Tare Out
25,190.00	

25.19	MT	SOIL: C	$40.00	$1,007.60	$130.99	$1,138.59

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

	Net Amount:	$1,138.59
MASTERCARD	Tendered:	1,138.59
	Change:	$0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68350 Weighmaster: TERESA DONATO

Date In: 10-Aug-2017 10:23 am
Date Out: 10-Aug-2017 10:29 am

Vehicle / Trk ID: AC18744 - Freestyle 213
Carrier: Freestyle

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

25213

INBOUND

38,860.00 Man. WT
13,340.00 Tare Out
25,520.00

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

25.52	MT	SOIL: C	$40.00	$1,020.80	$132.70	$1,153.50

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

Net Amount: $1,153.50
MASTERCARD Tendered: 1,153.50
Change: $0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68352 Weighmaster: TERESA DONATO

Date In: 10-Aug-2017 10:32 am
Date Out: 10-Aug-2017 10:34 am

Vehicle / Trk ID: AD88192 - 2570734 Ont Inc 1
Carrier: 2570734 Ont Inc

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

38231

INBOUND

40,980.00 Man. WT
13,560.00 Tare Out
27,420.00

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

27.42	MT	SOIL: C	$40.00	$1,096.80	$142.58	$1,239.38

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

Net Amount: $1,239.38
MASTERCARD Tendered: 1,239.38
Change: $0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68354 Weighmaster: TERESA DONATO

Date In: 10-Aug-2017 10:57 am
Date Out: 10-Aug-2017 11:00 am

Vehicle / Trk ID: 9225YT - A Haulage
Carrier: A Haulage

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

18363

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

39,410.00	Man. WT
13,370.00	Tare Out
26,040.00	

26.04	MT	SOIL: C	$40.00	$1,041.60	$135.41	$1,177.01

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

	Net Amount:	$1,177.01
MASTERCARD	Tendered:	1,177.01
	Change:	$0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68355 Weighmaster: TERESA DONATO

Date In: 10-Aug-2017 10:58 am
Date Out: 10-Aug-2017 11:02 am

Vehicle / Trk ID: AD10339 - Duhok 04
Carrier: Duhok

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

37692

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

39,690.00	Man. WT
13,500.00	Tare Out
26,190.00	

26.19	MT	SOIL: C	$40.00	$1,047.60	$136.19	$1,183.79

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

	Net Amount:	$1,183.79
MASTERCARD	Tendered:	1,183.79
	Change:	$0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68360 Weighmaster: TERESA DONATO

Date In: 10-Aug-2017 11:34 am
Date Out: 10-Aug-2017 11:37 am

Vehicle / Trk ID: AC18744 - Freestyle 213
Carrier: Freestyle

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

25214

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

40,350.00	Man. WT
13,340.00	Tare Out
27,010.00	

27.01	MT	SOIL: C	$40.00	$1,080.40	$140.45	$1,220.85

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

Net Amount: $1,220.85
MASTERCARD Tendered: 1,220.85
Change: $0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68362 Weighmaster: TERESA DONATO

Date In: 10-Aug-2017 11:36 am
Date Out: 10-Aug-2017 11:44 am

Vehicle / Trk ID: AD88192 - 2570734 Ont Inc 1
Carrier: 2570734 Ont Inc

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

38232

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

41,880.00	Man. WT
13,560.00	Tare Out
28,320.00	

28.32	MT	SOIL: C	$40.00	$1,132.80	$147.26	$1,280.06

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

Net Amount: $1,280.06
MASTERCARD Tendered: 1,280.06
Change: $0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68369 Weighmaster: TERESA DONATO

Date In: 10-Aug-2017 12:15 pm
Date Out: 10-Aug-2017 12:20 pm

Vehicle / Trk ID: 9225YT - A Haulage
Carrier: A Haulage

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

18364

INBOUND

39,780.00 Man. WT
13,370.00 Tare Out
26,410.00

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

26.41	MT	SOIL: C	$40.00	$1,056.40	$137.33	$1,193.73

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

Net Amount: $1,193.73
MASTERCARD Tendered: 1,193.73
Change: $0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68373 Weighmaster: TERESA DONATO

Date In: 10-Aug-2017 12:24 pm
Date Out: 10-Aug-2017 12:31 pm

Vehicle / Trk ID: AD10339 - Duhok 04
Carrier: Duhok

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

37693

INBOUND

40,990.00 Man. WT
13,500.00 Tare Out
27,490.00

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

27.49	MT	SOIL: C	$40.00	$1,099.60	$142.95	$1,242.55

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

Net Amount: $1,242.55
MASTERCARD Tendered: 1,242.55
Change: $0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68375 Weighmaster: TERESA DONATO

Date In: 10-Aug-2017 12:40 pm
Date Out: 10-Aug-2017 12:45 pm

Vehicle / Trk ID: AC18744 - Freestyle 213
Carrier: Freestyle

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

25215

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

42,240.00	Man. WT
13,340.00	Tare Out
28,900.00	

28.90	MT	SOIL: C	$40.00	$1,156.00	$150.28	$1,306.28

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

	Net Amount:	$1,306.28
MASTERCARD	Tendered:	1,306.28
	Change:	$0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68376 Weighmaster: TERESA DONATO

Date In: 10-Aug-2017 12:46 pm
Date Out: 10-Aug-2017 12:52 pm

Vehicle / Trk ID: AD88192 - 2570734 Ont Inc 1
Carrier: 2570734 Ont Inc

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

38233

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

42,680.00	Man. WT
13,560.00	Tare Out
29,120.00	

29.12	MT	SOIL: C	$40.00	$1,164.80	$151.42	$1,316.22

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

	Net Amount:	$1,316.22
MASTERCARD	Tendered:	1,316.22
	Change:	$0.00

Signature _____

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68381 Weighmaster: TERESA DONATO

Date In	Date Out
10-Aug-2017 1:35 pm	10-Aug-2017 1:46 pm

Vehicle / Trk ID: 9225YT - A Haulage
Carrier: A Haulage

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

18365

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

40,320.00	Man. WT
13,370.00	Tare Out
26,950.00	

26.95	MT	SOIL: C	$40.00	$1,078.00	$140.14	$1,218.14

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

Customers represents and warrants that the description of the material deposited with GFL Environmental Inc. on the face hereof is accurate and that the waste does not, unless specifically noted on the face hereof, include any radioactive, volatile, corrosive, highly flammable, explosive, biomedical, infectious biohazardous, toxic, hazardous or special waste such terms are defined in applicable local, provincial or federal law. Customer agrees to indemnify and save GFL Environmental Inc, it's directors, officers and employees, harmless from any and all costs and expenses (including without limitation any line or penalty imposed upon GFL Environmental Inc.) which GFL Environmental Inc. may incur arising from or as a result of any misrepresentation of the waste

	Net Amount:	$1,218.14
MASTERCARD	Tendered:	1,218.14
	Change:	$0.00

Signature 

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68390 Weighmaster: TERESA DONATO

Date In	Date Out
10-Aug-2017 1:45 pm	10-Aug-2017 1:50 pm

Vehicle / Trk ID: AD10339 - Duhok 04
Carrier: Duhok

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

37694

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

35,420.00	Man. WT
13,500.00	Tare Out
21,920.00	

21.92	MT	SOIL: C	$40.00	$876.80	$113.98	$990.78

TERMS AND CONDITIONS FOR DISPOSAL

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	Net Amount:	$990.78
VISA	Tendered:	990.78
	Change:	$0.00

Signature 

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68391 Weighmaster: TERESA DONATO

Date In	Date Out
10-Aug-2017 2:05 pm	10-Aug-2017 2:38 pm

Vehicle / Trk ID: AC18744 - Freestyle 213
Carrier: Freestyle

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

25216

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

38,470.00	Man. WT
13,340.00	Tare Out
25,130.00	

25.13	MT	SOIL: C	$40.00	$1,005.20	$130.68	$1,135.88

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

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	Net Amount:	$1,135.88
VISA	Tendered:	1,135.88
	Change:	$0.00

Signature 

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68392 Weighmaster: TERESA DONATO

Date In	Date Out
10-Aug-2017 2:40 pm	10-Aug-2017 2:40 pm

Vehicle / Trk ID: AD88192 - 2570734 Ont Inc 1
Carrier: 2570734 Ont Inc

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

38234

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

39,430.00	Man. WT
13,560.00	Tare Out
25,870.00	

25.87	MT	SOIL: C	$40.00	$1,034.80	$134.52	$1,169.32

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

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	Net Amount:	$1,169.32
VISA	Tendered:	1,169.32
	Change:	$0.00

Signature 

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68399 Weighmaster: TERESA DONATO

Date In: 10-Aug-2017 3:02 pm
Date Out: 10-Aug-2017 3:18 pm

Vehicle / Trk ID: AD10339 - Duhok 04
Carrier: Duhok

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

37695

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

34,710.00	Man. WT
13,500.00	Tare Out
21,210.00	

21.21	MT	SOIL: C	$40.00	$848.40	$110.29	$958.69

TERMS AND CONDITIONS FOR DISPOSAL

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	Net Amount:	$958.69
VISA	Tendered:	958.69
	Change:	$0.00

Signature 

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68400 Weighmaster: TERESA DONATO

Date In: 10-Aug-2017 3:08 pm
Date Out: 10-Aug-2017 3:22 pm

Vehicle / Trk ID: 9225YT - A Haulage
Carrier: A Haulage

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

18366

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

39,050.00	Man. WT
13,370.00	Tare Out
25,680.00	

25.68	MT	SOIL: C	$40.00	$1,027.20	$133.54	$1,160.74

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

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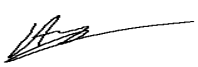
	Net Amount:	$1,160.74
VISA	Tendered:	1,160.74
	Change:	$0.00

Signature 

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68404 Weighmaster: TERESA DONATO

Date In	Date Out
10-Aug-2017 3:16 pm	10-Aug-2017 4:04 pm

Vehicle / Trk ID: AD88192 - 2570734 Ont Inc 1
Carrier: 2570734 Ont Inc

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

38235

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

37,260.00	Man. WT
13,560.00	Tare Out
23,700.00	

23.70	MT	SOIL: C	$40.00	$948.00	$123.24	$1,071.24

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

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	Net Amount:	$1,071.24
VISA	Tendered:	1,071.24
	Change:	$0.00

Signature 

H.S.T # 84188 4893

C of A A210742
C of A A680294

GFL ENVIRONMENTAL INC. - SOIL - FENMAR
38 Fenmar Drive
North York, ON M9L 1L9
PH:(416) 745-8080 FX:(416) 745-3478

REPRINT

Ticket: F1-68403 Weighmaster: TERESA DONATO

Date In	Date Out
10-Aug-2017 3:48 pm	10-Aug-2017 3:48 pm

Vehicle / Trk ID: AC18744 - Freestyle 213
Carrier: Freestyle
NO LOAD
25217

002001 - 2512461 Ontario Ltd
2502-110 Charles Street East
Toronto, ON M4Y 1T5

INBOUND

Contract/ Site Name: 20170739 - T&D 6611 2ND LINE WEST MISSISSAUGA

13,340.00	Man. WT
13,340.00	Tare Out
0.00	

0.00	MT	SOIL: C	$40.00	$0.00	$0.00	$0.00
1.00		NO LOAD CHARGE	$350.00	$350.00	$45.50	$395.50

TERMS AND CONDITIONS FOR DISPOSAL

User of this facility assume all liability for any injury or damage to person or property arising from or contributed to by users' failure to comply with procedures posted by GFL Environmental Inc. and/or instructions provided by a GFL Environmental Inc. attendant.

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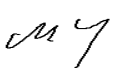
	Net Amount:	$395.50
VISA	Tendered:	395.50
	Change:	$0.00

Signature 

H.S.T # 84188 4893