AVENYN CAPITAL PARTNERS LP II

PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT

1591 – 1611 Michael Street, Ottawa, Ontario

FINAL REPORT

November 14, 2023

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1.0 EXECUTIVE SUMMARY

Terrapex Environmental Ltd. (Terrapex) was retained by Avenyn Capital Partners LP II (the Client) to complete a Phase Two Environmental Site Assessment (ESA) of the properties located at 1591 & 1611 Michael Street, and a portion of 1601 Michael Street, Ottawa, Ontario (referenced as "the Phase Two property" or "the Site"). It is understood that the study documented herein is being undertaken for the purposes of supporting a site plan agreement with the City of Ottawa.

The Site occupies an area of approximately 0.92 hectares (9171 m^2) and comprises the northern and eastern portions of the lands at 1591 & 1611 Michael Street, and a portion of 1601 Michael Street, Ottawa, Ontario. The Site was last used as a vehicle storage yard, and presently vacant. At the time of the Phase Two ESA investigations, the Site was vacant with overgrown vegetation and mature trees along the northern property boundary and the south-central portion of the Site was gravel-covered with a small single-storey modular building in the southwest portion.

A Phase One ESA was completed by Terrapex in January 2023 in accordance with the requirements of O. Reg. 153/04. The Phase One ESA identified several areas of potential environmental concern (APECs) at the Site, resulting from past commercial and light industrial uses of the Site and off-Site properties. As a result, a Phase Two ESA was required to investigate soil and groundwater quality at the Site prior to the filing of the mandatory RSC.

On the basis of the findings of the Phase One ESA, a Phase Two ESA was subsequently conducted by Terrapex to investigate the environmental quality of soil and groundwater at and in the vicinity of the APECs identified at the Site. The Phase Two ESA consisted of the completion of five boreholes to a maximum depth of 5.9 metres below grade (m bg), installation of four groundwater monitoring wells, and the collection of soil and groundwater samples for laboratory analysis of contaminants of potential concern (COPCs) at the Site.

The study documented herein is being undertaken for the purposes of supporting a site plan agreement with the Client, the generic full-depth Ministry of the Environment, Conservation and Parks (MECP) Site Condition Standards (SCS) applicable to industrial/commercial property use in a non-potable groundwater condition with coarse-textured soil (the "Table 3 SCS") was selected to evaluate soil and groundwater quality at the Site.

Based on field observations and an evaluation of soil and groundwater quality data, the following conclusions are provided:

- The soil stratigraphy encountered in the boreholes drilled at the Site generally consisted of a 100 to 200 mm layer of topsoil or a 200 mm layer of asphalt and granular sub-base underlain by fill material consisting of sand containing varying gravel fractions ranging from some gravel to gravelly, trace silt, and organics. The fill materials were underlain by a deposit of native brownish grey, greyish brown, and grey fine sand soil with some silt. The colour of the native sand becomes brownish grey or grey at depths between 0.5 and 1.5

m bg, brown soil between 1.5 – 2.0 m bg and changes to grey towards the end of borehole. The boreholes were terminated within the finer sand deposit at depths between 4.5 to 5.9 m bg, which represents the maximum depth of investigation.

- One groundwater monitoring event for all four wells have been conducted at the Site on July 24, 2023. The depth to groundwater was identified between 0.76 and 1.64 m bg during that monitoring event.
- The findings from the monitoring event indicated that the groundwater flow is to the north.
- No evidence of non-aqueous phase liquids (i.e., NAPL) was encountered during monitoring, purging, or sampling of the monitoring wells.
- No soil parameters were found to be present in soil at levels in excess of the Table 3 SCS.
- No groundwater parameters were found to be present in groundwater at levels in excess of the Table 3 SCS.

Based on the findings of the Phase Two ESA, the environmental quality of soil at the Site does meet the Table 3 SCS.

2.0 INTRODUCTION

Terrapex Environmental Ltd. (Terrapex) was retained by Avenyn Capital Partners LP II (the Client) to complete a Phase Two Environmental Site Assessment (ESA) of the properties located at 1591 & 1611 Michael Street, and a portion of 1601 Michael Street, Ottawa, Ontario (referenced as "the Phase Two property" or "the Site").

The objective of the Phase Two ESA was to assess the areas of potential environmental concern (APECs) identified by a Phase One ESA (Terrapex, 2023) to support the filing of a site plan agreement (SPA) with City of Ottawa (the City).

2.1 SITE DESCRIPTION

The Site occupies an area of approximately 0.92 hectares (9,171 m^2) and comprises the northern and eastern portions of the lands at 1591 & 1611 Michael Street, and a portion of 1601 Michael Street, Ottawa, Ontario. The Site was last used as a vehicle storage yard, and presently vacant.

At the time of the Phase Two ESA investigations, the Site was vacant with overgrown vegetation and mature trees along the northern property boundary and the south-central portion of the Site was gravel-covered with a small single-storey modular building in the southwest portion.

Based on the current Plan of Survey, the property identification number (PIN) and legal property description for the Site are listed below.

PHASE ONE PROPERTY INFORMATION

Address:	1591 [1] & 1611 [2] and a portion of 1601 [3] Michael Street, Ottawa, Ontario
Property Identification Number:	[1] 04263-0456 [2] 04263-0455 [3] 04263-0457
Legal Description:	1] Part of Lot 27, Concession 2 Ottawa Front, Gloucester, Part 4 Plan 4r29375 City of Ottawa [2] Part of Lot 27, Concession 2 Ottawa Front, Gloucester, Parts 2 And 3 Plan 4r29375 Subject to An Easement Over Part 3 Plan 4r29375 In Favour of Part of Lot 27, Concession 2 Ottawa Front, Gloucester, Part 1 Plan 4r29375 As In Oc1810476 City Of Ottawa [3] Part of Lot 27, Concession 2 Ottawa Front, Gloucester, Part 4 Plan 4r29375 City of Ottawa
UTM Coordinates (centre of site, NAD83):	18T, 451088 m E, 5028800 m N
Site Area:	9,171 m^2 (0.92 ha) in total
Occupants (current):	[1] Vacant [2] Vacant [3] Acc-Par Systems Ltd.
Other facilities of note:	None

The Site is located in a neighbourhood comprised of industrial/commercial land uses as shown on Figure 1 (Site Location Plan) and Figure 2 (General Site Layout).

A plan of survey for the Site is provided in Appendix I.

2.2 PROPERTY OWNERSHIP

Contact information for the registered owner of the Site and the party authorizing this Phase Two ESA is provided in the table below.

Name and Address of Registered Owner, and Authorizing Party:	Roberto Campagna President – Roca Homes 503-359 Kent St., Ottawa, ON K1P 0R6

2.3 CURRENT AND PROPOSED FUTURE USES

The Site is vacant and was formerly used as a vehicle storage yard. The Site is a "commercial property" use per O. Reg. 153/04. (Records of Site Condition – Part XV.1 of the Act).

It is understood that the study documented herein is being undertaken for the purposes of supporting a site plan agreement with the City .

2.4 APPLICABLE SITE CONDITION STANDARDS

Generic Ministry of the Environment, Conservation and Parks (MECP) Site Condition Standards for evaluating laboratory analytical results were selected from the April 15, 2011, *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* (MOE, 2011) document on the basis of the criteria specified in O. Reg. 153/04.

The Site-specific details which influenced the soil and groundwater standards selection are summarized below:

- the Site is not within or adjacent to an area of natural significance as defined within Section 1 (1) of O. Reg. 153/04, does not include any land within 30 m of an area of natural significance, and is not otherwise considered "potentially sensitive";
- the pH determined for "surface" soil samples (representative of depths not exceeding 1.5 m below ground surface, excluding any surface treatment) analysed as part of this Phase Two ESA ranged from 6.94 to 7.19, which is between the prescribed values of 5 to 9 for the application of generic Site Condition Standards;
- the pH determined for "subsurface" soil samples (representative of depths greater than 1.5 m below ground surface, excluding any surface treatment) analysed as part of this Phase Two ESA ranged from 6.81 to 7.22, which is between the prescribed values of 5 to 11 for the application of generic Site Condition Standards;
- more than 2 m of overburden was observed over at least two-thirds of the area of the Site;
- the Site does not include a waterbody and is not located within 30 m of a waterbody;
- stratified site conditions will not be used when evaluating laboratory analytical results;
- current use of the Site is considered to be commercial;
- proposed future use of the Site is expected to be commercial property and the proposed grading is anticipated to remain the same as the existing grade;
- potable water at the Site, and all other properties located (in whole or in part) within 250 m of the Site, is supplied by a municipal drinking water system (as defined in the *Safe Drinking Water Act, 2002*);
- neither the Site nor any property located (in whole or in part) within 250 m of the Site has a well that is used or intended for use as a source of water for human consumption or for

agriculture other than two domestic supply wells drilled to the west of Michael Street in 1953 and one domestic supply well at 1188 Newmarket Street in 2002.

- the Site is not located in an area designated in a municipal Official Plan as a well-head protection area, or another designation by the municipality intended for the protection of groundwater; and,
- soil texture at the Site has been classified as “fine textured” based on grain size analysis conducted on one soil sample conducted during a previous investigation at the Site.

Based on the above, Full Depth Generic Site Condition Standards applicable to industrial/commercial/community property use that are listed in Table 3 of the April 15, 2011 MECP *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* document (hereafter referenced as the MECP Table 3 SCS) are considered appropriate for evaluating laboratory analytical results.

In accordance with the requirements of Section 35 of O. Reg. 153/04, notification of the intent to use standards corresponding to a non-potable groundwater condition was provided to the Clerk of the City on September 6, 2023 of the intent to use standards corresponding to a non-potable groundwater condition. Currently, awaiting a response from the City. A copy of the notification correspondence is provided in Appendix II.

3.0 BACKGROUND INFORMATION

3.1 PHYSICAL SETTING

3.1.1 WATER BODIES & AREAS OF NATURAL SIGNIFICANCE

Based on the review of the aerial photographs, satellite images, and topographic maps completed as part of the previous Phase One ESA, the Site does not include, and is not adjacent to, or within 30 m of a water body, as defined in O. Reg. 153/04. There are no major water bodies within the Phase One Study Area. The nearest identified watercourse is Rideau River located approximately 3 km west and an unknown creek located approximately 1.5 km east of the Site.

3.1.2 TOPOGRAPHY & SURFACE WATER DRAINAGE

A review of GeoOttawa's topographic contours indicated the Site was at an elevation of approximate 68 m above mean sea level (amsl), and that the study area slopes gently to the northeast toward the Alexandria rail corridor.

A review of the topographic plan of survey, provided in Appendix I, shows the Site is relatively flat at an elevation of approximately 70 m amsl.

A copy of the Topographic map is provided in Appendix VIII.

Storm water from the Site (other than what infiltrates into the ground) is directed towards the municipal storm water sewer system through catch basins located on adjacent roadways.

3.2 PAST INVESTIGATIONS

A summary of past environmental reports available for review is presented below.

Summary of Phase One ESA

A Phase One ESA of the Site was carried out by Terrapex in January 2023 in accordance with the requirements of O. Reg. 153/04, as amended, to support the redevelopment of the Site for industrial/commercial purposes.

The Site occupies an area of approximately 0.92 hectares (9,171 m^2) and comprises the northern and eastern portions of the lands at 1591 & 1611 Michael Street, and a portion of 1601 Michael Street, Ottawa, Ontario. The Site was last used as a vehicle storage yard, and presently vacant. At the time of the Phase Two ESA investigations, the Site was vacant with an overgrown vegetation and mature trees along the northern property boundary and the south-central portion

of the Site was gravel-covered with a small single-storey modular building in the southwest portion.

The primary objective of the Phase One ESA was to assess the Site and the surrounding lands wholly or partly located within a 250 m radius (Phase One Study Area) for potentially contaminating activities (PCAs) to identify areas of potential environmental concern (APECs) at the Site. Possible environmental concerns were identified through a site reconnaissance, interviews, and a records review consisting of a review of aerial photographs, fire insurance plans (FIPs), a chain of title search, a city directories search, and an Ecolog Environmental Risk Information Services (ERIS) database search.

Through an evaluation of the information gathered from the records review, interviews, and the site reconnaissance, several APECs were identified at the Site associated with former potentially contaminating activities (PCAs) at the Site, including:

- Former automobile storage on site; and,
- Fill material of unknown quality and origin across the entire Site.

In addition, several PCAs were identified at off-Site locations in close proximity to all boundaries of the Site, with the potential to impact soil and groundwater quality at the Site through groundwater contaminant migration. As such, these off-Site PCAs are considered to represent APECs at the property limits.

In conclusion, the Phase One ESA identified several APECs at the Site, resulting from past industrial and commercial uses of the Site and off-Site properties. As a result, the completion of a Phase Two ESA was required in order to file a Record of Site Condition (RSC) for the Site in accordance with the requirements of O. Reg. 153/04.

4.0 SCOPE OF INVESTIGATION

4.1 OVERVIEW OF SITE INVESTIGATION

The scope of Terrapex's assessment comprised the following:

- preparing a Sampling and Analysis Plan that identified target sampling locations and associated rationale, a proposed laboratory analytical program, and the number and type of Quality Control (QC) samples;
- drilling five boreholes on July 19, 2023 to depths ranging between 4.5 and 5.9 m bg, four of which were completed as groundwater monitoring wells;
- collecting soil samples and logging of visual, olfactory and tactile soil characteristics;
- measuring combustible soil vapour (CSV) concentrations in soil;
- submitting selected soil and groundwater samples for laboratory analyses;
- surveying the elevation of each monitoring well relative to a known elevation of a fire hydrant adjacent to the southern property line of the Site;
- monitoring groundwater conditions within each monitoring well;
- evaluating laboratory analytical results with respect to the selected SCS; and,
- refining the existing Conceptual Site Model (developed during the previous Terrapex Phase One ESA) to reflect the information collected during the Phase Two ESA activities.

The Sampling and Analysis Plan is provided in Appendix III. The sampling procedures are documented in detail in Section 5.0.

4.2 MEDIA INVESTIGATED

Based on the Phase One ESA findings, the Phase Two ESA work program documented herein included investigation of the environmental quality of both soil and groundwater at the Site. The environmental quality of sediment was not investigated as sediment is not present at the Site.

Soil and groundwater were investigated by drilling boreholes, installing monitoring wells, and groundwater sampling, as described above, and in Section 5.0.

4.3 PHASE ONE CONCEPTUAL SITE MODEL

The Phase One Conceptual Site Model (CSM) presented in the Phase One ESA report (Terrapex, 2023) includes figures and narrative that provided the logical basis for the interpretation of PCAs and APECs on the Phase Two Property. A summary of the CSM is provided below.

Site Features: The Site occupies an area of approximately 0.92 hectares (9171 m^2) and comprises the northern and eastern portions of the lands at 1591 & 1611 Michael Street, and a

portion of 1601 Michael Street, Ottawa, Ontario. The Site was last used as a vehicle storage yard, and presently vacant. At the time of the Phase Two ESA investigations, the Site was vacant with an overgrown vegetation and mature trees along the northern property boundary and the south-central portion of the Site was gravel-covered with a small single-storey modular building in the southwest portion.

The Site is bordered by several industrial/commercial properties followed by Michael Street to the north and south, extending it to Newmarket Street and Belfast Road.

The location of the Site and the general Site layout are shown on Figure 1 and 2, respectively. The Phase One Study Area, illustrating the Site and surrounding lands, is shown on Figure 3.

Geology/Hydrogeology: Based on the 2007 Ontario Geological Survey (OGS) map *Physiography of Southern Ontario*, the Study Area is in a physiographic region known as clay plains.

Based on the OGS map *Surficial Geology of Southern Ontario*, the study area is in an area of massive to well laminated fine-textured glaciomarine deposits of silt and clay with minor sand and gravel.

Based on the OGS map *Paleozoic Geology of Southern Ontario*, the Paleozoic bedrock at the Site was described as shale and limestone of the Carlsbad formation.

The nearest identified watercourse is Rideau River located approximately 3 km west, and an unknown creek located approximately 1.5 kms east of the Site.

Based on topographic and geologic information provided above, the inferred direction of local shallow groundwater flow at the Site is anticipated to be north-easterly toward the Alexandria rail corridor.

Potentially Contaminating Activities (PCAs) / Areas of Potential Environmental Concern (APECs): 129 PCAs were identified relating to activities or incidents at the Site or within the Phase One Study Area that were evaluated for their potential to contribute to APEC.

Based on a detailed review of the available information relating to the PCAs, a total of 23 APECs were identified on the Site.

The identified PCAs and APECs associated with the CSM developed during the Terrapex Phase One ESA are illustrated on Figures 4 and 5.

Contaminants of Concern: Contaminants of potential concern (COPCs) associated with the APECs included metals, hydride-forming metals, PAHs, PHC F1-F4, VOCs (including BTEX), and select ORPs in soil and groundwater.

Migration Pathways: In general, potential preferential migration pathways for sub-surface contaminants at a Site can include naturally occurring sand seams or similar geologic strata as well as anthropological conduits associated with buried utilities, former building basements, historical water wells, etc. However, the observed stratigraphy at the Site suggests that natural preferential pathways are not a significant Site feature.

Based on the public and private utility locates obtained during investigation program, the only buried utilities were identified along Michael Street. As such, buried utilities are not suspected to have affected the Phase Two ESA efforts to identify potential contaminants at the Site.

Uncertainty: The main uncertainty in the CSM is the lack of information regarding past chemical handling/storage and operation/maintenance practices at the nearby commercial/light industrial properties.

4.4 DEVIATIONS FROM THE SAMPLING AND ANALYSIS PLAN

No deviations from the Sampling and Analysis Plan were encountered during the Phase Two ESA investigation except that the collection of soil samples for vertical delineation was not completed as signs of contamination were identified. A copy of the Sampling and Analysis Plan is provided in Appendix III.

4.5 IMPEDIMENTS

Access to the Site was not impeded at any time during the Phase Two ESA work program, with the exception of the northeast corner of the Site was overgrown with vegetation that limited our access for the our drill rig. It is out opinion that this impediment did not prevent the Phase Two ESA from identifying potential contaminants at the Site.

5.0 INVESTIGATION METHOD

5.1 GENERAL

The soil and groundwater quality at the Site were investigated at the locations shown on Figure 2 through the advancement of boreholes and installation of groundwater monitoring wells to characterize environmental conditions at the APECs identified in the Phase One ESA. Investigation methods followed Standard Operating Procedures prepared by Terrapex for the conduct of environmental investigations.

5.2 DRILLING AND EXCAVATING

Borehole drilling and monitoring well installation services for this work program were provided by Strata Drilling Group (Strata) of Markham, Ontario using a rubber track mounted Geoprobe™ drill rig. Strata is a MECP-licensed well drilling contractor.

Measures to minimize potential cross-contamination or other potential bias are described in Terrapex's Standard Operating Procedures (Appendix IV). There were no deviations from the Standard Operating Procedures regarding borehole drilling during this investigation.

5.3 SOIL

5.3.1 SOIL SAMPLING

Borehole advancement conducted as part of the Phase Two ESA work program was completed under the full-time supervision of Terrapex staff. Soil samples were collected at each borehole location at regular depth intervals using a disposable dual tube sampler from a Geoprobe™ drill rig.

Each recovered sample was divided into two portions. One portion was placed in a clear sampling bag for field screening/logging. The second portion was collected using laboratory supplied sampling containers for analysis of selected COPCs. Samples considered to be “worst-case” based on field screening were submitted for analysis and extracted at the laboratory within the required holding time. Soil descriptions were recorded based on the Unified Soil Classification System (USCS).

Samples for analysis were placed in a cooler with ice and delivered undersigned chain of custody to the project laboratory for analysis.

Borehole locations are shown on Figure 2. Tabular borehole logs illustrating the stratigraphy encountered, chemical analysis samples and measured SV concentrations are included in Appendix V. Measures to minimize potential cross-contamination or other potential bias are described in Terrapex’s SOPs (Appendix IV).

5.3.2 FIELD SCREENING MEASUREMENTS

Combustible Soil Vapour (CSV) concentrations were measured in each soil sample using an RKI Eagle 2 Hydrocarbon Surveyor (Eagle) calibrated to *n*-hexane and operated in "methane elimination" mode. The PID can measure organic compounds to a nominal detection level of 0.1 parts per million by volume (ppm), with an accuracy of ±10%. The Eagle can measure combustible organic compounds to a nominal detection level of 5 ppm, with an accuracy of ±5%.

The Eagle was calibrated according to the manufacturer's instructions and Terrapex Standard Operating Procedures before the field investigation.

"Worst-case" soil samples from each borehole were identified on the basis of vapour screening, and/or visual and olfactory evidence of contamination, and sample location in relation to potential point sources of impact.

5.4 GROUNDWATER

5.4.1 MONITORING WELL INSTALLATION

Monitoring well installation services for this work program were provided by Strata, under contract with Terrapex. To facilitate monitoring well installation, the drill rigs were equipped with hollow stem augers.

A monitoring well was installed in select boreholes, as shown on Figure 2. The monitoring wells were constructed using 50 mm inside diameter schedule 40 PVC well pipe and #10 slot screen interval. The annulus of each monitoring well was backfilled with washed silica sand to a depth of approximately 0.3 m above the screened interval. A hydrated bentonite seal was placed above the sand pack to prevent infiltration of surface water into the monitoring well. A flush-mount well casing was cemented in place over two monitoring wells and stick-up casing for the other two monitoring wells for protection. Well installation details are provided within the borehole logs in Appendix IV.

The depths to the bottom of the screened intervals of the monitoring wells varied from 4.5 to 4.9 m bg. The monitoring wells were screened to assess the groundwater for the potential on-Site and off-Site sources of contamination.

Measures to minimize potential cross-contamination or other potential bias are described in Terrapex's Standard Operating Procedures (Appendix IV). There were no deviations from the Sampling and Analysis Plan regarding the installation of the monitoring wells.

Prior to developing, the monitoring wells were monitored for combustible vapours in the well headspace, and depths to water and to the bottom were measured in each well. The estimated volume of water in each well and its annulus were calculated based on the

depth measurements, diameter of the well standpipe and annulus, and an assumed annulus porosity of 30%.

The monitoring wells were developed in accordance with Terrapex's SOPs to remove entrained particulate in the well standpipe, well screen and filter pack, as well as surrounding formation materials. Development of each monitoring well was conducted with a dedicated inertial sampler comprising low density polyethylene (LDPE) tubing and a LDPE foot valve.

5.4.2 FIELD MEASUREMENTS OF WATER QUALITY PARAMETERS

Prior to groundwater sampling, vapour levels were measured within the headspace of each monitoring using an Eagle. The depth to groundwater and apparent thickness, if any, of any light non-aqueous phase liquids (LNAPL) were then measured using an interface probe.

To mitigate cross-contamination, the interface probe was washed with a liquid solution of Alconox detergent and rinsed with potable water between each monitoring well. A fresh pair of nitrile gloves was worn at each well location.

Water quality parameters (i.e., temperature, pH, specific conductivity, dissolved oxygen, and oxidation reduction potential) were measured in monitoring wells prior to sampling activities using a flow-through cell and a YSI 556 Pro water quality sensor, as per Terrapex SOPs (Appendix IV).

5.4.3 GROUNDWATER SAMPLING

After water quality parameters stabilized, groundwater samples from the monitoring wells were collected. Sampling was conducted using "low-flow" methodology using a peristaltic pump and dedicated sample tubing, as per Terrapex SOPs (Appendix IV).

Groundwater samples were collected directly into pre-cleaned, laboratory-supplied sampling bottles, packed in a cooler with ice, and shipped under signed chain of custody to AGAT for laboratory analysis.

5.5 SEDIMENT

Sediment sampling was not completed as sediment is not present at the Site.

5.6 ANALYTICAL TESTING

Laboratory analytical services for this work program involving soil and groundwater media were provided by AGAT laboratory in Mississauga, Ontario under contract with Terrapex. AGAT is accredited by Standards Council of Canada (SCC) to International Standard ISO/IEC 17025:2005, *General Requirements for the Competence of Testing and Calibration Laboratories.*

Soil and groundwater samples were analysed as per the sampling and analysis plan to address the identified APECs from the Phase One ESA.

5.7 RESIDUE MANAGEMENT

Soil cuttings and purged water generated during the work program were contained on-Site.

5.8 ELEVATION SURVEYING

Terrapex completed an elevation survey of the top of the pipe and ground surface for each monitoring well relative to the top of spindle of the fire hydrant located on the east side of Michael Street, with an known elevation of 70.01 masl.

Survey was completed using a Topcon GM-50 series.

5.9 QUALITY ASSURANCE AND QUALITY CONTROL MEASURES

Quality Assurance and Quality Control (QA/QC) measures were implemented during the Phase Two ESA in accordance with Terrapex Standard Operating Procedures. A summary of these measures follows.

During drilling, to mitigate cross-contamination, dual tube sample liners were disposed after the collection of each sample. Fresh nitrile gloves were worn for the handling of each sample.

During groundwater sampling, dedicated sampling equipment was used at each monitoring well location. To mitigate cross-contamination, the interface probe was washed with a liquid solution of Alconox detergent and rinsed with potable water between each monitoring well. A fresh pair of nitrile gloves was donned at each well location.

Pre-cleaned groundwater sample containers for the specific parameters of interest were provided by the laboratory and used at each borehole and monitoring well location for the collection of soil and groundwater samples. Samples for analyses were placed in an enclosed cooler with loose ice and shipped under signed chain of custody and custody seals to the laboratory for chemical analysis.

QA/QC samples collected as part of the Phase Two investigation program included the following:

- one blind field duplicate soil sample for analysis of MW104-31 (duplicate of MW104-3) VOCs, BTEX and PHCs, and PAHs;
- one blind field duplicate soil sample BH105-21 (duplicate of BH105-2) for analysis of metals and/or inorganic parameters
- one blind field duplicate groundwater sample MW115 (duplicate of MW104) for analysis of VOCs, BTEX and PHCs, PAHs, and metals and inorganic parameters
- one trip blank sample (i.e. methanol blank) was analyzed with the soil samples for analysis of VOCs (including BTEX).
- one trip blank sample was analyzed with the groundwater samples for analysis of VOCs (including BTEX) and PHC F1.

With the exception of samples prepared by the laboratory, the laboratory was not informed of the nature or number of the field QA/QC samples outlined above.

6.0 REVIEW AND EVALUATION

6.1 GEOLOGY

Based on the findings of the Phase Two ESA work program, the Site generally consisted of a 100 to 200 mm layer of topsoil or a 150 mm layer of asphalt and granular sub-base underlain by fill material consisting of sand containing varying gravel fractions ranging from some gravel to gravelly, trace silt, and organics. The fill materials were underlain by a deposit of native brownish grey, greyish brown, and grey fine sand soil with some silt to 5.9 mbg (the maximum depth of the investigation). The only exception was in borehole MW101 that encounter weathered shale bedrock at approximately 4.5 m bg

The soil stratigraphy at the Site is shown on the borehole logs in Appendix V and on cross-sections in Figures 10A to 10G and Figures 11A to 11G.

6.2 GROUNDWATER ELEVATIONS AND FLOW DIRECTION

Four (4) groundwater monitoring wells were installed at 4 locations at the Site on July 19, 2023. The monitoring wells were screened between 1.5 and 4.5 m bg for MW103, and MW104, between 3.3 and 4.9 m bg for MW101 and between 1.8 and 4.9 m bg for MW102.

Groundwater monitoring was conducted at the Site on July 24, 2023. The depth to groundwater ranged between 0.76 and 1.64 m bg.

Shallow horizontal groundwater flow on July 24, 2023 was interpreted to be to the North. The groundwater monitoring data is summarised in Table 1 and the interpreted groundwater elevation contours are shown on Figure 6.

Non-aqueous phase liquid (NAPL) was not encountered during monitoring, purging, or sampling of the monitoring wells during the Phase Two ESA work programs.

6.3 SOIL TEXTURE

The soil texture was determined to be fine-textured per the definitions of O. Reg. 153/04, based on field observations and grain-size analysis.

6.4 SOIL FIELD SCREENING

The Phase One ESA suggests that potential soil impacts associated with fill materials could be associated with the presence of fill materials themselves. Given that such impacts are associated with the inherent environmental quality of the fill materials, soil field screening for assessment of the environmental quality of fill was generally directed toward identifying the presence/absence

of fill materials, and identifying samples of fill containing debris (wood, brick, concrete, and similar materials) that would be particularly suggestive of poor-quality fill materials.

In addition, potential impacts associated with spills, leaks, or other releases were screened by measuring CSV concentrations in the headspace of the portion of recovered soil samples. The soil samples were placed in sealable sample bags for further site characterization (i.e., the portion not placed directly into sampling containers for possible laboratory analyses).

During the Phase Two ESA, CSV concentrations were measured for each soil sample recovered from the boreholes using an Eagle. CSV concentrations in all soil samples were less than 5 ppm.

The CSV concentrations measured for each soil sample are included on the borehole logs (Appendix V).

6.5 SOIL QUALITY

Laboratory results for the soil samples submitted for analyses of BTEX and PHCs, VOCs, metals and inorganic parameters, and PAHs are summarized in Tables 2 through 5, respectively, with the laboratory Certificates of Analysis enclosed in Appendix VI.

As indicated in the tables, concentrations of all parameters in the soil samples were below the applicable SCSs.

It should be noted that Terrapex requested the laboratory re-analyze the lead concentration identified in soil sample MW104-2 due to the lead concentration was marginally above the SCS. Following the receipt of the re-analysis, the average of the results was less than the SCS.

Laboratory results of chemical analysis of the soil samples are presented in plan view on Figures 7A through 7G, and in profile view (cross-sectional view) on Figures 10A to 10G and 11A to 11G.

Copies of the Laboratory Certificates of Analyses are attached in Appendix V.

6.6 GROUNDWATER QUALITY

Laboratory results for the groundwater samples submitted for analyses of BTEX and PHCs, VOCs, inorganics, and PAHs are summarized in Tables 6 through 9, respectively, with the laboratory Certificates of Analysis enclosed in Appendix VI.

As indicated in the tables, concentrations of all parameters in the groundwater samples were below the applicable SCSs.

Laboratory results of chemical analysis of the groundwater samples are presented in plan view on Figures 8A through 8F, and in profile view (cross-sectional view) on Figures 12A to 12F to 13A to 13F.

Copies of the Laboratory Certificates of Analyses are attached in Appendix VI.

6.7 SEDIMENT QUALITY

The environmental quality of sediment was not investigated as sediment is not present at the Site.

6.8 QUALITY ASSURANCE AND QUALITY CONTROL RESULTS

The laboratory's QA/QC program consisted of the analysis of laboratory replicates, method and spiked blanks, process percent recoveries, matrix spikes, and surrogate percent recoveries, as appropriate for the particular analysis protocol.

QA/QC Control Limits: A review of the quality assurance reports attached to the laboratory certificates of analyses indicate that the laboratory QA/QC samples were within the quality control limits.

Lab Duplicate Samples: Acceptable correlation was generally observed between the Lab duplicate and its corresponding sampling pair for each of the tested parameters.

Matrix Spike Recoveries: No issues regarding matrix spike recoveries were outlined in any of the laboratory certificates of analysis.

Detection Limits: Detection limits generally did not require adjustment.

General Comments: Laboratory analysis generally did not deviate from standard protocol.

Field Duplicate Samples: Acceptable correlation for field duplicate sample results was observed between the duplicate sample and its corresponding sampling pair for each of the tested parameters, with the exception of:

- In soil - copper and molybdenum concentrations which had relative percent differences (RPDs) of 34% and 31% respectively, which is outside the alert criteria of 30% for metals. The elevated RPDs in soil may be attributed to the heterogeneity of the soil.
- In groundwater – cobalt concentrations had a RPD of 29%, which is outside the alert criteria of 20% for metals. As the RPDs for all other parameters met the alert criteria, this results in not to affect the quality of the results.

Trip Blank Samples: Trip blank samples were submitted for analysis of BTEX/F1 and VOCs as part of the soil and groundwater sampling events. Analytical results from the trip blank samples were all less than the detection limit.

Based on the above analysis of the QA/QC program, no concerns regarding the adequacy or representativeness of the sampling and analytical program were identified and, as a result, the

decision-making was not affected, and the overall objectives of the investigation and the assessment were met.

6.9 PHASE TWO CONCEPTUAL SITE MODEL

A preliminary conceptual site model was developed as part of the Phase One ESA. Following the completion of the Phase Two ESA field program, the conceptual site model was updated to present the current Site characteristics and identify actual or potential sources of contamination, pathways, release mechanisms, receptors, and exposure routes.

Additional inputs to the conceptual site model include:

- Results of chemical testing for the current soil and groundwater conditions at the Site; and,
- Groundwater levels and interpreted groundwater flow direction.
- Risk analysis

The Phase Two CSM is comprised of the narrative in Appendix VIII and the Figures contained in this report.

7.0 CONCLUSIONS

Based on the findings of the Phase Two ESA, the environmental quality of soil and groundwater meets the Table 3 SCS.

7.1 SIGNATURES

The environmental assessment described herein was conducted in accordance with the terms of reference for this project, agreed upon by Avenyn Capital Partners LP II and Terrapex Environmental Ltd.

The Phase Two ESA of the property located at 1591 & 1611 Michael Street, and a portion of 1601 Michael Street, Ottawa, Ontario was conducted in accordance with O. Reg. 153/04 by, or under the supervision of, a Qualified Person as required by the regulation.

Terrapex Environmental Ltd. has exercised due care, diligence, and judgement in the performance of this Phase Two ESA; however, studies of this nature have inherent limitations. The reported information is believed to provide a reasonable representation of the general environmental conditions at the Site at the time the assessment was conducted. However, the data were collected at discrete locations and conditions may vary at other locations or with the passage of time. The assessment was also limited to a study of those chemical parameters specifically addressed in this report.

In addition, our comments, conclusions, and recommendations are based in part on the observations and data documented by third parties. By necessity, except where explicitly noted, we have relied upon the accuracy and completeness of information presented by said third parties, regardless of any disclaimers regarding reliance provided in the documentation subjected to peer review. Terrapex Environmental Ltd. does not assume any responsibility for errors, omissions, or other limitations pertaining to third party work programs.

This report has been prepared for the sole use of the Avenyn Capital Partners LP II. Terrapex Environmental Ltd. accepts no liability for claims arising from the use of this report, or from actions taken or decisions made as a result of this report, by parties other than Avenyn Capital Partners LP II.

Respectfully submitted,

TERRAPEX ENVIRONMENTAL LTD.

For: Sreerag Padmakumar
Environmental Scientist

Jeff Murray, C.E.T
Environmental Scientist

Craig Beaton, P.Eng., QP_{ESA}
Senior Project Manager

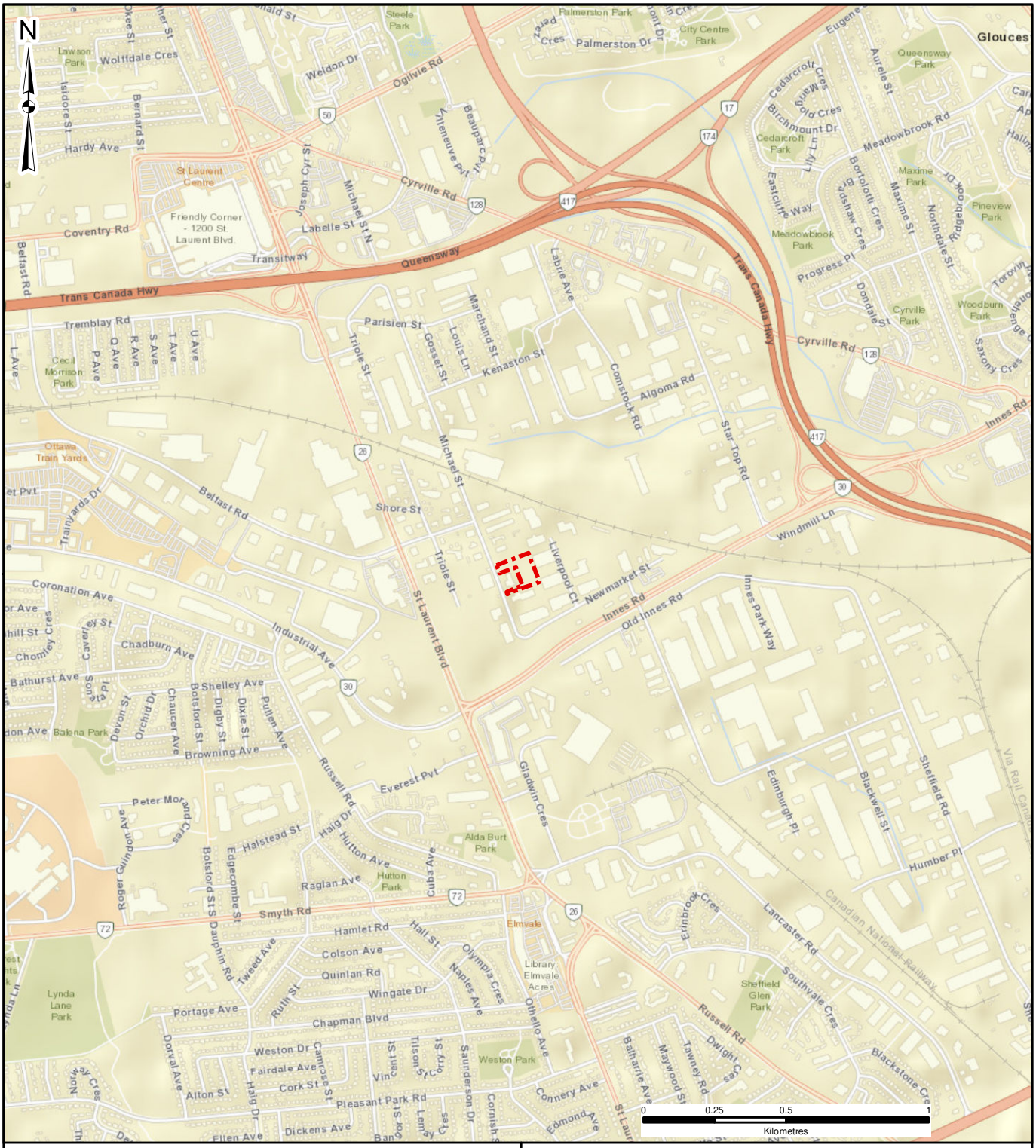
8.0 REFERENCES

Ontario Ministry of the Environment. 2011a. *Ontario Regulation 153/04, Records of Site Condition – Part XV.1 of the Act.* July 1.

Ontario Ministry of the Environment, 2011b. *Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*. April 15.

Terrapex Environmental Ltd. (Terrapex), 2023. *Phase One Environmental Site Assessment, 1591 - 1611 Michael Street, Ottawa, Ontario*. January 18, 2023.

FIGURES



LEGEND

SITE BOUNDARY

DATA SOURCE: ESRI
MAP PROJECTION: NAD 1983 UTM Zone 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SITE LOCATION

DRAWN BY: SW	PROJECT NO.: CO892.02	CHECKED BY: XX
REVISION: 00	DATE: SEPTEMBER 2023	**FIGURE: 1**

swilliams C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02 1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 1 SITE LOCATION.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
GENERAL SITE LAYOUT

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**2**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02 1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 2 GENERAL SITE LAYOUT.mxd

LEGEND

- SITE BOUNDARY
- PHASE ONE STUDY AREA
- WATER WELL LOCATION

0 100m 200m

(APPROXIMATE)

SOURCE: GEOOTTAWA MAPS, 2021 IMAGERY.

CLIENT:

AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:

1591 AND 1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:

PHASE ONE STUDY AREA

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**3**

LEGEND

- SITE BOUNDARY
- PHASE ONE STUDY AREA
- POTENTIALLY CONTAMINATING ACTIVITIES (PCA)
- TANK LOCATION

POTENTIALLY CONTAMINATING ACTIVITY TYPES

NOTE:

- PCA ID (PCA TYPE)

REFER TO TABLE 17 IN THE REPORT FOR ADDITIONAL DETAILS.

0 100m 200m
(APPROXIMATE)

SOURCE: GEOOTTAWA MAPS, 2021 IMAGERY.

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591 AND 1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
CONCEPTUAL SITE MODEL AND POTENTIALLY CONTAMINATING ACTIVITIES

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**4**

LEGEND

- SITE BOUNDARY
- PARCEL
- AREA OF POTENTIAL ENVIRONMENTAL CONCERN (APEC)
- MONITORING WELL
- BOREHOLE

0 10m 20m
(APPROXIMATE)

SOURCE: VUMAP FIRST BASE SOLUTIONS, SATELLITE IMAGERY.

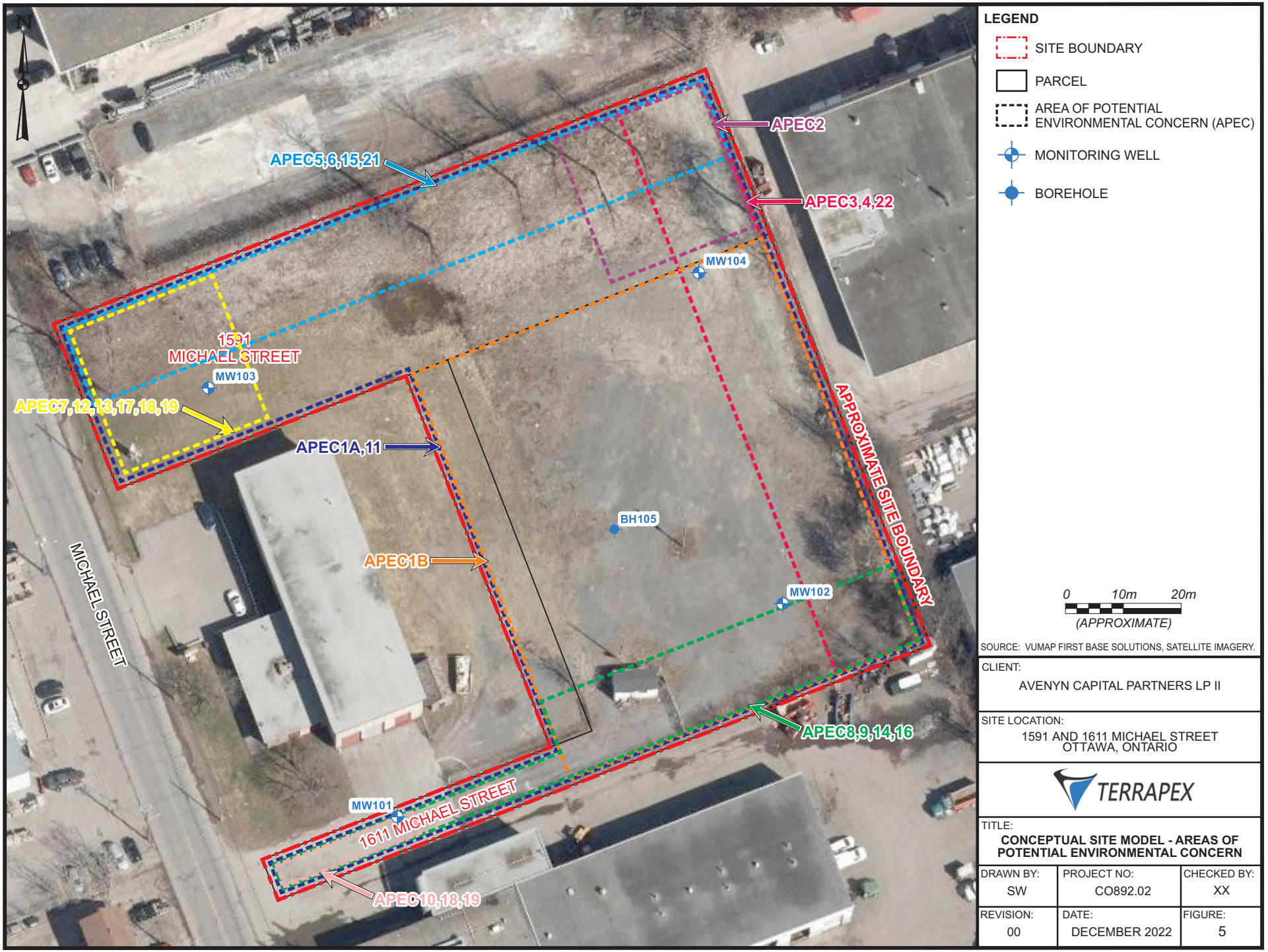
CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591 AND 1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
CONCEPTUAL SITE MODEL - AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

DRAWN BY:	PROJECT NO:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	DECEMBER 2022	5



LEGEND

- SITE BOUNDARY
- PARCEL
- AREA OF POTENTIAL ENVIRONMENTAL CONCERN (APEC)
- MONITORING WELL
- BOREHOLE

0 10m 20m

(APPROXIMATE)

SOURCE: VUMAP FIRST BASE SOLUTIONS, SATELLITE IMAGERY.

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591 AND 1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
CONCEPTUAL SITE MODEL - AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

DRAWN BY:	PROJECT NO:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	DECEMBER 2022	5

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- EQUIPOTENTIAL CONTOUR
- GROUNDWATER FLOW DIRECTION
- 68.53 STATIC WATER LEVEL (24 July 2023) (m ASL)

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER FLOW

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**6**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02 1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 6 GROUNDWATER FLOW.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS

STANDARD INFORMATION

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTES
1. ALL UNITS ARE IN µg/g UNLESS OTHERWISE SPECIFIED
2. DEPTHS ARE IN METRES BELOW GROUND SURFACE (mbgs)
3. RESULTS PRESENTED AS # / # REPRESENTS PARENT SAMPLE / FIELD DUPLICATE.

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYTICAL RESULTS - METALS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **7A**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02 1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 7A SOIL ANALYTICAL RESULTS - METALS.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS

STANDARD INFORMATION

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTES
1. ALL UNITS ARE IN µg/g UNLESS OTHERWISE SPECIFIED
2. DEPTHS ARE IN METRES BELOW GROUND SURFACE (mbgs)
3. RESULTS PRESENTED AS # / # REPRESENTS PARENT SAMPLE / FIELD DUPLICATE.

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYTICAL RESULTS
HYDRIDE-FORMING METALS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**7B**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02 1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 7B SOIL ANALYTICAL RESULTS - HFMETALS.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS

STANDARD INFORMATION

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTES
1. ALL UNITS ARE IN µg/g UNLESS OTHERWISE SPECIFIED
2. DEPTHS ARE IN METRES BELOW GROUND SURFACE (mbgs)
3. RESULTS PRESENTED AS # / # REPRESENTS PARENT SAMPLE / FIELD DUPLICATE.

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYTICAL RESULTS
OTHER REGULATED PARAMETERS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **7C**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02 1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 7C SOIL ANALYTICAL RESULTS - ORP.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS

STANDARD INFORMATION

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTES
1. ALL UNITS ARE IN µg/g UNLESS OTHERWISE SPECIFIED
2. DEPTHS ARE IN METRES BELOW GROUND SURFACE (mbgs)
3. RESULTS PRESENTED AS # / # REPRESENTS PARENT SAMPLE / FIELD DUPLICATE.

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYTICAL RESULTS - BTEX

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **7D**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02 1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 7D SOIL ANALYTICAL RESULTS - BTEX.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS

STANDARD INFORMATION

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTES
1. ALL UNITS ARE IN µg/g UNLESS OTHERWISE SPECIFIED
2. DEPTHS ARE IN METRES BELOW GROUND SURFACE (mbgs)
3. RESULTS PRESENTED AS # / # REPRESENTS PARENT SAMPLE / FIELD DUPLICATE.

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYTICAL RESULTS - PHC

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**7E**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02 1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 7E SOIL ANALYTICAL RESULTS - PHC.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS

STANDARD INFORMATION

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTES
1. ALL UNITS ARE IN µg/g UNLESS OTHERWISE SPECIFIED
2. DEPTHS ARE IN METRES BELOW GROUND SURFACE (mbgs)
3. RESULTS PRESENTED AS # / # REPRESENTS PARENT SAMPLE / FIELD DUPLICATE.

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYTICAL RESULTS - VOC

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**7F**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02 1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 7F SOIL ANALYTICAL RESULTS - VOC.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS

STANDARD INFORMATION

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTES
1. ALL UNITS ARE IN µg/g UNLESS OTHERWISE SPECIFIED
2. DEPTHS ARE IN METRES BELOW GROUND SURFACE (mbgs)
3. RESULTS PRESENTED AS # / # REPRESENTS PARENT SAMPLE / FIELD DUPLICATE.

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYTICAL RESULTS - PAH

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**7G**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02 1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 7G SOIL ANALYTICAL RESULTS - PAH.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS

STANDARD INFORMATION

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTES
1. ALL UNITS ARE IN µg/L UNLESS OTHERWISE SPECIFIED
2. SCREEN INTERVAL IS IN METRES BELOW GROUND SURFACE (mbgs)
3. RESULTS PRESENTED AS # / # REPRESENTS PARENT SAMPLE / FIELD DUPLICATE

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER ANALYTICAL RESULTS - METALS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **8A**

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LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS

STANDARD INFORMATION

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTES
1. ALL UNITS ARE IN µg/L UNLESS OTHERWISE SPECIFIED
2. SCREEN INTERVAL IS IN METRES BELOW GROUND SURFACE (mbgs)
3. RESULTS PRESENTED AS # / # REPRESENTS PARENT SAMPLE / FIELD DUPLICATE

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER ANALYTICAL RESULTS - HYDRIDE-FORMING METALS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**8B**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02 1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 8B GW ANALYTICAL RESULTS - HFMETALS.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS

STANDARD INFORMATION

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTES
1. ALL UNITS ARE IN µg/L UNLESS OTHERWISE SPECIFIED
2. SCREEN INTERVAL IS IN METRES BELOW GROUND SURFACE (mbgs)
3. RESULTS PRESENTED AS # / # REPRESENTS PARENT SAMPLE / FIELD DUPLICATE

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER ANALYTICAL RESULTS - BTEX

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **8C**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02 1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 8C GW ANALYTICAL RESULTS - BTEX.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS

STANDARD INFORMATION

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTES
1. ALL UNITS ARE IN µg/L UNLESS OTHERWISE SPECIFIED
2. SCREEN INTERVAL IS IN METRES BELOW GROUND SURFACE (mbgs)
3. RESULTS PRESENTED AS # / # REPRESENTS PARENT SAMPLE / FIELD DUPLICATE

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER ANALYTICAL RESULTS - PHC

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**8D**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02 1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 8D GW ANALYTICAL RESULTS - PHC.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS

STANDARD INFORMATION

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTES
1. ALL UNITS ARE IN µg/L UNLESS OTHERWISE SPECIFIED
2. SCREEN INTERVAL IS IN METRES BELOW GROUND SURFACE (mbgs)
3. RESULTS PRESENTED AS # / # REPRESENTS PARENT SAMPLE / FIELD DUPLICATE

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER ANALYTICAL RESULTS - VOC

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**8E**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02 1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 8E GW ANALYTICAL RESULTS - VOC.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS

STANDARD INFORMATION

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

VALUE GREATER THAN SCS
VALUE LESS THAN OR EQUAL TO SCS

NOTES
1. ALL UNITS ARE IN µg/L UNLESS OTHERWISE SPECIFIED
2. SCREEN INTERVAL IS IN METRES BELOW GROUND SURFACE (mbgs)
3. RESULTS PRESENTED AS # / # REPRESENTS PARENT SAMPLE / FIELD DUPLICATE

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

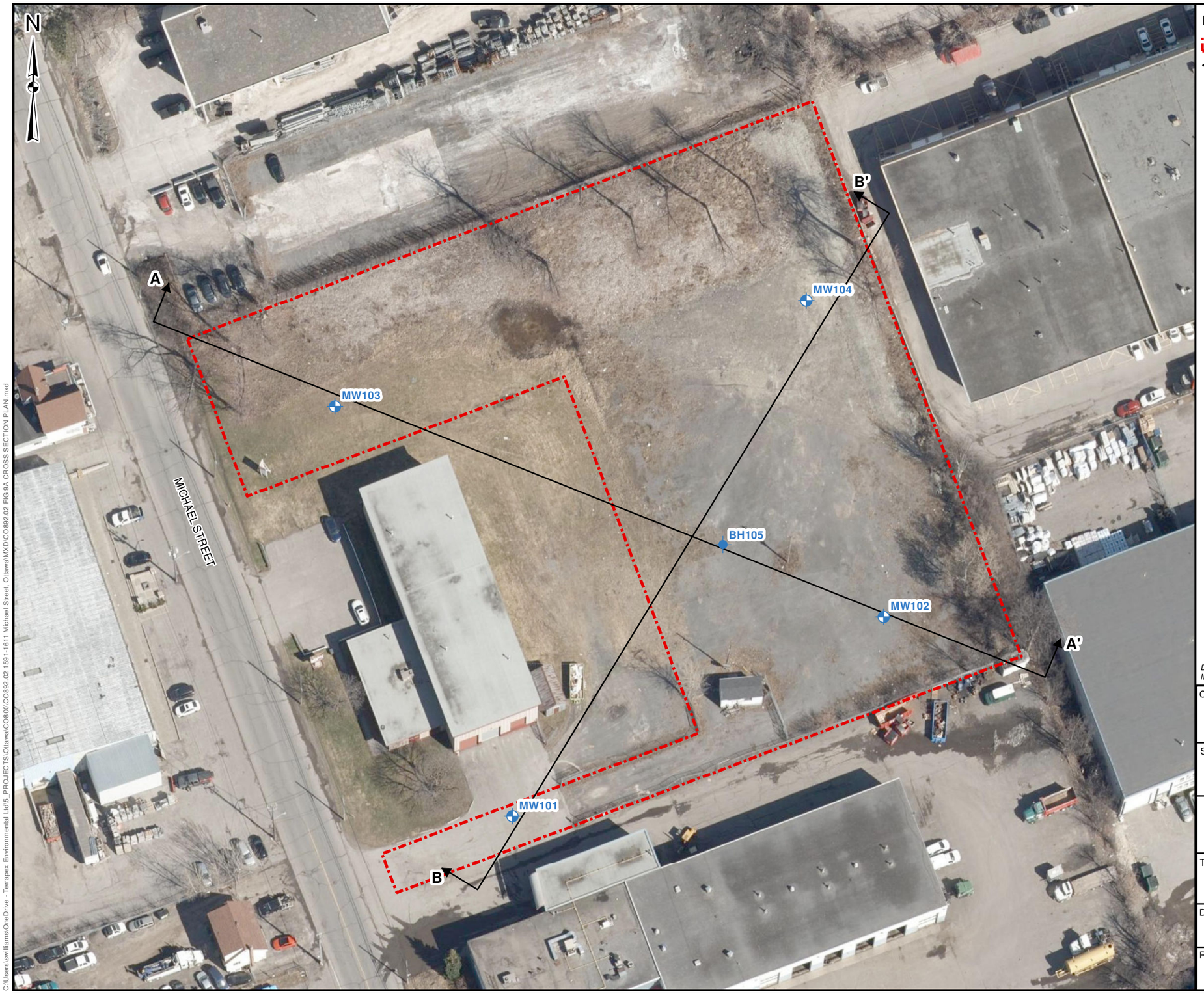
SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER ANALYTICAL RESULTS - PAH

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**8F**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02 1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 8F GW ANALYTICAL RESULTS - PAH.mxd



LEGEND

- SITE BOUNDARY
- CROSS SECTION
- BOREHOLE
- MONITORING WELL

0 10 20
Metres

DATA SOURCE: CITY OF OTTAWA
MAP PROJECTION: NAD 1983 UTM ZONE 18N

CLIENT:
AVENYN CAPITAL PARTNERS LP II

SITE LOCATION:
1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

TITLE:
CROSS SECTION PLAN

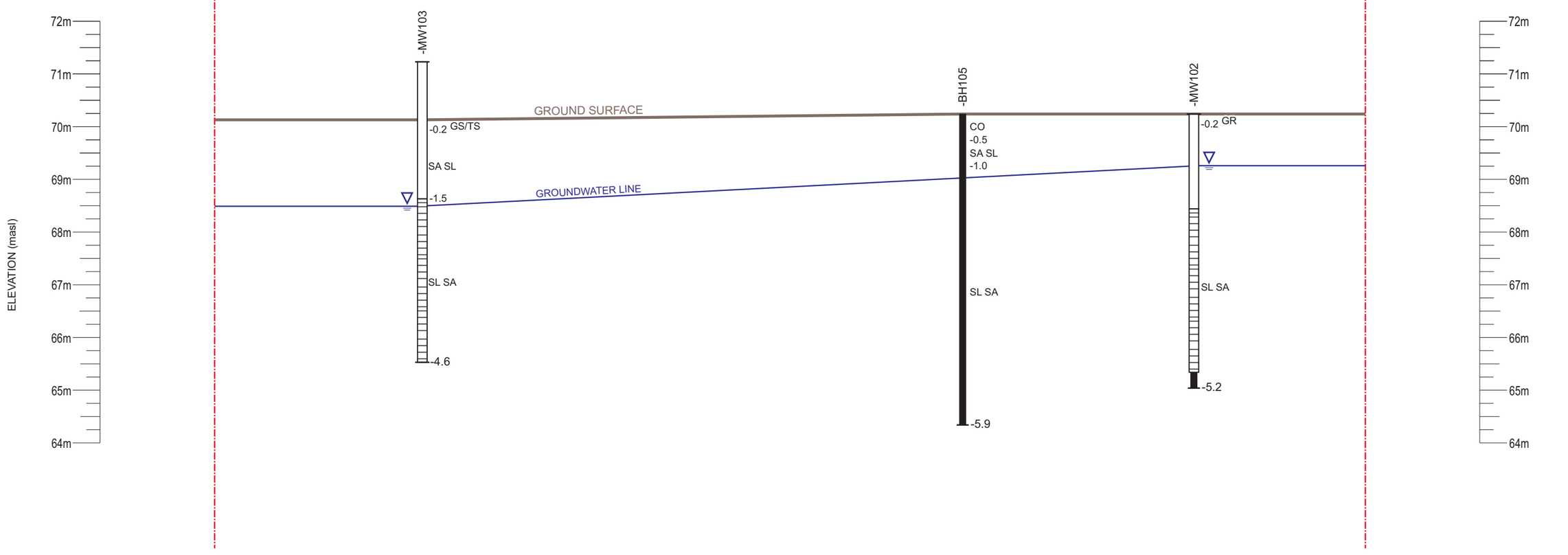
DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**9A**

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Ottawa\CO800\CO892.02\1591-1611 Michael Street, Ottawa\MXD\CO892.02 FIG 9A CROSS SECTION PLAN.mxd

A

LOOKING NORTH

A'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

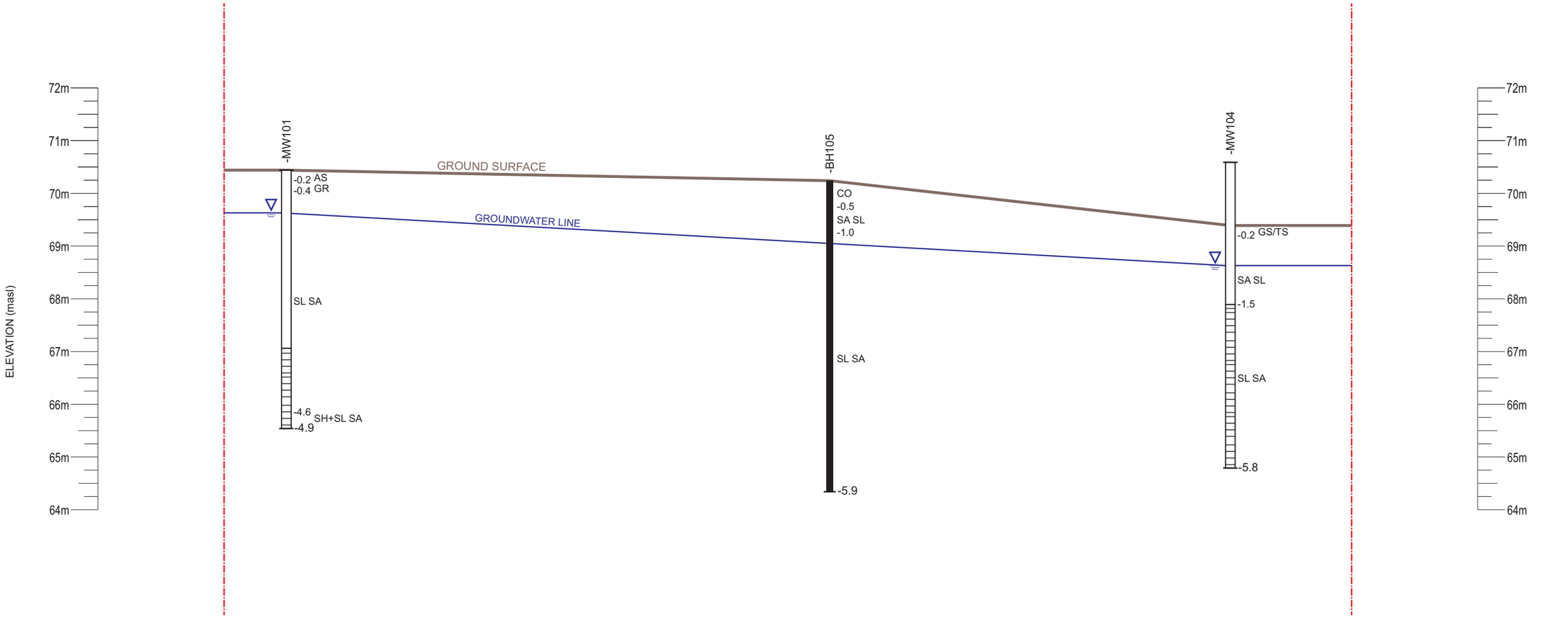
TITLE: **CROSS SECTION A-A'**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **9B**

B

LOOKING WEST

B'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

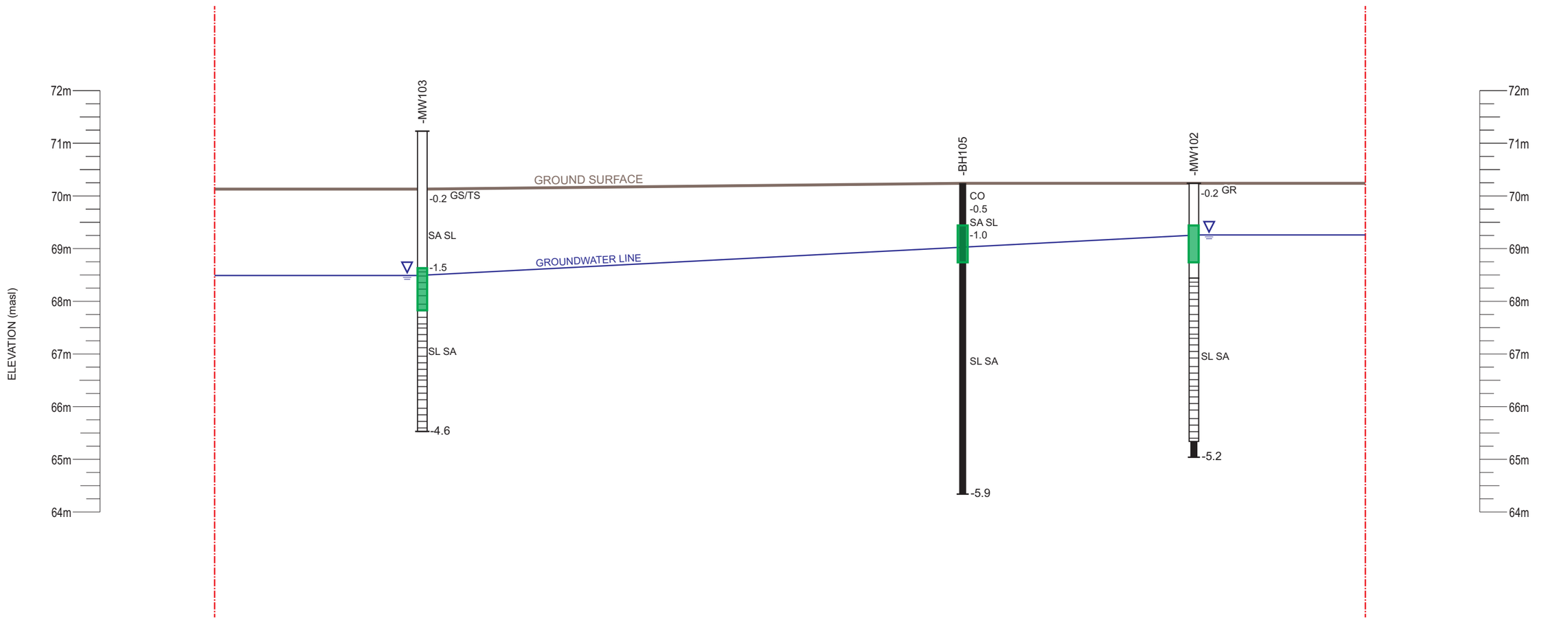
TITLE: **CROSS SECTION B-B'**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **9C**

A

LOOKING NORTH

A'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

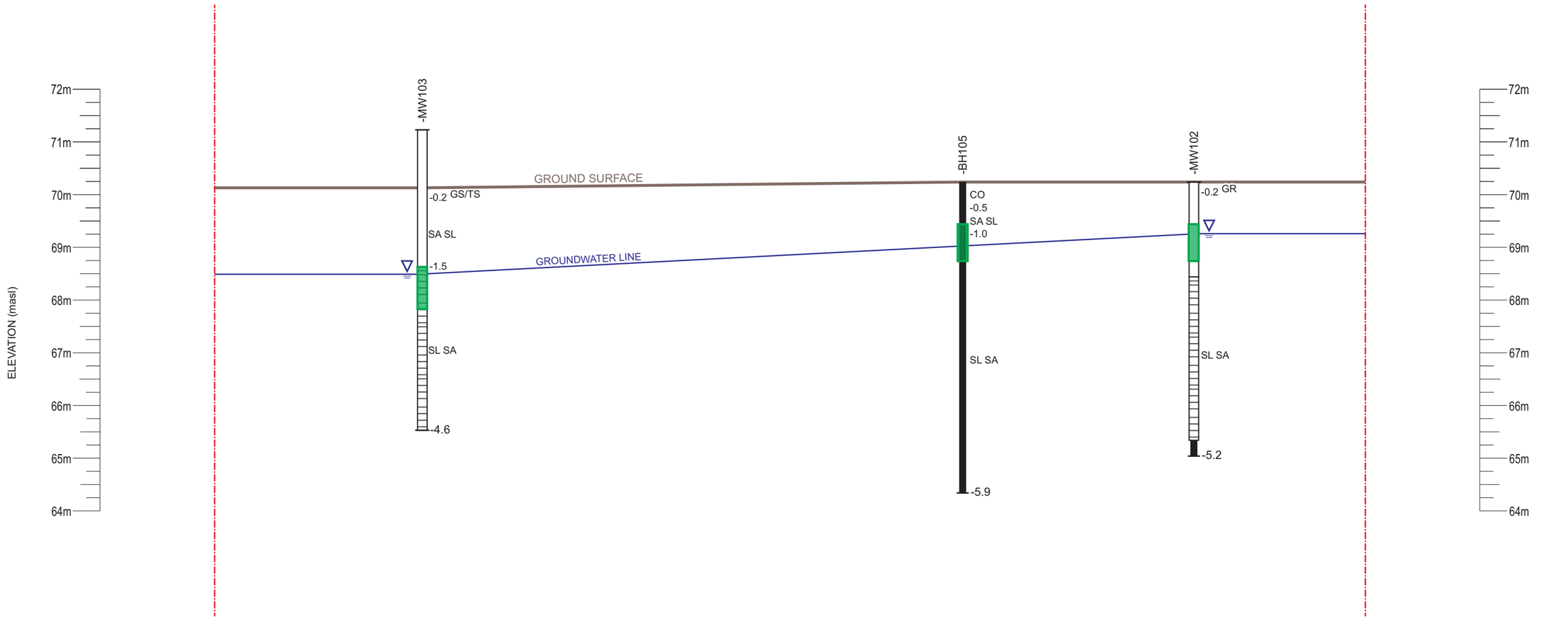
TITLE: **SOIL ANALYTICAL RESULTS - CROSS SECTION A-A' METALS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **10A**

A

LOOKING NORTH

A'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

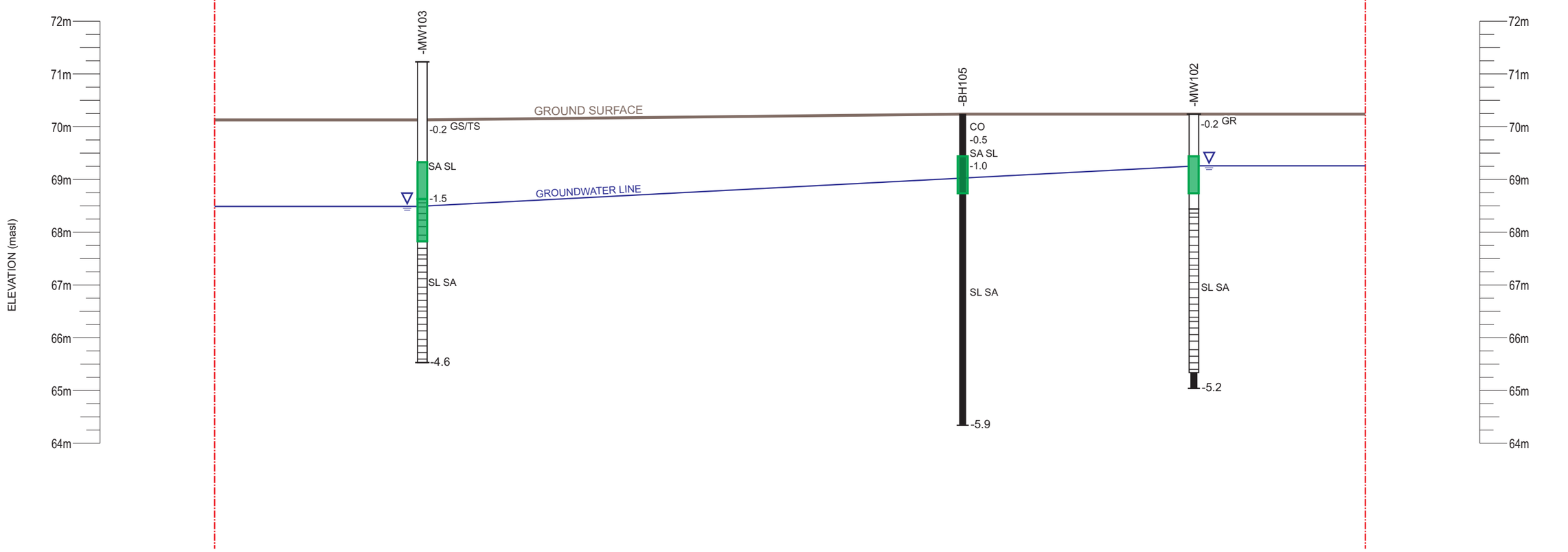
TITLE: **SOIL ANALYTICAL RESULTS - CROSS SECTION A-A' HYDRIDE-FORMING METALS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**10B**

A

LOOKING NORTH

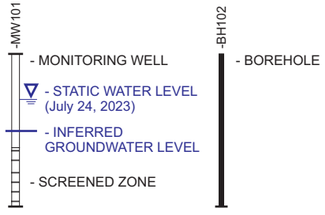
A'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE



ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

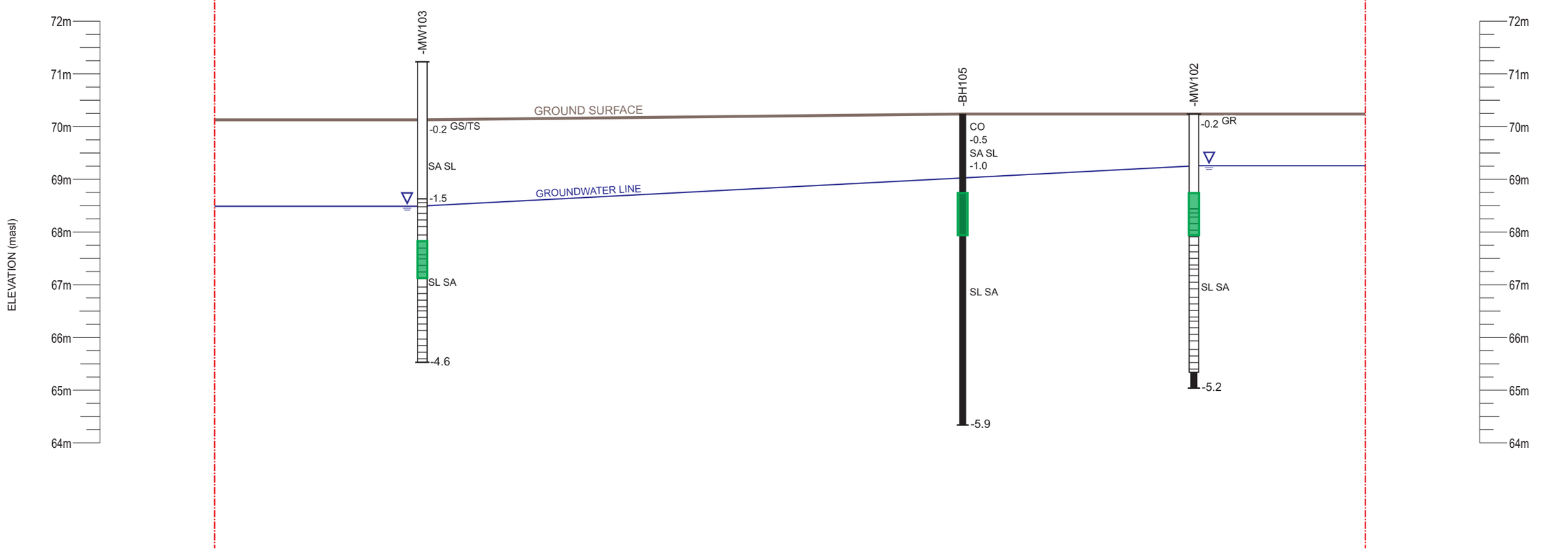
TITLE: **SOIL ANALYTICAL RESULTS - CROSS SECTION A-A' OTHER REGULATED PARAMETERS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**10C**

A

LOOKING NORTH

A'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

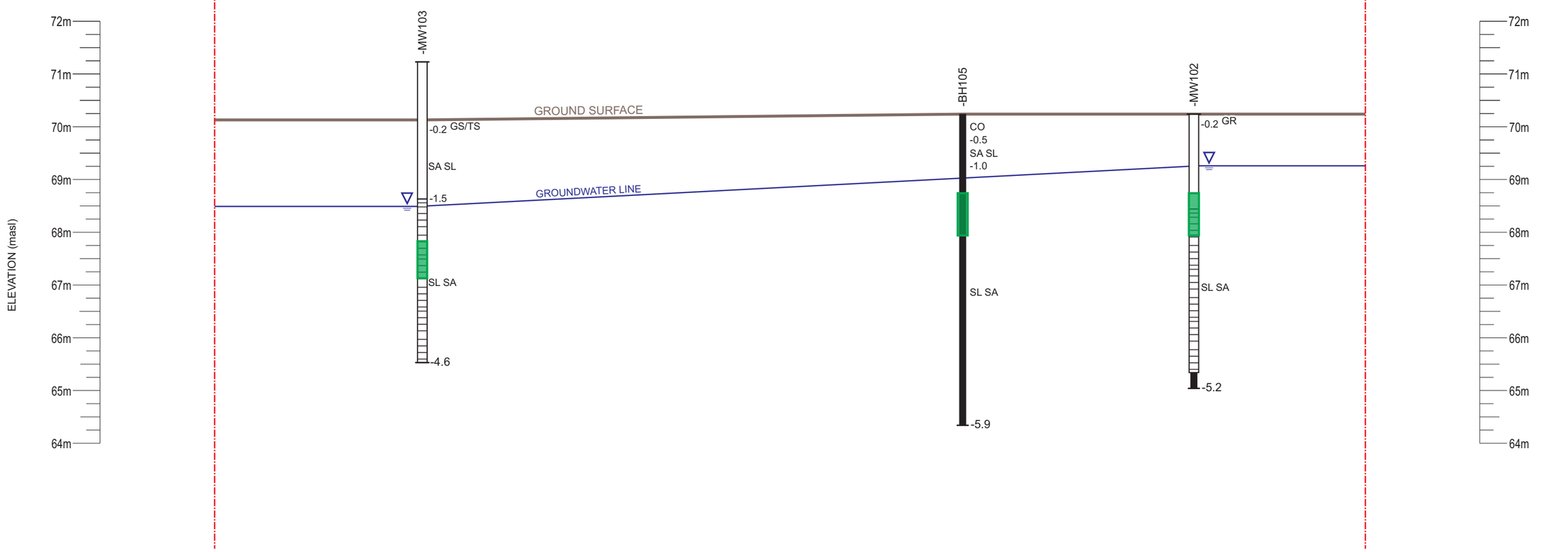
TITLE: **SOIL ANALYTICAL RESULTS - CROSS SECTION A-A' BTEX**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**10D**

A

LOOKING NORTH

A'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

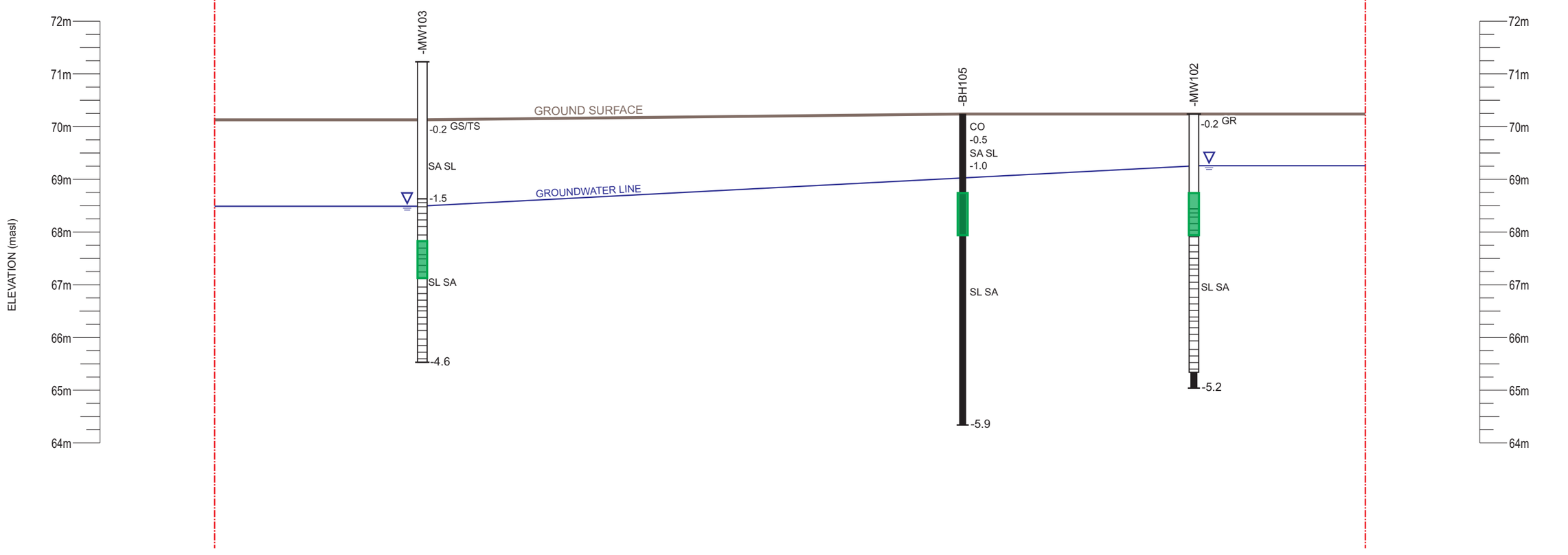
TITLE: **SOIL ANALYTICAL RESULTS - CROSS SECTION A-A' PHC**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **10E**

A

LOOKING NORTH

A'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

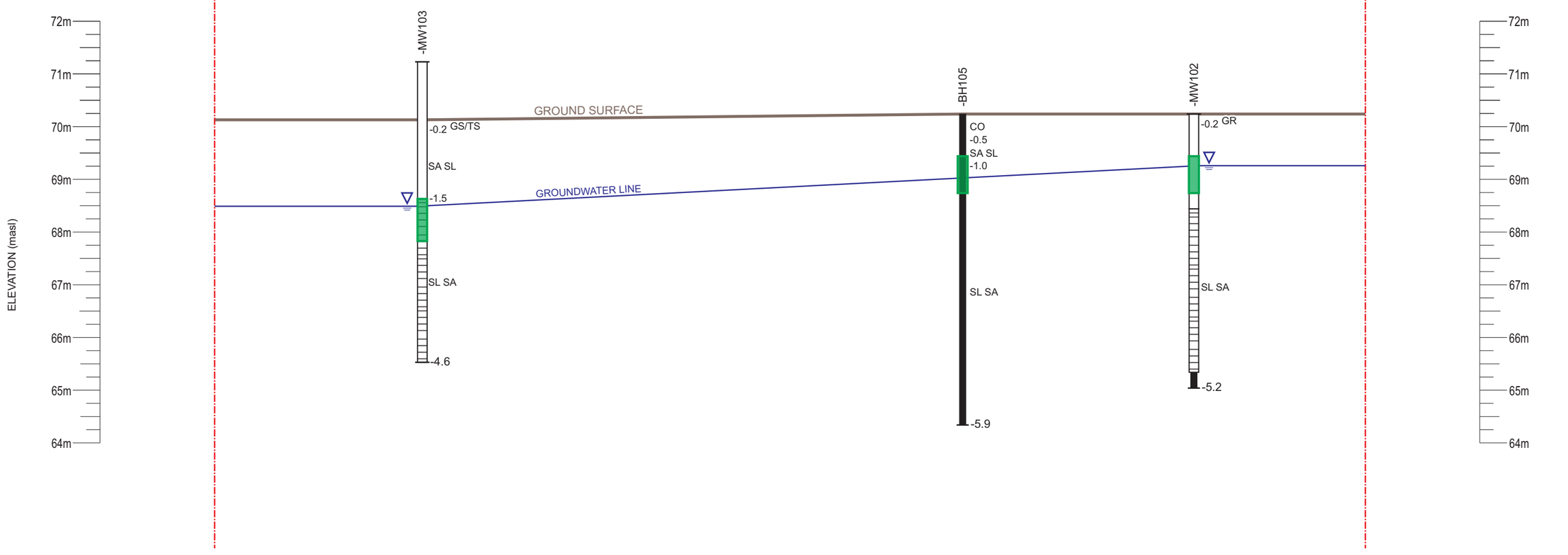
TITLE: **SOIL ANALYTICAL RESULTS - CROSS SECTION A-A' VOC**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **10F**

A

LOOKING NORTH

A'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

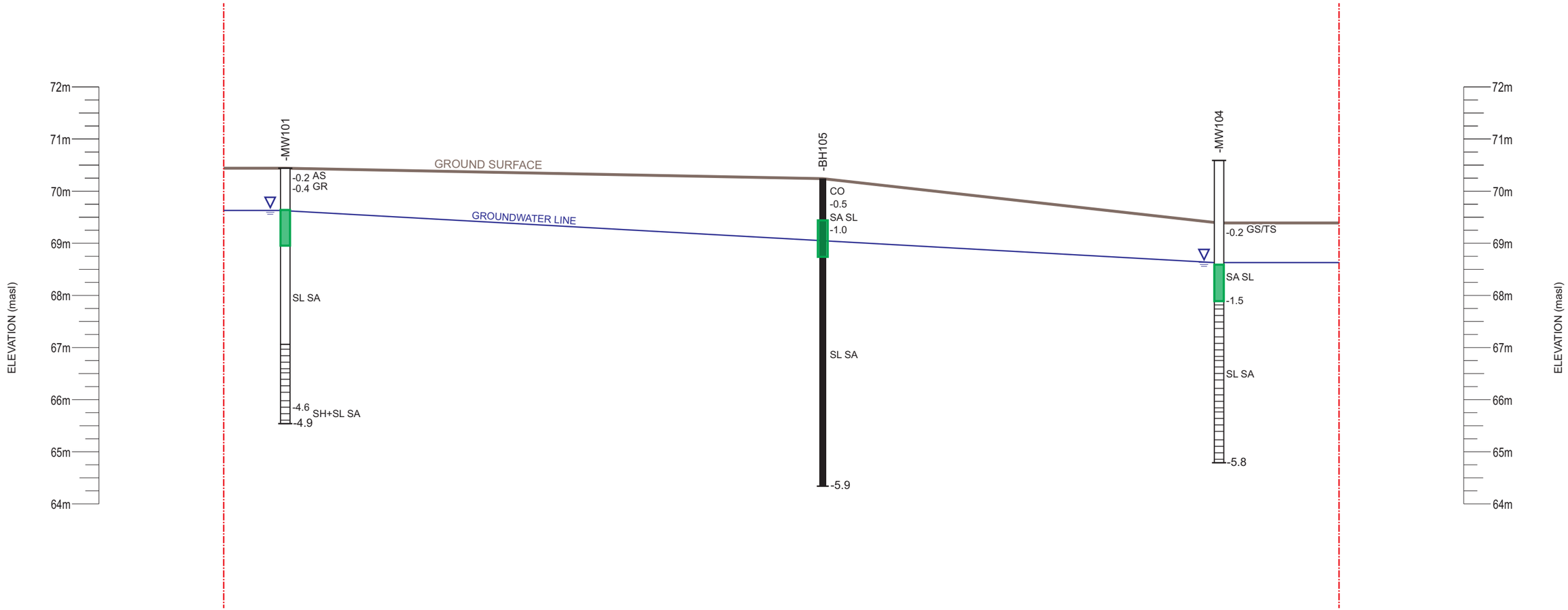
TITLE: **SOIL ANALYTICAL RESULTS - CROSS SECTION A-A' PAH**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**10G**

B

LOOKING WEST

B'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

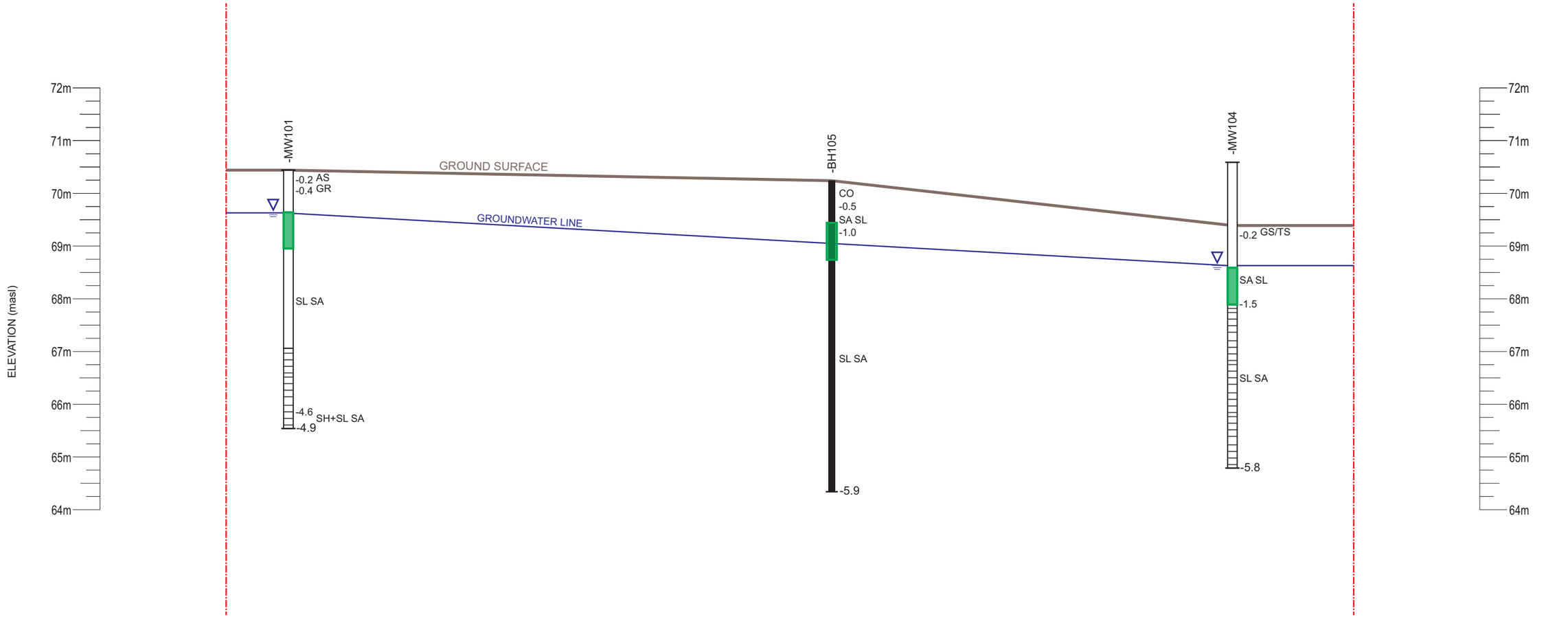
TITLE: **SOIL ANALYTICAL RESULTS - CROSS SECTION B-B' METALS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **11A**

B

LOOKING WEST

B'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

-MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

-BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

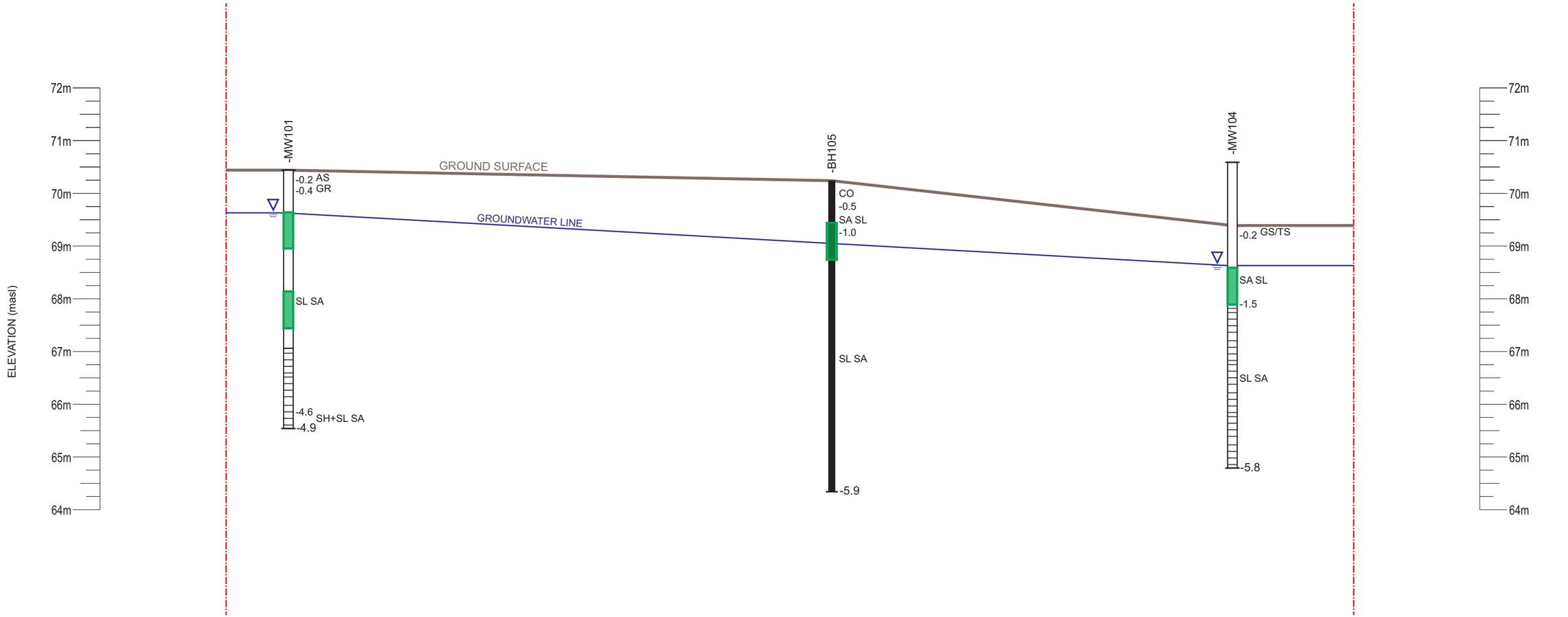
TITLE: **SOIL ANALYTICAL RESULTS - CROSS SECTION B-B' HYDRIDE-FORMING METALS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **11B**

B

LOOKING WEST

B'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

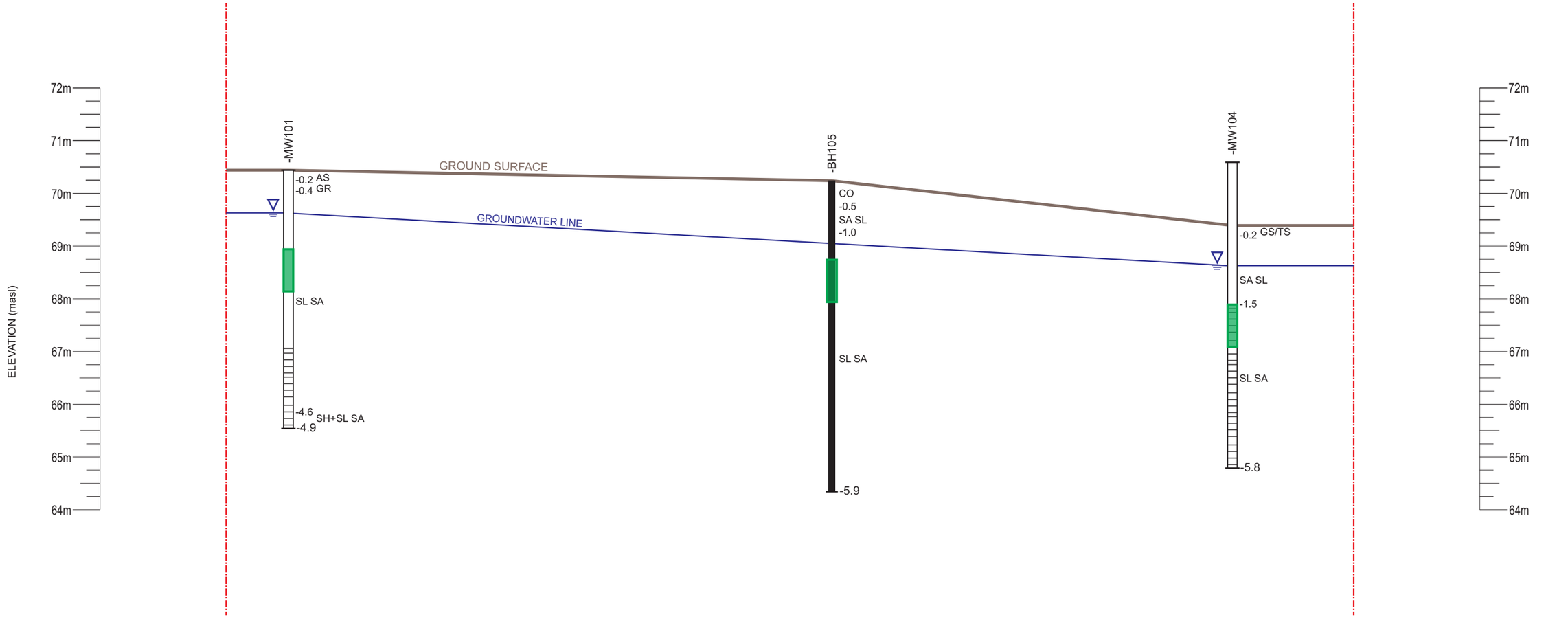
TITLE: **SOIL ANALYTICAL RESULTS - CROSS SECTION B-B' OTHER REGULATED PARAMETERS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **11C**

B

LOOKING WEST

B'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

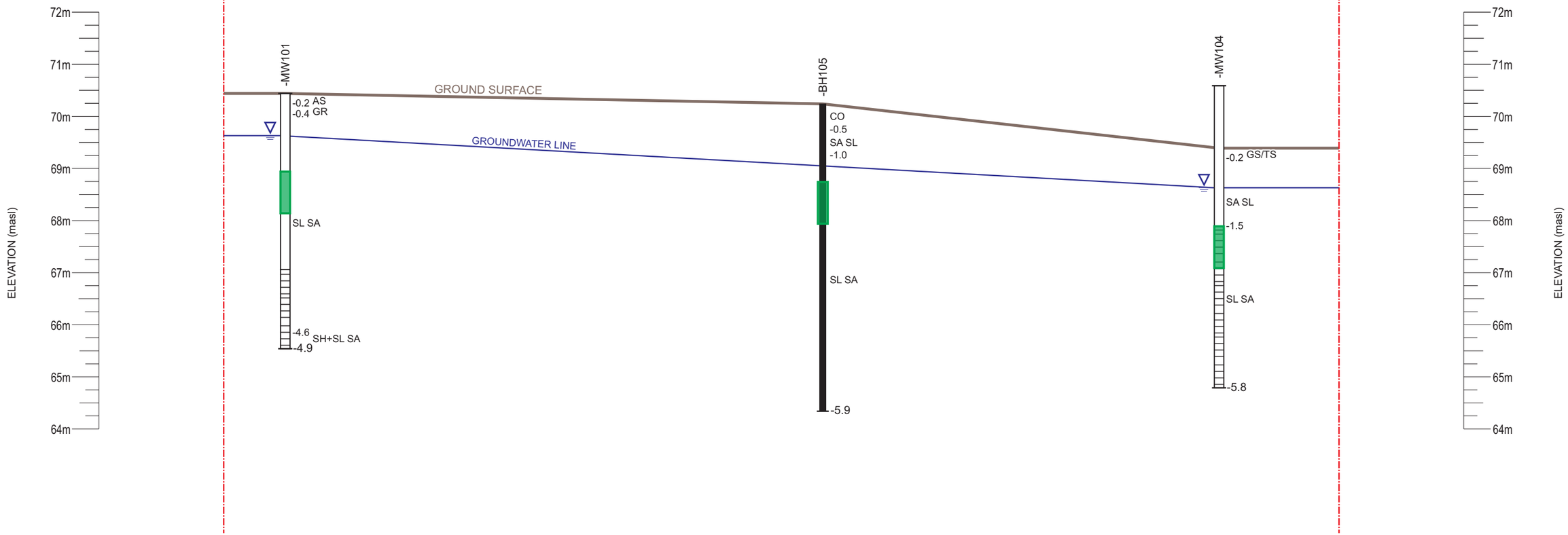
TITLE: **SOIL ANALYTICAL RESULTS - CROSS SECTION B-B' BTEX**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **11D**

B

LOOKING WEST

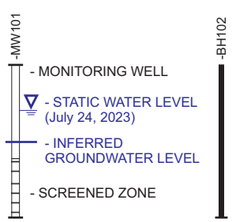
B'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE



ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET
OTTAWA, ONTARIO

TERRAPEX

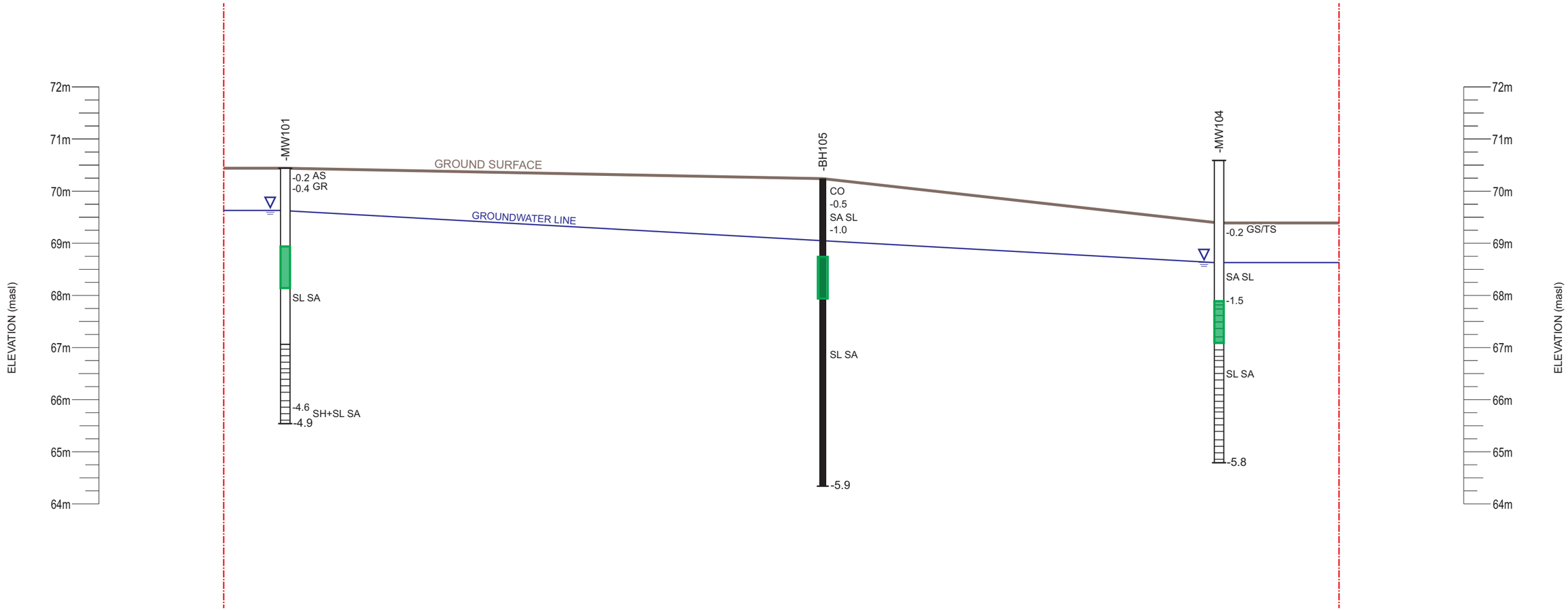
TITLE: **SOIL ANALYTICAL RESULTS - CROSS SECTION B-B'**
PHC

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **11E**

B

LOOKING WEST

B'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

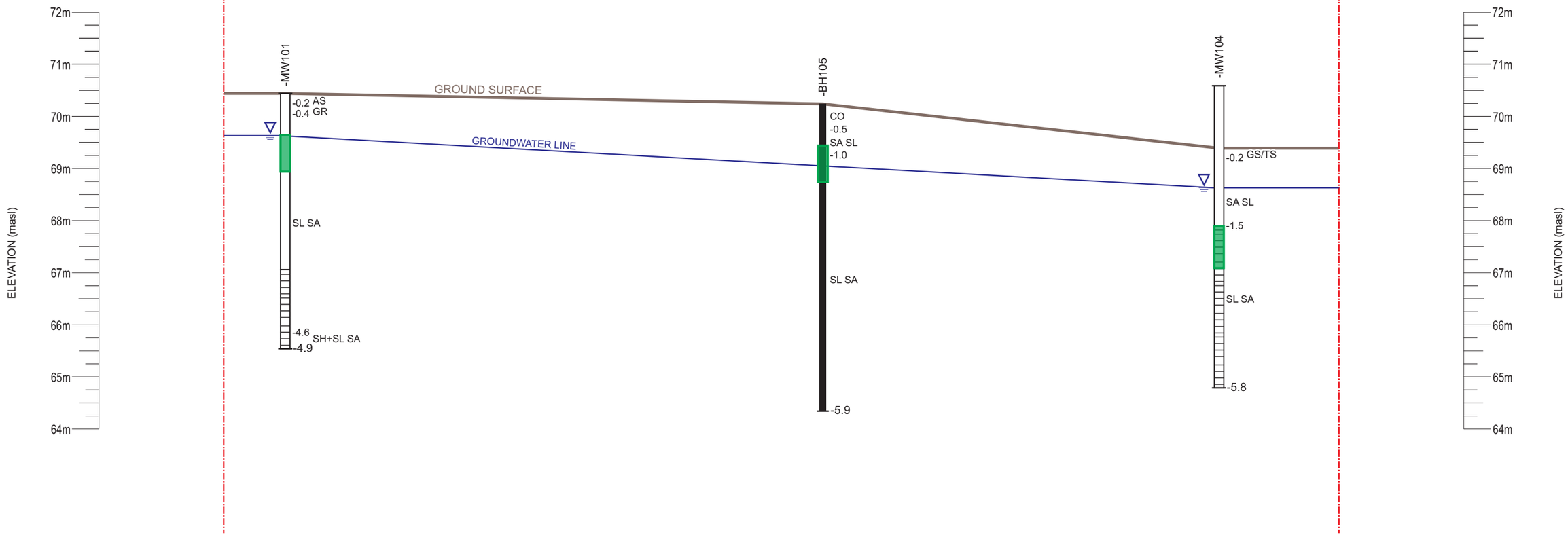
TITLE: **SOIL ANALYTICAL RESULTS - CROSS SECTION B-B' VOC**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **11F**

B

LOOKING WEST

B'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR INDUSTRIAL/COMMERCIAL/COMMUNITY PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

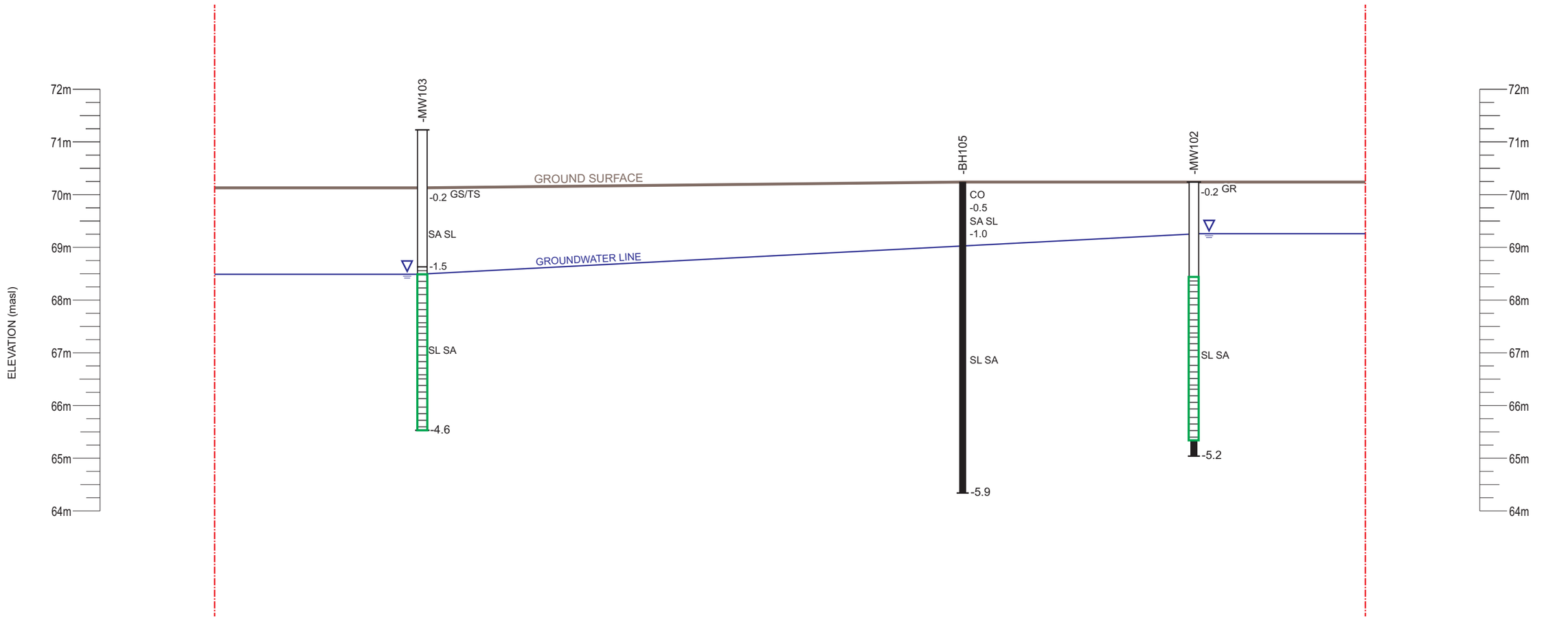
TITLE: **SOIL ANALYTICAL RESULTS - CROSS SECTION B-B' PAH**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **11G**

A

LOOKING NORTH

A'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101
- MONITORING WELL
- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102
- BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

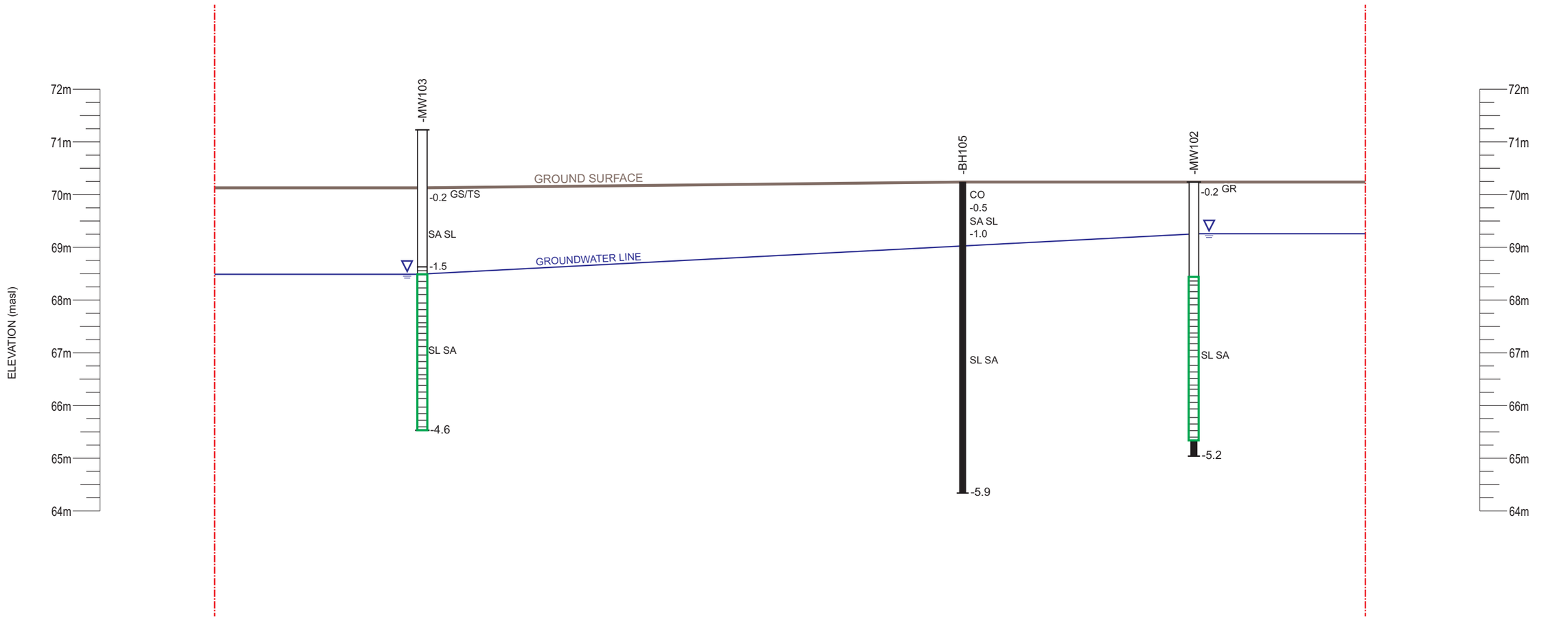
TITLE: **GROUNDWATER ANALYTICAL RESULTS CROSS SECTION A-A' - METALS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **12A**

A

LOOKING NORTH

A'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101
- MONITORING WELL
- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102
- BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

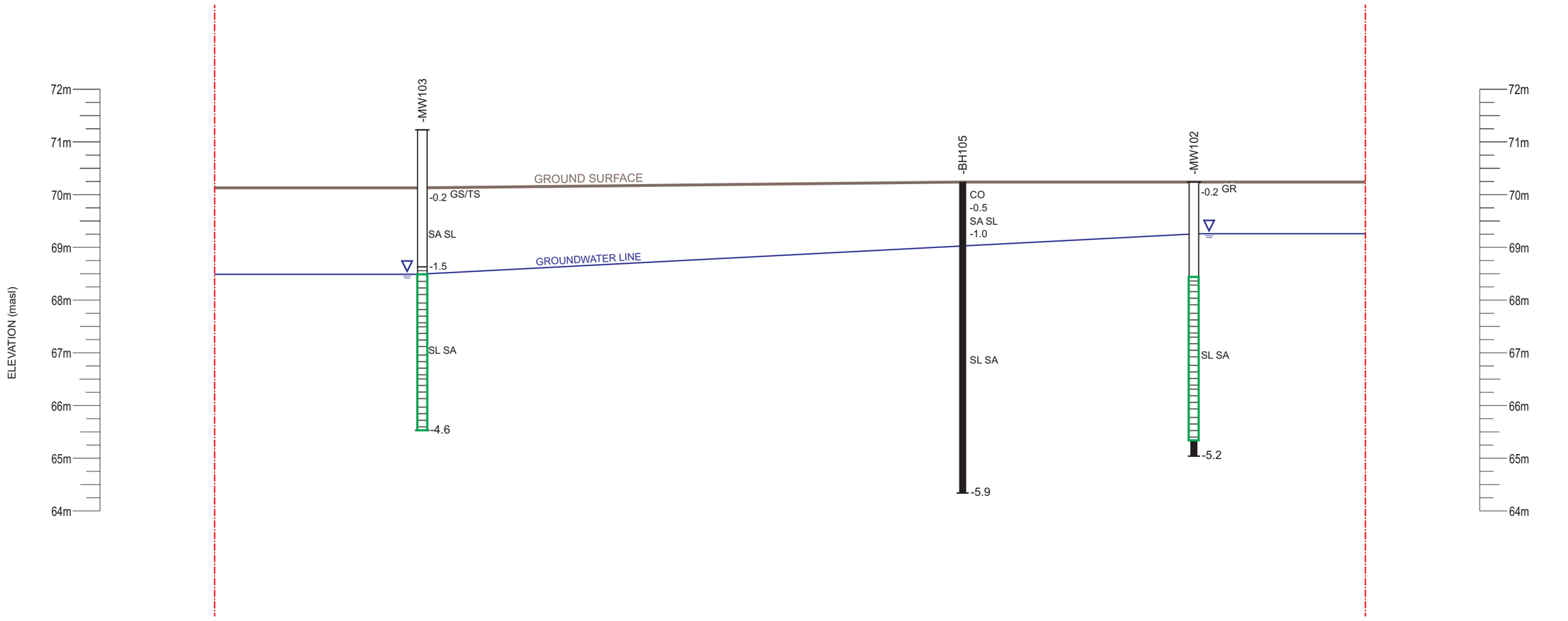
TITLE: **GROUNDWATER ANALYTICAL RESULTS CROSS SECTION A-A' - HYDRIDE-FORMING METALS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	**12B**

A

LOOKING NORTH

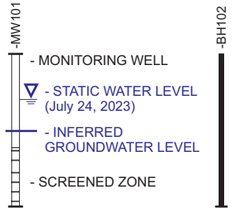
A'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE



ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

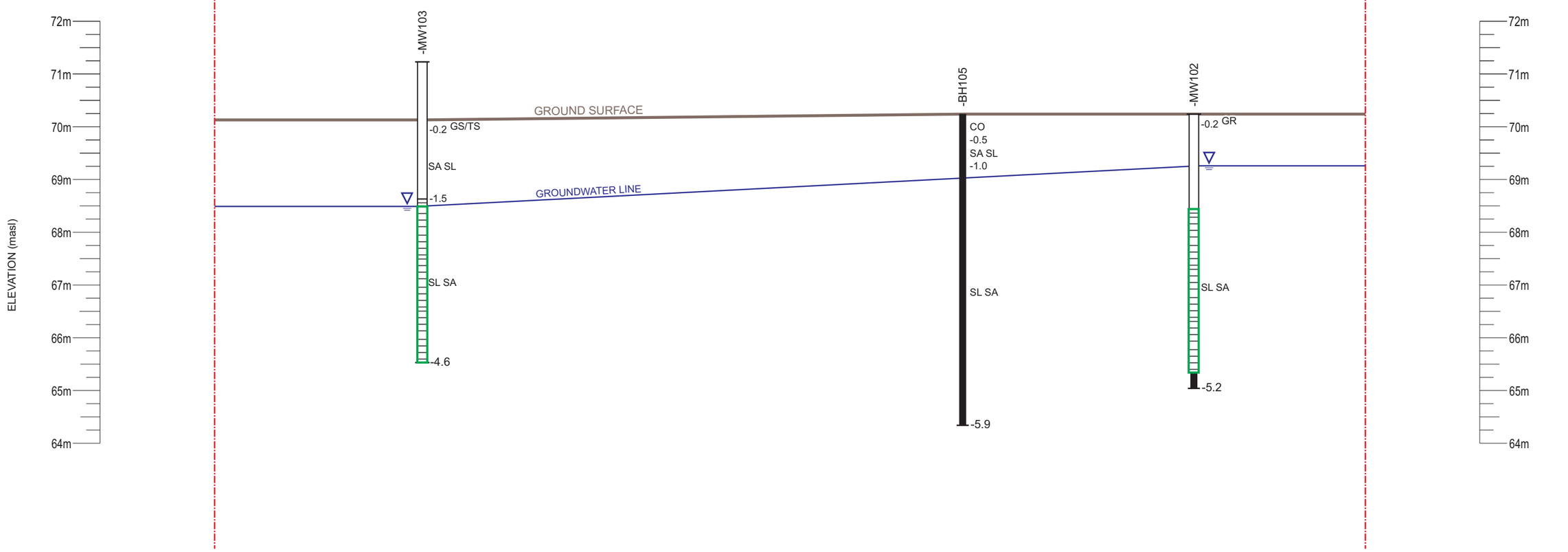
TITLE: **GROUNDWATER ANALYTICAL RESULTS CROSS SECTION A-A' - BTEX**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **12C**

A

LOOKING NORTH

A'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

-MW101
- MONITORING WELL
- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

-BH102
- BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

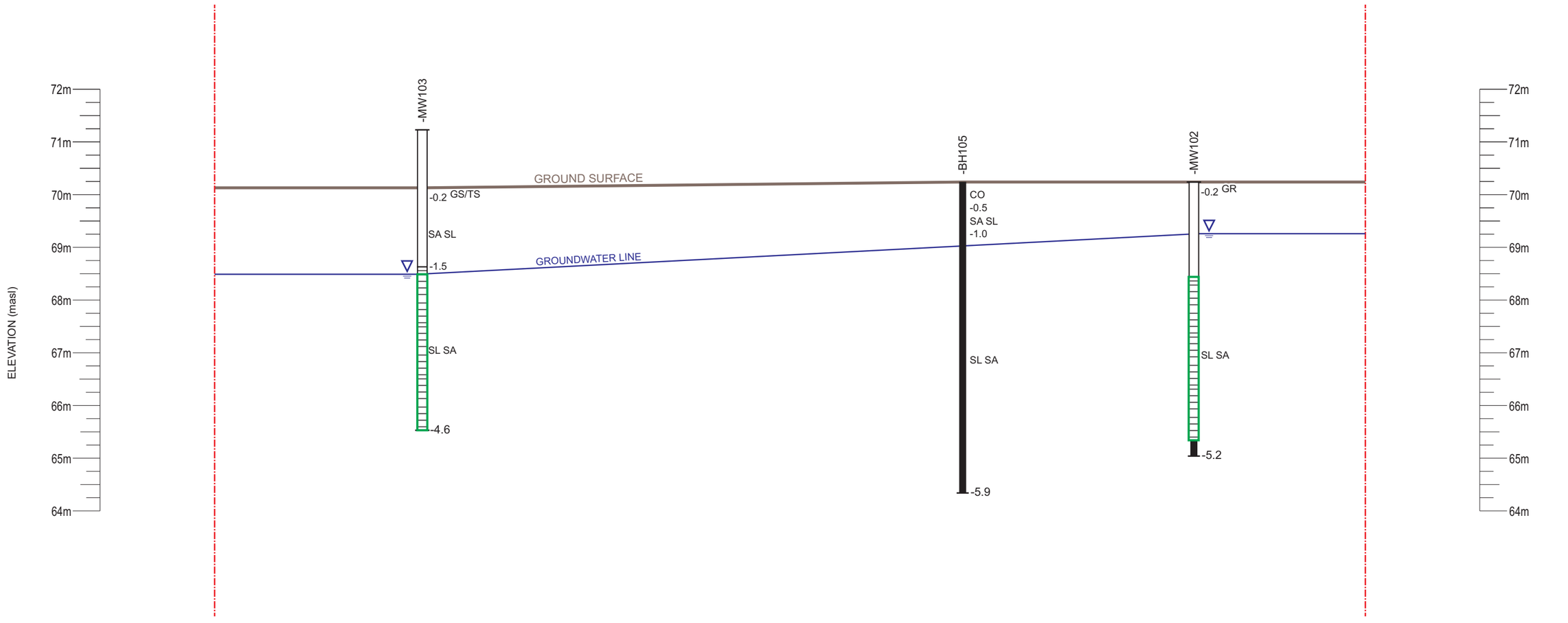
TITLE: **GROUNDWATER ANALYTICAL RESULTS CROSS SECTION A-A' - PHC**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **12D**

A

LOOKING NORTH

A'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101
- MONITORING WELL
- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102
- BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

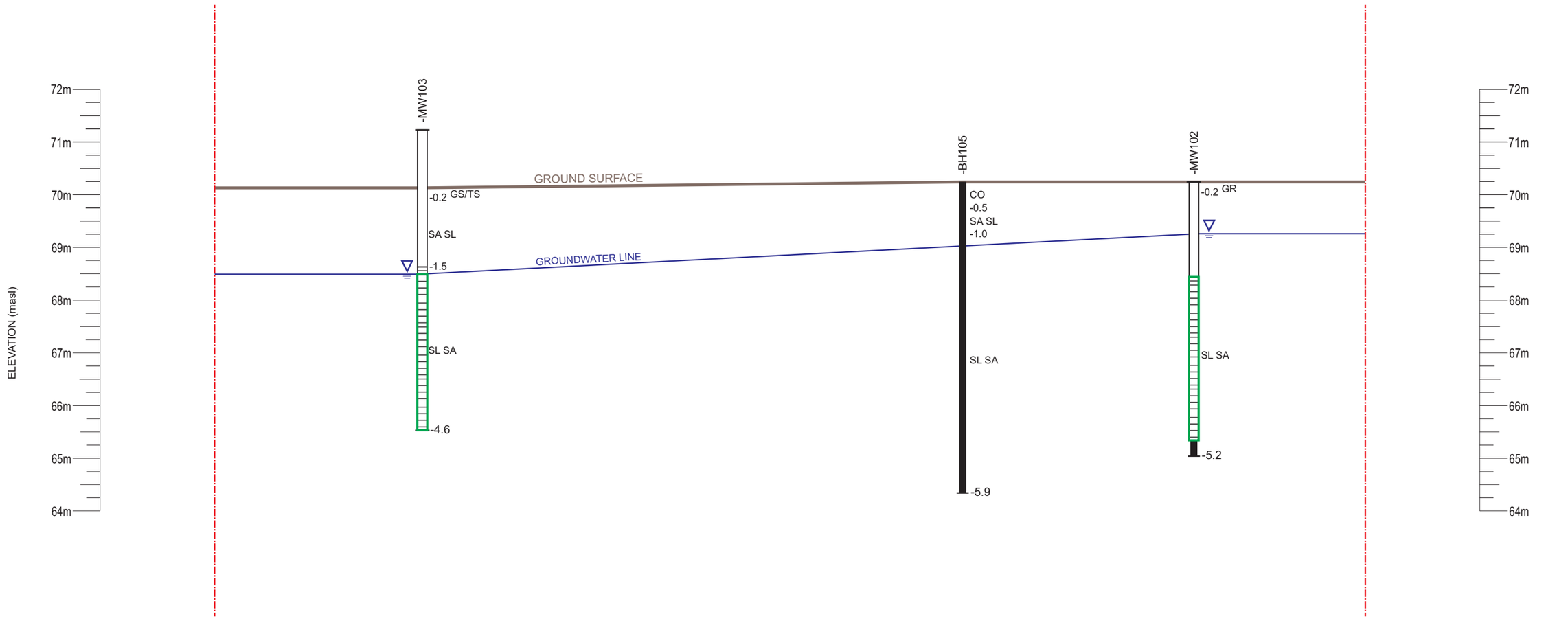
TITLE: **GROUNDWATER ANALYTICAL RESULTS CROSS SECTION A-A' - VOC**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **12E**

A

LOOKING NORTH

A'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

-MW101
- MONITORING WELL
- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

-BH102
- BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

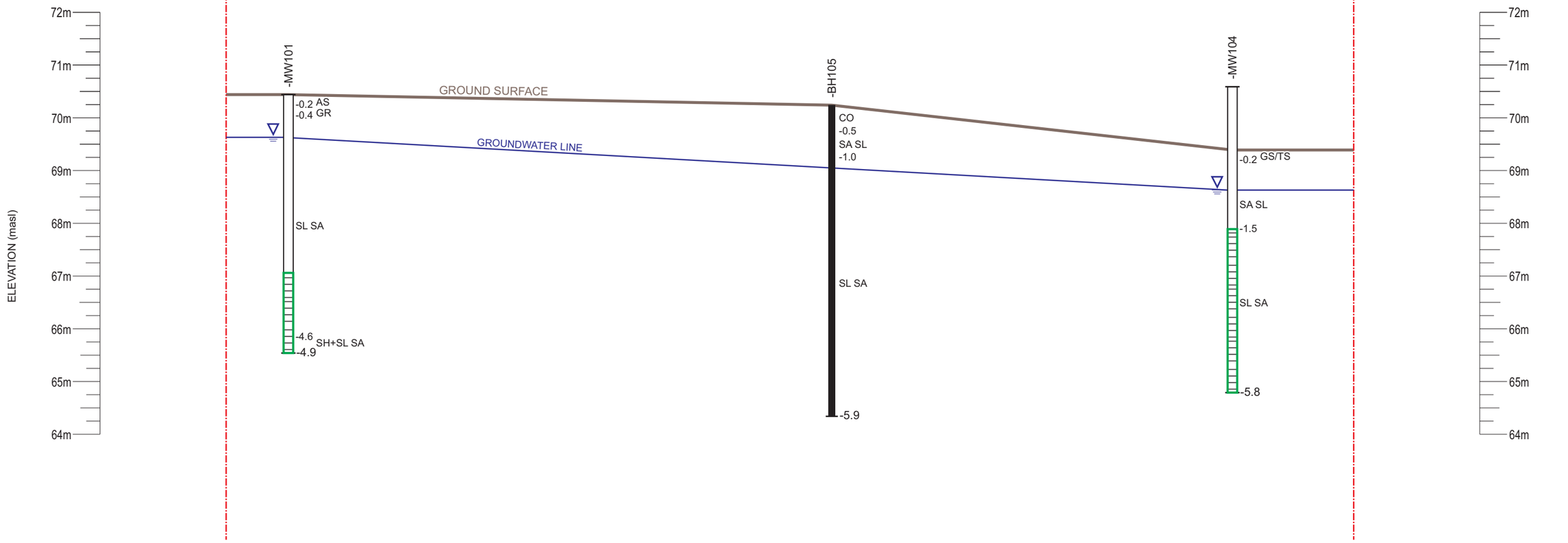
TITLE: **GROUNDWATER ANALYTICAL RESULTS CROSS SECTION A-A' - PAH**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: 12F

B

LOOKING WEST

B'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

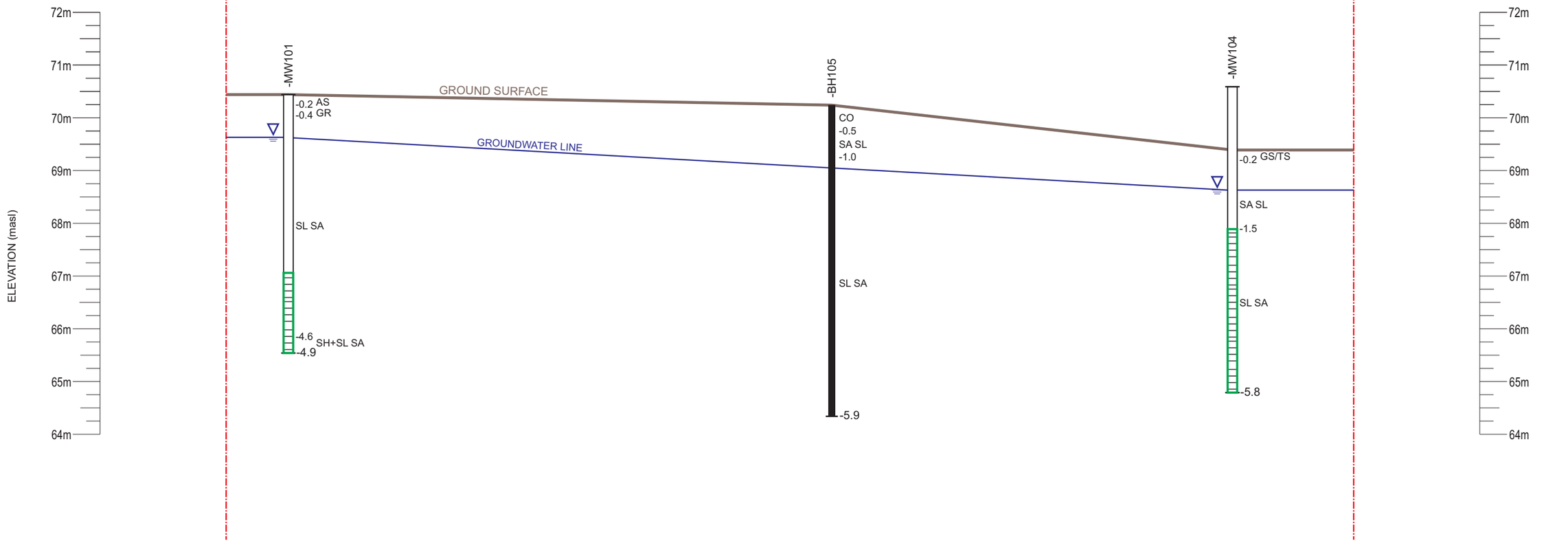
TITLE: **GROUNDWATER ANALYTICAL RESULTS CROSS SECTION B-B' - METALS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **13A**

B

LOOKING WEST

B'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

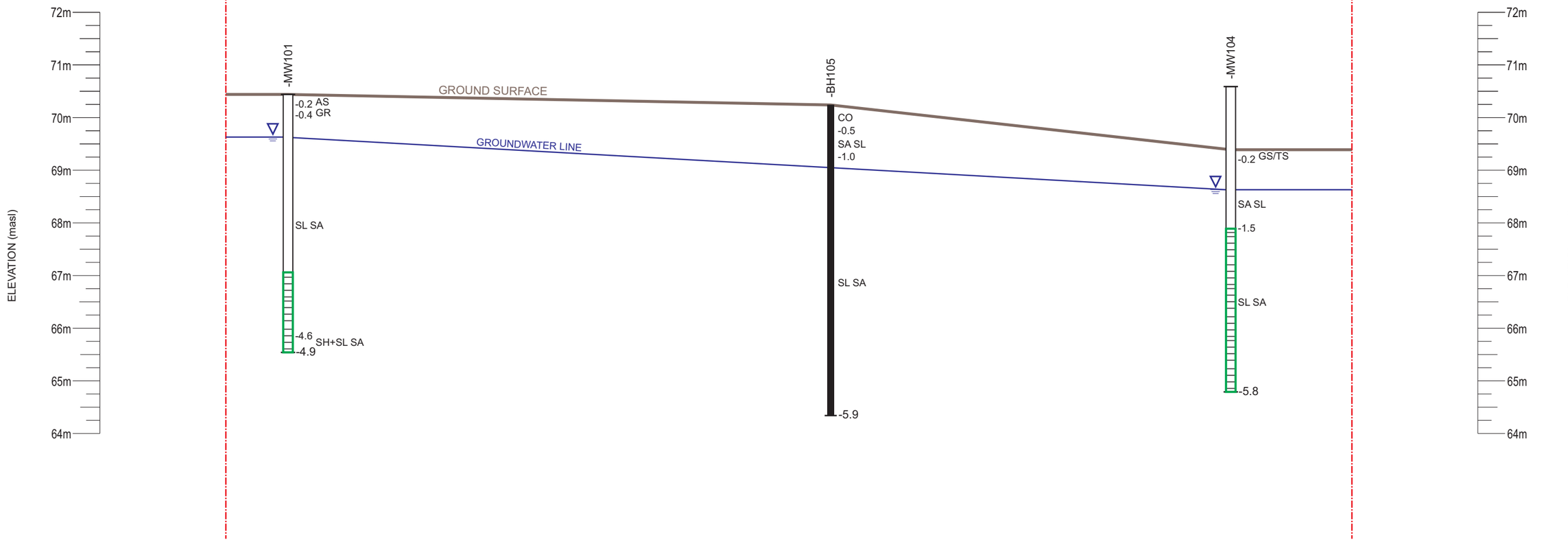
TITLE: **GROUNDWATER ANALYTICAL RESULTS CROSS SECTION B-B' - HYDRIDE-FORMING METALS**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION:	DATE:	FIGURE:
00	SEPTEMBER 2023	13B

B

LOOKING WEST

B'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

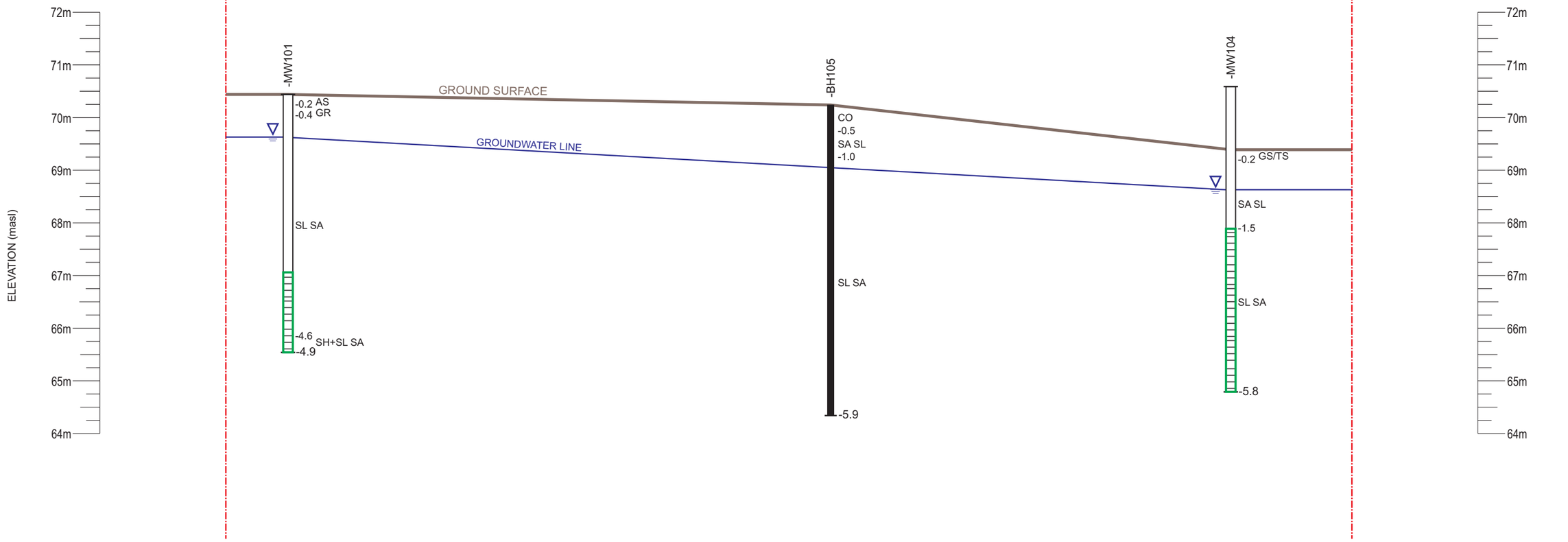
TITLE: **GROUNDWATER ANALYTICAL RESULTS CROSS SECTION B-B' - BTEX**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **13C**

B

LOOKING WEST

B'



LEGEND

	PROPERTY BOUNDARY
	STRATIGRAPHIC UNIT
	INFERRED STRATIGRAPHIC UNIT
TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)

- INFERRED GROUNDWATER LEVEL

- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS

VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20

Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

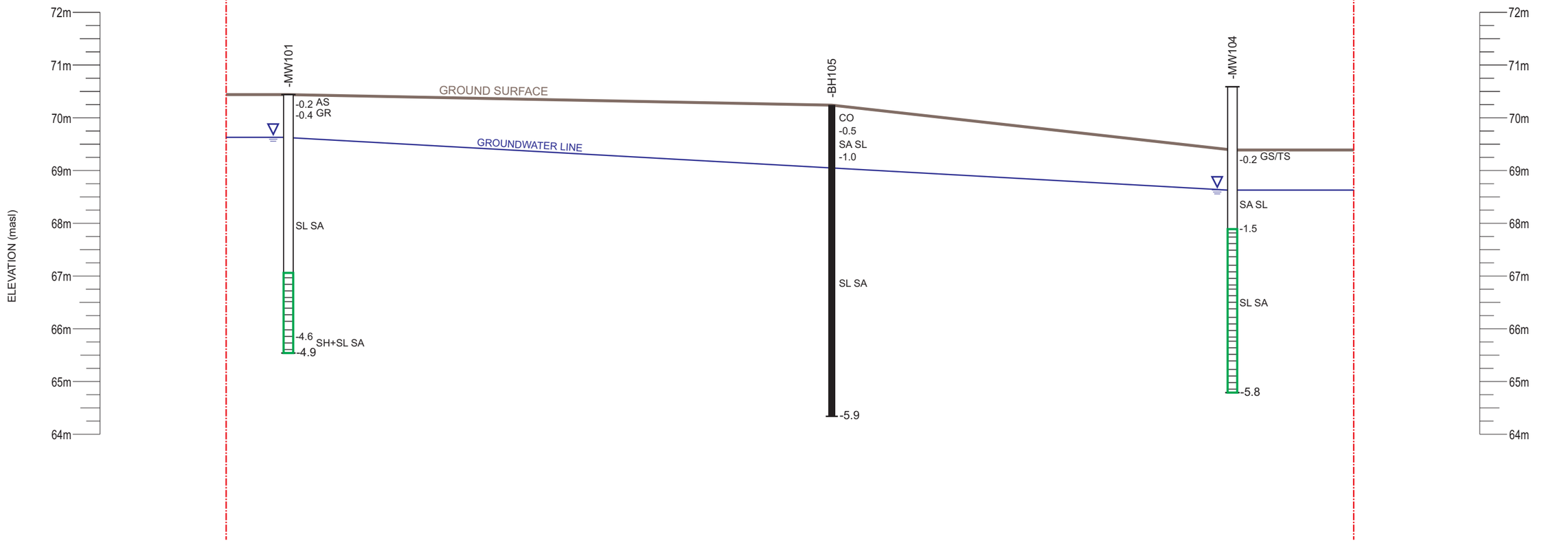
TITLE: **GROUNDWATER ANALYTICAL RESULTS CROSS SECTION B-B' - PHC**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **13D**

B

LOOKING WEST

B'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

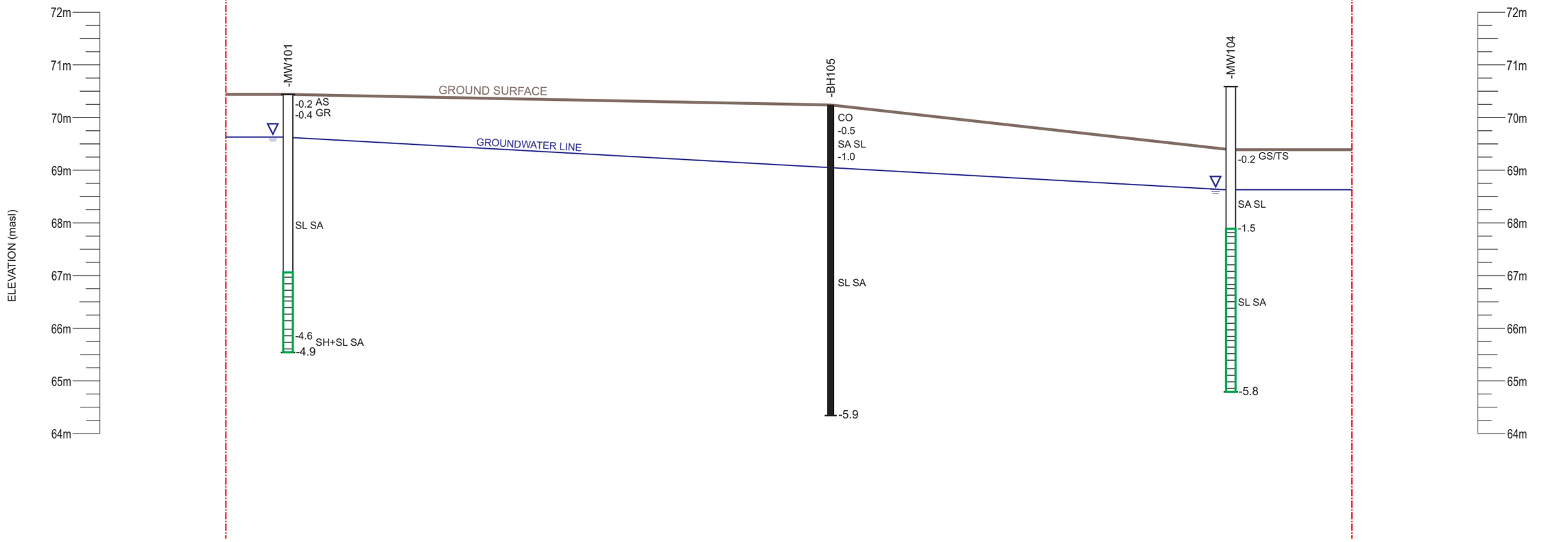
TITLE: **GROUNDWATER ANALYTICAL RESULTS CROSS SECTION B-B' - VOC**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **13D**

B

LOOKING WEST

B'



LEGEND

- PROPERTY BOUNDARY
- STRATIGRAPHIC UNIT
- INFERRED STRATIGRAPHIC UNIT

TS	TOPSOIL
CO	COBBLES
AS	ASPHALT
GR	GRAVEL
SA	SAND
SL	SILT
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

MW101 - MONITORING WELL

- STATIC WATER LEVEL (July 24, 2023)
- INFERRED GROUNDWATER LEVEL
- SCREENED ZONE

BH102 - BOREHOLE

ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS

VALUE Greater than Table 3 SCS
VALUE Less than or equal to Table 3 SCS

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR ALL TYPES OF PROPERTY USE WITH FINE TO MEDIUM TEXTURED SOIL.

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL STRATIGRAPHY BETWEEN LOCATIONS IS INTERPRETED.
2. UTILITY LOCATIONS AND DEPTHS ARE APPROXIMATE.

CLIENT: AVENYN CAPITAL PARTNERS LP II

SITE LOCATION: 1591-1611 MICHAEL STREET OTTAWA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER ANALYTICAL RESULTS CROSS SECTION B-B' - PAH**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW	CO892.02	XX
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: **13F**

TABLES

TABLE 1 GROUNDWATER MONITORING DATA
1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO

WELL NUMBER	DATE	GROUND ELEVATION[1] (m)	T.O.P. ELEVATION[2] (m)	SCREEN LENGTH (m)	BOTTOM OF SCREEN[3] (m)	CV[4]	DEPTH TO WATER FROM T.O.P. (m)	DEPTH TO WATER FROM GROUND (m)	GROUNDWATER ELEVATION[5] (m)	LNAPL THICKNESS[6] (m)
MW101	24-Jul-23	71.07	70.98	1.50	66.11	80 ppm	0.72	0.81	70.26	None
MW102	24-Jul-23	70.87	70.76	3.05	65.89	6% LEL	0.88	0.98	69.89	None
MW103	24-Jul-23	70.76	70.67	3.05	66.10	17% LEL	1.55	1.64	69.12	None
MW104	24-Jul-23	70.02	71.05	3.05	66.48	15% LEL	1.80	0.76	69.26	None

[1] Elevation of ground surface at well location, relative to site benchmark (Hydrant Spindle at south side of
[2] Elevation of highest point of well pipe ("top of pipe"), relative to site benchmark
[3] Elevation of bottom of well screened interval, relative to site benchmark
[4] Combustible vapour concentration in well headspace in parts per million by volume (ppm) or percent of lower explosive limit (%LEL)
[5] Static water level elevation, relatve to site benchmark
[6] Measured thickness of light, non-aqueous phase liquid, if any

TABLE 2 SOIL ANALYTICAL RESULTS PHCs

1591 and 1611 Michael Street, Ottawa, Ontario

Sample Name	Units	STANDARDS Table 3 I/C/C fine/medium	MW101-3	MW102-3	MW103-4	MW104-3	MW104-31 (Field Duplicate of MW104-3)	RPD	BH105-3	Trip Blank
Vapour Reading	see note	-	<5ppm	<5ppm	<5ppm	<5ppm	<5ppm	-	-	-
Sample Depth	m bg	-	1.5-2.3	1.5-2.3	2.3-3.0	1.5-2.3	1.5-2.3	-	1.5-2.3	-
Sampling Date	dd-mmm-yy	-	19-Jul-23	19-Jul-23	19-Jul-23	19-Jul-23	19-Jul-23	-	19-Jul-23	19-Jul-23
Analysis Date (on or before)	dd-mmm-yy	-	27-Jul-23	25-Jul-23	26-Jul-23	27-Jul-23	27-Jul-23	-	24-Jul-23	24-Jul-23
Certificate of Analysis No.	-	-	23Z049826	23Z049826	23Z049826	23Z049826	23Z049826	-	23Z049826	23Z049826
Benzene	ug/g	0.40	<0.02	<0.02	<0.02	<0.02	<0.02	0%	<0.02	<0.02
Toluene	ug/g	78	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Ethylbenzene	ug/g	19	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Xylene Mixture	ug/g	30	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Petroleum Hydrocarbons F1[1]	ug/g	65	<5	<5	<5	<5	<5	0%	<5	-
Petroleum Hydrocarbons F2	ug/g	250	<10	<10	<10	<10	<10	0%	<10	-
Petroleum Hydrocarbons F3	ug/g	2,500	<50	<50	<50	<50	<50	0%	<50	-
Petroleum Hydrocarbons F4	ug/g	6,600	<50	<50	<50	<50	<50	0%	<50	-

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1
of the Environmental Protection Act (April 15, 2011 and as amended)
Table 3: Full Depth Generic SCS in a Non-Potable Ground Water Condition
Industrial/Commercial/Community Property-Use, Fine- to Medium-Textured Soil

-	Not analyzed
m bg	meters below grade
ppm	parts per million
% LEL	percent of the lower explosive limit
RPD	Relative percent difference
Value	Exceeds standard
Value	Detection limit exceeds standard
[1]	F1 fraction does not include BTEX.

TABLE 3 SOIL ANALYTICAL RESULTS VOCs

1591 and 1611 Michael Street, Ottawa, Ontario

Sample Name	Units	STANDARDS Table 3 I/C/C fine/medium	MW101-3	MW102-3	MW103-4	MW104-3	MW104-31 (Field Duplicate of MW104-3)	RPD	BH105-3	Trip Blank
Vapour Reading	see note	-	<5ppm	<5ppm	<5ppm	<5ppm	<5ppm		-	-
Sample Depth	m bg	-	1.5-2.3	1.5-2.3	2.3-3.0	1.5-2.3	1.5-2.3		1.5-2.3	-
Sampling Date	dd-mmm-yy	-	19-Jul-23	19-Jul-23	19-Jul-23	19-Jul-23	19-Jul-23		19-Jul-23	19-Jul-23
Analysis Date (on or before)	dd-mmm-yy	-	27-Jul-23	25-Jul-23	26-Jul-23	27-Jul-23	27-Jul-23		24-Jul-23	24-Jul-23
Certificate of Analysis No.	-	-	23Z049826	23Z049826	23Z049826	23Z049826	23Z049826		23Z049826	23Z049826
Acetone	ug/g	28	<0.50	<0.50	<0.50	<0.50	<0.50	0%	<0.50	<0.50
Bromodichloromethane	ug/g	18	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Bromoform	ug/g	1.7	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Bromomethane	ug/g	0.050	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Carbon Tetrachloride	ug/g	1.5	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Chlorobenzene	ug/g	2.7	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Chloroform	ug/g	0.18	<0.04	<0.04	<0.04	<0.04	<0.04	0%	<0.04	<0.04
Dibromochloromethane	ug/g	13	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Dichlorobenzene, 1,2-	ug/g	8.5	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Dichlorobenzene, 1,3-	ug/g	12	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Dichlorobenzene, 1,4-	ug/g	0.84	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Dichlorodifluoromethane	ug/g	25	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Dichloroethane, 1,1-	ug/g	21	<0.02	<0.02	<0.02	<0.02	<0.02	0%	<0.02	<0.02
Dichloroethane, 1,2-	ug/g	0.050	<0.03	<0.03	<0.03	<0.03	<0.03	0%	<0.03	<0.03
Dichloroethylene, 1,1-	ug/g	0.48	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Dichloroethylene, 1,2-cis-	ug/g	37	<0.02	<0.02	<0.02	<0.02	<0.02	0%	<0.02	<0.02
Dichloroethylene, 1,2-trans-	ug/g	9.3	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Dichloropropane, 1,2-	ug/g	0.68	<0.03	<0.03	<0.03	<0.03	<0.03	0%	<0.03	<0.03
Dichloropropene,1,3-	ug/g	0.21	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.04
Ethylene dibromide	ug/g	0.050	<0.04	<0.04	<0.04	<0.04	<0.04	0%	<0.04	<0.04
Hexane (n)	ug/g	88	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Methyl Ethyl Ketone	ug/g	88	<0.50	<0.50	<0.50	<0.50	<0.50	0%	<0.50	<0.50
Methyl Isobutyl Ketone	ug/g	210	<0.50	<0.50	<0.50	<0.50	<0.50	0%	<0.50	<0.50
Methyl tert-Butyl Ether (MTBE)	ug/g	3.2	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Methylene Chloride	ug/g	2.0	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Styrene	ug/g	43	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	ug/g	0.11	<0.04	<0.04	<0.04	<0.04	<0.04	0%	<0.04	<0.04
Tetrachloroethane, 1,1,2,2-	ug/g	0.094	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Tetrachloroethylene	ug/g	21	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Trichloroethane, 1,1,1-	ug/g	12	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Trichloroethane, 1,1,2-	ug/g	0.11	<0.04	<0.04	<0.04	<0.04	<0.04	0%	<0.04	<0.04
Trichloroethylene	ug/g	0.61	<0.03	<0.03	<0.03	<0.03	<0.03	0%	<0.03	<0.03
Trichlorofluoromethane	ug/g	5.8	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05	<0.05
Vinyl Chloride	ug/g	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	0%	<0.02	<0.02

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1
of the Environmental Protection Act (April 15, 2011 and as amended)
Table 3: Full Depth Generic SCS in a Non-Potable Ground Water Condition
Industrial/Commercial/Community Property-Use, Fine- to Medium-Textured Soil

- Not analyzed
m bg meters below grade
RPD Relative percent difference
Value Exceeds standard
Value Detection limit exceeds standard

TABLE 4 SOIL ANALYTICAL RESULTS PAHs

1591 and 1611 Michael Street, Ottawa, Ontario

Sample Name	Units	STANDARDS Table 3 I/C/C fine/medium	MW101-2	MW102-2	MW103-3	MW104-3	MW104-31 (Field Duplicate of MW104-3)	RPD	BH105-2
Vapour Reading	see note	-	<5ppm	<5ppm	<5ppm	<5ppm	<5ppm		-
Sample Depth	m bg	-	0.8-1.5	0.8-1.5	1.5-2.3	1.5-2.3	1.5-2.3		0.8-1.5
Sampling Date	dd-mmm-yy	-	19-Jul-23	19-Jul-23	19-Jul-23	19-Jul-23	19-Jul-23		19-Jul-23
Analysis Date (on or before)	dd-mmm-yy	-	27-Jul-23	27-Jul-23	27-Jul-23	27-Jul-23	27-Jul-23		27-Jul-23
Certificate of Analysis No.	-	-	23Z049826	23Z049826	23Z049826	23Z049826	23Z049826		23Z049826
Acenaphthene	ug/g	96	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Acenaphthylene	ug/g	0.17	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Anthracene	ug/g	0.74	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Benz[a]anthracene	ug/g	0.96	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Benzo[a]pyrene	ug/g	0.30	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Benzo[b]fluoranthene	ug/g	0.96	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Benzo[ghi]perylene	ug/g	9.6	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Benzo[k]fluoranthene	ug/g	0.96	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Chrysene	ug/g	9.6	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Dibenz[a h]anthracene	ug/g	0.10	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Fluoranthene	ug/g	9.6	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Fluorene	ug/g	69	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Indeno[1 2 3-cd]pyrene	ug/g	0.95	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Methlynaphthalene, 2-(1-)[1]	ug/g	85	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Naphthalene	ug/g	28	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Phenanthrene	ug/g	16	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05
Pyrene	ug/g	96	<0.05	<0.05	<0.05	<0.05	<0.05	0%	<0.05

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1
of the Environmental Protection Act (April 15, 2011 and as amended)
Table 3: Full Depth Generic SCS in a Non-Potable Ground Water Condition
Industrial/Commercial/Community Property-Use, Fine- to Medium-Textured Soil

- Not analyzed
m bg meters below grade
RPD Relative percent difference
Value Exceeds standard
Value Detection limit exceeds standard
[1] the sum of 1-methylnaphthalene and 2- methylnaphthalene.

TABLE 5 SOIL ANALYTICAL RESULTS METALS AND INORGANICS

1591 and 1611 Michael Street, Ottawa, Ontario

Sample Name	Units	STANDARDS Table 3 I/C/C fine/medium	MW101-2	MW101-4	MW102-2	MW103-2	MW103-3	MW104-2	MW104-2 (Re-Analysis)	BH105-2	BH105-21 (Field Duplicate of BH105-2)	RPD
Vapour Reading	see note	-	<5ppm	<5ppm	<5ppm	<5ppm	<5ppm	<5ppm	<5 ppm	-	-	-
Sample Depth	m bg	-	0.8-1.5	2.3-3	0.8-1.5	0.8-1.5	1.5-2.3	0.8-1.5	0.8 - 1.5	0.8-1.5	0.8-1.5	-
Sampling Date	dd-mmm-yy	-	19-Jul-23	19-Jul-23	19-Jul-23	19-Jul-23	19-Jul-23	19-Jul-23	19-Jul-23	19-Jul-23	19-Jul-23	-
Analysis Date (on or before)	dd-mmm-yy	-	27-Jul-23	26-Jul-23	27-Jul-23	26-Jul-23	27-Jul-23	26-Jul-23	11-Aug-23	27-Jul-23	26-Jul-23	-
Certificate of Analysis No.	-	-	23Z049826	23Z049826	23Z049826	23Z049826	23Z049826	23Z049826	23Z049826	23Z049826	23Z049826	-
pH	pH Units	NV	7.15	7.22	7.18	6.94	6.81	7.08	-	7.19	7.26	1%
Antimony	ug/g	50	<0.8	-	<0.8	-	<0.8	7.1	-	<0.8	<0.8	0%
Arsenic	ug/g	18	3	-	4	-	1	4	-	4	4	0%
Barium	ug/g	670	67.8	-	75.3	-	50.9	205	-	53.5	59.9	11%
Beryllium	ug/g	10	<0.5	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	0%
Boron (total)	ug/g	120	11	-	10	-	<5	8	-	7	8	13%
Boron (Hot Water Soluble)[1]	ug/g	2.0	<0.10	-	<0.10	-	<0.10	0.36	-	<0.10	<0.10	0%
Cadmium	ug/g	1.9	<0.5	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	0%
Chromium Total	ug/g	160	19	-	22	-	19	33	-	16	16	0%
Chromium VI	ug/g	10	<0.2	-	<0.2	-	<0.2	<0.2	-	<0.2	<0.2	0%
Cobalt	ug/g	100	9.6	-	11.5	-	4.5	9.2	-	8.7	9.8	12%
Copper	ug/g	300	18.4	-	23.4	-	9.2	23.1	-	29.6	20.9	34%
Cyanide (CN-)	ug/g	0.051	<0.040	-	<0.040	-	<0.040	<0.040	-	<0.040	<0.040	0%
Lead	ug/g	120	7	-	9	-	2	**127**	109	6	7	15%
Mercury	ug/g	20	<0.10	-	<0.10	-	<0.10	<0.10	-	<0.10	<0.10	0%
Molybdenum	ug/g	40	1.7	-	2.2	-	<0.5	2	-	1.1	1.5	31%
Nickel	ug/g	340	23	-	27	-	12	23	-	19	24	23%
Selenium	ug/g	5.5	<0.8	-	<0.8	-	<0.8	<0.8	-	<0.8	<0.8	0%
Silver	ug/g	50	<0.5	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	0%
Thallium	ug/g	3.3	<0.5	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	0%
Uranium	ug/g	33	0.84	-	0.91	-	<0.50	1.05	-	0.8	0.85	6%
Vanadium	ug/g	86	33.7	-	37.4	-	22.4	42	-	30.5	31.9	4%
Zinc	ug/g	340	35	-	58	-	21	114	-	33	34	3%
Electrical Conductivity	mS/cm	1.4	0.199	-	0.143	-	0.136	0.239	-	0.155	0.143	8%
Sodium Adsorption Ratio	N/A	12	0.411	-	0.438	-	0.956	0.63	-	0.438	0.59	30%

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (April 15, 2011 and as amended)
Table 3: Full Depth Generic SCS in a Non-Potable Ground Water Condition
Industrial/Commercial/Community Property-Use, Fine- to Medium-Textured Soil

- Not analyzed
m bg meters below grade
RPD Relative percent difference
Value Exceeds standard
Value Detection limit exceeds standard
[1] Hot water soluble boron applies to surface soils (<1.5 m bg).
[z] Analysis for methyl mercury only applies when mercury standard is exceeded.
NA Not Applicable

TABLE 6 GROUNDWATER ANALYTICAL RESULTS **PHCs**

1591-1611 MICHAEL STREET, OTTAWA, ONTARIO

Sample Name	Units	STANDARDS Table 3 fine/medium	MW101	MW102	MW103	MW104	MW115 (Field Duplicate of MW104)	RPD	Trip Blank
Vapour Reading	see note	-	80 ppm	6% LEL	17% LEL	15% LEL	15% LEL	-	-
Screened Interval	m bg	-	3.3 - 4.8	1.8 - 4.8	1.5 - 4.5	1.5 - 4.5	1.5 - 4.5	-	-
Sampling Date	dd-mmm-yy	-	24-Jul-23	24-Jul-23	24-Jul-23	24-Jul-23	24-Jul-23	-	24-Jul-23
Analysis Date (on or before)	dd-mmm-yy	-	29-Jul-23	29-Jul-23	29-Jul-23	29-Jul-23	29-Jul-23	-	29-Jul-23
Certificate of Analysis No.	-	-	23Z051210	23Z051210	23Z051210	23Z051210	23Z051210	-	23Z051210
Benzene	ug/L	430	<0.20	<0.20	<0.20	<0.20	<0.20	0%	<0.20
Toluene	ug/L	18,000	<0.20	<0.20	<0.20	<0.20	<0.20	0%	<0.20
Ethylbenzene	ug/L	2,300	<0.10	<0.10	<0.10	<0.10	<0.10	0%	<0.10
Xylene Mixture	ug/L	4,200	<0.20	<0.20	<0.20	<0.20	<0.20	0%	<0.20
Petroleum Hydrocarbons F1[1]	ug/L	750	<25	<25	<25	<25	<25	0%	<25
Petroleum Hydrocarbons F2	ug/L	150	<100	<100	<100	<100	<100	0%	-
Petroleum Hydrocarbons F3	ug/L	500	<100	<100	<100	<100	<100	0%	-
Petroleum Hydrocarbons F4	ug/L	500	<100	<100	<100	<100	<100	0%	-

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1
of the Environmental Protection Act (April 15, 2011 and as amended)
Table 3: Full Depth Generic SCS in a Non-Potable Ground Water Condition
All Types of Property-Use, Fine- to Medium-Textured Soil

- Not analyzed
m bg meters below grade
ppm parts per million
% LEL percent of the lower explosive limit
RPD Relative percent difference
Value Exceeds standard
Value Detection limit exceeds standard
[1] F1 fraction does not include BTEX.

TABLE 7 GROUNDWATER ANALYTICAL RESULTS VOCs

1591-1611 MICHAEL STREET, OTTAWA, ONTARIO

Sample Name	Units	STANDARDS Table 3 fine/medium	MW101	MW102	MW103	MW104	MW115 (Field Duplicate of MW104)	RPD
Vapour Reading	see note	-	80 ppm	6% LEL	17% LEL	15% LEL	15% LEL	-
Screened Interval	m bg	-	3.3 - 4.8	1.8 - 4.8	1.5 - 4.5	1.5 - 4.5	1.5 - 4.5	-
Sampling Date	dd-mmm-yy	-	24-Jul-23	24-Jul-23	24-Jul-23	24-Jul-23	24-Jul-23	-
Analysis Date (on or before)	dd-mmm-yy	-	29-Jul-23	29-Jul-23	29-Jul-23	29-Jul-23	29-Jul-23	-
Certificate of Analysis No.	-	-	23Z051210	23Z051210	23Z051210	23Z051210	23Z051210	-
Acetone	ug/L	130,000	<1.0	<1.0	<1.0	<1.0	<1.0	0%
Bromodichloromethane	ug/L	85,000	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Bromoform	ug/L	770	<0.10	<0.10	<0.10	<0.10	<0.10	0%
Bromomethane	ug/L	56	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Carbon Tetrachloride	ug/L	8.4	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Chlorobenzene	ug/L	630	<0.10	<0.10	<0.10	<0.10	<0.10	0%
Chloroform	ug/L	22	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Dibromochloromethane	ug/L	82,000	<0.10	<0.10	<0.10	<0.10	<0.10	0%
Dichlorobenzene, 1,2-	ug/L	9,600	<0.10	<0.10	<0.10	<0.10	<0.10	0%
Dichlorobenzene, 1,3-	ug/L	9,600	<0.10	<0.10	<0.10	<0.10	<0.10	0%
Dichlorobenzene, 1,4-	ug/L	67	<0.10	<0.10	<0.10	<0.10	<0.10	0%
Dichlorodifluoromethane	ug/L	4,400	<0.40	<0.40	<0.40	<0.40	<0.40	0%
Dichloroethane, 1,1-	ug/L	3,100	<0.30	<0.30	<0.30	<0.30	<0.30	0%
Dichloroethane, 1,2-	ug/L	12	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Dichloroethylene, 1,1-	ug/L	17	<0.30	<0.30	<0.30	<0.30	<0.30	0%
Dichloroethylene, 1,2-cis-	ug/L	17	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Dichloroethylene, 1,2-trans-	ug/L	17	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Dichloropropane, 1,2-	ug/L	140	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Dichloropropene,1,3-	ug/L	45	<0.30	<0.30	<0.30	<0.30	<0.30	0%
Ethylene dibromide	ug/L	0.83	<0.10	<0.10	<0.10	<0.10	<0.10	0%
Hexane (n)	ug/L	520	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Methyl Ethyl Ketone	ug/L	1,500,000	<1.0	<1.0	<1.0	<1.0	<1.0	0%
Methyl Isobutyl Ketone	ug/L	580,000	<1.0	<1.0	<1.0	<1.0	<1.0	0%
Methyl tert-Butyl Ether (MTBE)	ug/L	1,400	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Methylene Chloride	ug/L	5,500	<0.30	<0.30	<0.30	<0.30	<0.30	0%
Styrene	ug/L	9,100	<0.10	<0.10	<0.10	<0.10	<0.10	0%
Tetrachloroethane, 1,1,1,2-	ug/L	28	<0.10	<0.10	<0.10	<0.10	<0.10	0%
Tetrachloroethane, 1,1,2,2-	ug/L	15	<0.10	<0.10	<0.10	<0.10	<0.10	0%
Tetrachloroethylene	ug/L	17	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Trichloroethane, 1,1,1-	ug/L	6,700	<0.30	<0.30	<0.30	<0.30	<0.30	0%
Trichloroethane, 1,1,2-	ug/L	30	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Trichloroethylene	ug/L	17	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Trichlorofluoromethane	ug/L	2,500	<0.40	<0.40	<0.40	<0.40	<0.40	0%
Vinyl Chloride	ug/L	1.7	<0.17	<0.17	<0.17	<0.17	<0.17	0%

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1
of the Environmental Protection Act (April 15, 2011 and as amended)
Table 3: Full Depth Generic SCS in a Non-Potable Ground Water Condition
All Types of Property-Use, Fine- to Medium-Textured Soil

- Not analyzed
m bg meters below grade
RPD Relative percent difference
Value Exceeds standard
Value Detection limit exceeds standard
[1] F1 fraction does not include BTEX.

TABLE 8 GROUNDWATER ANALYTICAL RESULTS PAHs

1591-1611 MICHAEL STREET, OTTAWA, ONTARIO

Sample Name	Units	STANDARDS Table 3 fine/medium	MW101	MW102	MW103	MW104	MW115 (Field Duplicate of MW104)	RPD
Vapour Reading	see note	-	80 ppm	6% LEL	17% LEL	15% LEL	15% LEL	-
Screened Interval	m bg	-	3.3 - 4.8	1.8 - 4.8	1.5 - 4.5	1.5 - 4.5	1.5 - 4.5	-
Sampling Date	dd-mmm-yy	-	24-Jul-23	24-Jul-23	24-Jul-23	24-Jul-23	24-Jul-23	-
Analysis Date (on or before)	dd-mmm-yy	-	29-Jul-23	29-Jul-23	29-Jul-23	29-Jul-23	29-Jul-23	-
Certificate of Analysis No.	-	-	23Z051210	23Z051210	23Z051210	23Z051210	23Z051210	-
Acenaphthene	ug/L	1,700	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Acenaphthylene	ug/L	1.8	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Anthracene	ug/L	2.4	<0.10	<0.10	<0.10	<0.10	<0.10	0%
Benz[a]anthracene	ug/L	4.7	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Benzo[a]pyrene	ug/L	0.81	<0.01	<0.01	<0.01	<0.01	<0.01	0%
Benzo[b]fluoranthene	ug/L	0.75	<0.10	<0.10	<0.10	<0.10	<0.10	0%
Benzo[ghi]perylene	ug/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Benzo[k]fluoranthene	ug/L	0.40	<0.10	<0.10	<0.10	<0.10	<0.10	0%
Chrysene	ug/L	1.0	<0.10	<0.10	<0.10	<0.10	<0.10	0%
Dibenz[a h]anthracene	ug/L	0.52	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Fluoranthene	ug/L	130	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Fluorene	ug/L	400	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Indeno[1 2 3-cd]pyrene	ug/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Methlynaphthalene, 2-(1-)[1]	ug/L	1,800	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Naphthalene	ug/L	6,400	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Phenanthrene	ug/L	580	<0.10	<0.10	<0.10	<0.10	<0.10	0%
Pyrene	ug/L	68	<0.20	<0.20	<0.20	<0.20	<0.20	0%

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1
of the Environmental Protection Act (April 15, 2011 and as amended)
Table 3: Full Depth Generic SCS in a Non-Potable Ground Water Condition
All Types of Property-Use, Fine- to Medium-Textured Soil

- Not analyzed
m bg meters below grade
RPD Relative percent difference
Value Exceeds standard
Value Detection limit exceeds standard
[1] the sum of 1-methylnaphthalene and 2- methylnaphthalene.

TABLE 9 GROUNDWATER ANALYTICAL RESULTS Metals and Inorganics

1591-1611 MICHAEL STREET, OTTAWA, ONTARIO

Sample Name	Units	STANDARDS Table 3 fine/medium	MW101	MW102	MW103	MW104	MW115 (Field Duplicate of MW104)	RPD
Vapour Reading	see note	-	80 ppm	6% LEL	17% LEL	15% LEL	15% LEL	-
Sample Depth	m bg	-	3.3 - 4.8	1.8 - 4.8	1.5 - 4.5	1.5 - 4.5	1.5 - 4.5	-
Sampling Date	dd-mmm-yy	-	24-Jul-23	24-Jul-23	24-Jul-23	24-Jul-23	24-Jul-23	-
Analysis Date (on or before)	dd-mmm-yy	-	28-Jul-23	28-Jul-23	28-Jul-23	28-Jul-23	28-Jul-23	-
Certificate of Analysis No.	-	-	23Z051210	23Z051210	23Z051210	23Z051210	23Z051210	-
Antimony	ug/L	20,000	<1.0	<1.0	<1.0	<1.0	<1.0	0%
Arsenic	ug/L	1,900	<1.0	<1.0	<1.0	<1.0	<1.0	0%
Barium	ug/L	29,000	32.5	84.9	203	92.6	93.4	1%
Beryllium	ug/L	67	<0.50	<0.50	<0.50	<0.50	<0.50	0%
Boron (total)	ug/L	45,000	30.7	26.2	34.8	40.2	38.8	4%
Cadmium	ug/L	2.7	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Chromium Total	ug/L	810	<2.0	<2.0	<2.0	<2.0	<2.0	0%
Cobalt	ug/L	66	<0.50	0.77	4.41	1.85	2.49	29%
Copper	ug/L	87	1	<1.0	1.7	<1.0	1.1	0%
Lead	ug/L	25	<0.50	<0.50	<0.50	<0.50	<0.50	0%
Molybdenum	ug/L	9,200	12.5	19.9	12.2	20.9	21.3	2%
Nickel	ug/L	490	3.4	9.1	8.9	9.5	11	15%
Selenium	ug/L	63	<1.0	1.2	<1.0	<1.0	<1.0	0%
Silver	ug/L	1.5	<0.20	<0.20	<0.20	<0.20	<0.20	0%
Thallium	ug/L	510	<0.30	<0.30	<0.30	<0.30	<0.30	0%
Uranium	ug/L	420	0.52	1.06	<0.50	1.43	1.58	10%
Vanadium	ug/L	250	<0.40	<0.40	<0.40	<0.40	<0.40	0%
Zinc	ug/L	1,100	5.6	<5.0	<5.0	<5.0	<5.0	0%

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1
of the Environmental Protection Act (April 15, 2011 and as amended)
Table 3: Full Depth Generic SCS in a Non-Potable Ground Water Condition
All Types of Property-Use, Fine- to Medium-Textured Soil

- Not analyzed
m bg meters below grade
RPD Relative percent difference
Value Exceeds standard
Value Detection limit exceeds standard
[1] Hot water soluble boron applies to surface soils (<1.5 m bg).
[2] Analysis for methyl mercury only applies when mercury standard is exceeded.

APPENDIX I
PLAN OF SURVEY

TOPOGRAPHICAL PLAN OF

PART OF LOT 27
CONCESSION 2 (OTTAWA FRONT)
GEOGRAPHIC TOWNSHIP OF GLOUCESTER
CITY OF OTTAWA

Prepared by Annis, O'Sullivan, Vollebekk Ltd.
Field Work Completed on June 9, 2022
Plan Amended on June 28, 2022 to Add Under Ground Gas & Rogers.

Scale 1 : 250

10 7.5 5.0 2.5 0 5 10 Metres

Metric

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

June 28 2022 — Date

E.H. Herweyer, O.L.S.

LOT 26 CONCESSION 2 (OTTAWA FRONT) (GLOUCESTER)

PART 1 PLAN 5R - 481
PIN 04263 - 0221
No. 1580 Liverpool Crt.

PART 1 PLAN 5R - 2141
PIN 04263 - 0222
No. 1145 Newmarket Street

PART 2 PLAN 5R-168

PART 6 PLAN 5R-168

PART 2 PLAN 5R - 481

PART 2 PLAN 5R - 2141

N 21° 49' 30" W

Concrete Block Retaining Wall

Bush Area

PART 2
PIN 04263 - 0455

GRAVEL

120.53

120.51

Asphalt Parking Area

Asphalt

PIN 04263 - 0101

PART 4
PIN 04263 - 0456

N 21° 50' 00" W 68.71

PART 1 PLAN 4R - XXXXX

Concrete Steps

Vinyl Sided Trailer

Wooden Deck & Steps

Gate

Metal Sided Entrance

LOT 27 CONCESSION 2 (OTTAWA FRONT) (GLOUCESTER)

PIN 04263 - 0002

61.06

N 68° 09' 40" E

PART 1
PIN 04263 - 0457

PLAN

No. 1601
1 STOREY
METAL SIDED BUILDING

Door Sill Elev.= 71.15

Door Sill Elev.=71.37

PART SUBJECT TO RIGHT OF WAY INST. PIN 04263 - 0455 OC1801476

N 68° 10' 00" E

No. 1621

Asphalt Parking Area

Asphalt Walkway

JOB BENCHMARK
TOP OF SPINDLE
ELEVATION=72.01

30.48

S 21° 50' 00" W

68.70

106.68

7.50

TOS

Ditch C/L

CSP 0.45ø TW=71.12

CSP 0.45ø

C/L Ditch

Rogers

Gravel Shoulder

Edge of Asphalt

305mmø Watermain

250mmø Sanitary

MH-S TW=71.03 Inv.=67.73

MH-S TW=71.00 Inv.=67.38

Approximate Crown of Road

150mmø Gas

MICHAEL STREET (AS WIDENED BY BY-LAW 241-58, INST.GL32524) (PLAN BA-2542)
PIN 04263 - 0292

Notes & Legend

Denotes

	"	Deciduous Tree
	"	Coniferous Tree
FH	"	Fire Hydrant
WV	"	Water Valve
MH-S	"	Maintenance Hole (Sanitary)
MH-C	"	Maintenance Hole Communication
OHW	"	Overhead Wires
S	"	Underground Sanitary Sewer
W	"	Underground Water
C	"	Underground Rogers
CSP	"	Corrugated Steel Pipe
UP	"	Utility Pole
AN	"	Anchor
CLF	"	Chain Link Fence
MF	"	Metal Fence
Ø	"	Diameter
+65.00	"	Location of Elevations
+65.00	"	Top of Wall Elevation
TOS	"	Top of Slope
BOS	"	Bottom of Slope
G	"	Underground Gas

UTILITY NOTES

1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
2. Only visible surface utilities were located.
3. Underground utility data derived from City of Ottawa utility sheet reference H-21-12 & H-21-11.
4. Sanitary and storm sewer grades and inverts were derived from City of Ottawa Plans (Michael Street August 25, 1960)
5. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.

ELEVATION NOTES

1. Elevations shown are geodetic and are referred to the CGVD28 geodetic datum, derived from vertical control monument No. 001196530385 having an elevation of 77.150 metres.
2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that it's relative elevation and description agrees with the information shown on this drawing.

SITE AREA = 8662 m²

BOUNDARY INFORMATION COMPILED FROM PLAN 4R-29375

ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850 / Fax: (613) 727-1079
Email: Nepean@aovltd.com
Ontario Land Surveyors

Job No. 22977-22 PL LOT 27 CON 2 OF T F — FS

APPENDIX II
CORRESONDANCE REGARDING
NON-POTABLE STANDARDS

September 6, 2023
CO892.02

City of Ottawa
Clerk's Office
275 Perrier Ave,
Ottawa, Ontario
K1L 5C6

Attention: Town Clerk

Via facsimile: Michel Kearney; Michel.Kearney@ottawa.ca

Re: Notification of Environmental Standards
1591-1611 Michael Street, Ottawa, ON

Dear Sir/Madam:

Terrapex Environmental Ltd. (Terrapex) has been retained by the property owner to conduct a Phase Two Environmental Site Assessment at 1591 – 1611 Michael Street, Ottawa, Ontario (the site).

After reviewing Ontario Regulation (O. Reg.) 153/04 *Records of Site Condition - Part XV.1 of the Act,* Terrapex has determined that the site meets the requirements outlined in Section 35 of the regulation. As such, applicable Table 3 SCS generic site condition standards in a non-potable groundwater condition will be applied to the analytical data obtained from the site.

On behalf of the owner, and in accordance with the requirements of Section 35 of O. Reg. 153/04, Terrapex is hereby providing written notice to the City of Ottawa of the intention to apply non-potable groundwater site condition standards in preparing a Record of Site Condition for the property at the 1591 – 1611 Michael Street, Ottawa, Ontario.

If you have any questions or concerns regarding this matter, please do not hesitate to contact the undersigned.

Sincerely,
TERRAPEX ENVIRONMENTAL LTD.

Sreerag Padmakumar, M.Eng.
Environmental Scientist

APPENDIX III
SAMPLING AND ANALYSIS PLAN

TERRAPEX

SAMPLING AND ANALYSIS PLAN
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

Site: 1591-1611 Michael Street, Ottawa, Ontario
Project No: CO892.02
Date: September 13, 2023

OBJECTIVES

On behalf of Avenyn Capital Partners LP II, Terrapex Environmental Ltd. (Terrapex) has prepared this sampling and analysis plan for a Phase Two Environmental Site Assessment (ESA) at 1591-1611 Michael Street, Ottawa, Ontario, the "Phase Two Property". The Phase Two ESA is to be conducted for the purposes of filing a Record of Site Condition per Ontario Regulation (O. Reg.) 153/04, *Records of Site Condition - Part XV.1 of the Act* on the basis of future development for residential use. The objective of this ESA is to determine the location and concentration of contaminants in the land or water on, in or under the Phase Two Property.

The Phase Two ESA will investigate all Areas of Potential Environmental Concern (APECs) which were identified in a Phase One ESA of the property conducted by Terrapex, dated February 14, 2023. The APECs are shown on Figure 1 and listed in Table 1.

SAMPLING PROGRAM

The media to be investigated and the contaminants of concern have been determined based on findings from previous investigations and potential environmental concerns identified from on-site and off-site activities. The media, contaminants, investigation and sampling methods are summarized on Table 2. The rationale for each sampling location, and the proposed laboratory analytical program for each location, is shown on Table 3. Modifications may be made to the program during the course of implementation, based on field observations, and will be documented in the Phase Two ESA report.

STANDARD OPERATING PROCEDURES

The following Terrapex Standard Operating Procedures (SOPs) will be used:

SOP E01.00 – Field Meter Calibration
SOP E03.03 – Borehole Advancement Using Direct Push Methodology
SOP E04.00 – Monitoring Well Installation
SOP E05.00 – Monitoring Well Development
SOP E06.00 – Groundwater Monitoring
SOP E07.01 – Groundwater Sampling, Low Volume Purge, Using Peristaltic Pump
SOP E09.00 – Soil Sample Handling
SOP E10.00 – Soil Classification
SOP E11.00 – Measuring and Surveying Using Rod and Level
SOP E12.00 – Field Program Quality Assurance & Quality Control

DATA QUALITY OBJECTIVES

The investigation will be completed following Terrapex SOP *E12.00 - Field Program Quality Assurance & Quality Control*, which specifies requirements for minimizing cross-contamination, record-keeping, sample storage, sample submission, field QA/QC samples and data quality objectives. If the data quality objectives are not met, the Qualified Person for the project will review the results and determine whether the deviation affects decision-making or the overall objectives of the investigation.

LABORATORY PROGRAM

Project Laboratory: AGAT Laboratories Ltd.

Accreditation: Standards Council of Canada (SCC) and Canadian Association for Laboratory Accreditation Inc. (CALA) in accordance with the International Standard ISO/IEC17025-2017 – *General Requirements for the Competence of Testing and Calibration Laboratories*

Proposed Analytical Program: See Table 3, attached.

Analytical Methods: The laboratory will use the methods specified in the *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011 (Analytical Protocol).*

Sample Containers and Preservatives: See Table 4, attached.

AGAT's Quality Assurance/Quality Control (QA/QC) program will consist of the analysis of method blanks, laboratory control samples, matrix spikes, sample duplicates, and surrogates, as appropriate for the particular analysis protocol and as specified in the *Analytical Protocol.*

SUB-CONTRACTORS

All sub-contractors used in the Phase Two ESA will be approved suppliers according to Terrapex's internal management system. The following sub-contractors will be retained for this project:

Private utility locates: Underground Service Locators Inc.
Borehole drilling and well installation: Strata Drilling Group
Laboratory analyses: AGAT Laboratories Ltd.

ATTACHMENTS

Figure 1 – Areas of Potential Environmental Concern and Proposed Sampling Locations

Table 1 – Areas of Potential Environmental Concern
Table 2 – Media to be Investigated and Chemicals of Concern
Table 3 – Proposed Sampling Plan
Table 4 – Sample Containers and Preservation Plan

TABLE 1: AREAS OF POTENTIAL ENVIRONMENTAL CONCERN
1591-1611 MICHAEL STREET, OTTAWA, ONTARIO

LOCATION OF APEC ON PHASE ONE PROPERTY	POTENTIALLY CONTAMINATING ACTIVITY (as set out in Column A of Table 2 in Schedule D of O. Reg. 153/04)	CONTAMINANTS OF POTENTIAL CONCERN	MEDIA POTENTIALLY IMPACTED (Groundwater, Soil, and/or Sediment)
Entire Site	Importation of Fill Material of Unknown Quality	Inorganics, PAHs, BTEX and PHCs	Soil
	Metal Fabrication	Inorganics, PAHs, BTEX and PHCs	Soil
	Gasoline and Associated Products Storage in Fixed Tanks	BTEX and PHCs	Soil and Groundwater
	Metal Treatment, Coating, Plating and Finishing	Inorganics, PAHs, BTEX and PHCs	Soil
	Storage Containers- Other Plastic Industries	Inorganics, BTEX, PHCs, VOCs	Soil and Groundwater
1611 Michael St	Salvage Yard, including automobile wrecking	Inorganics, PAHs, BTEX and PHCs	Soil and Groundwater

LOCATION OF APEC ON PHASE ONE PROPERTY	POTENTIALLY CONTAMINATING ACTIVITY (as set out in Column A of Table 2 in Schedule D of O. Reg. 153/04)	CONTAMINANTS OF POTENTIAL CONCERN	MEDIA POTENTIALLY IMPACTED (Groundwater, Soil, and/or Sediment)
Northeast corner (from off-site)	Metal Treatment, Coating, Plating and Finishing	Inorganics	Soil
	Gasoline and Associated Products Storage in Fixed Tanks	BTEX and PHCs	Soil and Groundwater
	Salvage Yard, including automobile wrecking	Inorganics, PAHs, BTEX and PHCs	Soil and Groundwater
	Various Waste Generators	BTEX, PHCs, VOCs	Soil and Groundwater
	Vehicles and Associated Parts Manufacturing	BTEX, PHCs, VOCs	Groundwater
	Metal Fabrication	Inorganics, PAHs, BTEX and PHCs	Soil
	Operation of Dry Cleaning Equipment (where chemicals are used)	VOCs	Groundwater
Eastern portion (from off-site)	Operation of Dry Cleaning Equipment (where chemicals are used)	VOCs	Groundwater
	Ink Manufacturing, Processing and Bulk Storage	VOCs	Groundwater
	Metal Treatment, Coating, Plating and Finishing	Inorganics	Soil
	Gasoline and Associated Products Storage in Fixed Tanks	BTEX and PHCs	Soil and Groundwater
	Electronic Motors	VOCs	Soil and Groundwater
	Various Waste Generators	Inorganics, BTEX, PHCs, VOCs	Soil and Groundwater
Southeast corner (from off-site)	Dye Manufacturing, Processing and Bulk Storage	VOCs	Groundwater

LOCATION OF APEC ON PHASE ONE PROPERTY	POTENTIALLY CONTAMINATING ACTIVITY (as set out in Column A of Table 2 in Schedule D of O. Reg. 153/04)	CONTAMINANTS OF POTENTIAL CONCERN	MEDIA POTENTIALLY IMPACTED (Groundwater, Soil, and/or Sediment)
Southern portion (from off-site)	Gasoline and Associated Products Storage in Fixed Tanks	BTEX and PHCs	Soil and Groundwater
	Vehicles and Associated Parts Manufacturing	Inorganics, PAHs, BTEX, PHCs and VOCs	Soil and Groundwater
	Various Waste Generators	Inorganics, BTEX, PHCs, VOCs	Soil and Groundwater
	Textile Manufacturing and Processing	VOCs	Groundwater
	Operation of Dry Cleaning Equipment (where chemicals are used)	VOCs	Groundwater
Southwest corner (from off-site)	Textile Manufacturing and Processing	VOCs	Groundwater
	Gasoline and Associated Products Storage in Fixed Tanks	BTEX and PHCs	Soil and Groundwater
	Ink Manufacturing, Processing and Bulk Storage	VOCs	Groundwater
	Vehicles and Associated Parts Manufacturing	Inorganics, PAHs, BTEX, PHCs and VOCs	Soil and Groundwater
Northwest and southwest portions (from off-site)	Gasoline and Associated Products Storage in Fixed Tanks	BTEX and PHCs	Soil and Groundwater

LOCATION OF APEC ON PHASE ONE PROPERTY	POTENTIALLY CONTAMINATING ACTIVITY (as set out in Column A of Table 2 in Schedule D of O. Reg. 153/04)	CONTAMINANTS OF POTENTIAL CONCERN	MEDIA POTENTIALLY IMPACTED (Groundwater, Soil, and/or Sediment)
Northwest corner (from off-site)	Operation of Dry Cleaning Equipment (where chemicals are used)	VOCs	Groundwater
	Metal Fabrication	Inorganics, PAHs, BTEX and PHCs	Soil
	Gasoline and Associated Products Storage in Fixed Tanks	BTEX and PHCs	Soil and Groundwater
	Various Waste Generators	Inorganics, BTEX, PHCs, VOCs	Soil and Groundwater
Northern portion (from off-site)	Gasoline and Associated Products Storage in Fixed Tanks	BTEX and PHCs	Soil and Groundwater
	Various Waste Generators	Inorganics, BTEX, PHCs, VOCs	Soil and Groundwater
	Metal Fabrication	Inorganics, PAHs, BTEX and PHCs	Soil

Inorganics: *metals and other regulated parameters*
PHCs: *petroleum hydrocarbons*
BTEX: *benzene, toluene, ethylbenzene and xylenes*
VOCs: *volatile organic compounds (including BTEX)*

TABLE 2 - MEDIA INVESTIGATED, CONTAMINANTS OF CONCERN AND METHODS

1591-1611 MICHAEL STREET, OTTAWA, ONTARIO

Media	Contaminants of Concern	Investigation Method	Equipment	Sample Collection Method
Soil	Petroleum hydrocarbons Polycyclic aromatic hydrocarbons Volatile organic compounds Benzene, toluene, ethylbenzene, xylenes Metals, metal hydrides Mercury Cyanide Chromium VI Hot water soluble boron Electrical conductivity Sodium absorption ratio (SAR)	Boreholes	Direct Push drill rig	Dedicated PVC dual tube sampling method, continuous sampling
Groundwater	Petroleum hydrocarbons Polycyclic aromatic hydrocarbons Volatile organic compounds Benzene, toluene, ethylbenzene, xylenes Metals, metal hydrides Mercury Cyanide Chromium VI Sodium, chloride Nitrite, nitrate	Monitoring wells	Direct Push drill rig	Low-flow sampling using peristaltic pump, target top 0.5 m of water column

TABLE 3 PROPOSED SAMPLING PLAN AND RATIONALE
1591-1611 MICHAEL STREET, OTTAWA, ONTARIO

Borehole No.	Location	APEC	Depth (m)	Screened Interval (m)	Sampling Technique	Rationale	Soil					Groundwater			
							BTEX, F1-F4	VOCs	Inorg.	pH	PAHs	BTEX, F1-F4	VOCs	PAHs	Inorg.
MW101	Southwest portion of the Site	1, 8, 9, 14, 16	5.2	1.8 - 4.9	Borehole/ Monitoring Well	Fill of unknown quality and quantity. Gasoline and Associated Products Storage in Fixed Tanks. Dye manufacturing, processing, and bulk storage. Textile manufacturing and processing.	1	1	1	2	1	1	1	1	1
MW102	Southeast portion of the Site	1, 8, 9, 14, 16	5.2	1.8 - 4.9	Borehole/ Monitoring Well	Fill of unknown quality and quantity. Gasoline and Associated Products Storage in Fixed Tanks. Dye manufacturing, processing, and bulk storage. Textile manufacturing and processing.	1	1	1	1	1	1	1	1	1
MW103	Northwest portion of the Site	1, 12, 13, 17, 18, 19	4.9	3.3 - 4.9	Borehole/ Monitoring Well	Fill of unknown quality and quantity. Presence of dry cleaning equipment. Metal Fabrication. Gasoline and Associated Products Storage in Fixed Tanks.	1	1	1	2	1	1	1	1	1
MW104	Northeast portion of the Site	1, 2, 3, 4, 22	4.5	1.5 - 4.5	Borehole/ Monitoring Well	Fill of unknown quality and quantity. Metal treatment, coating, plating, and finishing. Gasoline and Associated Products Storage in Fixed Tanks. Operation of Dry Cleaning Equipment. Salvage Yard.	1	1	1	1	1	1	1	1	1
BH105	Central portion of the Site	1, 11	5.9	-	Borehole	Fill of unknown quality and quantity. Metal Fabrication. Metal Treatment, coating, plating and finishing. Gasoline and Associated Products Storage in Fixed Tanks.	1	1	1	1	1				
Total Before QA/QC Samples							**5**	**5**	**5**	**7**	**5**	**4**	**4**		**4**
QA/QC field duplicate						One duplicate per 10 samples			1			1	1	1	1
QA/QC field blank (methanol blank for soil, deionized water blank for water)						One per sampling round (volatiles only)	1	1				1	1		
QA/QC trip blank						One per sampling round (volatiles in groundwater only)						1	1		
QA/QC trip spike						One per sampling round (volatiles in groundwater only)									
Total Laboratory Analyses							**6**	**6**	**6**	**7**	**5**	**7**	**7**		**5**

Notes: APEC = Area of Potential Concern, refer to phase one ESA
VOCs = volatile organic compounds (O. Reg. 153/04)
BTEX/F1-F4 = benzene, toluene, ethylbenzene, xylenes and petroleum hydrocarbons in the F1 to F4 fractions
Inorg. = metals and general inorganic parameters (O. Reg. 153/04)
PAHs = polycyclic aromatic hydrocarbons (O. Reg. 153/04)
PCBs = polychlorinated biphenyls

TABLE 4 - SAMPLE CONTAINERS AND PRESERVATION

1591-1611 MICHAEL STREET, OTTAWA, ONTARIO

Media	Analytical Parameter	Field Filtered	Sample Container	Preservation	Holding Time (preserved)
Soil	Metals, metal hydrides, hot water soluble boron, chromium VI, SAR, EC, pH	Not applicable	250 mL glass jar	5 ± 3 °C	180 days
	Cyanide	Not applicable	250 mL glass jar, teflon lined lid	5 ± 3 °C	14 days
	BTEX, PHC F1	Not applicable	40 mL glass vial and 60 mL glass jar, no headspace	10 mL methanol, 5 ± 3 °C	14 days
	BTEX, PHC F1	Not applicable	Hermetic sampler (Encore™)	5 ± 3 oC	Extract within 48 hrs
	PHCs F2-F4	Not applicable	120 mL glass jar, teflon lined lid	5 ± 3 °C	14 days
	VOCs	Not applicable	40 mL glass vial and 60 mL glass jar, no headspace	10 mL methanol, 5 ± 3 °C	14 days
	VOCs	Not applicable	Hermetic sampler (Encore™)	5 ± 3 °C	Extract within 48 hrs
	PAHs	Not applicable	120 mL glass jar, teflon lined lid	5 ± 3 °C	60 days
Groundwater	Metals, metal hydrides, sodium	Yes	250 mL HDPE bottle	HNO_3 to pH < 2 5 ± 3 oC	60 days
	Mercury	Yes	125 mL clear glass bottle	HCl to pH < 2 5 ± 3 oC	28 days
	Chromium VI	Yes	250 mL HDPE bottle	$(NH_4)_2SO_4/HN_4OH$ 5 ± 3 oC	28 days
	Cyanide	No	250 mL HDPE bottle	NaOH to pH > 12 5 ± 3 °C	14 days
	BTEX, PHC F1	No	3 x 40 mL clear glass septum vial, no headspace	$NaHSO_4$ to pH < 2 5 ± 3 $_o$C	14 days
	PHCs F2-F4	No	2 x 500 mL amber glass bottle	$NaHSO_4$ to pH < 2 5 ± 3 $_o$C	40 days
	VOCs	No	3 x 40 mL clear glass septum vial, no headspace	$NaHSO_4$ to pH < 2 5 ± 3 $_o$C	14 days
	PAHs	No	1 L amber glass bottle	5 ± 3 °C	14 days

SAR = sodium absorption ratio
EC = electrical conductivity
BTEX = benzene, toluene, ethylbenzene, xylenes
PHC F1 - F4 = petroleum hydrocarbons F1 to F4 fractions
VOCs = volatile organic compounds
PAHs = polycyclic aromatic hydrocarbons (O. Reg. 153/04)

APPENDIX IV
STANDARD OPERATING PROCEDURES

TERRAPEX STANDARD OPERATING PROCEDURE
FIELD VAPOUR METER CALIBRATION

GENERAL NOTES

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

This SOP describes calibration procedures and requirements for portable meters used to measure combustible vapours, volatile organic compounds, and/or other gases within an atmosphere. The procedures described herein are applicable to calibration both in the office and in the field (using a portable calibration kit).

GENERAL CALIBRATION PROCEDURES

1. Turn on the instrument and allow 5-10 minutes for it to warm up. When calibrating in the field, complete instrument warm up in a sheltered environment, or allow an additional 5-10 minutes for warm up.
2. Attach hoses, water traps, probe ends and other pieces that will be utilized during actual measurement, and set instrument to the intended measurement mode (e.g., on a Gastech Model 1238 ME, turn “methane elimination” on or off, as appropriate).
3. Check instrument flow rate to confirm suitable vapour intake.
4. In a baseline environment (e.g., ambient air), “zero” the instrument. Record any adjustments made on the instrument calibration log, including initial and final (calibrated) readings.
5. Fill an empty Tedlar bag with calibration gas, and connect it to the instrument. If the instrument being calibrated has multiple sensors for different ranges of target vapours (e.g., GasTech model 1238ME), calibrate the coarse range (higher concentrations) first.

6. Allow the instrument to equilibrate with the environment in the Tedlar bag and adjust the instrument span settings as appropriate. Record any adjustments made on the instrument calibration log, including initial and final (calibrated) readings.
7. Remove the Tedlar bag and confirm that the instrument returns to a baseline reading (e.g., zero reading on a combustible vapour meter).
8. Repeat steps 4 through 7, as necessary, for additional sensors and/or target vapours.

CALIBRATION REQUIREMENTS

Portable meters are to be calibrated prior to the start of a site visit, and prior to the start of each successive site visit if the project requires more than a single day onsite.

More frequent calibration may be required on projects where elevated vapour readings are frequently encountered, as such scenarios can results in calibration "drift" (erroneous readings on the instrument). Calibration drift is often characterized by one or more of the following conditions:

- Failure of the instrument to return to a baseline reading in ambient conditions;
- No response or apparently "sluggish" response of the instrument upon exposure to an environment containing target vapours; or,
- Inconsistent instrument readings despite exposure to apparently identical target environments.

Where calibration drift is suspected, the instrument should be recalibrated as soon as practicable. Readings potentially affected by calibration drift should be appropriately annotated on field notes/log sheets.

TERRAPEX STANDARD OPERATING PROCEDURE
BOREHOLE ADVANCEMENT USING DIRECT PUSH METHODOLOGY

GENERAL NOTES

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

This SOP is applicable to intrusive environmental investigations involving the advancement of borings using direct push methodology (e.g., Geoprobe) to collect soil samples using a “dual tube” sampling system comprising an inner disposable sampling liner or “sleeve” and a rigid outer casing tube.

The SOP is applicable whether such activity constitutes the whole of a work program, or part of a larger work program.

EQUIPMENT

The following list details the standard equipment necessary for borehole advancement. Specific sites may require additional or specialized equipment.

- ☐ Portable combustible vapour meter (e.g., Gastech™ 1238ME), calibrated and charged
- ☐ Combustible vapour meter field calibration kit, if applicable
- ☐ tape measure with weighted end
- ☐ sampling equipment (gloves, bags, permanent marker)
- ☐ bucket for washing non-dedicated down hole equipment
- ☐ detergent solution in spray bottle
- ☐ distilled/clean water in spray bottle

- ☐ laboratory-supplied sampling jars appropriate for contaminants of concern
- ☐ cooler with ice
- ☐ laboratory chain of custody forms
- ☐ field notebook
- ☐ field borehole logs (F025)
- ☐ site plan
- ☐ scope of work/field work instructions
- ☐ site-specific health and safety plan, including Job Safety Analysis and other POST™ documentation
- ☐ Personal Protective Equipment (hard hat, vest, safety glasses, respirator, steel toe boots, gloves, hearing protection)
- ☐ Camera
- ☐ Measuring wheel or similar device

PREPARATION

- review scope, proposed borehole locations, and utility locates with project manager
- ensure utility locates are complete, contractor is confirmed, and site access is confirmed
- ensure equipment booked is suitable for site (e.g., tracked drill rig vs. truck-mounted rig)
- calibrate and sign-out field equipment

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Above ground and underground utilities and other services within the assessment area are to be located and identified in the field prior to drilling. Where appropriate, a private locating contractor should also be retained to identify secondary services such as yard lights, internal computer/communication lines, etc., and clear proposed borehole locations. All exclusions or conditions attached to utility service locates (e.g., notification requirements, “hand dig only” areas) are to be strictly adhered to.

NOMENCLATURE

Boreholes should be uniquely numbered on a sequential basis, and prefaced by “BH".

The initial round of borehole advancement should begin with borehole “BH101”, with subsequent boreholes advanced during this round identified as “BH102”, “BH103”, etc. Additional rounds of borehole advancement would begin by advancing the borehole count to the next 100 (e.g., the first borehole from the second and third investigation program would be “BH201” and “BH301”, respectively). Borehole numbering is to be maintained irrespective of the manner in which the borehole is advanced (e.g., if the second round of borehole advancement is completed using a method other than direct-push sampling, it would still commence with borehole “BH201”).

If a monitoring well is installed in a borehole (refer to *Monitoring Well Installation*, SOP E04.00), the prefix “MW” is to be substituted for “BH”, however, the borehole numbering sequence is to be maintained (e.g., if the second borehole of the first round of investigation is instrumented as a monitoring well, it would be identified as “MW102”, not “MW101”).

Soil samples collected during borehole advancement should be numbered sequentially using the test pit number followed by a dash as a prefix, (e.g., sample “BH101-4", indicating the fourth sample from borehole BH101). Subdivided samples should be labelled with alphabetical suffixes from the top of the sample (e.g., “BH101-4A” and “BH101-4B”, with the later sample located at the greater depth).

All alphabetical prefixes and suffixes should be written in capital letters.

FIELD PROCEDURES

Sampling

Direct push samples are normally collected on an effectively continuous basis, meaning that samples are collected from ground surface over the full length of the sampling liner, with the next sample collected beginning immediately below the preceding liner. It should be noted that direct push samplers typically have very poor (in some cases virtually nil) recovery within large granular soils such as granular base beneath asphalt and similar surface treatments.

Sampling sleeves are consumables and should not be re-used. The rigid outer tube casing lengths are to be cleaned prior to use using soapy water and a fresh water rinse.

Recovered soil samples should be handled and screened in the field as specified in *Soil Sample Handling* (SOP E09.00). Where appropriate, samples should be divided into two or more sub-samples to facilitate logging of observed changes in geological conditions (stratigraphy, etc.) or evidence of possible impact (staining, odours, etc.). Subdivided samples should be identified as described in the Nomenclature section above; i.e., assigning the suffix “A” to the sub-sample at the top of the spoon (the sample first collected), then “B”, “C”, etc.

Sampling liners are available in lengths of 1 m, 2 feet (approximately 0.6 m), 3 feet (approximately 0.9 m), 4 feet (approximately 1.2 m), and 5 feet (approximately 1.5 m), although 4 feet and 5 feet lengths are most common. Where sampling liners greater than 1 m are employed, recovered samples are to be subdivided (e.g., into "A" and "B" samples) to ensure that each unique sample comprises an interval no more than 1 m in length.

Boreholes are to be advanced to at least the maximum anticipated depth of potential impact (e.g., at least the water table for investigations of possible petroleum hydrocarbon impacts). Whenever possible, the final depth of the borehole should approximately delineate the vertical extent of contamination in the vicinity of the borehole (e.g., one "clean" sample should be obtained from the base of the borehole).

Where a well is to be installed in the completed boring, it may be preferable to enlarge the boring (to increase the diameter of filter pack placement around the well screen and/or to facilitate the installation of a larger diameter well) by over-drilling the hole using continuous flight augers. The over-drilling practice, and the diameter of the enlarged hole, should be noted on the borehole log.

Note Taking

Use the Terrapex field borehole form (Form F025). Always fill in every field of the top portion of the form completely - logs can easily get separated from each other. Where applicable, note the outer diameter of augers.

Avoid using non-established short forms on all descriptions. Do not scribble anything out or erase, just place a line through the word.

The type and thickness of surfacing materials (asphalt, concrete and/or crushed stone) should also be recorded.

Record the sampling interval graphically as the interval over which the dual tube sampler was driven, not the length of the sampling tube (i.e., record the actual sampling interval, accounting for refusal, not the planned sampling interval).

Label each sample collected as 1, 2, 3, etc. as specified in the Nomenclature section. Do not start a new set of numbers if you change collection methods. Do not use depth intervals for the sample name (e.g. 10'-12').

Record percent recovery based on how far you drove the sampler (actual sampling interval, not the intended sampling interval), rounded to the nearest 5%.

$$\% \text{ recovery} = (\text{Quantity of soil recovered})/(\text{sampling interval}) \times 100\%$$

For example, if the sampler was driven 1 m, and 78 cm of soil was recovered,

% recovery = (78 cm / 100 cm) x 100% = 78%, rounded to 80%.

When screening soil headspace vapours, record vapour readings AND units. Note the instrument number used to collect vapour readings. If you are using an instrument other than the default GasTech 1238 combustible meter or equivalent, note the type of instrument.

If there is no deflection on the combustible gas meter (or other field headspace screening instrument) record the reading as less than the effective detection limit (<10 ppm for combustible gas meters), not 0 ppm.

For odours, use NONE, SLIGHT, MODERATE and STRONG. The default is assumed to be hydrocarbon odour; other types of odours require a description entered onto the log. Do not leave this blank unless you did not check for odours.

Refer to the *Soil Classification* (SOP E10.00) for standard terminology for recording sample descriptions. In addition:

- always record the relative grain size of sand particles (fine/medium/coarse), not just "sand";
- note any structural observations (bedding, etc.)
- record presence of rootlets/roots, organic matter, debris, and anything else that might help determine whether the soil is fill or native;
- note fractures and location, width, weathered, staining, open, closed, tight.
- for sand seams, record the depth and thickness as well as a description (coarse, wet, etc.).

Clearly and fully document the stratigraphy encountered during drilling and soil sampling, including the depths of stratigraphic contacts observed **within** recovered samplers (e.g., located within sampling intervals). If there are distinct layers within a sample, the sample should be divided into sub-samples and identified with suffixes A, B, C, etc. as described above.

The depth and reasons for abandoning further borehole advancement (e.g., refusal at bedrock, depth of desired investigation obtained) is to be recorded on the log.

Backfilling

This section applies to boreholes in which monitoring wells are not installed. Refer to Monitoring *Well Installation* (SOP E04.00) for instrumenting boreholes as monitoring wells.

To ensure that the boring does not represent a potential conduit for groundwater flow or contaminant migration, boreholes are to be backfilled using bentonite chips and subsequently hydrated by the addition of a sufficient volume of potable-grade water. Where boreholes have been advanced through a hole cut through asphalt, concrete or similar hard surfacing, a concrete patch is to be applied to mitigate further cracking/degradation of surface treatments.

Prior to Leaving Site

- Check the scope of work to ensure you have completed project objectives
- Measure the final location of all boreholes from permanent site features and show on site plan (refer to *Measuring and Surveying using Rod and Level*, SOP E11.00)
- Ensure boreholes are properly backfilled and the site is sufficiently restored
- Clean up any garbage or debris and leave the site the way you found it (or better)
- Call the project manager to ensure there is nothing else required, to summarize findings and results**,** and select final lab samples
- Pack and submit samples to lab with chain of custody

UPON RETURN TO OFFICE

- Clean and sign in all equipment used
- Log in soil samples in soil bins
- Complete equipment and supply form
- Complete field package (place logs and photocopies of relevant field log book pages in project file folder)
- Submit site drawing depicting borehole locations to drafting.

TERRAPEX STANDARD OPERATING PROCEDURE
SOIL CLASSIFICATION

GENERAL NOTE

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

These procedures are applicable to intrusive investigations involving the completion of localized excavations for the purposes of collecting soil samples and/or documenting subsurface conditions. The procedures are applicable whether such activity constitutes the whole of a work program, or part of a larger work program.

PRESENTATION OF DESCRIPTION

Soils descriptions will be presented in the order specified below:

- Consistency Descriptive (only where appropriate field tests are conducted)
- Moisture Descriptive
- Colour
- Plasticity (if applicable)
- Texture Descriptive (applicable for sands and gravels only)
- Major Constituent (principal grain size)
- Minor constituents (major to minor, largest to smallest if same %).
  - include organics after minor constituents
- Other Modifiers, e.g. laminated, uniform, fissured, etc. (If applicable)
- Odours, where applicable, i.e., slight, moderate, strong with odour type (e.g., earthy, hydrocarbon, etc.)

Health and Safety

Fresh nitrile gloves must be used for when handling all soil samples.

CLASSIFICATION BY PARTICLE DIAMETER

O. Reg 153/04 Soil Texture	Description	Particle Diameter Range (mm)	Notes	
Coarse	BOULDERS	> 200	Measurable *(in TPs only)*	
	COBBLES	60 to 200	Measurable *(in TPs and some auger BHs)*	
	GRAVEL *(particles that are too large to cling together through capillary forces when damp)*			
	Coarse	20 to 60	Measurable	
	Medium	6.0 to 20	Measurable	
	Fine	2.0 to 6.0	Measurable	
	SAND *(particles that when damp generally cling together through capillary forces)*			
	Coarse	0.6 to 2.0	Measurable *(visible to eye)*	
	Medium	0.2 to 0.6	Measurable *(visible to eye)*	
	Fine	0.075 to 0.20	Measurable *(mostly visible)* with definite gritty texture Dry lumps have slight cohesion, but easily powdered between fingers.	
Medium & Fine	SILT	0.002 to 0.075	Not discernible to eye	Non-plastic when wetted, dilatant Rough, but not gritty texture Dries quickly & dusted off fingers leaving only a stain Dry lumps have appreciable cohesion but can be powdered between the fingers
	CLAY	< 0.002		Plastic when wetted, not dilatant Smooth greasy touch Sticks to fingers & dries slowly Dry lumps can be broken but not powdered in the fingers.

O. Reg. 153/04 Soil Texture Classifications: O. Reg. 153/04 provides for a general (overall) classification of soil texture for the purposes of selecting Site Condition Standards. These classifications are separate from the soil texture descriptions applicable to soil descriptions (stratigraphy) provided in the table above.

- ***O. Reg. 153/04 Coarse-textured soils:*** *contains more than 50 per cent by mass of particles that are 75 micrometres or larger in mean diameter.*
- ***O. Reg. 153/04 Medium and Fine-Textured Soils:*** *soil that contains 50 per cent or more by mass of particles that are smaller than 75 micrometres in mean diameter.*

Organic soils: significant organic matter content, dark in colour, and with an organic odour.

DESCRIPTION OF CONSTITUENT PARTS OF A SOIL

Coarse Soils (Sand, Gravel)

Coarse soils will be principally described on the basis of the largest particle size classification by percentage of particles (e.g. sand, gravel), with the dominant texture descriptive, where applicable (e.g. coarse sand). Where two or more classifications are present in approximately equal amounts, the sample will be principally described using the constituents presented from largest to smallest and joined by "and" (e.g. "sand and silt"). Where two or more texture descriptives are present in approximately equal amounts, the sample will be described using the descriptives presented from largest to smallest and joined by "and" (e.g. "coarse and medium sand").

Minor constituents are described using the terms defined below.

Term	Example	Proportion (by weight)
Noun (typically CAPITALIZED)	GRAVEL, SAND	>35% and main fraction
"and" (typically CAPITALIZED)	and GRAVEL, and SILT, etc.	>35%
Adjective (typically CAPITALIZED)	GRAVELLY, SANDY, SILTY	20-35%
"some"	some gravel, some silt	10-20%
"trace"	trace gravel, trace silt	1-10%

Medium and Fine Soils (Silt and Clay)

In the field, *all medium and fine soils shall be deemed to be clay* unless field/laboratory tests confirm the soil exhibits none to low plasticity and rapid dilatancy.

Field Test 1: Feel and Smear
Handle a pinch of soil *lightly* between the thumb and fingers to obtain an impression of grittiness or softness of the constituent particles. Thereafter, smear a pinch of soil with *considerable pressure* between the thumb and forefinger to determine the degree of roughness and grittiness, or softness and smoothness of the soil.

- *Coarse to medium-grained sands* typically exhibit a very harsh and gritty feel and smear
- *Coarse to fine-grained sands* have a less harsh feel, but exhibit a very gritty smear
- *Medium to fine-grained sands* exhibit a less gritty feel and smear which becomes softer and less gritty with an increase in the fine sand fraction
- *Fine-grained sands* exhibit a relatively soft feel and a much less gritty smear than the coarser sand components
- *Silt* components less than 10% of the total weight can be identified by a slight discolouration of the fingers after a smear or a moist sample. Increasing silt increases the discolouration and softens the smear.

Field Test 2: Visual Characteristics

Sand and gravel particles can be readily identified visually but silt particles are generally indistinguishable to the eye. With an increasing silt component, individual sand grains become obscured and when silt exceeds about 12%, it masks almost entirely the sand component from visual separation. Note that grey fine-grained sand visually appears siltier than the actual silt content.

Field Test 3: Organic Soils

Soils with high organic content can be identified by smell and colour. If the soil is already wet, it will possess a distinctive odour of decomposed organic matter. If the soil is dry, add water and shake together and check the odour. An organic rich soil is usually dark in colour (black-brown).

Field Test 4: Dilatancy – "none", "slow", or "rapid"

Pat of wet soil is shaken in the palm of the hand and alternately squeezed and released. Predominantly silty materials will show a dull, dry surface when squeezed and a glassy wet surface when released/shaken (dilatent). This characteristic becomes less pronounced with increasing clay content, as clays are not dilatant.

Field Test 5: Plasticity from thread test – "none", "low", "medium", or "high"

Attempt to roll a 3 mm thread of soil on a flat surface with the palm of your hand, adding as much water as necessary. Fold the thread and roll until it crumbles. (Note: silts can be plastic as well as clays so this is not a definitive test of particle size.)

Descriptive Term	Liquid Limit, w_L
Non-plastic	Thread cannot be rolled
Weakly plastic	Thread can barely be rolled, weakly cohesive
Plastic	Can be easily rolled, cohesive

Note: more accurate plasticity determinations can be conducted in the laboratory.

COLOUR

Generally, soil is described using BROWN, GREY, OLIVE.

Use qualifiers such as LIGHT, DARK, or combination terms like REDDISH-BROWN, BROWN/BLACK

Where more specific colour references are required, scientific colour descriptors from the Munsell Colour Chart should be used.

MOISTURE DESCRIPTIVE (GRANULAR SOILS ONLY)

Descriptive Term	Observation
Dry	Absence of moisture; dusty *(not applicable to Ontario soils)*
Damp	No sign of water; broadly holds shape when squeezed; little/no wetness on hand after squeezing
Moist	Signs of water; holds shape when squeezed; wetness observed after squeezing, but no free water
Wet	Signs of water; wet to touch; free water when squeezed
Saturated	Soil will flow under gravity

OTHER MODIFIERS

Sorting & Grading

Sorting is a geological term that describes the relative range of particles sizes and is analogous to the geotechnical concept of “grading”, except that opposite descriptors are used (e.g., a poorly sorted soil, geologically, is considered a well graded soil, geotechnically).

The degree of *sorting* can indicate the environment in which the soil was deposited (e.g., river, debris flow, glacier), or whether the soil has been subject to reworking after original deposition. In geotechnical engineering and hydrogeology, the grading of a soil is an indicator of other engineering properties such as compressibility, shear strength and hydraulic conductivity.

A poorly graded soil will have better drainage than a well graded soil because there are more void spaces in a poorly graded soil.

Geological Term	Engineering Term	Observation
Poorly sorted	Well graded	a wide range of particle sizes is present
Well sorted	Poorly graded	a narrow range of particle sizes is present

Geological descriptors are to be used for environmental descriptions of the relative range of particle sizes.

Particle Shape

The shape and angularity of coarser-grained constituents (gravel sized and above) of a soil provide indicators regarding the depositional environment of the soil (and therefore assist with determining different soil types types), or the extent of weathering within upper layers of bedrock.

Geological Term		Observation
Angularity	Angular	Many corners/pointed parts, not smooth
	Sub-angular	Between angular and rounded
	Rounded	Generally rounded and smooth, no corners or pointed parts
	Well-rounded	Very round and smooth
Form	Cubic	Blocky
	Flat or Tabular	Platy
	Elongated	Needle-like

AUXILLIARY DESCRIPTIONS AND OBSERVATIONS

Auxiliary descriptions and observations can include hydrocarbon and chemical staining, odours, composites, waste and debris. Make note of sheen on split spoon drilling rods or water entering test pits.

Composite Soils (FILL)

Any soil layer that has been placed or disturbed by human interaction is referred to as FILL. Fill soil may also include pieces of manufactured products (e.g., asphalt, concrete, brick, ash, slag, timber, plastic, glass, etc.), which should be separately identified and quantified in the soil description.

The following distinctions relating to fill soils shall be observed:

Term	Legend Symbol	Application
FILL	Crosshatch	Any soil layer that includes relatively abundant pieces of manufactured/ deleterious products.
FILL – REWORKED NATIVE	Crosshatch & dominant soil constituent	Native soil in origin, known as being disturbed or placed (e.g. clay fill, Gran B, etc.)
PROBABLE FILL		Native soil in origin, but strongly suspected as being disturbed or placed.
(possible fill)	Applicable Native Soil	Native soil in origin (and should be described as such) but contains an anomaly which may infer soil to be fill

The terms described above should be included in capitals (for fill or suspected fill) or lower case and in brackets for possible fill.

The soil fraction is not capitalized for FILL, FILL-REWORKED NATIVE or PROBABLE FILL.

Note: *unless describing a backfilled bored tunnel,* ***native soil cannot exist above a layer of fill.***

Pavement Structure

Accurately recording and documenting the structure of pavements or hard surfacing is critical to all areas of study.

Most hard surfacing is composed of:

- Surface material (asphaltic concrete or Portland cement concrete)
    - Measure thickness in-situ
    - Identify presence of any reinforcement (concrete)
- Granular Base (typically coarser Granular A)
    - Measure thickness in-situ
- Granular Sub-base (typically finer Granular BI or BII)
    - Measure thickness in-situ

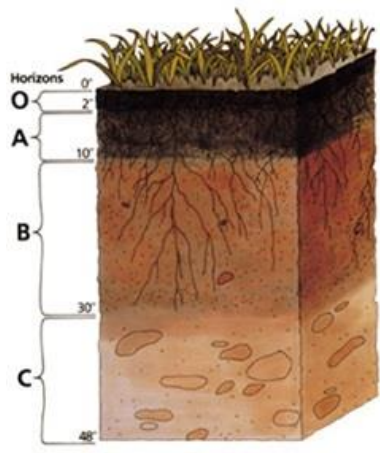
For geotechnical studies, attempts should be made to positively distinguish all layers of a pavement structure, and accurately record component thicknesses.

- Measure surface material thickness following auger/break-through/diamond coring
- After inspection of initial [SPT] sample, auger to next [SPT] sample depth, but prior to each successive sampling, scrape side of borehole to expose and measure base layers (as best as possible) until subgrade is identified.

For non-geotechnical studies, it is sufficient to record a measured surface material thickness and an inferred (through sampling) total granular base/sub-base thickness.

Topsoil

Topsoil is defined as *"horizons in a soil profile, commonly known as the "O" and the "A" horizons, containing organic material and includes deposits of partially decomposed organic matter such as peat. [O. Reg. 406/19, Municipal Act, 2001, c. 25, s. 142 (1)]"* (see diagram below).



O (humus or organic): Mostly organic matter such as decomposing leaves. The O horizon is thin in some soils, thick in others, and not present at all in others.

A (topsoil): Mostly minerals from parent material with organic matter incorporated. A good material for plants and other organisms to live.

B (subsoil): Rich in minerals that leached (moved down) from the A or E horizons and accumulated here.

C (parent material): The deposit at Earth's surface from which the soil developed.

Care should be taken to avoid inclusion of subsoil layers (typically lighter in colour, less organic content). Topsoil is still a soil and should be subject to detailed inspection and description. Sampling of the topsoil for laboratory analyses should be exclusive to the topsoil layer. This is particularly relevant as there are significant excess soil implications relevant to topsoil.

Indicators of Contaminant Impacts

Observations regarding visual and/or olfactory evidence of possible chemical impact are to be recorded in the sampling log. Where staining is present, describe both the apparent colour and the distribution of the staining (e.g., throughout the soil matrix, or within fractures). Odours are described using NONE, SLIGHT, MODERATE or STRONG, along with a description of the type of odour (e.g., hydrocarbon, organic, etc.).

DESCRIPTIVE SOIL TERMINOLOGY

These terms may be used, where applicable, to further describe soils.

TILL	Typically dense, unstratified, unsorted glacial deposit of clay, silt, sand, heterogeneous angular and subangular gravel, cobbles and boulders in any combination.
FILL	Any soil layer identified or suspected as having been disturbed or placed by humans.
TOPSOIL	Weathered surface materials which are capable of supporting plant life.
HOMOGENEOUS	soil of uniform composition and colour.
HETEROGENEOUS	soil of non-uniform, variable composition or structure.
INCLUSION	An anomalous substance or fragment incorporated in a soil or rock mass.
DESICCATED	Dried by moisture evaporation - desiccated clays are sometimes described as fissured or having nugget structure.
FISSURED	Containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.
SENSITIVE	Exhibiting loss of strength on remolding.
FRIABLE, BLOCKY, PLATY	A soil consistency term pertaining to the ease of crumbling of otherwise cohesive soils. Easily crumbled between the fingers, soil breaks into small (friable), larger (blocky) or thin, plate-like (platy) fragments with little effort.
CALCAREOUS	Containing appreciable quantities of calcium-carbonate.
LAYER	> 75 mm in thickness.
SEAM	2 mm to 75 mm in thickness.
STRATIFIED	Containing layers of different soil types (more than 3 mm thick).
PARTING	< 2 mm in thickness.
LAMINATED	Composed of thin layers (less than 3 mm thick) of varying color and texture.
VARVED	Composed of regular alternating layers of silt and clay, often manifesting as alternating light and dark colouring, each usually between 25 and 75 mm in thickness, typically resulting from alternating seasonal deposition in a lacustrine environment.

PREPARATION OF OFFICE LOGS

Office logs shall be prepared following a detailed review of the soil samples and field descriptions by the Project Manager.

Each minor variance in soil type should not be represented as separate stratigraphic layer(s); rather such is reflected as depth-related remarks, maintaining a relatively simple stratigraphic succession.

FILL is FILL! Except for either concrete/asphalt surface materials, unplaced topsoil (surficial or buried), or possible fill, use the FILL symbol (cross-hatch) for all fill soil layers. Distinction between different fill layers (e.g. granular A, granular B, heterogeneous fill, foundry sand, demolition fill, etc.) can be accomplished by combining symbols over the cross-hatch as a base.

Where asphalt/concrete/topsoil is present at grade, its thickness should be measured and reported in brackets. With regards to underlying bedding layers, the type of each layer must be identified and its measured thickness reported in brackets. Each layer must be presented in the log as a separate soil layer, and not combined. Please note the following:

A sample collected and submitted for laboratory analyses may not encompass the entirety of a primary soil sample (Dual Tube/Split-Spoon, etc.). Ensure the log accurately reflects the top and bottom depths of a sample submitted for laboratory analyses. This is particularly important with regards to failed SPT tests, where there sample limits should equate to the total penetration of the SPT.

EXAMPLES

Native Soils:

- Compact, moist, brown, SILTY SAND, trace gravel
- Compact, wet, grey, weakly plastic, SANDY SILT, trace gravel, trace clay, slightly dilatant
- Very stiff, brown, SILTY CLAY, trace sand, occasionally parted by thin sand seams, occasional oxidized fissure
- Dense, damp, brown fine to coarse SAND, trace gravel, trace rootlets & topsoil stringers (possible fill).

Fill Soils:

- Compact, damp, brown, sand and angular gravel FILL – REWORKED NATIVE
- Firm, brown, dark brown, silty clay, some sand, trace asphalt, brick fragments, occasional topsoil pocket FILL
- Loose, wet, grey black (stained), medium and coarse sand, strong hydrocarbon odour, oily free product FILL

Pavement structure:

- 100 mm APHALTIC CONCRETE
- 400 mm dense, damp, pale grey crushed gravel and sand (FILL)
- 400 mm dense, damp, brown, sand and angular gravel (FILL)
- 500 mm compact, damp, brown sand, some gravel (FILL)

TERRAPEX STANDARD OPERATING PROCEDURE
MONITORING WELL INSTALLATION

GENERAL NOTES

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

This SOP is applicable to the installation of monitoring wells following the vertical advancement of a borehole in overburden or bedrock. Borehole drilling procedures are not covered by this SOP.

EQUIPMENT

The following list details the standard equipment necessary for monitoring well installation over and beyond that required for borehole advancement. Specific sites may require additional or specialized equipment.

- □ Well screen and riser pipe
- □ “well gravel” (silica sand)
- □ Bentonite chips
- □ Cement mix
- □ End caps
- □ Expandable gripper caps (“J-plugs”)
- □ Protective casings
- □ locks
- □ clean, disposable vinyl or nitrile gloves

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

A well record (per R.R.O. 1990, Reg. 903) must be completed by the drilling contractor for all monitoring wells greater than 3 m in depth, or for any well (regardless of depth) installed with a contaminated or potentially contaminated area. All necessary information to complete the well record (e.g., well owner, their address and telephone number, etc.) is to be on hand during installation or provided to the well contractor prior to the start of the work program.

Wells shall not be installed in a manner that would facilitate the migration of liquids between differing water-bearing units, or between overburden and bedrock. The subsurface stratigraphy at the borehole location should be thoroughly assessed prior to well installation.

Monitoring wells to be used for the collection of groundwater samples for laboratory analyses shall be installed such that the saturated portion of the well screen has a length less than or equal to 3.1 m.

NOMENCLATURE

Monitoring wells will be assigned numbers corresponding to the borehole numbering (refer to the appropriate borehole advancement SOP), identified by a “MW” prefix in place of “BH” (e.g., borehole “BH101” becomes “MW101”).

Multi-level well installations, whether installed within a common boring or as a series of separate borings in immediate proximity of each other, will be identified through the use of alphabetical suffixes from the deepest to the shallowest installation (e.g., “MW101A” is deeper than “MW101B”); this convention is based on the principle that numbering begins with the initial installation, and proceeds sequentially thereafter.

All alphabetical prefixes and suffixes should be written in capital letters.

The assigned well name is to be recorded on the well casing, on the outside of the well standpipe, and/or the top (outside) of the well standpipe cap/plug.

FIELD PROCEDURES

Well Construction

Monitoring wells must be constructed of new, clean materials. Every individual (including drilling contractor staff) involved in the installation of a monitoring well shall be provided, and must wear,

a new, clean pair of disposable gloves. Gloves should be changed between installations, and whenever contact with a potential contaminant occurs.

The base of the completed boring should be measured using a weighted tape and recorded prior to well installation. It is not acceptable to rely on estimates of the completed boring depth based on the number of auger sections used to advance the borehole, etc.

The well should be constructed such that the screened portion of the well intersects the depth range of interest (e.g., the top of the unconfined water table for a typical investigation of potential petroleum hydrocarbon impacts).

Well screens shall intersect a single water-bearing unit only. If the depth range of interest comprises multiple water-bearing units, multi-level well installations should be used. Well screens shall not traverse the bedrock-overburden interface. If the depth range of interest includes both bedrock and overburden, multi-level well installations should be used.

To prevent pooling in the bottom cap of the monitoring well that may introduce bias to monitoring results (e.g., when the groundwater table drops below the base of the well), the bottom cap of monitoring wells should include a suitable slot or drainage hole. Where necessary, an undraining bottom cap may be equipped with a slot by making a short cut through the bottom of the cap using a hacksaw or similar tool.

The length of the screened interval, as well as the depth of installation (base of the screened interval) are to be measured and recorded, along with the well slot size, standpipe thickness (e.g., schedule 40, schedule 80, etc.), and standpipe diameter. The length of the screened interval should not exceed 3.1 m (10 ft), and the screened interval of the well should extend no higher than a depth of 1.2 m (4 ft) below ground surface to ensure adequate sealing of the boring annulus.

“Well gravel” (filter pack) should be placed in the annulus of the borehole either by manually filling the annual space, or by using a tremie pipe. The grading classification (e.g., No. 1, No.2, etc.) of well gravel used should be recorded. The top of the filter pack should ideally be located between 15 and 30 cm (6 and 12 in) above the top of the screened interval of the well. The depth of the top of the filter pack should be measured using a weighted tape and recorded. It is not acceptable to rely on estimates of the depth of the top of the filter pack.

The remaining annulus of the well should be backfilled using bentonite chips or an equivalent sealant material, to a depth of approximately 45 cm (18 in) below ground surface. Where applicable, sealant material should be hydrated by the addition of a sufficient volume of potable-grade water during installation (e.g., in lifts) and at the conclusion of sealant placement. The depth of the top of the sealant should be measured and recorded.

A flush-mount or monument ("stick-up") protective casing shall be set in concrete overtop the well. If a monument casing is installed, the height of the above grade portion of the well standpipe (not the casing) is to be measured and recorded.

Surveying, Establishment of Measuring Points

A consistent measuring point for future groundwater monitoring events is to be indicated on each well by placing a shallow notch on the outside of the well standpipe at its highest point. The elevation of the "ground surface" and "top of pipe" are to be surveyed relative to an appropriate temporary or geodetic benchmark. All "top of pipe" elevations are to be surveyed by placing the rod on the shallow notch (measuring point) on the outside of the well standpipe. Refer to SOP E11.00 (*Measuring and Surveying using Rod and Level*) for additional surveying details.

MULTI-LEVEL INSTALLATIONS

The preferred method for completing multi-levelled well installations is to complete a separate boring for each screened interval in the immediate vicinity of each other ("nested installation"). Nested installations should not be separated from the adjoining installation by distances greater than 2 m.

Within nested installations, it is typically only necessary to collect soil samples and log stratigraphy within the deepest boring. However, each well installation is to be logged and recorded on a separate field form/report log with each log illustrating a single standpipe in a unique boring.

If multiple well standpipes are placed within the same boring, an appropriate sealant with a thickness of at least 2 m must be used to mitigate migration of liquids between the screened intervals. Such installations are to be logged and recorded on a single field form/report log that illustrates the multiple standpipes within a common boring.

FIELD DOCUMENTATION

Monitoring well installations should be recorded on field form F025 (field borehole log). Refer to the appropriate borehole advancement SOP for general borehole logging procedures.

TERRAPEX STANDARD OPERATING PROCEDURE
MONITORING WELL DEVELOPMENT

GENERAL NOTE

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

These procedures are applicable to developing monitoring wells or piezometers installed for the purposes of monitoring groundwater conditions, hydraulic conductivity or similar in-situ testing, and/or recovering samples for physical inspection/laboratory analytical testing. The procedures are applicable whether such activity constitutes the whole of a work program, or part of a larger work program.

EQUIPMENT

The following list details the standard equipment necessary for groundwater monitoring. Specific sites may require additional or specialized equipment.

- □ Well opening tools (e.g., hex wrench , $^{9}/_{16}$" socket wrench, pry bar, well keys)
- □ bucket for washing down-hole field equipment
- □ detergent solution in spray bottle
- □ distilled/clean water in spray bottle
- □ Surge-block
- □ File for well notching
- □ field notebook
- □ well development field form (F054)
- □ site plan

- □ scope of work/field work instructions
- □ site-specific health and safety plan, including Job Safety Analysis and other POST™ documentation
- □ Personal Protective Equipment (e.g., hard hat, vest, safety glasses, respirator, steel toe boots, gloves, hearing protection)
- □ Camera

PREPARATION

- review scope of work with project manager
- ensure site access is confirmed
- calibrate and sign-out field equipment

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Traffic spotters should be employed when development activities include wells located in the travelled portion of a roadway or in high-traffic areas. A traffic control plan in accordance with Ontario Ministry of Transportation (MTO) guidelines must be implemented for all work in road allowance.

Accumulated headspace vapours, the depth to water, the depth to the bottom of the well, and the depths to any water/non-aqueous phase liquid (NAPL) interfaces within the well should be measured (refer to SOP E06.00, *Groundwater Monitoring*) prior to development so as to establish baseline conditions.

Waters removed from wells in which there is evidence of significant contamination (e.g., NAPL) should be containerized for future disposal off-site.

Well development is NOT synonymous with purging completed prior to groundwater sampling, and wells must be permitted to return to equilibrium conditions prior to subsequent monitoring, in-situ testing, and/or sampling efforts. The period of recovery will vary depending on well construction and subsurface conditions, but will be no less than twenty-four hours regardless.

FIELD PROCEDURES

Objectives

Monitoring wells are developed in order to remove "drilling debris" - entrained particulate in the well standpipe, well screen and filter pack, and surrounding formation materials - thereby

mitigating potential bias that may occur during groundwater monitoring, in-situ hydraulic testing, or laboratory analyses of recovered groundwater samples. A secondary objective of development is to remove waters that may have been introduced during drilling (e.g., water used as coolant during diamond coring), or that may have been impacted by drilling fluids used during drilling (e.g., mud-rotary augering).

Development Requirements

Non-dedicated down hole equipment employed during development must be cleaned using soapy water and a fresh water rinse prior to use within a well.

Development is conducted until the well yields water free of visible particulate. At a minimum, at least one borehole volume of water (defined as the initial volume of water in the well standpipe plus the volume of water in the filter pack surrounding the well) should be removed from the well during surge/purge cycles.

Where water or drilling fluids have been introduced during borehole drilling and/or monitoring well installation, the minimum volume of water to be removed from the well during the surge/purge cycles should be calculated as the greater of:

i. three times the volume of the water/fluids introduced (or "lost") to the subsurface during drilling; and,

ii. one borehole volume of water (defined as the initial volume of water in the well standpipe plus the volume of water in the filter pack surrounding the well).

Under certain circumstances, development may be halted prior to achieving visibly particulate-free discharges waters and removing the required volume of water:

- If the well has been purged to a “dry” condition on three consecutive surge/purge cycles, and where the water column within the well standpipe has been permitted to recover to at least 90% of its initial height between each surge/purge cycle; or,
- If the well has been purged to a “dry” condition during surging/purging, where at least three times the volume of water/fluids introduced ("lost") to the subsurface have been removed, and where the water column within the well standpipe has not returned to at least 90% of its initial height following a recovery period of 24 hours or more; or,
- Following the removal of an “excessive” volume of water from a well that has yielded water continuously during surge/purge cycles, where “excessive” is defined as **the greater of**:
    i. a volume exceeding three times the initial borehole volume of water (where a borehole volume is calculated as the volume of water in the well standpipe plus the volume of water in the filter pack surrounding the well);
    ii. ten times the initial volume of water in the well standpipe; and,

iii. three times the volume of the water/fluids introduced (or "lost") to the subsurface during drilling.

The start and stop time of development, equipment used (e.g., surge block, bailer), the volume of water removed, and the rationale for ceasing development efforts (e.g., particulate-free water obtained, excessive volume of water removed) are to be recorded for each well.

Bailers and Inertial Samplers

Inertial samplers generally exert a weak “surging” action, and as a result typically require significantly more water to be purged from a well to achieve a particulate-free state.

A relatively strong surging action can be achieved using a bailer if:

- the bailer is rapidly removed from the well; and,
- the removal results in a significant instantaneous drop in the water level within the well standpipe.

This generally requires the use of an elongated bailer (e.g., a 36" nominal length rather than a 12" nominal length bailer) with an outside diameter only marginally less than the inside diameter of a well standpipe (e.g., a 1.66" nominal diameter bailer within a 2" nominal diameter monitoring well), as well as a sufficient volume of water in the well to fill or nearly fill the bailer. The well must yield a sufficient volume of water to permit particulate mobilized during the removal of the bailer to be subsequently captured as the bailer is reintroduced into the well. (Otherwise, the particulate will simply settle at the bottom of the well standpipe.)

Because of their relatively weak surging action, the use of bailers and inertial samplers may result in poor development of wells that do not yield water continuously.

Surge Blocks

Surge blocks generates significant surging action and are therefore quite effective for wells that do not yield water continuously and/or that contain a significant amount of particulate (e.g., wells installed in borings advanced through bedrock).

However, surge blocks do not contribute any purging action, and must therefore be combined with a sampling or pumping device (e.g., a bailer or an inertial sampler) to remove mobilized particulate. Moreover, surge blocks generally cannot be employed within a well that has down-hole equipment installed within, necessitating the successive installation and removal of the paired sampling/pumping device. Care must be taking to ensure that neither the surge block nor the sampling/pumping device come into direct contact with the ground while they are being installed, removed, used, or otherwise manipulated.

As surge blocks are not dedicated sampling equipment, they must be cleaned using soapy water and a fresh water rinse prior to use in a well.

PRIOR TO LEAVING SITE

□ Check the scope of work to ensure you have completed project objectives

□ Verify the site plan accurately reflects site features and infrastructure (e.g., plan does not indicate buildings that have since been demolished, wells that have been decommissioned, etc.)

□ Clean up any garbage or debris and leave the site the way you found it (or better)

□ Call the project manager to ensure there is nothing else required, to summarize findings and results

UPON RETURN TO OFFICE

- Clean and sign in all equipment used
- Complete equipment and supply form
- Complete field package (place logs and photocopies of relevant field log book pages in project file folder)
- Submit any necessary revisions to site plan to drafting.

TERRAPEX STANDARD OPERATING PROCEDURE
GROUNDWATER MONITORING

GENERAL NOTE

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

These procedures are applicable to monitoring headspace vapours, depth to water, and non-aqueous phase liquid (NAPL) thicknesses within existing groundwater monitoring wells. The procedures are applicable whether such activity constitutes the whole of a work program, or part of a larger work program.

EQUIPMENT

The following list details the standard equipment necessary for groundwater monitoring. Specific sites may require additional or specialized equipment.

- ☐ Portable vapour meter (e.g., Gastech™ 1238ME), calibrated and charged
- ☐ Vapour meter field calibration kit, if applicable
- ☐ “oil/water” interface probe
- ☐ Well opening tools (e.g., hex wrench , $^{9}/_{16}$” socket wrench, pry bar, well keys)
- ☐ File for well notching
- ☐ bucket for washing down-hole field equipment
- ☐ detergent solution in spray bottle
- ☐ distilled/clean water in spray bottle
- ☐ field notebook
- ☐ field groundwater monitoring form (F018)

☐ site plan

☐ scope of work/field work instructions

☐ site-specific health and safety plan, including Job Safety Analysis and other POST™ documentation

☐ Personal Protective Equipment (e.g., hard hat, vest, safety glasses, respirator, steel toe boots, gloves, hearing protection)

☐ Camera

PREPARATION

- review scope of work with project manager
- ensure site access is confirmed
- calibrate and sign-out field equipment

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Traffic spotters should be employed when monitoring activities include wells located in the travelled portion of a roadway or in high-traffic areas. A traffic control plan in accordance with Ontario Ministry of Transportation (MTO) guidelines must be implemented for all work in road allowance.

Groundwater monitoring should not be conducted on wells that have not been developed (refer to SOP E05.00, *Monitoring Well Development*), and should only be conducted if at least 24 hours has elapsed since well development efforts were completed.

FIELD PROCEDURES

General Instructions

Groundwater monitoring activities comprise the measurement of accumulated headspace vapours, the depth to water, the depth to the bottom of the well, and the depths to any water/NAPL interfaces detected within a well. Vapour measurements should be collected immediately upon removal of the well plug/cap to minimize venting of accumulated vapours.

To minimize contamination of the interface probe and tape, well depths should not be measured if floating (“light”) NAPL is encountered.

As part of the groundwater monitoring activities, each monitored well should be inspected to assess whether the well casing is intact, MOE well record tags (if present) remain attached to the well, and that the well standpipe is equipped with an appropriate plug/cap. Damage to the well or surrounding ground surfacing should be recorded, and broken/missing plugs or caps replaced.

If the well name recorded on the well casing, outside of the well standpipe, or top of the well standpipe cap/plug has faded or smudged, a replacement identifier is to be placed. However; it is imperative that appropriate steps be taken to confirm the well identification before doing so to avoid mislabelling.

Headspace Vapour Measurements

A water trap must be used for the field vapour meter if it is available. The probe tip is to be inserted approximately 15 cm into the well or other headspace being measured, unless this would result in immersing the probe tip in water. Cover the opening as best as possible to mitigate venting of vapours and record the highest vapour level indicated on the meter within the 30 seconds of inserting the probe tip.

When utilizing Gastech 1238 ME combustible (or "hydrocarbon") vapour meters or equivalent devices, switch to the % LEL (percentage of lower explosive limit) scale when measured vapours in excess of 500 parts per million by volume (ppm). Recognize that Gastech 1238 ME and equivalent devices are considered to have an effective detection limit of 10 ppm; readings of zero or readings less than 10 ppm are to be recorded as "< 10 ppm".

Depth to Water and Water/NAPL Interface Measurements

Prior to use in a well, the interface probe is to be cleaned using soapy water and a fresh water rinse. The grounding clip is to be attached to the well casing or an equivalent grounding point before inserting the probe into the well.

Depths to water and any water/NAPL interfaces are to be measured relative to established measuring points (a notch on the outside of the well standpipe). Should a well lack an established measuring point, a file should be used to create a notch on the outside of the well standpoint at its highest point, and this point should be used to measure depths.

Depths are to be recorded to the gradations provided on the probe tape (typically 5 mm), or at least the nearest 0.5 cm if the tape lacks more detailed gradational markings.

If the presence of NAPL is indicated by the interface probe, depths to the interface of water and floating NAPL (LNAPL) in the well are to be determined by lowering the probe past the apparent interface and slowly raising the probe until the presence of NAPL is indicated. For sinking NAPL (DNAPL), depths to the water/NAPL are to be determined by raising the probe above the apparent interface and slowly lowering the probe until the presence of NAPL is indicated. This

approach will limit potential measurement bias associated with adherence of non-polar NAPL to the probe surface as it is raised/lowered in the well water column.

If the interface probe does not indicate the presence of floating NAPL (LNAPL), but other factors suggest LNAPL may be present (e.g., high headspace vapour readings, “sheen” on the probe, historical LNAPL findings), a clean disposable bailer should be used to recover a water sample and visually assess the possible presence of LNAPL. Such verification efforts and their findings should be documented in the field notes.

Prior to Leaving Site

- Check the scope of work to ensure you have completed project objectives
- Verify the site plan accurately reflects site features and infrastructure (e.g., plan does not indicate buildings that have since been demolished, wells that have been decommissioned, etc.)
- Clean up any garbage or debris and leave the site the way you found it (or better)
- Call the project manager to ensure there is nothing else required, to summarize findings and results**,** and select final lab samples

UPON RETURN TO OFFICE

- Clean and sign in all equipment used
- Complete equipment and supply form
- Complete field package (place logs and photocopies of relevant field log book pages in project file folder)
- Submit any necessary revisions to site plan to drafting.

TERRAPEX STANDARD OPERATING PROCEDURE
GROUNDWATER SAMPLING, LOW VOLUME PURGE, USING PERISTALTIC PUMP

GENERAL NOTES

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

This SOP is applicable to the collection of groundwater samples from developed monitoring wells using a positive displacement peristaltic pump, or "roller" pump. Procedures for well development are defined in SOP E05.00, *Monitoring Well Development*, while procedures for pre-screening ("monitoring") of groundwater conditions are described in SOP E06.00, *Groundwater Monitoring*.

EQUIPMENT

The following list details the standard equipment necessary for groundwater sampling. Specific sites may require additional or specialized equipment.

- □ Portable combustible vapour meter (e.g., Gastech™ 1238ME), calibrated and charged
- □ Combustible vapour meter field calibration kit, if applicable
- □ Water level indicator or equivalent (e.g., interface probe)
- □ Multi-meter capable of measuring pH, conductivity, ORP/redox potential, and dissolved oxygen
- □ Flow-through cell
- □ Variable-speed Peristaltic Pump
- □ Equipment cleaning/decontamination supplies (spray bottle with detergent solution, spray bottle with distilled/potable-grade water, paper towels)

- ☐ Well opening tools (hex keys, brass key, socket wrench, screwdriver, pry bar, well key)
- ☐ Turkey baster or other equipment to purge or bail accumulated water within protective casings
- ☐ File for well “notching”
- ☐ bucket with volume markings
- ☐ laboratory-supplied sampling containers appropriate for contaminants of concern
- ☐ cooler with ice
- ☐ laboratory chain of custody forms
- ☐ field notebook
- ☐ well sampling form (F028)
- ☐ site plan
- ☐ scope of work/field work instructions
- ☐ site-specific health and safety plan, including Job Safety Analysis and other POST™ documentation
- ☐ Personal Protective Equipment (hard hat, vest, safety glasses, respirator, steel toe boots, gloves, hearing protection)
- ☐ Camera
- ☐ Measuring wheel or similar device

PLANNING

- ☐ review scope of work and well locations with project manager
- ☐ ensure site access is confirmed
- ☐ calibrate and sign-out field equipment

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Traffic control and, flag persons, and/or spotters should be employed when groundwater sampling activities include wells within a road allowance, or in high-traffic areas of a site (e.g., an operating retail fuel outlet). Traffic control plans must correspond to Ontario Ministry of Transportation guidelines/requirements.

Groundwater samples should not be collected from wells that have not been developed (refer to SOP E05.00, *Monitoring Well Development*).

Care should be taken when handling sampling containers pre-charged with sample preservative for safety reasons (they are generally acids), and so that preservative is not inadvertently lost.

NOMENCLATURE

Groundwater samples are assigned names that correspond to the well from which the sample was collected (e.g., sample name “MW110A” is assigned to the sample recovered from monitoring well MW110A).

FIELD PROCEDURES

Prior to use, the peristaltic pump is to be outfitted with new silicone tubing for the sampling mechanism, and any non-dedicated equipment is to be cleaned using soapy water and a fresh water rinse. New and/or dedicated tubing is to be employed to draw water into and out from the pump.

To mitigate potential cross-contamination:

- always don fresh latex/nitrile gloves for each sample collection;
- do not allow the sampling equipment to touch sample bottles (preservatives from one bottle may be a “contaminant” for another bottle)
- use dedicated sampling equipment to the maximum extent possible;
- decontaminate non-dedicated monitoring equipment between samples; and,
- Wells should be sampled beginning with “least” impacted and progressing to the “most” impacted wells to minimize cross-contamination potential. The determination of relative impact should be made using information obtained during pre-sampling monitoring, previous monitoring/sampling events, site assessment results, or similar data.

Discharge waters are to be inspected to assess for the possibility of contamination of the samplers (e.g., the presence of odours in discharged waters where none had been observed during previous samplings).

Purging

For a well that is screened across the water table, set the pump intake approximately 0.5 m below the initial static water surface level. Otherwise, set the pump intake at the approximate midpoint of the screened interval.

Water is to be purged from the well at a rate between 0.1 to 0.5 L/min. (0.1 L/min = 500 mL in 5 minutes and 0.5 L/min = 2.5 L in 5 minutes). If the pump does not have a flow meter, check the flow rate by pumping into a container of known volume and record the time to fill it. Do not use the flow-through cell to check flow rate.

Water levels should be monitored to ensure that excessive drawdown does not occur within the well (the height of the water column in the well does not drop by more than 25% during purging). To the extent possible, the pump flow rate should be adjusted to maintain a constant water level within the well during purging.

Geochemical parameters should be measured using the multi-meter and flow-through cell assembly approximately every 3 to 5 minutes.

Purging is considered complete once the monitored parameters have "stabilized" for a minimum of three consecutive readings (parameters are within the ranges shown below of the previous reading) and at least one standpipe volume of water (calculated as the volume of water in the well standpipe prior to the commencement of purging) has been removed from the well. Note that dissolved oxygen may not stabilize in all situations; if all parameters other than dissolved oxygen have stabilized for a minimum of five consecutive readings, purging may be considered complete.

Geochemical stabilization Requirements

pH units	+/-0.2
Conductivity	+/-3%
ORP/redox	+/-20 mV
Dissolved Oxygen	+/-0.2 mg/L

(Source: ASTM Standard D6771)

It is not necessary to wait for groundwater levels in the well to recover before recovering samples for laboratory analysis.

Alternative Purging Criteria

Purging may cease once three times the initial volume of water in the well has been removed, regardless of whether the monitored parameters have stabilized, and groundwater samples may be collected. It is not necessary to wait for groundwater levels in the well to recover before recovering samples for laboratory analysis. The reason for ceasing purging should be recorded.

(Well volumes are calculated on the basis of the well standpipe; the volume of any water in the sand pack surrounding the well screen is not included in the calculation of the initial volume of water. For a 2 inch (50 mm) nominal diameter well, one well volume is approximately equal to 2 L per metre of standing water.)

If excessive drawdown cannot be avoided during purging (i.e., the water column height in the well drops more than 25%, even at a purge rate of 0.1 L/min), the well should be purged until a minimum of three times the initial volume of water in the wells has been removed. The well should then be permitted to recover; purging will be considered complete once the well has recovered such that the volume of water in the well is at least 50% of its initial volume.

If the well does not yield three volumes of water (e.g., the well is purged "dry"), the well should be allowed to recover so that the volume of water in the well is at least 50% of its initial volume, and then purged "dry" once more. The well should then be permitted to recover again; purging will be considered complete once the well has recovered such that the volume of water in the well is at least 50% of its initial volume.

Volumes purged, points at which the well went "dry" (if applicable), and well recovery (water height) are to be recorded.

Sampling

Wells are to be sampled immediately following purging (and recovery, if applicable). Sampling is to be completed by disconnecting the flow-through cell and adjusting the pump flow rate to collect groundwater samples into standard laboratory supplied containers for analysis at a steady rate, and under laminar (not turbulent) flow conditions.

Where more than one sampling container is required, filling should be conducted concurrently, alternating filling so that the containers contain the same "mix" of water (e.g., avoid filling bottles sequentially). Turbulent flow conditions should be avoided to minimize loss of volatile or semi-volatile parameters. Vials and bottles should be filled until a convex water surface occurs at the top of the vial or bottle, and the cap carefully placed on the sampling container.

Vials filed for testing of volatile compounds should be inverted (turned upside down) to examine for the presence of air bubbles. If significant bubbles are present, the cap should be removed and additional water added. When using sampling vials pre-charged with sample preservative, no more than two additional attempts to remove excessive bubbles through the addition of extra water are to be made; if after the second attempt significant bubble remain in the sample, the vial should be discarded and another vial filled to mitigate unacceptable preservative loss/dilution in the sample.

Always be aware of the preservatives in the bottles, for safety reasons (they are generally acids) and so that you do not inadvertently wash them out.

To mitigate potential cross-contamination:

- always don fresh latex/nitrile gloves for each sample collection;

- do not allow the sampling equipment to touch sample bottles (preservatives from one bottle may be a “contaminant” for another bottle)
- use dedicated sampling equipment to the maximum extent possible;
- decontaminate non-dedicated monitoring equipment between samples; and,
- Wells should be sampled beginning with “least” impacted and progressing to the “most” impacted wells to minimize cross-contamination potential. The determination of relative impact should be made using information obtained during pre-sampling monitoring, previous monitoring/sampling events, site assessment results, or similar data.

Recovered samples are to be placed in a closed cooler with ice immediately after collection, and maintained in a secure environment to prevent accidental or deliberate tampering.

Field Filtering

Groundwater samples collected for analyses of metallic parameters (including hydride metals, hexavalent chromium, and mercury, but excluding methyl mercury) are to be field filtered during sample collection using dedicated 0.45 µm in-line filters. Groundwater samples for other analyses, including inorganic analyses, are not to be field filtered.

The purpose of filtering groundwater samples for metals analysis is to remove particulate before acidifying the water, so that the acid does not extract metals contained within the particulate.

Each filter is to be fitted to the discharge point of the inertial foot-valve during purging such that a minimum volume of water equal to three times the volume of the filter passes through the filter before sampling containers are filled. In-line filters cannot be re-used. A new filter is required for each well, and each sampling event.

Submission to contract laboratory

All samples are to be packed in coolers with loose ice and appropriate packing materials to mitigate potential breakage during shipment to the contact laboratory. All shipments must be accompanied by completed and signed Chain of Custody form placed inside the cooler. The date and time for each sample recovery is to be recorded on the Chain of Custody.

Each cooler is to be secured with Custody Seals affixed in such a fashion that the cooler may not be opened without breaking one or more of the Custody Seals.

QUALITY ASSURANCE / QUALITY CONTROL SAMPLES

QA/QC sample requirements are specified in SOP E12.00, *Field Program Quality Assurance & Quality Control*.

FIELD DOCUMENTATION

Groundwater sampling should be recorded on the Low Flow Purging and Sampling field form. The form must be filled out completely, and dates should be recorded such that the month, day, and year of the sampling event is unambiguous (e.g., use Feb. 3, 2011, rather than 03/02/11).

Any irregularities or conditions suggestive of possible bias observed during sampling (e.g., sediment within recovered groundwater samples) should be recorded on the form.

TERRAPEX STANDARD OPERATING PROCEDURE
SOIL SAMPLE HANDLING

GENERAL NOTE

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

These procedures are applicable to intrusive investigations involving the collection of soil samples for the purposes of environmental assessment. The SOP is also applicable to work programs that involve the collection of samples of materials that are not technically soil, but which are soil-like, including sediments, regolith, and engineered granular materials.

It should be noted that this SOP addresses general requirements related to soil sample handling (e.g., once a sample has been recovered). Specific requirements related to sample collection methodology, including sample nomenclature and documentation, are provided in SOPs related to these sampling approaches. Additional information relating to sample description and quality assurance and quality control requirements for soil sampling programs are provided in SOPs E10.00 (*Soil Classification*) and E12.00 (*Field Program Quality Assurance & Quality Control*), respectively.

EQUIPMENT

The following list details standard equipment used in the sampling of soil or soil-like materials. Specific sites may require additional or specialized equipment.

- ☐ Gastech™ 1238ME, calibrated and charged
- ☐ Gastech™ field calibration kit, if applicable
- ☐ tape measure (preferably weighted flexible tape)
- ☐ trowel or knife for sampling from bucket

- ☐ sampling equipment (gloves, bags, permanent marker)
- ☐ laboratory-supplied sampling jars appropriate for contaminants of concern
- ☐ laboratory chain of custody forms
- ☐ field notebook
- ☐ site plan
- ☐ Sampling Plan (scope of work/field work instructions)
- ☐ site-specific health and safety plan
- ☐ Personal Protective Equipment (hard hat, vest, safety glasses, respirator, steel toe boots)
- ☐ camera

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Above ground and underground utilities and other services within the assessment area are to be located and identified in the field prior to intrusive sampling. Where appropriate, a private locating contractor should also be retained to identify secondary services such as yard lights, internal computer/communication lines, etc. and clear proposed sampling locations. All exclusions or conditions attached to utility service locates (e.g. notification requirements, “hand dig only” areas) are to be strictly adhered to.

Requirements outlined in the SOP specific to the sampling methodology are to be adopted during sample collection. To mitigate potential cross contamination, new disposable gloves are to be donned for the collection / handling of each sample, and any non-dedicated sampling equipment washed and rinsed prior to use.

Recovered samples should be identified using the nomenclature requirements outlined in the SOP specific to the sampling methodology. Available information relating to previous intrusive sampling programs at the site (including those by parties other than Terrapex) should be reviewed to ensure that sample identifications employed during the work program are unique; in some instances this may require advancing standard Terrapex sampling counts to address sampling identifications used by third parties during earlier investigations (e.g., if another consultant has already advanced boreholes identified as BH1 through BH10, the first round of Terrapex boreholes should begin at BH101, even though this is normally the count for the second round of Terrapex boreholes).

DISCRETE SAMPLES

Recovered samples are to be split into two portions; one portion is to be placed in a clear sealable sampling bag for field logging and screening, while the second portion is to be retained for possible laboratory analyses.

Portions for (Possible) Laboratory Analyses

If contaminants of concern / potential contaminants of concern for the sampling program include volatile constituents (see below for a detailed list of these parameters), the portion of the sample for possible volatile laboratory analyses is to be collected using a hermetically sealed sampling device (e.g., En Core Samplers) or placed directly into laboratory-supplied sampling containers pre-charged with sample preservative.

Samples (or portions of samples) for other analyses should either be placed directly into laboratory-supplied sampling containers appropriate for the intended/potential analyses, or should be placed in a second sealable sampling bag (i.e., a sampling bag other than the bag in which the portion for field screening and logging was placed) without headspace for subsequent transfer to laboratory-supplied sampling containers once samples for laboratory analyses have been selected).

If it is possible to accurately return to the sampling location, it is also acceptable for initial sampling to be completed for field screening and logging purposes only, with the portion of the sample for laboratory analyses recovered at a later time. In such an instance, samples for laboratory analyses are to be collected directly into laboratory-supplied sampling containers. This approach is generally only applicable during the collection of samples from open excavations (remedial excavation work programs, tank removals, etc.).

From a purely technical perspective, the preference for sample collection methodologies (from most preferred to least preferred) is:

1. Collection directly into laboratory-supplied sampling containers concurrently with collection of the portion of the sample for field screening and logging.
2. Initial sampling for field screening and logging only, and returning to the sampling location at a later time to sample for the purposes of laboratory analyses.
3. Collection into sealable sampling bags concurrently with separate bags collected for the portion of the sample for field screening and logging and the portion of the sample for laboratory analyses.

To the extent practicable during the work program, the technical preference outlined above should be adhered to. The sampling methodology employed for each sample should be recorded in the field notes, and included as part of the report documenting the work program.

If the third approach is selected the sampling bags should be managed while in temporary storage as would any other sample (refer to SOP E12.00, *Field Program Quality Assurance & Quality Control*), and should not be manipulated or otherwise disturbed until the bag contents are to be transferred to laboratory-supplied sampling containers for submission to the contract laboratory. When transferring the sample from the sampling bag to the laboratory-supplied sampling

containers, efforts should be made to select portions of the sample from the interior of the bag (i.e., not in contact with the sides of the bag) and avoid undue manipulation of the sample.

Sample submissions to the contract laboratory should NOT be prepared using material placed in the sampling bag for field logging and screening (see below), as this activity involves significant manipulation of the recovered sample.

Field Screening and Logging

Logging is the process by which individual samples are recorded (documented). Logging also includes classifying / describing the sample for the purposes of determining overall site stratigraphy.

Samples are to be logged using the appropriate field form (refer to the SOP specific to the sampling methodology), and classified / described as per SOP E10.00, *Soil Classification*.

Detailed examination and logging of samples requires some time, and is often completed at the conclusion of sampling activities. This practice is acceptable, but any information relating to structural or similar details (e.g., bedding, orientation of clasts within soil matrix) likely to be lost during movement of the bag and/or manipulation of the sample during field screening will need to be logged immediately at the time of sample collection.

Field screening is the process by which samples are qualitatively assessed for evidence of chemical impact, often to assist in the selection of samples for quantitative chemical testing by a contract laboratory. As field screening information is often gathered concurrently with field logging of recovered samples and is recorded on field logs, the distinction between field logging and field screening is subtle.

The components of field screening include:

- Measurements of vapours within the headspace of the sealable sampling bag containing the portion of the soil sample for field screening and logging (sometimes referred to combustible soil vapour measurements or CSV measurement);
- Examination of the sample for visual evidence of possible chemical impact (e.g., staining, presence of debris or other inclusions); and,
- Examination of the sample for olfactory evidence of possible chemical impact; and,
- Evaluation of the sampling location (both horizontally and vertically) with respect to the conceptual site model (e.g., proximity to underground storage tanks or other areas of potential environmental concern, relative positioning to the groundwater table or other contaminant fate and transport factors).

Typically, the selection of soil samples for laboratory analyses will be based on the results of the field screening process. On occasion, samples may also be selected to address specific work program objectives (e.g., duplication of previous results, re-evaluation of specific sampling locations), regardless of field screening results, however, field screening of recovered samples is still to be completed in such instances.

Procedures for measuring headspace vapours within the sealable sampling bag are described below.

Observations regarding visual and/or olfactory evidence of possible chemical impact are to be recorded in the sampling log. Where staining is present, describe both the apparent colour and the distribution of the staining (e.g., throughout the soil matrix, or within fractures). Odours are described using NONE, SLIGHT, MODERATE or STRONG, along with a description of the type of odour (e.g., hydrocarbon, organic, etc.).

DUPLICATE SAMPLES

A field duplicate is a second sample concurrently collected from the same location as another sample and submitted for duplicate analyses to provide quality assurance information during sampling programs (refer to SOP E12.00, *Field Program Quality Assurance & Quality Control*).

Field duplicate samples should be recorded in the field notes using their assigned sample nomenclature, along with their corresponding sampling pair. When possible, sample duplicates should be subjected to field screening and logging procedures, although limited sample volume may occasionally preclude such efforts.

COMPOSITE SAMPLES

Composite samples are 'prepared' samples; that is they are created by Terrapex out of two or more discrete samples. Composite samples may only be prepared using samples collected from the same depth, and that are located within a single 2 m horizontal radius.

Composite samples should be prepared by placing approximately equal volumes of each contributing discrete sample in a stainless steel bowl and blending the samples together such that the individual samples can no longer be visually distinguished from one another. It should be noted that compositing cohesive soils or very dense cohesionless soils may be impracticable at some sites.

The composite sample should be recorded in the field notes (e.g., on the sampling log), noting each of the contributing discrete samples incorporated within, with the time and date of the composite "sampling" being that when the sample was created. Composite soil samples are NOT to be classified per SOP E10.00, *Soil Classification*, nor are they subject to the field screening procedures applicable to discrete soil samples.

Composite soil samples should not be submitted for laboratory analyses other than metallic (with the exception of mercury and methyl mercury, which are volatile parameters) or general chemistry (inorganic) parameters.

SPECIAL CONSIDERATIONS, SAMPLES FOR ANALYSES OF VOLATILE CONSTITUENTS

To minimize potential losses through off-gassing, soil samples for analyses or potential analyses of volatile constituents are subject to special handling requirements as outlined in Table 1, below.

Table 1 Soil Sampling Requirements, Analyses for Volatile Constituents

Parameter(s)	Notes
Mercury, Methyl Mercury	Samples to be packaged in glass, high density polyethylene (HDPE), or polyethylene terephthalate (PET) container without headspace. Note that it is not necessary to prepare additional sampling containers for mercury and/or methyl mercury analyses if analyses of other metallic compounds are also being completed for the sample.
Volatile Organic Compounds (VOCs)	Samples are to be collected using hermetically sealed sampling device (e.g., En Core Samplers) and submitted to the laboratory for receipt within 36 hours of sample collection. The sampling devices may need to be accompanied by a portion of the sample placed in a glass jar to permit moisture content determination; **OR**, Each sample is to be placed into sampling containers pre-charged with methanol preservative (note that a second container may be required by the laboratory to facilitate laboratory QA/QC; verify requirements with the contract laboratory). The methanol-preserved samples must be accompanied by a portion of the sample placed in a glass jar to permit moisture content determination.
Bromomethane (also known as methyl bromide)	Where the collection of soil samples employ methanol preservative and where bromomethane is a contaminant of concern, a separate sample (collected either using a hermetically sealed sampling device, or collected into a container pre-charged with sodium bisulphate solution preservative) may be required to achieve appropriate detection limits.

Parameter(s)	Notes
Trihalomethanes (THMs)	THMs are technically VOCs, but since they are primarily related to chlorination of drinking water they may also be considered separately. Requirements for general VOCs apply to THMs. Note that it is not necessary to prepare additional sampling containers for THMs if general VOC analyses are also being completed for the sample.
1,4-Dioxane	1,4-Dioxane is typically an additional analysis to a general VOC analyses, or an additional analysis to an analyses of acid/base/neutral compounds. It is not necessary to collect additional sampling containers when 1,4-Dioxane analyses is to be completed as an addition to either VOC or acid/base/neutral compound analyses. When collected as an addition to acid/base/neutral compound analyses, the sampling requirements of that analysis apply. When completed as an addition to general VOCs analyses, the sampling requirements for general VOCs apply. When a soil sample is collected specifically for analysis or potential analysis of 1,4-Dioxane (e.g., and not also for analyses of VOCs or acid/base/neutral compounds), the requirements for general VOCs apply (see above).
Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)	BTEX can be determined as part of a general VOC analyses, or as a targeted analyses only for these parameters (typically in combination with the F1 parameter and accompanied by samples for analyses of the F2 to F4 parameters). When soil samples are being collected specifically for analyses or potential analyses of BTEX, the requirements for general VOCs apply (see above).
F1 Petroleum Hydrocarbon (PHC) parameter	Requirements for general VOCs apply to the F1 parameter. Note that it is not necessary to prepare additional sampling containers analysis of F1 if BTEX or general VOC analyses are also being completed for the sample.
F2 to F4 PHC parameters (includes gravimetric determination of F4 parameter)	Samples to be packaged in glass jar without headspace and sealed using polytetrafluoroethylene (PTFE, or "Teflon") lined cap.

HEADSPACE VAPOUR SCREENING

Headspace vapour screening is completed using portable gas monitoring devices (or meters), with the most common devices being catalytic bead combustible gas meters (e.g., Gastech 1238 ME, RKI Eagle, RKI NP-204) and photo ionization detectors (PIDs).

The selection of the specific gas monitoring device is determined during development of the Sampling Plan. Generally, PIDs are employed at locations where volatile compounds are considered to be contaminants of concern. However, if volatile contaminants of concern are restricted to petroleum hydrocarbons (PHCs), a combustible gas meter calibrated to n-hexane will typically be selected over a PID, due to their relatively greater 'sensitivity' to PHC compounds. Combustible gas meters calibrated to methane may also be used at locations where elevated natural gas levels are a concern or potential concern.

Some combustible gas meters are equipped with a "methane elimination" toggle that, when activated, reduces the response of the instrument to methane gas. However, it should be noted that the switch does not truly eliminate contributions of methane gas to the overall combustible gas reading; where significant methane is present, the gas meter may still report significant overall combustible gas levels, even in the absence of any other gases.

Methodology

1. Field screening is to be completed using portable gas monitoring meters that have been appropriately calibrated (refer to SOP E01.00, *Field Meter Calibration*).
2. The sampling bag containing the portion of the sample for field screening is to be tightly sealed with a nominal headspace, and any clumps within the sampling bag are to be gently broken by manually manipulating the sealed sampling bag.
3. The sampling bag should is not be opened or pierced until headspace vapour screening has been completed.
4. Once the sample has reached a temperature approximately between 5ºC and 15ºC and within two hours of sample collection, the tip of the portable gas monitoring meter is to be inserted into the nominal headspace of the sampling bag to record headspace vapour levels. The tip is to be inserted in a manner that does not permit vapours within the sampling bag to vent to ambient air during measurement.
5. The sample should be gently manipulated, and the peak reading registered by the meter during the first 15 seconds of measurement should be recorded as the sample headspace vapour reading.

TERRAPEX STANDARD OPERATING PROCEDURE
MEASURING AND SURVEYING USING ROD AND LEVEL

GENERAL NOTE

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

These procedures are applicable to obtaining basic site dimensioning information, including determining reference elevations using a survey rod and level. The procedures are applicable whether such activity constitutes the whole of a work program, or part of a larger work program.

These procedures are not applicable to legal surveying, or the use of a Total Station survey instrument.

EQUIPMENT

The following list details the standard equipment necessary for excavation of test pits. Specific sites may require additional or specialized equipment.

- ☐ automatic level
- ☐ tripod
- ☐ survey rod
- ☐ survey rod level
- ☐ field notebook
- ☐ field form F026 (Survey Form)
- ☐ 2-way walkie-talkie radios
- ☐ 30 m tape measure (for small sites)

- ☐ measuring wheel (for large sites)
- ☐ safety equipment (hard hat, boots, safety vest, safety glasses)
- ☐ chalk and/or spray paint
- ☐ nails and flagging tape (for setting control points)
- ☐ hammer and chisel (for making control points or benchmarks)
- ☐ traffic control equipment (pylons, traffic signs), if applicable
- ☐ site plan
- ☐ site-specific health and safety plan
- ☐ Traffic Control Plan and Road Occupation Permit, if applicable

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Traffic spotters should be employed when surveying or dimensioning activities include locations located in the travelled portion of a roadway or in high traffic areas. A traffic control plan in accordance with Ontario Ministry of Transportation (MTO) guidelines must be implemented for all work in road allowance.

DEFINITIONS

Temporary Benchmark (TBM): semi-permanent structure or point of known (or assumed) elevation such as the flange bolt on a fire hydrant (do not use the top bolt as opening the hydrant will change the elevation of this bolt), the centre of a catch basin, the base of a sign, or a nail on the side of a wooden hydro pole or tree (make note of height of nail above grade).

It is preferable to use an existing (geodetic) benchmark so that elevations can be reported in metres above mean sea level (m amsl). Locations of geodetic benchmarks can be obtained from the municipality or from Control Survey Information Exchange (COSINE).

Where an assumed elevation is used, it is conventional to assign the TBM with an elevation of 100.000 metres above local datum (m ald), and the location and a description of the TBM must be provided in the project report(s).

Turning Point (TP): a point temporarily used to transfer an elevation, where the rod is first held for a foresight reading, then for a back sight reading. It establishes a new bench mark from which a new height of instrument is calculated. Preferably, select a solid surface (concrete sidewalk or block, asphalt, cable box) as your TP.

Back Sight (BS): a rod reading taken on a point of "known" elevation (e.g., an established geodetic benchmark or a TBM with an assumed elevation) in order to establish the elevation of instrument line of sight (TP or TBM).

Height of Instrument (HI): the elevation of the line of sight through the level.

Fore Sight (FS): a rod reading taken on a TP or TBM.

Intermediate Sight (IS): a rod reading taken at any other point where an elevation is required.

FIELD PROCEDURES

Setup

1. Choose a TBM and record information carefully and accurately on form so it can be used again if required. Assign the TBM an elevation of 100.000 m. Avoid using a monitoring well as a TBM, since it may be subject to frost heaving. Also, the well may be decommissioned or destroyed at a later date.
2. Plan your survey path before setting up the instrument. Choose a location where you can see the TBM and minimize the number of turning points.
3. Set up pylons around your surveying location if it is in a traffic pathway on site.
4. Stand tripod, roughly level by adjusting legs.
5. Screw level assembly to base. Set level lens parallel to two of the levelling screws. Turn screws simultaneously in opposite directions until levelling bubble is in line with circle. Turn third screw either clockwise or counter clockwise to centre bubble in circle.
6. Once level, turn 90 degrees to check accuracy. If bubble moves out of circle, repeat above steps.

Hand Signals

Due to the distances involved, and if a 2-way walkie-talkie radio is not available, establish hand signals between the surveyor and rod person, prior to commencing the survey. Common hand signals include:

- "All Right" Both arms extended horizontally and forearms waved vertically.
- "Wave Rod" Operator holds arm vertical and moves arm from side to side.
- "Give Foresight" Operator holds arm vertically above head.
- "Set Turning Point" Rod person holds rod horizontally over head and brings it down on point.

- "Plumb" Rod arm is held vertically and moved in direction of plumb.
- "Move Right/Left" Arm extended with motion in direction of desired movement.
- "Move Up/Down" Arm extended with motion in direction of desired movement.
- "Pick Up Unit" Arms extended outward and downward, then inward and upward.

Basic Survey

Rod person must hold rod as vertical as possible. Tilt it very slowly back and forth in the direction of the surveyor so the surveyor can read the lowest number (when the rod is vertical).

Alternatively, if the survey rod level is used, ensure that the rod person holds the rod level against the rod and keeps them both completely still and confirms with the surveyor (via walkie talkie) as to when the rod is level to take a reading.

Surveyor must read elevation to nearest millimeter (three decimal places). Surveyor shoots the TBM, enters reading in the BS column. Surveyor calculates and records the HI ($HI = E_{TBM} + BS$).

Surveyor shoots monitoring wells or other points to be surveyed. Both the ground elevation and elevation of the well standpipe measuring point (refer to SOP E06.00, *Groundwater Monitoring*) are to be surveyed. Surveyor enters data for each point in the IS column.

For wells equipped with flush-mounted casings, shoot the top of the protective casing as representing "ground" elevation. For wells equipped with monument ("stick up") casings, shoot the ground surface adjacent to the casing.

Limit all elevation shots to distances of no more than 30 m (100 ft). If an object is too far away, use a turning point to move the instrument closer. Significant errors may result if longer elevation shots are attempted. To the extent practicable, the level should be placed such that IS shot distances for each placement are approximately equal. To the extent practicable, BS and FS shot distances should also be approximately equal.

When all points have been shot, surveyor re-shoots the TBM to close the survey loop and enters the rod reading in the FS column.

Turning Point (if required)

A TP is required if you cannot see all your survey points from one instrument location, or if the distance between one or more survey points and the instrument exceed 30 m.

Choose a suitable TP where you can see the instrument's current location and will be able to see the instrument's new location (the instrument will be located where it can see as many of the

points to be surveyed as possible). Try to minimize the number of turning points to minimize the accuracy of rod reading errors.

The rod person moves to the TP and places a mark there (e.g., chalk or spray paint) if it is not a fixed point. Surveyor shoots the TP and records reading in the FS column. Surveyor calculates and records the elevation of the TP (E_{TP} = HI - FS).

Surveyor moves instrument to the new location (note that the instrument location is not assigned a specific name). Surveyor re-levels the instrument. Surveyor re-shoots the TP and enters in BS column. Surveyor calculates and records a new HI (HI = E_{TP} + BS). Note that it is imperative that the rod person must keep the rod on the TP until after the Surveyor has completed setting up the level and has taken a BS reading of the TP from the new instrument location.

Surveyor shoots remaining monitoring wells or other points to be surveyed as above.

When all points have been shot, surveyor traverses back to TBM using new TPs as required. Surveyor records final shot to TBM in the FS column.

Accuracy Check

Method 1: Surveyor adds all the FS readings together, enters result at bottom of form. Repeat for BS readings. The error is the difference between the two totals.

Method 2: Surveyor calculates elevation of the TBM from the final rod reading (E_{TBM} = HI - FS). This requires that calculations be done throughout the survey (for TPs, not for wells). The error is the difference between the assigned elevation of the TBM and the calculated elevation.

Acceptable Error: +/- 3 mm

If the error is greater, the survey must be repeated.

TYING IN EXISTING WELLS

If there are wells already existing at the site, survey them ALL in, even if an older survey exists. Wells can shift over time. Wherever possible, use the benchmark used in the original survey for consistency. If the benchmark has been removed, use another benchmark and re-survey in all the wells.

SITE DIMENSIONING

Use a measuring tape or wheel to measure distances. Pacing to record distances does not yield sufficiently accurate dimensioning information, and is not to be used. Triangulate points to be measured (take two measurements for each location, each from a different mapable point). To avoid large inaccuracies in locating objects, do not measure in objects using offset measurements from linear features (such as sidewalks, building walls, etc) where the measured distances exceed 2 metres.

If a site plan has been provided, double check the accuracy and confirm the drawing is up-to-date by re-measuring dimensions of existing buildings and structures and comparing to the site plan. If measurements do not match site plan, adjust the incorrect dimensions accordingly.

If a site plan does not exist, sketch a site plan with all existing structures and dimensions between them for proper layout and orientation. On-site dimension locations include: buildings, pump islands, fences, property lines/Iron bars, catch basins/manholes, USTs, utility services, etc. Off-site dimension locations include: catch basins/manholes, sidewalks, roads/curbs, hydrants, utility services, hydro poles, etc.

Site plans/sketches must include a North directional arrow. Indicate whether the arrow indicates **magnetic north** (i.e., north from a compass), **true north** (i.e., magnetic north with an appropriate declination correction), or **reference north** (e.g., assumed/approximate north direction).

Where the site/study area is very large and/or a high degree of horizontal accuracy is not required for the project, portable GPS units may be used to determine approximate UTM coordinates for site features, however, the indicated accuracy range on the GPS unit must be identified for each mapped feature in the notes.

TERRAPEX STANDARD OPERATING PROCEDURE
FIELD PROGRAM QUALITY ASSURANCE & QUALITY CONTROL

GENERAL NOTES

Standard Operating Procedures (SOPs) have been developed by Terrapex Environmental Ltd. to standardize protocols used during environmental assessment work programs. However, certain work programs may warrant deviations from SOPs and some clients may have specific requirements which differ from those outlined in this SOP. Any significant deviations should be discussed with and approved by the project manager. Each deviation, along with the rationale for the deviation, should be documented in the field notes, project scope and/or notes to file.

Where SOPs are appended to reports, all deviations from this SOP, along with the rationale for the deviation, must be documented in the report.

APPLICATION

This SOP is applicable to intrusive investigations involving the collection of soil, water, and air samples for possible laboratory chemical analyses, including sediment, groundwater, surface water, indoor air, outdoor air, and soil vapour. The SOP addresses only measures required for quality assurance and quality control purposes. Sample collection, nomenclature, documentation, and other requirements associated with specific sampling approaches (e.g., borehole drilling) are described in other SOPs.

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Liaison with the contract laboratory in advance of field programs will be required as the laboratory will normally be responsible for providing appropriate sampling containers, prepared trip blank and trip spike quality assurance samples, and appropriate analyte-free water for the preparation of field blanks and equipment blanks by Terrapex.

FIELD PROGRAM QUALITY CONTROL REQUIREMENTS

Sample Collection

Quality control measures during sample collection are primarily intended to mitigate the accidental introduction of a contaminant or the loss of a volatile constituent of the sample.

Specific requirements associated with sampling methods are defined in the SOP(s) applicable to those methods. General requirements for all work programs are described below:

- Sampling containers and field preservative (if applicable) will be obtained from the contract laboratory.
- Available information relating to environmental conditions at the site should be reviewed and, to the extent practicable, sampling should commence in the apparent least-impacted area and progress to areas of apparently greater impact, finishing in the apparent "worst-case" area.
- New disposable gloves are to be donned for the collection / handling of each sample.
- To the extent practicable, dedicated sampling equipment is to be employed during sampling collection; any non-dedicated sampling equipment which comes into contact with the sample must be thoroughly washed and rinsed prior to use.
- For water samples, sampling equipment (regardless of whether it is dedicated or non-dedicated) should be purged prior to sample collection by passing a minimum of three times the volume of the sampling equipment of either sample water or analyte-free water supplied by the contract laboratory through the equipment.

  For groundwater samples, purging of sampling equipment is typically completed concurrently with well purging (e.g., by employing the inertial sampler to be used during sample collection during the initial purging of the well).

  It should be noted that "sampling equipment" in this context does not include laboratory-supplied sampling containers.
- Water samples (including groundwater) are to be collected directly into laboratory-supplied containers appropriate for intended/potential analytical requirements; passing the sample through an in-line field filtration device prior to collection into the sampling container is an acceptable practice for samples that require field filtration.
- When more than one groundwater sampling container is involved and/or when duplicate groundwater samples are being collected, filing should be conducted concurrently, alternating filing so that the containers contain the same "mix" of water (i.e., avoid filling bottles sequentially).
- Soil and sediment samples are often split into two portions – one for field screening/logging, and one for (potential) laboratory analyses; to the extent practical, the sample portion for (potential) laboratory analyses should be immediately placed into laboratory-supplied containers appropriate for the intended/potential analytical requirements. Regardless, samples of soil potentially impacted by volatile or organic contaminants should be containerized immediately to minimize potential volatile loss.
- Samples collected for (potential) analyses of organic contaminants should not be subjected to extended contact with plastics.

Quality control measures are also required to ensure that a record of recovered samples, and the location from which they were obtained, is maintained. Specific requirements associated with sampling methods are defined in the SOP(s) applicable to those methods. General requirements for all work programs are described below:

- All recovered samples during a work program are to be assigned a sample identification that is unique during the work program, and sampling details – INCLUDING the time and date of sample collection – are to be recorded on field forms and/or in the field notes.
- In the case of soil or sediment samples, sample identifications are expected to be unique even over several work programs, including work programs that are completed by other parties. In some instances this may require advancing standard Terrapex sampling counts to address sampling identifications used or potentially used by third parties (e.g., if another consultant has already advanced boreholes identified as BH101 through BH110, the first round of Terrapex boreholes should begin at BH201, even though this is normally the count for the second round of Terrapex boreholes).
- In the case of water or groundwater samples, sample identifications are typically tied to a sampling location (e.g., a monitoring well identification), and it is quite common for several water samples (collected on different dates) to have been assigned a common identification. This is acceptable, provided that the date of sample collection is recorded in the field notes and included in work program documentation so as to create unique sample identification information.

Temporary Sample Storage

Temporary sample storage is required between the time of sample collection and the time of sample submission or when the sample is discarded. Quality control measures during temporary sample storage are primarily intended to mitigate the accidental introduction of a contaminant or the loss of a volatile constituent of the sample. Quality control measures are also required to maintain appropriate Chain of Custody of recovered samples.

- Samples must be labelled prior to being placed in temporary storage. Labelling must include the full sample identification, project number, and date of sample recovery on each container.
- Generally, samples are to be maintained in a cool environment, ideally 3 to 5ºC, and protected from direct exposure to sunlight (e.g., within a cooler with loose ice).
- Samples are not to be left unattended in a public space during storage. A public space includes any work site where access is not restricted by a fence or similar physical barrier to prevent unauthorized entry, even if the site is owned by a private corporation or individual.

Terrapex offices, locked vehicles, or work site trailers are not considered public spaces.

- Unpreserved samples submitted for laboratory analyses of VOCs / F1 PHCs and/or volatile gases should be received by the contract laboratory within 36 hours of sample collection (so as to permit the laboratory sufficient time to prepare sample extractions within regulated hold times). Samples submitted for all other analyses should be received by the contract laboratory within 72 hours of sample collection.

  Note that a sample collected using a hermetic sampling device (e.g., En Core sampler) is NOT considered to be preserved.

Sample Submission

Sample submission is the point at which Terrapex ceases to have custody of samples intended for laboratory analyses. This point may occur when the samples are released directly into the custody of the contract laboratory (i.e., hand delivered by Terrapex), or when the samples are released into the custody of a courier for delivery to the laboratory.

Quality control measures associated with sample submission are required to maintain sample integrity and appropriate Chain of Custody:

- Samples for submission are to be placed in an insulated packing container (e.g., a cooler) along with appropriate packing materials (e.g., bubble wrap) to mitigate breakage during transport to the contract laboratory. Do not overpack the cooler; distribute contents between coolers if needed to keep the mass of any cooler less than 20 kg.
- Seal each container tightly and place in sealed bags to prevent water from intruding into the sample and/or degrading the sample label. Group containers with the same sample ID within the same sealed bag. To the extent possible, place the bags into the cooler so that sampling containers sit upright.
- Loose ice is also to be placed in the cooler to assist in maintaining a cool internal temperature (ideally 3 to 5ºC).
- Sample submissions are to be accompanied by a completed Chain of Custody form. The Chain of Custody form is to be signed immediately before sealing the cooler, and placed inside the cooler within a sealed bag.
- Both the date and time of sample collection is to be recorded for each sample on the Chain of Custody form.
- If coolers are to be released into the custody of a party other than the contract laboratory (e.g., a courier), signed and dated custody seals must be placed on the cooler and secured in a manner that it is not possible to open the cooler without breaking one or more seals.

Sample submissions are also to be subjected to a quality assurance process involving a check of both the Chain of Custody and the cooler contents by a second person to ensure the Chain of

Custody is complete and consistent with the cooler contents. The second person shall record their quality assurance check by initialing the Chain of Custody form, ideally in the "Comments" section accompanied by a note indicating the purpose of the initials (e.g., "submission check by XX").

In instances where sample submission is happening directly from a field location at which a second Terrapex employee is not present, second person review should be completed via transmitted photographs or video conferencing. In such instances, the person who prepares the Chain of Custody should note the name of the remote reviewer, and the fact of the remote review, on the Chain of Custody form.

FIELD PROGRAM QUALITY ASSURANCE SAMPLES

Field Quality Assurance sample requirements for work programs are outlined below. These requirements are related to both the frequency of sample submissions (the number of samples submitted) as well as the duration of the field program.

The following terminology is used in defining sample requirements for this SOP:

- ***Field day*:** a work program to which this SOP applies that is completed in the space of a single calendar day.
- ***Sampling round:*** a work program to which this SOP applies that is completed over a period of one or more days, and which are associated with a single submission of samples to the contract laboratory. (Note that a single submission may constitute several coolers; "submission" refers to a batch of samples which are delivered to the laboratory at the same time.)
- ***Number of samples:*** for the purposes of this SOP, the number of samples for the work program comprises the sum of uniquely identified samples, excluding field program quality assurance samples, within each of the Analytical Program Groupings (refer to Table 1, below).

  For example, a work program involving the submission of three samples for VOC analyses with two of these three samples also submitted for analyses of metals would comprise a total of five samples, even though only three sample names might be listed on a chain of custody.

  The number of samples can be determined on both a field day and sampling round basis.

Table 1 Analytical Program Groupings, Quality Assurance Sampling and Analyses

Grouping	Analytical Protocol Section [1]	Notes
Acid/Base/Neutral Compounds (ABNs)	1.1.1	-
Chlorophenols	1.1.2	Not considered to be a separate grouping when analyses completed as part of ABN analyses
1,4-Dioxane	1.1.3	Not considered to be a separate grouping when analyses completed as part of ABN or VOC analyses
Dioxins/Furans, PCDDs/PCDFs	1.1.4	-
Organochlorine Pesticides	1.1.5	-
Petroleum Hydrocarbons (PHCs)	1.1.6	-
Polychlorinated Biphenyls (PCBs)	1.1.7	-
Polycyclic Aromatic Hydrocarbons	1.1.8	-
Trihalomethanes	1.1.9	Not considered to be a separate grouping when analyses completed as part of VOC analyses
Volatile Organic Compounds (VOCs)	1.1.10	-
Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)	1.1.11	Not considered to be a separate grouping when analyses completed as part of VOC analyses
Bromomethane	1.1.12	Not considered to be a separate grouping when analyses completed as part of VOC analyses
Calcium and Magnesium	1.2.1	-
Metals	1.2.2	-
Hydride-Forming Metals	1.2.3	Not considered to be a separate grouping when analyses completed as part of Metals analyses
Sodium	1.2.4	-
Other Regulated Parameters (ORPs)	1.3	Single parameter tests; each analysis is considered a separate grouping

1 *Protocol for Analytical Methods Used in the Assessment of Properties and Excess Soil Quality under Part XV.1 of the Environmental Protection Act*, Ministry of the Environment, Conservation and Parks (November 30, 2020)

Field Duplicates

A field duplicate is a second sample concurrently collected from the same location as another sample and submitted for duplicated analyses. Field duplicates provide information relating to:

- The ability of the contract laboratory to provide reproducible (i.e., similar or the same results) analytical results;
- The ability of Terrapex to consistently collect representative samples (as both the duplicate and its sampling pair are purportedly representative of the sampling location, similar results should be obtained); and,
- Homogeneity of the sampled media.

It is generally preferable to obtain field duplicate samples from sampling locations likely to generate quantified concentrations of the target parameters, as comparisons of quantified results is more informative than comparisons of non-detectable concentrations.

To mitigate potential bias in methodology, etc. at the contract laboratory, field duplicate samples should not be identified as field program quality assurance samples at the time of submission.

Field duplicate sampling requirements are provided in Table 2.

Field Blanks

Field blanks, whether they are accompanying soil, sediment, or groundwater samples, comprise a sample of analyte-free water prepared in the field and submitted for laboratory analyses as a measure of:

- The ability of the laboratory to avoid introducing concentrations of target parameters into analysed samples (i.e., potential analytical bias);
- The ability of Terrapex to avoid introducing concentrations of target parameters into recovered samples (e.g., cross contamination);
- Potential cross-contamination between samples during temporary storage and/or transportation to the contract laboratory; and,
- Potential cross-contamination between samples during temporary storage at the contract laboratory.

Analyte-free water for preparing field blanks should be obtained from the contract laboratory in bulk and transferred to appropriate sampling containers in the field. Ideally, a field blank sample should be prepared (or opened) adjacent to the “worst-case” sampling location. If this is impracticable, field blank samples should be prepared at another location in the field. Field blank

samples should not be prepared at the office or at the laboratory. The location at which a field blank sample was prepared should be recorded in the field notes.

To mitigate potential bias in methodology, etc., at the contract laboratory, field blank samples should not be identified as field program quality assurance samples at the time of submission. Consequently, because a field blank is by definition a water sample, field blanks are not normally part of soil sampling programs.

The exception to these general rules involves the use of methanol-preserved or sodium bisulphate solution-preserved soil samples for analyses of volatile organic constituents. Unused sampling containers precharged with preservative should be used as field blanks. The container(s) for the blank sample(s) should be opened, exposed to ambient atmosphere for approximately 30 seconds (the approximate time required to collect a soil sample into the sampling container), and re-sealed. It is not necessary, and not advisable, to attempt to transfer the preservative to another sampling container.

The “preparation” of the soil sample field blanks should be completed adjacent to the “worst-case” sampling location or condition; if this is impracticable, the activity should be completed at another location in the field at which bias of sampling results could have resulted. The location at which the soil sample field blank was prepared should be recorded in the field notes.

Field blank sampling requirements are provided in Table 2.

Trip Blanks

A trip blank is a sample prepared by the contract laboratory using analyte-free water and obtained by Terrapex immediately prior to the site visit. Trip blanks may also be prepared by the laboratory using methanol or sodium bisulphate solution for sampling programs involving soil samples for analyses of volatile organic constituents.

The trip blank sample accompanies Terrapex during the execution of the sampling activities and is not opened during this time. While in the possession of Terrapex, trip blanks are to be managed as if they were any other sample (e.g., maintained in a cool, dark environment as described above). At the conclusion of the sampling activities, the sample is submitted to the contract laboratory for analyses as a measure of:

- The ability of the laboratory to avoid introducing concentrations of target parameters into analysed samples;
- Potential cross-contamination between samples during temporary storage and/or transportation to the contract laboratory; and,
- Potential cross-contamination between samples during temporary storage at the contract laboratory.

As it is prepared by the contract laboratory, trip blanks will be received bearing a sampling label and associated sample identification. Reasonable efforts are to be made to limit the amount of time a trip blank sample is in possession of Terrapex (e.g., obtaining the sample is close to practicable to the start of sampling activities whilst ensuring it is in Terrapex's possession at the start). Regardless, the trip blank sample is to be received by the laboratory within seven days of the date/time of preparation listed on the sampling label.

Trip blank sampling requirements are provided in Table 2.

Equipment Blanks

An equipment blank is a sample prepared by exposing analyte-free water (supplied by the contract laboratory) to sampling equipment employed during the sampling activities (e.g., passing water through a bailer). Because the objectives of the equipment blank includes assessment of potential cross-contamination associated with the use of non-dedicated sampling equipment, non-dedicated equipment is to be washed in accordance with normal field procedures prior to preparing equipment blank samples.

Notwithstanding the objective of equipment blank samples, it should be noted that equipment blank laboratory results may also be affected by analytical bias or cross-contamination.

Equipment blanks should be prepared at the conclusion of the field day (as representative of "worst-case" cross-contamination potential when non-dedicated sampling equipment is used), as sampling is to commence in the apparent least impacted area and progress to areas of apparent increasing impact), and ideally in the field itself. The time and location of preparing each equipment blank sample is to be recorded in the field notes.

Equipment blank sampling requirements are provided in Table 2.

Trip Spikes

A trip spike is a sample prepared by the contract laboratory using water containing known concentrations of target parameters. The sample is obtained by Terrapex immediately prior to the site visit and accompanies Terrapex during the execution of the sampling activities, but is not opened. While in the possession of Terrapex, trip spikes are to be managed as if it were any other sample. At the conclusion of the sampling round, the sample is submitted to the contract laboratory for analyses.

Trip Spikes are primarily intended as measures of potential loss (low bias) in samples collected for volatile analysis, although results can also be affected by issues associated with laboratory analytical precision (e.g., laboratory equipment calibration) as well as potential cross-contamination between samples during temporary storage and/or transportation.

As it is prepared by the contract laboratory, trip spikes will be received bearing a sampling label and associated sample identification. Reasonable efforts are to be made to limit the amount of time a trip spike sample is in possession of Terrapex (e.g., obtaining the sample as close to practicable to the start of sampling activities whilst ensuring it is in Terrapex's possession at the start of the work program). Regardless, the trip spike sample is to be received by the laboratory within seven days of the date/time of preparation listed on the sampling label.

Trip spike sampling requirements are provided in Table 2.

Table 2 Field Program Quality Assurance Sampling Requirements

Sample Type	Media	Minimum Frequency	Comments
Field Duplicate [1]	Soil / Sediment	1 per 10 samples	Duplicates not required for TCLP extraction analyses
	Water / Groundwater	1 per 10 samples	
	Air / Soil Vapour	1 per 10 samples	
Field Blank [1]	Soil / Sediment	Generally not required [2]	A field blank is not required if a trip blank is being submitted (e.g., analyses of VOCs / F1 PHCs and/or volatile gases)
	Water / Groundwater	1 per sampling round	
	Air / Soil Vapour	1 per sampling round	
Trip Blank	Soil / Sediment	Generally not required [2]	Applicable only for analyses of VOCs / F1 PHCs and/or volatile gases
	Water / Groundwater	1 per sampling round (see comments)	
	Air / Soil Vapour	1 per sampling round (see comments)	
Equipment Blank [1]	Soil / Sediment	Generally not required [3]	Not required if only dedicated sampling equipment employed
	Water / Groundwater	1 per field day	
	Air / Soil Vapour	Not required	It is generally impracticable to attempt collection of equipment blanks during air or soil vapour sampling

Sample Type	Media	Minimum Frequency	Comments
Trip Spike	Soil / Sediment	Generally not required [4]	Applicable only for analyses of VOCs / F1 PHCs and/or volatile gases
	Water / Groundwater	Not required but 1 per sampling round recommended [5]	
	Air / Soil Vapour	Not required	Commercial laboratories are generally unable to provide reliable trip spike samples for air or soil vapour sampling

Notes:

1 To the extent practicable, at least one of each type of field program quality assurance sample should be submitted for the various analytical groupings that comprises the sampling program

2 A trip blank sample OR a field blank sample is required for each sampling round that includes methanol-preserved or sodium bisulphate solution-preserved soil samples for analyses of volatile constituents

3 Equipment blanks are not required if reasonable efforts are made to clean non-dedicated soil or sediment samplers between use (e.g., if split spoon samplers are washed between use, an equipment blank would not be required by this SOP). Otherwise, an equipment blank sample should be prepared by running laboratory-supplied analyte-free water over/through the equipment and collecting these waters for laboratory analyses of the target parameters.

4 Trip Spike samples are not required for soil or sediment analyses, as the laboratory-provided spikes are generally not provided in an equivalent media to the recovered samples (e.g., trip spike samples are generally water, and losses in a water sample may not be representative of the presence, absence, or magnitude of losses in hermetic samplers, methanol preserved samples, etc.)

5 Trip Spike samples are not required field program Quality Assurance elements per O. Reg. 153/04 and consequently are not mandatory per this SOP. However, as loss of volatile constituents during sample storage / transport to the analytical laboratory can significantly affect the reliability of analytical results, analyses of one trip per sampling round is recommended.

Nomenclature for Field Quality Assurance Samples

As a general practice, the contract laboratory should not be informed of the number or nature of field program quality assurance samples submitted as part of a sampling program unless the laboratory's assistance is required in investigating a potential data quality issue (e.g., in the event of a result triggering an alert criteria specified in Data Quality Analysis, below).

Notwithstanding this general principal, both trip blank and trip spike samples are typically prepared and provided by the contract laboratory. Accordingly, these samples will be assigned sample identifications by the laboratory, and the date/time of preparation will typically be recorded on the sampling label. Such samples should be recorded on the Chain of Custody form using the sample identification and date/time of preparation provided by the laboratory.

The remaining field program quality assurance samples (field duplicates, field blanks, and equipment blanks) should be submitted on a "blind" basis so that the laboratory ought to be reasonably unaware of the nature of the sample submission. That is, these samples should be assigned a plausible sampling identification that does not correspond to another actual or potential sampling location at the site, and the true nature of the sample identification recorded in the field notes. Selected sample identifications should not, for example, be identified as or include "DUP", "BLANK", or any other nomenclature suggesting that the sample represents a field program quality assurance measure.

This principal extends to field blanks prepared for methanol-preserved or sodium bisulphate solution-preserved soil samples for analyses of volatile constituents. Although field blanks may be readily identified as such at sample reception (through the lack of any soil within the sample container), the nature of such samples would not be readily apparent to other laboratory staff following laboratory extraction procedures. Accordingly, these samples should be assigned a plausible sampling identification that does not correspond to another actual or potential sampling location at the site, and the true nature of the sample identification recorded in the field notes.

LABORATORY QUALITY ASSURANCE

Commercial contract laboratories will have their own internal quality assurance and quality control programs. These programs typically include quality assurance samples in analytical runs, the results of which are provided (in summary form) in the Certificate of Analysis documenting analytical results for a sample submission.

Maintaining overall field program quality assurance and quality control and completing data quality analysis requires a review of the laboratory Certificate of Approval.

For the purposes of this SOP, laboratory quality assurance samples are defined as outlined below. Note that while this nomenclature had been adopted to reflect language typical in the commercial contract laboratory industry, it may not necessarily correlate exactly with that used in the laboratory Certificate of Analysis.

Method Blank: an aliquot prepared using analyte-free water and processed through the entire analytical method, including extracting, digestion, and other preparation procedures.

Blank Spike: an aliquot prepared using water containing known concentrations of target parameters and processed through the entire analytical method, including extracting, digestion, and other preparation procedures.

Matrix Spike: a second aliquot from an analytical sample that is fortified with known concentrations of the target parameters and processed through the entire analytical method, including extracting, digestion, and other preparation procedures. As quality assurance results

are assessed on the basis of comparison of the determined concentration versus the known concentrations, high concentrations of the target parameters in the fortified sample can obscure (mask) matrix spike recovery.

Laboratory Duplicate: a second aliquot from an analytical sample that is included in the analytical run for comparison to results from the corresponding sampling pair.

Certificate Reference Material (CRM): an aliquot that has been certified by a recognized agency to contain specific concentrations of target parameters and which is included in the analytical run. A CRM differs from a blank spike in that it is not prepared internally by the contract laboratory.

Surrogate Recovery: Surrogates are parameters not normally found in nature but that behave chemically and physically similar to the analytical run target parameters, and that are introduced into the aliquot of an analytical sample. Surrogate recovery is the evaluation of the determined concentration of the surrogate versus the known concentration introduced into the sample aliquot.

DATA QUALITY OBJECTIVES

Alert criteria for quality assurance and quality control metrics are summarized in Table 3. Any result triggering the specified alert criteria must be identified in the work program report, and specific commentary regarding the implication of this result on the work program findings (if any) offered.

Note that triggering an alert criteria does not mean that the corresponding laboratory results are invalid; it only indicates a situation where specific commentary regarding the validity of the laboratory results is required in the work program report.

Quality assurance samples involving comparisons of actual results to expected results are evaluated on the basis of ***Recovery***, or recovery percentage. Note that Recovery does not necessarily relate to the ability to provide consistent (similar) quantitations between successive analyses.

Recovery is calculated as follows:

$$Recovery = \frac{reported\ \ concentration}{actual\ \ (expected) concentration}\ \ x\ \ 100\%$$

Quality assurance samples involving comparisons of 'duplicate' analysis are evaluated on the basis of ***Relative Percent Difference (RPD)***. RPD provides a measure of the ability to provide consistent results on successive analyses, but does not necessarily relate to the ability to provide

results that are representative of the actual concentration of the target parameter (e.g., the expected result when comparing against a known standard).

RPD is calculated as follows:

$$RPD = \left| \frac{result_1 - result_2}{\frac{1}{2} \; x \; (result_1 + \; result_2)} \right| \; x \; 100\%$$

RPD values should not be calculated where one or both of the results do not yield quantifiable results (i.e., non-detect findings), or where one or both of the results are less than five times the reported detection limits. RPD values should not be calculated for parameters which are based on calculations using raw data (e.g., sodium adsorption ratio, total xylenes); instead, where applicable, RPD values should be calculated for the 'raw' data (e.g., the m&p-xylenes, o-xylenes parameters).

Note that the mere absence of a calculated RPD is not considered a quality assurance failure, but simply a situation where alert criteria cannot be quantifiably evaluated. Similarly, the absence of a RPD value is not necessarily considered to be an acceptable field quality assurance result (e.g., a non-detect result in a duplicate sample but an elevated concentrations reported for the corresponding sampling pair is suggestive of a potentially significant variance is sampling results, and may warrant commentary in the work program report).

Table 3 Field Program Data Quality Objectives

Field QC Metric	Alert Criteria
Sample integrity	Deviation from this SOP recorded within field notes Significant variance in field screening results (if applicable) recorded within field notes between duplicate samples Laboratory reports average sample temperature at time of receipt greater than 10ºC Incorrect sampling container employed Broken or leaking sampling container reported by laboratory Excessive particulate within received water sample reported by laboratory
Sample identification integrity	Laboratory reports discrepancy between samples reported on Chain of Custody and those actually received (as per sampling container labels) Laboratory reports unlabelled sample received (no sample identification apparent)
Chain of Custody integrity	Laboratory reports missing/damaged custody seal Laboratory reports missing Chain of Custody form Date/time of sample recovery not recorded on Chain of Custody form

Table 3 Field Program Data Quality Objectives

Sample storage (hold time) integrity	Sample for analysis of VOC / F1 PHCs and/or volatile gases received by laboratory more than 36 hours after recorded sample collection Sample for analysis other than VOC / F1 PHCs and volatile gases received by laboratory more than 72 hours after recorded sample collection		
Laboratory QA Metric	**Alert Criteria**		
	Analytical Grouping	**Soil / Sediment**	**Air / Soil Vapour / Water / Groundwater**
Method Blank	ALL	Any concentration in excess of laboratory detection limits	
Blank Spike, Matrix Spike		*results outside:*	*results outside:*
	BNAs, PAHs	50% - 140% Recovery [1]	50% - 140% Recovery [1]
	1,4-Dioxane	50% - 140% Recovery	50% - 140% Recovery
	Dioxins/Furans	50% - 150% Recovery	50% - 150% Recovery
	OC Pesticides	50% - 140% Recovery	50% - 140% Recovery
	PCBs	60% - 140% Recovery	60% - 140% Recovery
	PHCs	60% - 140% Recovery	60% - 140% Recovery
	VOCs	50% - 140% Recovery	50% - 140% Recovery
	Hg, Cr^{6+}, CN^-	70% - 130% Recovery	70% - 130% Recovery
	EC	n/a	n/a
	FOC, Chloride	70% - 130% Recovery	70% - 130% Recovery
	Methyl mercury	60% - 140% Recovery	60% - 140% Recovery
	Metals *(incl. B, HWS B, Ca, Mg, Na)*	70% - 130% Recovery [2]	70% - 130% Recovery [2]
Laboratory Duplicate	BNAs, PAHs	> 40% RPD	> 30% RPD
	1,4-Dioxane	> 50% RPD	> 30% RPD
	Dioxins/Furans	> 40% RPD	> 30% RPD
	OC Pesticides	> 40% RPD	> 30% RPD
	PCBs	> 40% RPD	> 30% RPD
	PHCs	> 30% RPD	> 30% RPD
	VOCs	> 50% RPD	> 30% RPD
	Hg, Cr^{6+}, CN^-	> 35% RPD	> 20% RPD
	EC	> 10% RPD	n/a
	FOC, Chloride	> 35% RPD	> 20% RPD
	Methyl mercury	> 30% RPD	> 20% RPD
	Metals *(incl. B, HWS B, Ca, Mg, Na)*	> 30% RPD [4,5]	> 20% RPD
	pH	[3]	[3]

Table 3 Field Program Data Quality Objectives

Certified Reference Material, Laboratory Control Sample		*results outside:*	*results outside:*
	BNAs, PAHs	50% - 140% Recovery [1]	50% - 140% Recovery [1]
	1,4-Dioxane	50% - 140% Recovery	50% - 140% Recovery
	Dioxins/Furans	50% - 150% Recovery	50% - 150% Recovery
	OC Pesticides	50% - 140% Recovery	50% - 140% Recovery
	PCBs	60% - 140% Recovery	60% - 140% Recovery
	PHCs	80% - 120% Recovery	60% - 140% Recovery
	VOCs	60% - 140% Recovery	60% - 140% Recovery
	Hg, Cr^{6+}, CN^-	80% - 120% Recovery	80% - 120% Recovery
	EC	90% - 110% Recovery	90% - 110% Recovery
	FOC, Chloride	70% - 130% Recovery	70% - 130% Recovery
	Methyl mercury	70% - 130% Recovery	70% - 130% Recovery
	Metals *(incl. B, HWS B, Ca, Mg, Na)*	80% - 120% Recovery [6]	80% - 120% Recovery [6]
Surrogate Recovery		*results outside:*	*results outside:*
	BNAs, PAHs	50% - 140% Recovery	50% - 140% Recovery
	1,4-Dioxane	50% - 140% Recovery	50% - 140% Recovery
	Dioxins/Furans	40% - 140% Recovery	40% - 140% Recovery
	OC Pesticides	50% - 140% Recovery	50% - 140% Recovery
	PCBs	60% - 140% Recovery	60% - 140% Recovery
	PHCs	60% - 140% Recovery	60% - 140% Recovery
	VOCs	50% - 140% Recovery	50% - 140% Recovery
Field Program QA Metric	**Alert Criteria**		
	Analytical Grouping	**Soil / Sediment**	**Air / Soil Vapour / Water / Groundwater**
Field Duplicate	pH	[3]	[3]
	BNAs, PAHs	> 40% RPD [1,4]	>30% RPD [1]
	1,4-Dioxane	> 50% RPD	> 30% RPD
	Dioxins/Furans	> 40% RPD	> 30% RPD
	OC Pesticides	> 40% RPD	> 30% RPD
	PCBs	> 40% RPD	> 30% RPD
	PHCs	> 30% RPD	> 30% RPD
	VOCs	> 50% RPD	> 30% RPD
	Hg, Cr^{6+}, CN^-	> 35% RPD	> 20% RPD
	EC	> 10% RPD	n/a
	FOC, Chloride	> 35% RPD	> 20% RPD
	Methyl mercury	> 30% RPD	> 20% RPD
	Metals *(incl. B, HWS B, Ca, Mg, Na)*	> 30% RPD [4,5]	> 20% RPD
Field Blank	ALL	Any concentration in excess of laboratory detection limits	

Table 3 Field Program Data Quality Objectives

Trip Blank	VOCs / F1 PHCs Volatile Gases	Any concentration in excess of laboratory detection limits
Equipment Blank	ALL	Any concentration in excess of laboratory detection limits
Trip Spike		*results outside:*
	F1 PHC	60% -140% Recovery
	Ketones and Gaseous Compounds at 20°C [7]	60% - 140% Recovery
	Other VOCs	70% - 130% Recovery

Source: adapted from Tables 5-1 through 5-14, Analytical Protocol (November 30, 2020)

Notes:

1 *Alert Criteria for p-chloroaniline, 3,3-dichlorobenzidene, phenol, 2,4-dimethylphenol, and 2,4-dinitrophenol is 30% - 130%*

2 *Alert Criteria for Hot Water Soluble Boron is 60% - 140% Recovery*

3 *RPD values are not calculated for pH analyses; however, results should be within 0.3 pH units*

4 *Increased RPD values may be encountered whenever duplicate analyses are completed on samples representing heterogeneous fill materials. Specific commentary regarding the validity of analytical results should be offered whenever the specified alert criteria is exceeded; however, significant concerns regarding the validity of analytical results would generally not be suspected if calculated RPD do not exceed the specified alert criteria more than a factor of 2.*

5 *Alert Criteria for Hot Water Soluble Boron is >40% RPD*

6 *Alert Criteria for Hot Water Soluble Boron is 70% - 130% Recovery*

7 *In a standard VOC list, this includes acetone, dichlorodifluoromethane, 1,4-dioxane, methyl ethyl ketone, methyl isobutyl ketone, 1,1,1,2-tetrachloroethane, and vinyl chloride*

APPENDIX V
BOREHOLE LOGS

CLIENT: AVENYN CAPITAL PARTNERS LP II	PROJECT NO.: CO892.02	**RECORD OF: MW101**
ADDRESS: 1591 & 1611 MICHAEL STREET		
CITY/PROVINCE: OTTAWA, ONTARIO	NORTHING (m): 0451071	EASTING (m): 5028745 ELEV. (m) 71.07
CONTRACTOR: STRATA	METHOD: GEOPROBE 78220T	
BOREHOLE DIAMETER (cm): 15	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: #2 SEALANT TYPE: BENTONITE

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) ● 40 80 120 160 / N-VALUE (Blows/300mm) ▲ 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		ASPHALT	0	71									
		GRAVEL											
		dry, brown SANDY SILT, COBBLES, GRAVEL	0.5	70.5			1			<5 ppm			
		moist, brownish black SILTY SAND	1	70			2			<5 ppm	M+I PAH		GW ELEVATION: 70.26m
			1.5	69.5									
			2	69			3			<5 ppm	VOC, BTEX, F1-F4		
		moist, grey/ black SILTY SAND trace gravel	2.5	68.5			4			<5 ppm	pH		
			3	68									
			3.5	67.5			5			<5 ppm			
			4	67			6			<5 ppm			
		moist, grey WEATHERED SHALE, SILTY SAND	4.5	66.5			7			<5 ppm			
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: SP	DRILLING DATE: 19-JUL-23
INPUT BY: AB/SW	MONITORING DATE: 24-JUL-23
REVIEWED BY: CB	PAGE 1 OF 1

CLIENT: AVENYN CAPITAL PARTNERS LP II		PROJECT NO.: CO892.02	**RECORD OF: MW102**
ADDRESS: 1591 & 1611 MICHAEL STREET			
CITY/PROVINCE: OTTAWA, ONTARIO	NORTHING (m): 0451138	EASTING (m): 5028781	ELEV. (m) 70.87
CONTRACTOR: STRATA	METHOD: GEOPROBE 78220T		
BOREHOLE DIAMETER (cm): 15	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10	SAND TYPE: #2	SEALANT TYPE: BENTONITE

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) ● 40 80 120 160 / N-VALUE (Blows/300mm) ▲ 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		GRAVEL	0	70.5			1			<5 ppm			
		moist, brown SILTY SAND trace gravel and organics	0.5										
			1	70			2			<5 ppm	M+I PAH		GW ELEVATION: 69.89m
		moist to wet SILTY SAND	1.5	69.5									
			2	69			3			<5 ppm	VOC, BTEX, F1-F4		
		wet, grey SILTY SAND	2.5	68.5									
			3	68			4			<5 ppm			
			3.5	67.5			5			<5 ppm			
			4	67									
			4.5	66.5			6			<5 ppm			
			5	66			7			<5			
							8			<5			
		END OF BOREHOLE											

TERRAPEX

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CLIENT: AVENYN CAPITAL PARTNERS LP II	PROJECT NO.: CO892.02	**RECORD OF: MW103**
ADDRESS: 1591 & 1611 MICHAEL STREET		
CITY/PROVINCE: OTTAWA, ONTARIO	NORTHING (m): 0451039	EASTING (m): 5028819 ELEV. (m) 70.76
CONTRACTOR: STRATA	METHOD: GEOPROBE 78220T	
BOREHOLE DIAMETER (cm): 15	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: #2 SEALANT TYPE: BENTONITE

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) 40 80 120 160 / N-VALUE (Blows/300mm) 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		GRASS, TOPSOIL	-0.5	71									
		wet, brown SANDY SILT trace organics	0										
		wet, brown SANDY SILT	0.5	70.5			1			<5 ppm			
			1	70			2			<5 ppm	pH		
		moist, brown SILTY SAND	1.5	69.5									GW ELEVATION: 69.12
			2	69			3			<5 ppm	M+I PAH		
		wet, brown SILTY SAND	2.5	68.5									
			3	68			4			<5 ppm	VOC, BTEX, F1-F4		
			3.5	67.5			5			<5 ppm			
		wet, grey SILTY SAND trace cobbles	4	67									
			4.5	66.5			6			<5 ppm			
		END OF BOREHOLE											

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CLIENT: AVENYN CAPITAL PARTNERS LP II	PROJECT NO.: CO892.02	**RECORD OF: MW104**
ADDRESS: 1591 & 1611 MICHAEL STREET		
CITY/PROVINCE: OTTAWA, ONTARIO	NORTHING (m): 0451124	EASTING (m): 5028838 ELEV. (m) 70.02
CONTRACTOR: STRATA	METHOD: GEOPROBE 78220T	
BOREHOLE DIAMETER (cm): 15	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: #2 SEALANT TYPE: BENTONITE

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) ● 40 80 120 160 / N-VALUE (Blows/300mm) ▲ 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		GRASS, TOPSOIL	-0.5	70.5									
		moist, grey to black SANDY SILT trace organic & cobbles	0	70			1			<5 ppm			
		moist, brown SANDY SILT trace cobbles	0.5	69.5									
			1	69			2			<5 ppm			GW ELEVATION: 69.26m
		wet, brown SILTY SAND	1.5	68.5									
			2	68			3			<5 ppm	M+I PAH		
			2.5	67.5									
		wet, grey SILTY SAND	3	67			4			<5 ppm	VOC, PAH		
			3.5	66.5			5			<5 ppm			
			4	66			6			<5 ppm			
			4.5	65.5									
		END OF BOREHOLE											

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CLIENT: AVENYN CAPITAL PARTNERS LP II	PROJECT NO.: CO892.02	**RECORD OF: BH105**
ADDRESS: 1591 & 1611 MICHAEL STREET		
CITY/PROVINCE: OTTAWA, ONTARIO	NORTHING (m): 0451109	EASTING (m): 5028749 / ELEV. (m) -
CONTRACTOR: STRATA	METHOD: GEOPROBE 78220T	
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm):	SCREEN SLOT #: / SAND TYPE: / SEALANT TYPE:

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) ● 40 80 120 160 / N-VALUE (Blows/300mm) ▲ 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		moist, grey COBBLES trace organics	0				1			<5 ppm			
		moist, grey & brown SANDY SILT trace cobbles	0.5										
		moist to wet, brown SILTY SAND	1				2			<5 ppm	M+I, PAH		
			1.5										
			2				3			<5 ppm	BTEX, F1-F4		
		moist, grey SILTY SAND trace cobbles	2.5				4			<5 ppm			
			3										
			3.5				5			<5 ppm			
			4				6			<5 ppm			
			4.5										
			5				7			<5 ppm			
			5.5				8			<5 ppm			
		END OF BOREHOLE											

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APPENDIX VI
LABORATORY CERTIFICATES OF ANALYSIS

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
20 GURDWARA ROAD, UNIT 1
OTTAWA, ON K2E 8B3
613 745 6471

ATTENTION TO: Craig Beaton

PROJECT: CO892.02

AGAT WORK ORDER: 23Z049826

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Aug 15, 2023

PAGES (INCLUDING COVER): 42

VERSION*: 2

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*Notes

VERSION 2: V2 issued 2023-08-15. Includes lead re-analysis by client request. Supersedes previous version. (LB)

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 23Z049826

PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO

SAMPLED BY:SP

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2023-07-21

DATE REPORTED: 2023-08-15

SAMPLE DESCRIPTION:				MW101-2	MW102-2	MW103-3	MW104-2	BH105-2	BH105-21
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2023-07-19 10:40	2023-07-19 11:20	2023-07-19 12:20	2023-07-19 13:00	2023-07-19 14:25	2023-07-19 14:30
Parameter	Unit	G / S	RDL	5160040	5160046	5160056	5160058	5160063	5160067
Antimony	µg/g		0.8	<0.8	<0.8	<0.8	7.1	<0.8	<0.8
Arsenic	µg/g		1	3	4	1	4	4	4
Barium	µg/g		2.0	67.8	75.3	50.9	205	53.5	59.9
Beryllium	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	µg/g		5	11	10	<5	8	7	8
Boron (Hot Water Soluble)	µg/g		0.10	<0.10	<0.10	<0.10	0.36	<0.10	<0.10
Cadmium	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g		5	19	22	19	33	16	16
Cobalt	µg/g		0.8	9.6	11.5	4.5	9.2	8.7	9.8
Copper	µg/g		1.0	18.4	23.4	9.2	23.1	29.6	20.9
Lead	µg/g		1	7	9	2	127	6	7
Molybdenum	µg/g		0.5	1.7	2.2	<0.5	2.0	1.1	1.5
Nickel	µg/g		1	23	27	12	23	19	24
Selenium	µg/g		0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g		0.50	0.84	0.91	<0.50	1.05	0.80	0.85
Vanadium	µg/g		2.0	33.7	37.4	22.4	42.0	30.5	31.9
Zinc	µg/g		5	35	58	21	114	33	34
Chromium, Hexavalent	µg/g		0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g		0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm		0.005	0.199	0.143	0.136	0.239	0.155	0.143
Sodium Adsorption Ratio (2:1) (Calc.)	N/A		N/A	0.411	0.438	0.956	0.630	0.438	0.590
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.15	7.18	6.81	7.08	7.19	7.26

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 23Z049826
PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO
SAMPLED BY:SP

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2023-07-21
DATE REPORTED: 2023-08-15

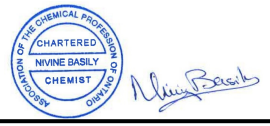
Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5160040 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

5160056-5160067 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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AGAT WORK ORDER: 23Z049826
PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO

SAMPLED BY:SP

O. Reg. 153(511) - Metals (Including Hydrides) (Soil) - Lead Re-analysis

DATE RECEIVED: 2023-07-21

DATE REPORTED: 2023-08-15

				SAMPLE DESCRIPTION:	MW104-2
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2023-07-19 13:00
Parameter	Unit	G / S	RDL	5160058	
Lead	µg/g		1	109	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Toronto (unless marked by *)

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AGAT WORK ORDER: 23Z049826

PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO

SAMPLED BY:SP

O. Reg. 153(511) - ORPs (Soil)

DATE RECEIVED: 2023-07-21

DATE REPORTED: 2023-08-15

				SAMPLE DESCRIPTION:	MW101-4	MW103-2
				SAMPLE TYPE:	Soil	Soil
				DATE SAMPLED:	2023-07-19 10:49	2023-07-19 12:15
Parameter	Unit	G / S	RDL		5160043	5160055
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA		7.22	6.94

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Industrial/Commercial/Community Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5160043-5160055 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis performed at AGAT Toronto (unless marked by *)

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AGAT WORK ORDER: 23Z049826
PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO

SAMPLED BY:SP

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2023-07-21

DATE REPORTED: 2023-08-15

				SAMPLE DESCRIPTION:	MW101-2	MW102-2	MW103-3	MW104-3	MW104-31	BH105-2
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2023-07-19 10:40	2023-07-19 11:20	2023-07-19 12:20	2023-07-19 13:05	2023-07-19 13:05	2023-07-19 14:25
Parameter	Unit	G / S	RDL		5160040	5160046	5160056	5160060	5160062	5160063
Naphthalene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1 and 2 Methlynaphthalene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1		9.0	11.3	12.7	9.5	13.1	10.8
Surrogate	Unit	Acceptable Limits								
Naphthalene-d8	%	50-140			105	100	90	100	75	80
Acridine-d9	%	50-140			70	90	90	90	95	90
Terphenyl-d14	%	50-140			85	90	90	70	115	105

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5160040-5160063 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

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Certificate of Analysis

AGAT WORK ORDER: 23Z049826
PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO

SAMPLED BY:SP

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2023-07-21

DATE REPORTED: 2023-08-15

				SAMPLE DESCRIPTION:	MW104-3	MW104-31
				SAMPLE TYPE:	Soil	Soil
				DATE SAMPLED:	2023-07-19 13:05	2023-07-19 13:05
Parameter	Unit	G / S	RDL		5160060	5160062
F1 (C6 - C10)	µg/g		5		<5	<5
F1 (C6 to C10) minus BTEX	µg/g		5		<5	<5
F2 (C10 to C16)	µg/g		10		<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10		<10	<10
F3 (C16 to C34)	µg/g		50		<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50		<50	<50
F4 (C34 to C50)	µg/g		50		<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50		NA	NA
Moisture Content	%		0.1		9.5	13.1
Surrogate	Unit	Acceptable Limits				
Toluene-d8	%	50-140			100	96
Terphenyl	%	60-140			73	65

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5160060-5160062 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 23Z049826
PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO

SAMPLED BY:SP

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

DATE RECEIVED: 2023-07-21

DATE REPORTED: 2023-08-15

SAMPLE DESCRIPTION:				MW101-3	MW102-3	MW103-4	BH105-3
SAMPLE TYPE:				Soil	Soil	Soil	Soil
DATE SAMPLED:				2023-07-19 10:45	2023-07-19 11:25	2023-07-19 12:25	2023-07-19 14:30
Parameter	Unit	G / S	RDL	5160041	5160048	5160057	5160064
F1 (C6 - C10)	µg/g		5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g		5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g		10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g		50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g		50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA	NA	NA
Moisture Content	%		0.1	10.33	10.33	10.33	10.33
Surrogate	Unit	Acceptable Limits					
Toluene-d8	%	50-140		95	99	94	96
Terphenyl	%	60-140		89	80	86	69

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5160041-5160064 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: 

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z049826

PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO

SAMPLED BY:SP

O. Reg. 153(511) - VOCs (MEOH)

DATE RECEIVED: 2023-07-21

DATE REPORTED: 2023-08-15

		SAMPLE DESCRIPTION:		Trip Blank
		SAMPLE TYPE:		MeOH
		DATE SAMPLED:		2023-07-19 14:30
Parameter	Unit	G / S	RDL	5160065
Dichlorodifluoromethane	µg/g		0.05	<0.05
Vinyl Chloride	ug/g		0.02	<0.02
Bromomethane	ug/g		0.05	<0.05
Trichlorofluoromethane	ug/g		0.05	<0.05
Acetone	ug/g		0.50	<0.50
1,1-Dichloroethylene	ug/g		0.05	<0.05
Methylene Chloride	ug/g		0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g		0.05	<0.05
Methyl tert-butyl Ether	ug/g		0.05	<0.05
1,1-Dichloroethane	ug/g		0.02	<0.02
Methyl Ethyl Ketone	ug/g		0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g		0.02	<0.02
Chloroform	ug/g		0.04	<0.04
1,2-Dichloroethane	ug/g		0.03	<0.03
1,1,1-Trichloroethane	ug/g		0.05	<0.05
Carbon Tetrachloride	ug/g		0.05	<0.05
Benzene	ug/g		0.02	<0.02
1,2-Dichloropropane	ug/g		0.03	<0.03
Trichloroethylene	ug/g		0.03	<0.03
Bromodichloromethane	ug/g		0.05	<0.05
Methyl Isobutyl Ketone	ug/g		0.50	<0.50
1,1,2-Trichloroethane	ug/g		0.04	<0.04
Toluene	ug/g		0.05	<0.05
Dibromochloromethane	ug/g		0.05	<0.05
Ethylene Dibromide	ug/g		0.04	<0.04
Tetrachloroethylene	ug/g		0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g		0.04	<0.04
Chlorobenzene	ug/g		0.05	<0.05
Ethylbenzene	ug/g		0.05	<0.05

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 23Z049826

PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO

SAMPLED BY:SP

O. Reg. 153(511) - VOCs (MEOH)

DATE RECEIVED: 2023-07-21

DATE REPORTED: 2023-08-15

				SAMPLE DESCRIPTION:	Trip Blank
				SAMPLE TYPE:	MeOH
				DATE SAMPLED:	2023-07-19 14:30
Parameter	Unit	G / S	RDL	5160065	
m & p-Xylene	ug/g		0.05	<0.05	
Bromoform	ug/g		0.05	<0.05	
Styrene	ug/g		0.05	<0.05	
1,1,2,2-Tetrachloroethane	ug/g		0.05	<0.05	
o-Xylene	ug/g		0.05	<0.05	
1,3-Dichlorobenzene	ug/g		0.05	<0.05	
1,4-Dichlorobenzene	ug/g		0.05	<0.05	
1,2-Dichlorobenzene	ug/g		0.05	<0.05	
Xylenes (Total)	ug/g		0.05	<0.05	
1,3-Dichloropropene (Cis + Trans)	µg/g		0.04	<0.04	
n-Hexane	µg/g		0.05	<0.05	
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140		94	
4-Bromofluorobenzene	% Recovery	50-140		79	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5160065 A small amount of methanol extract was diluted in water and analyzed by purge & trap GC/MS.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popnikolof

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AGAT WORK ORDER: 23Z049826
PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
ATTENTION TO: Craig Beaton
SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO
SAMPLED BY:SP

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-07-21
DATE REPORTED: 2023-08-15

SAMPLE DESCRIPTION:				MW101-3	MW102-3	MW103-4	MW104-3	MW104-31	BH105-3
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2023-07-19 10:45	2023-07-19 11:25	2023-07-19 12:25	2023-07-19 13:05	2023-07-19 13:05	2023-07-19 14:30
Parameter	Unit	G / S	RDL	5160041	5160048	5160057	5160060	5160062	5160064
Dichlorodifluoromethane	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g		0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g		0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g		0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 23Z049826

PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO

SAMPLED BY:SP

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-07-21

DATE REPORTED: 2023-08-15

SAMPLE DESCRIPTION:				MW101-3	MW102-3	MW103-4	MW104-3	MW104-31	BH105-3
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2023-07-19 10:45	2023-07-19 11:25	2023-07-19 12:25	2023-07-19 13:05	2023-07-19 13:05	2023-07-19 14:30
Parameter	Unit	G / S	RDL	5160041	5160048	5160057	5160060	5160062	5160064
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	10.2	11.4	12.3	9.5	13.1	12.1
Surrogate	Unit	Acceptable Limits							
Toluene-d8	% Recovery	50-140		95	99	94	100	96	96
4-Bromofluorobenzene	% Recovery	50-140		85	90	83	87	87	82

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5160041-5160064 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

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Quality Assurance

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AGAT WORK ORDER: 23Z049826
PROJECT: CO892.02
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SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO
SAMPLED BY:SP

Soil Analysis

RPT Date: Aug 15, 2023			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. 153(511) - Metals & Inorganics (Soil)															
Antimony	5160040	5160040	<0.8	<0.8	NA	< 0.8	126%	70%	130%	100%	80%	120%	93%	70%	130%
Arsenic	5160040	5160040	3	3	NA	< 1	105%	70%	130%	100%	80%	120%	114%	70%	130%
Barium	5160040	5160040	67.8	67.3	0.7%	< 2.0	95%	70%	130%	100%	80%	120%	114%	70%	130%
Beryllium	5160040	5160040	<0.5	<0.5	NA	< 0.5	84%	70%	130%	95%	80%	120%	111%	70%	130%
Boron	5160040	5160040	11	11	NA	< 5	100%	70%	130%	114%	80%	120%	125%	70%	130%
Boron (Hot Water Soluble)	5160944		<0.10	<0.10	NA	< 0.10	87%	60%	140%	104%	70%	130%	104%	60%	140%
Cadmium	5160040	5160040	<0.5	<0.5	NA	< 0.5	103%	70%	130%	101%	80%	120%	113%	70%	130%
Chromium	5160040	5160040	19	20	NA	< 5	103%	70%	130%	102%	80%	120%	119%	70%	130%
Cobalt	5160040	5160040	9.6	9.1	5.3%	< 0.8	94%	70%	130%	98%	80%	120%	107%	70%	130%
Copper	5160040	5160040	18.4	18.3	0.5%	< 1.0	82%	70%	130%	102%	80%	120%	107%	70%	130%
Lead	5160040	5160040	7	7	0.0%	< 1	96%	70%	130%	100%	80%	120%	105%	70%	130%
Molybdenum	5160040	5160040	1.7	1.6	NA	< 0.5	106%	70%	130%	108%	80%	120%	126%	70%	130%
Nickel	5160040	5160040	23	23	0.0%	< 1	95%	70%	130%	102%	80%	120%	111%	70%	130%
Selenium	5160040	5160040	<0.8	<0.8	NA	< 0.8	126%	70%	130%	99%	80%	120%	114%	70%	130%
Silver	5160040	5160040	<0.5	<0.5	NA	< 0.5	115%	70%	130%	118%	80%	120%	110%	70%	130%
Thallium	5160040	5160040	<0.5	<0.5	NA	< 0.5	117%	70%	130%	108%	80%	120%	116%	70%	130%
Uranium	5160040	5160040	0.84	0.84	NA	< 0.50	124%	70%	130%	106%	80%	120%	121%	70%	130%
Vanadium	5160040	5160040	33.7	34.4	2.1%	< 2.0	114%	70%	130%	102%	80%	120%	119%	70%	130%
Zinc	5160040	5160040	35	32	9.0%	< 5	99%	70%	130%	101%	80%	120%	121%	70%	130%
Chromium, Hexavalent	5160046	5160046	<0.2	<0.2	NA	< 0.2	106%	70%	130%	93%	80%	120%	88%	70%	130%
Cyanide, WAD	5160067	5160067	<0.040	<0.040	NA	< 0.040	103%	70%	130%	107%	80%	120%	96%	70%	130%
Mercury	5160040	5160040	<0.10	<0.10	NA	< 0.10	109%	70%	130%	110%	80%	120%	103%	70%	130%
Electrical Conductivity (2:1)	5160040	5160040	0.199	0.188	5.7%	< 0.005	91%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	5159900		2.38	2.35	1.3%	NA									
pH, 2:1 CaCl2 Extraction	5159779		6.63	6.90	4.0%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

O. Reg. 153(511) - ORPs (Soil)															
pH, 2:1 CaCl2 Extraction	5159779		6.63	6.90	4.0%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

Duplicate NA: results are under 5X the RDL and will not be calculated.

O. Reg. 153(511) - Metals & Inorganics (Soil)															
Boron (Hot Water Soluble)	5159900		0.26	0.26	NA	< 0.10	88%	60%	140%	102%	70%	130%	112%	60%	140%

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Quality Assurance

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
AGAT WORK ORDER: 23Z049826
PROJECT: CO892.02
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SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO
SAMPLED BY:SP

Soil Analysis (Continued)

RPT Date: Aug 15, 2023			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. 153(511) - Metals (Including Hydrides) (Soil) - Lead Re-analysis															
Lead	5160058	5160058	109	110	1.7%	< 1	111%	70%	130%	101%	80%	120%	103%	70%	130%

Comments: NA signifies Not Applicable.

Duplicate NA: results are under 5X the RDL and will not be calculated.

Comments: NA Signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

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SAMPLED BY:SP

Trace Organics Analysis

RPT Date: Aug 15, 2023			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. 153(511) - PAHs (Soil)															
Naphthalene	5159011		<0.05	<0.05	NA	< 0.05	107%	50%	140%	83%	50%	140%	70%	50%	140%
Acenaphthylene	5159011		<0.05	<0.05	NA	< 0.05	117%	50%	140%	90%	50%	140%	85%	50%	140%
Acenaphthene	5159011		<0.05	<0.05	NA	< 0.05	117%	50%	140%	75%	50%	140%	80%	50%	140%
Fluorene	5159011		<0.05	<0.05	NA	< 0.05	108%	50%	140%	95%	50%	140%	80%	50%	140%
Phenanthrene	5159011		0.10	0.14	NA	< 0.05	103%	50%	140%	75%	50%	140%	96%	50%	140%
Anthracene	5159011		<0.05	<0.05	NA	< 0.05	99%	50%	140%	83%	50%	140%	75%	50%	140%
Fluoranthene	5159011		0.13	0.17	NA	< 0.05	100%	50%	140%	75%	50%	140%	81%	50%	140%
Pyrene	5159011		0.10	0.14	NA	< 0.05	110%	50%	140%	90%	50%	140%	88%	50%	140%
Benz(a)anthracene	5159011		<0.05	0.06	NA	< 0.05	107%	50%	140%	78%	50%	140%	90%	50%	140%
Chrysene	5159011		<0.05	<0.05	NA	< 0.05	105%	50%	140%	95%	50%	140%	88%	50%	140%
Benzo(b)fluoranthene	5159011		0.06	<0.05	NA	< 0.05	112%	50%	140%	105%	50%	140%	96%	50%	140%
Benzo(k)fluoranthene	5159011		<0.05	<0.05	NA	< 0.05	96%	50%	140%	85%	50%	140%	88%	50%	140%
Benzo(a)pyrene	5159011		<0.05	<0.05	NA	< 0.05	105%	50%	140%	80%	50%	140%	95%	50%	140%
Indeno(1,2,3-cd)pyrene	5159011		<0.05	<0.05	NA	< 0.05	111%	50%	140%	73%	50%	140%	95%	50%	140%
Dibenz(a,h)anthracene	5159011		<0.05	<0.05	NA	< 0.05	105%	50%	140%	98%	50%	140%	105%	50%	140%
Benzo(g,h,i)perylene	5159011		<0.05	<0.05	NA	< 0.05	101%	50%	140%	78%	50%	140%	90%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)															
F1 (C6 - C10)	5159704		NA	NA	NA	< 5	80%	60%	140%	102%	60%	140%	81%	60%	140%
F2 (C10 to C16)	5159664		< 10	< 10	NA	< 10	104%	60%	140%	93%	60%	140%	105%	60%	140%
F3 (C16 to C34)	5159664		< 50	< 50	NA	< 50	104%	60%	140%	85%	60%	140%	90%	60%	140%
F4 (C34 to C50)	5159664		< 50	< 50	NA	< 50	75%	60%	140%	82%	60%	140%	98%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	5159704		NA	NA	NA	< 0.05	96%	50%	140%	75%	50%	140%	78%	50%	140%
Vinyl Chloride	5159704		NA	NA	NA	< 0.02	91%	50%	140%	92%	50%	140%	104%	50%	140%
Bromomethane	5159704		NA	NA	NA	< 0.05	92%	50%	140%	116%	50%	140%	118%	50%	140%
Trichlorofluoromethane	5159704		NA	NA	NA	< 0.05	102%	50%	140%	88%	50%	140%	88%	50%	140%
Acetone	5159704		NA	NA	NA	< 0.50	105%	50%	140%	86%	50%	140%	88%	50%	140%
1,1-Dichloroethylene	5159704		NA	NA	NA	< 0.05	82%	50%	140%	81%	60%	130%	76%	50%	140%
Methylene Chloride	5159704		NA	NA	NA	< 0.05	113%	50%	140%	97%	60%	130%	96%	50%	140%
Trans- 1,2-Dichloroethylene	5159704		NA	NA	NA	< 0.05	85%	50%	140%	80%	60%	130%	79%	50%	140%
Methyl tert-butyl Ether	5159704		NA	NA	NA	< 0.05	111%	50%	140%	100%	60%	130%	96%	50%	140%
1,1-Dichloroethane	5159704		NA	NA	NA	< 0.02	110%	50%	140%	90%	60%	130%	86%	50%	140%
Methyl Ethyl Ketone	5159704		NA	NA	NA	< 0.50	89%	50%	140%	85%	50%	140%	86%	50%	140%
Cis- 1,2-Dichloroethylene	5159704		NA	NA	NA	< 0.02	119%	50%	140%	88%	60%	130%	86%	50%	140%
Chloroform	5159704		NA	NA	NA	< 0.04	111%	50%	140%	100%	60%	130%	97%	50%	140%
1,2-Dichloroethane	5159704		NA	NA	NA	< 0.03	93%	50%	140%	94%	60%	130%	100%	50%	140%
1,1,1-Trichloroethane	5159704		NA	NA	NA	< 0.05	106%	50%	140%	85%	60%	130%	89%	50%	140%
Carbon Tetrachloride	5159704		NA	NA	NA	< 0.05	104%	50%	140%	84%	60%	130%	90%	50%	140%

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SAMPLED BY:SP

Trace Organics Analysis (Continued)

RPT Date: Aug 15, 2023			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
Benzene	5159704		NA	NA	NA	< 0.02	117%	50%	140%	85%	60%	130%	84%	50%	140%
1,2-Dichloropropane	5159704		NA	NA	NA	< 0.03	77%	50%	140%	83%	60%	130%	84%	50%	140%
Trichloroethylene	5159704		NA	NA	NA	< 0.03	80%	50%	140%	87%	60%	130%	98%	50%	140%
Bromodichloromethane	5159704		NA	NA	NA	< 0.05	89%	50%	140%	105%	60%	130%	104%	50%	140%
Methyl Isobutyl Ketone	5159704		NA	NA	NA	< 0.50	87%	50%	140%	69%	50%	140%	108%	50%	140%
1,1,2-Trichloroethane	5159704		NA	NA	NA	< 0.04	115%	50%	140%	102%	60%	130%	136%	50%	140%
Toluene	5159704		NA	NA	NA	< 0.05	99%	50%	140%	88%	60%	130%	114%	50%	140%
Dibromochloromethane	5159704		NA	NA	NA	< 0.05	101%	50%	140%	88%	60%	130%	107%	50%	140%
Ethylene Dibromide	5159704		NA	NA	NA	< 0.04	91%	50%	140%	97%	60%	130%	96%	50%	140%
Tetrachloroethylene	5159704		NA	NA	NA	< 0.05	88%	50%	140%	88%	60%	130%	118%	50%	140%
1,1,1,2-Tetrachloroethane	5159704		NA	NA	NA	< 0.04	109%	50%	140%	112%	60%	130%	99%	50%	140%
Chlorobenzene	5159704		NA	NA	NA	< 0.05	119%	50%	140%	91%	60%	130%	117%	50%	140%
Ethylbenzene	5159704		NA	NA	NA	< 0.05	81%	50%	140%	83%	60%	130%	99%	50%	140%
m & p-Xylene	5159704		NA	NA	NA	< 0.05	91%	50%	140%	84%	60%	130%	107%	50%	140%
Bromoform	5159704		NA	NA	NA	< 0.05	99%	50%	140%	119%	60%	130%	101%	50%	140%
Styrene	5159704		NA	NA	NA	< 0.05	91%	50%	140%	85%	60%	130%	103%	50%	140%
1,1,2,2-Tetrachloroethane	5159704		NA	NA	NA	< 0.05	116%	50%	140%	98%	60%	130%	117%	50%	140%
o-Xylene	5159704		NA	NA	NA	< 0.05	103%	50%	140%	87%	60%	130%	114%	50%	140%
1,3-Dichlorobenzene	5159704		NA	NA	NA	< 0.05	114%	50%	140%	84%	60%	130%	112%	50%	140%
1,4-Dichlorobenzene	5159704		NA	NA	NA	< 0.05	82%	50%	140%	96%	60%	130%	119%	50%	140%
1,2-Dichlorobenzene	5159704		NA	NA	NA	< 0.05	102%	50%	140%	90%	60%	130%	121%	50%	140%
n-Hexane	5159704		NA	NA	NA	< 0.05	83%	50%	140%	83%	60%	130%	83%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

F1 (C6 - C10)	5159704		NA	NA	NA	< 5	80%	60%	140%	102%	60%	140%	81%	60%	140%

Certified By: N Popnikolof

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AGAT WORK ORDER: 23Z049826
PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160040	MW101-2	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - Metals & Inorganics (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	26-JUL-2023	26-JUL-2023	SE
Arsenic	26-JUL-2023	26-JUL-2023	SE
Barium	26-JUL-2023	26-JUL-2023	SE
Beryllium	26-JUL-2023	26-JUL-2023	SE
Boron	26-JUL-2023	26-JUL-2023	SE
Boron (Hot Water Soluble)	27-JUL-2023	27-JUL-2023	ZK
Cadmium	26-JUL-2023	26-JUL-2023	SE
Chromium	26-JUL-2023	26-JUL-2023	SE
Cobalt	26-JUL-2023	26-JUL-2023	SE
Copper	26-JUL-2023	26-JUL-2023	SE
Lead	26-JUL-2023	26-JUL-2023	SE
Molybdenum	26-JUL-2023	26-JUL-2023	SE
Nickel	26-JUL-2023	26-JUL-2023	SE
Selenium	26-JUL-2023	26-JUL-2023	SE
Silver	26-JUL-2023	26-JUL-2023	SE
Thallium	26-JUL-2023	26-JUL-2023	SE
Uranium	26-JUL-2023	26-JUL-2023	SE
Vanadium	26-JUL-2023	26-JUL-2023	SE
Zinc	26-JUL-2023	26-JUL-2023	SE
Chromium, Hexavalent	25-JUL-2023	25-JUL-2023	DG
Cyanide, WAD	26-JUL-2023	26-JUL-2023	BG
Mercury	26-JUL-2023	26-JUL-2023	SE
Electrical Conductivity (2:1)			XL
Sodium Adsorption Ratio (2:1) (Calc.)			XH
pH, 2:1 CaCl2 Extraction	26-JUL-2023	26-JUL-2023	XL

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	27-JUL-2023	27-JUL-2023	SB
Acenaphthylene	27-JUL-2023	27-JUL-2023	SB
Acenaphthene	27-JUL-2023	27-JUL-2023	SB
Fluorene	27-JUL-2023	27-JUL-2023	SB
Phenanthrene	27-JUL-2023	27-JUL-2023	SB
Anthracene	27-JUL-2023	27-JUL-2023	SB
Fluoranthene	27-JUL-2023	27-JUL-2023	SB
Pyrene	27-JUL-2023	27-JUL-2023	SB
Benz(a)anthracene	27-JUL-2023	27-JUL-2023	SB
Chrysene	27-JUL-2023	27-JUL-2023	SB
Benzo(b)fluoranthene	27-JUL-2023	27-JUL-2023	SB

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160040	MW101-2	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzo(k)fluoranthene	27-JUL-2023	27-JUL-2023	SB
Benzo(a)pyrene	27-JUL-2023	27-JUL-2023	SB
Indeno(1,2,3-cd)pyrene	27-JUL-2023	27-JUL-2023	SB
Dibenz(a,h)anthracene	27-JUL-2023	27-JUL-2023	SB
Benzo(g,h,i)perylene	27-JUL-2023	27-JUL-2023	SB
1 and 2 Methlynaphthalene	27-JUL-2023	27-JUL-2023	SYS
Naphthalene-d8	27-JUL-2023	27-JUL-2023	SB
Acridine-d9	27-JUL-2023	27-JUL-2023	SB
Terphenyl-d14	27-JUL-2023	27-JUL-2023	SB
Moisture Content	25-JUL-2023	25-JUL-2023	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160041	MW101-3	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 - C10)	24-JUL-2023	24-JUL-2023	VB
F1 (C6 to C10) minus BTEX	24-JUL-2023	24-JUL-2023	SYS
Toluene-d8	24-JUL-2023	24-JUL-2023	VB
F2 (C10 to C16)	26-JUL-2023	26-JUL-2023	CA
F3 (C16 to C34)	26-JUL-2023	26-JUL-2023	CA
F4 (C34 to C50)	26-JUL-2023	26-JUL-2023	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content			
Terphenyl	26-JUL-2023	26-JUL-2023	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	24-JUL-2023	24-JUL-2023	VB
Vinyl Chloride	24-JUL-2023	24-JUL-2023	VB
Bromomethane	24-JUL-2023	24-JUL-2023	VB
Trichlorofluoromethane	24-JUL-2023	24-JUL-2023	VB
Acetone	24-JUL-2023	24-JUL-2023	VB
1,1-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Methylene Chloride	24-JUL-2023	24-JUL-2023	VB
Trans- 1,2-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Methyl tert-butyl Ether	24-JUL-2023	24-JUL-2023	VB
1,1-Dichloroethane	24-JUL-2023	24-JUL-2023	VB
Methyl Ethyl Ketone	24-JUL-2023	24-JUL-2023	VB
Cis- 1,2-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160041	MW101-3	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Chloroform	24-JUL-2023	24-JUL-2023	VB
1,2-Dichloroethane	24-JUL-2023	24-JUL-2023	VB
1,1,1-Trichloroethane	24-JUL-2023	24-JUL-2023	VB
Carbon Tetrachloride	24-JUL-2023	24-JUL-2023	VB
Benzene	24-JUL-2023	24-JUL-2023	VB
1,2-Dichloropropane	24-JUL-2023	24-JUL-2023	VB
Trichloroethylene	24-JUL-2023	24-JUL-2023	VB
Bromodichloromethane	24-JUL-2023	24-JUL-2023	VB
Methyl Isobutyl Ketone	24-JUL-2023	24-JUL-2023	VB
1,1,2-Trichloroethane	24-JUL-2023	24-JUL-2023	VB
Toluene	24-JUL-2023	24-JUL-2023	VB
Dibromochloromethane	24-JUL-2023	24-JUL-2023	VB
Ethylene Dibromide	24-JUL-2023	24-JUL-2023	VB
Tetrachloroethylene	24-JUL-2023	24-JUL-2023	VB
1,1,1,2-Tetrachloroethane	24-JUL-2023	24-JUL-2023	VB
Chlorobenzene	24-JUL-2023	24-JUL-2023	VB
Ethylbenzene	24-JUL-2023	24-JUL-2023	VB
m & p-Xylene	24-JUL-2023	24-JUL-2023	VB
Bromoform	24-JUL-2023	24-JUL-2023	VB
Styrene	24-JUL-2023	24-JUL-2023	VB
1,1,2,2-Tetrachloroethane	24-JUL-2023	24-JUL-2023	VB
o-Xylene	24-JUL-2023	24-JUL-2023	VB
1,3-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
1,4-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
1,2-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
Xylenes (Total)	24-JUL-2023	24-JUL-2023	SYS
1,3-Dichloropropene (Cis + Trans)	24-JUL-2023	24-JUL-2023	SYS
n-Hexane	24-JUL-2023	24-JUL-2023	VB
Toluene-d8	24-JUL-2023	24-JUL-2023	VB
4-Bromofluorobenzene	24-JUL-2023	24-JUL-2023	VB
Moisture Content	25-JUL-2023	25-JUL-2023	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160043	MW101-4	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - ORPs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
pH, 2:1 CaCl2 Extraction	26-JUL-2023	26-JUL-2023	XL

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AGAT WORK ORDER: 23Z049826
PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160046	MW102-2	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - Metals & Inorganics (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	26-JUL-2023	26-JUL-2023	SE
Arsenic	26-JUL-2023	26-JUL-2023	SE
Barium	26-JUL-2023	26-JUL-2023	SE
Beryllium	26-JUL-2023	26-JUL-2023	SE
Boron	26-JUL-2023	26-JUL-2023	SE
Boron (Hot Water Soluble)	27-JUL-2023	27-JUL-2023	ZK
Cadmium	26-JUL-2023	26-JUL-2023	SE
Chromium	26-JUL-2023	26-JUL-2023	SE
Cobalt	26-JUL-2023	26-JUL-2023	SE
Copper	26-JUL-2023	26-JUL-2023	SE
Lead	26-JUL-2023	26-JUL-2023	SE
Molybdenum	26-JUL-2023	26-JUL-2023	SE
Nickel	26-JUL-2023	26-JUL-2023	SE
Selenium	26-JUL-2023	26-JUL-2023	SE
Silver	26-JUL-2023	26-JUL-2023	SE
Thallium	26-JUL-2023	26-JUL-2023	SE
Uranium	26-JUL-2023	26-JUL-2023	SE
Vanadium	26-JUL-2023	26-JUL-2023	SE
Zinc	26-JUL-2023	26-JUL-2023	SE
Chromium, Hexavalent	25-JUL-2023	25-JUL-2023	DG
Cyanide, WAD	26-JUL-2023	26-JUL-2023	BG
Mercury	26-JUL-2023	26-JUL-2023	SE
Electrical Conductivity (2:1)			XL
Sodium Adsorption Ratio (2:1) (Calc.)			XH
pH, 2:1 CaCl2 Extraction	26-JUL-2023	26-JUL-2023	XL

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	27-JUL-2023	27-JUL-2023	SB
Acenaphthylene	27-JUL-2023	27-JUL-2023	SB
Acenaphthene	27-JUL-2023	27-JUL-2023	SB
Fluorene	27-JUL-2023	27-JUL-2023	SB
Phenanthrene	27-JUL-2023	27-JUL-2023	SB
Anthracene	27-JUL-2023	27-JUL-2023	SB
Fluoranthene	27-JUL-2023	27-JUL-2023	SB
Pyrene	27-JUL-2023	27-JUL-2023	SB
Benz(a)anthracene	27-JUL-2023	27-JUL-2023	SB
Chrysene	27-JUL-2023	27-JUL-2023	SB
Benzo(b)fluoranthene	27-JUL-2023	27-JUL-2023	SB

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160046	MW102-2	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzo(k)fluoranthene	27-JUL-2023	27-JUL-2023	SB
Benzo(a)pyrene	27-JUL-2023	27-JUL-2023	SB
Indeno(1,2,3-cd)pyrene	27-JUL-2023	27-JUL-2023	SB
Dibenz(a,h)anthracene	27-JUL-2023	27-JUL-2023	SB
Benzo(g,h,i)perylene	27-JUL-2023	27-JUL-2023	SB
1 and 2 Methlynaphthalene	27-JUL-2023	27-JUL-2023	SYS
Naphthalene-d8	27-JUL-2023	27-JUL-2023	SB
Acridine-d9	27-JUL-2023	27-JUL-2023	SB
Terphenyl-d14	27-JUL-2023	27-JUL-2023	SB
Moisture Content	25-JUL-2023	25-JUL-2023	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160048	MW102-3	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 - C10)	24-JUL-2023	24-JUL-2023	VB
F1 (C6 to C10) minus BTEX	24-JUL-2023	24-JUL-2023	SYS
Toluene-d8	24-JUL-2023	24-JUL-2023	VB
F2 (C10 to C16)	26-JUL-2023	26-JUL-2023	CA
F3 (C16 to C34)	26-JUL-2023	26-JUL-2023	CA
F4 (C34 to C50)	26-JUL-2023	26-JUL-2023	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content			
Terphenyl	26-JUL-2023	26-JUL-2023	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	24-JUL-2023	24-JUL-2023	VB
Vinyl Chloride	24-JUL-2023	24-JUL-2023	VB
Bromomethane	24-JUL-2023	24-JUL-2023	VB
Trichlorofluoromethane	24-JUL-2023	24-JUL-2023	VB
Acetone	24-JUL-2023	24-JUL-2023	VB
1,1-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Methylene Chloride	24-JUL-2023	24-JUL-2023	VB
Trans- 1,2-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Methyl tert-butyl Ether	24-JUL-2023	24-JUL-2023	VB
1,1-Dichloroethane	24-JUL-2023	24-JUL-2023	VB
Methyl Ethyl Ketone	24-JUL-2023	24-JUL-2023	VB
Cis- 1,2-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160048	MW102-3	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Chloroform	24-JUL-2023	24-JUL-2023	VB
1,2-Dichloroethane	24-JUL-2023	24-JUL-2023	VB
1,1,1-Trichloroethane	24-JUL-2023	24-JUL-2023	VB
Carbon Tetrachloride	24-JUL-2023	24-JUL-2023	VB
Benzene	24-JUL-2023	24-JUL-2023	VB
1,2-Dichloropropane	24-JUL-2023	24-JUL-2023	VB
Trichloroethylene	24-JUL-2023	24-JUL-2023	VB
Bromodichloromethane	24-JUL-2023	24-JUL-2023	VB
Methyl Isobutyl Ketone	24-JUL-2023	24-JUL-2023	VB
1,1,2-Trichloroethane	24-JUL-2023	24-JUL-2023	VB
Toluene	24-JUL-2023	24-JUL-2023	VB
Dibromochloromethane	24-JUL-2023	24-JUL-2023	VB
Ethylene Dibromide	24-JUL-2023	24-JUL-2023	VB
Tetrachloroethylene	24-JUL-2023	24-JUL-2023	VB
1,1,1,2-Tetrachloroethane	24-JUL-2023	24-JUL-2023	VB
Chlorobenzene	24-JUL-2023	24-JUL-2023	VB
Ethylbenzene	24-JUL-2023	24-JUL-2023	VB
m & p-Xylene	24-JUL-2023	24-JUL-2023	VB
Bromoform	24-JUL-2023	24-JUL-2023	VB
Styrene	24-JUL-2023	24-JUL-2023	VB
1,1,2,2-Tetrachloroethane	24-JUL-2023	24-JUL-2023	VB
o-Xylene	24-JUL-2023	24-JUL-2023	VB
1,3-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
1,4-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
1,2-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
Xylenes (Total)	24-JUL-2023	24-JUL-2023	SYS
1,3-Dichloropropene (Cis + Trans)	24-JUL-2023	24-JUL-2023	SYS
n-Hexane	24-JUL-2023	24-JUL-2023	VB
Toluene-d8	24-JUL-2023	24-JUL-2023	VB
4-Bromofluorobenzene	24-JUL-2023	24-JUL-2023	VB
Moisture Content	25-JUL-2023	25-JUL-2023	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160055	MW103-2	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - ORPs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
pH, 2:1 CaCl2 Extraction	26-JUL-2023	26-JUL-2023	XL

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160056	MW103-3	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - Metals & Inorganics (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	26-JUL-2023	26-JUL-2023	SE
Arsenic	26-JUL-2023	26-JUL-2023	SE
Barium	26-JUL-2023	26-JUL-2023	SE
Beryllium	26-JUL-2023	26-JUL-2023	SE
Boron	26-JUL-2023	26-JUL-2023	SE
Boron (Hot Water Soluble)	27-JUL-2023	27-JUL-2023	ZK
Cadmium	26-JUL-2023	26-JUL-2023	SE
Chromium	26-JUL-2023	26-JUL-2023	SE
Cobalt	26-JUL-2023	26-JUL-2023	SE
Copper	26-JUL-2023	26-JUL-2023	SE
Lead	26-JUL-2023	26-JUL-2023	SE
Molybdenum	26-JUL-2023	26-JUL-2023	SE
Nickel	26-JUL-2023	26-JUL-2023	SE
Selenium	26-JUL-2023	26-JUL-2023	SE
Silver	26-JUL-2023	26-JUL-2023	SE
Thallium	26-JUL-2023	26-JUL-2023	SE
Uranium	26-JUL-2023	26-JUL-2023	SE
Vanadium	26-JUL-2023	26-JUL-2023	SE
Zinc	26-JUL-2023	26-JUL-2023	SE
Chromium, Hexavalent	25-JUL-2023	25-JUL-2023	DG
Cyanide, WAD	28-JUL-2023	28-JUL-2023	BG
Mercury	26-JUL-2023	26-JUL-2023	SE
Electrical Conductivity (2:1)			XL
Sodium Adsorption Ratio (2:1) (Calc.)			XH
pH, 2:1 CaCl2 Extraction	26-JUL-2023	26-JUL-2023	XL

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	27-JUL-2023	27-JUL-2023	SB
Acenaphthylene	27-JUL-2023	27-JUL-2023	SB
Acenaphthene	27-JUL-2023	27-JUL-2023	SB
Fluorene	27-JUL-2023	27-JUL-2023	SB
Phenanthrene	27-JUL-2023	27-JUL-2023	SB
Anthracene	27-JUL-2023	27-JUL-2023	SB
Fluoranthene	27-JUL-2023	27-JUL-2023	SB
Pyrene	27-JUL-2023	27-JUL-2023	SB
Benz(a)anthracene	27-JUL-2023	27-JUL-2023	SB
Chrysene	27-JUL-2023	27-JUL-2023	SB
Benzo(b)fluoranthene	27-JUL-2023	27-JUL-2023	SB

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160056	MW103-3	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzo(k)fluoranthene	27-JUL-2023	27-JUL-2023	SB
Benzo(a)pyrene	27-JUL-2023	27-JUL-2023	SB
Indeno(1,2,3-cd)pyrene	27-JUL-2023	27-JUL-2023	SB
Dibenz(a,h)anthracene	27-JUL-2023	27-JUL-2023	SB
Benzo(g,h,i)perylene	27-JUL-2023	27-JUL-2023	SB
1 and 2 Methlynaphthalene	27-JUL-2023	27-JUL-2023	SYS
Naphthalene-d8	27-JUL-2023	27-JUL-2023	SB
Acridine-d9	27-JUL-2023	27-JUL-2023	SB
Terphenyl-d14	27-JUL-2023	27-JUL-2023	SB
Moisture Content	25-JUL-2023	25-JUL-2023	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160057	MW103-4	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 - C10)	24-JUL-2023	24-JUL-2023	VB
F1 (C6 to C10) minus BTEX	24-JUL-2023	24-JUL-2023	SYS
Toluene-d8	24-JUL-2023	24-JUL-2023	VB
F2 (C10 to C16)	26-JUL-2023	26-JUL-2023	CA
F3 (C16 to C34)	26-JUL-2023	26-JUL-2023	CA
F4 (C34 to C50)	26-JUL-2023	26-JUL-2023	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content			
Terphenyl	26-JUL-2023	26-JUL-2023	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	24-JUL-2023	24-JUL-2023	VB
Vinyl Chloride	24-JUL-2023	24-JUL-2023	VB
Bromomethane	24-JUL-2023	24-JUL-2023	VB
Trichlorofluoromethane	24-JUL-2023	24-JUL-2023	VB
Acetone	24-JUL-2023	24-JUL-2023	VB
1,1-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Methylene Chloride	24-JUL-2023	24-JUL-2023	VB
Trans- 1,2-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Methyl tert-butyl Ether	24-JUL-2023	24-JUL-2023	VB
1,1-Dichloroethane	24-JUL-2023	24-JUL-2023	VB
Methyl Ethyl Ketone	24-JUL-2023	24-JUL-2023	VB
Cis- 1,2-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB

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Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160057	MW103-4	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Chloroform	24-JUL-2023	24-JUL-2023	VB
1,2-Dichloroethane	24-JUL-2023	24-JUL-2023	VB
1,1,1-Trichloroethane	24-JUL-2023	24-JUL-2023	VB
Carbon Tetrachloride	24-JUL-2023	24-JUL-2023	VB
Benzene	24-JUL-2023	24-JUL-2023	VB
1,2-Dichloropropane	24-JUL-2023	24-JUL-2023	VB
Trichloroethylene	24-JUL-2023	24-JUL-2023	VB
Bromodichloromethane	24-JUL-2023	24-JUL-2023	VB
Methyl Isobutyl Ketone	24-JUL-2023	24-JUL-2023	VB
1,1,2-Trichloroethane	24-JUL-2023	24-JUL-2023	VB
Toluene	24-JUL-2023	24-JUL-2023	VB
Dibromochloromethane	24-JUL-2023	24-JUL-2023	VB
Ethylene Dibromide	24-JUL-2023	24-JUL-2023	VB
Tetrachloroethylene	24-JUL-2023	24-JUL-2023	VB
1,1,1,2-Tetrachloroethane	24-JUL-2023	24-JUL-2023	VB
Chlorobenzene	24-JUL-2023	24-JUL-2023	VB
Ethylbenzene	24-JUL-2023	24-JUL-2023	VB
m & p-Xylene	24-JUL-2023	24-JUL-2023	VB
Bromoform	24-JUL-2023	24-JUL-2023	VB
Styrene	24-JUL-2023	24-JUL-2023	VB
1,1,2,2-Tetrachloroethane	24-JUL-2023	24-JUL-2023	VB
o-Xylene	24-JUL-2023	24-JUL-2023	VB
1,3-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
1,4-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
1,2-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
Xylenes (Total)	24-JUL-2023	24-JUL-2023	SYS
1,3-Dichloropropene (Cis + Trans)	24-JUL-2023	24-JUL-2023	SYS
n-Hexane	24-JUL-2023	24-JUL-2023	VB
Toluene-d8	24-JUL-2023	24-JUL-2023	VB
4-Bromofluorobenzene	24-JUL-2023	24-JUL-2023	VB
Moisture Content	25-JUL-2023	25-JUL-2023	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160058	MW104-2	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - Metals & Inorganics (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	26-JUL-2023	26-JUL-2023	SE
Arsenic	26-JUL-2023	26-JUL-2023	SE
Barium	26-JUL-2023	26-JUL-2023	SE

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Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160058	MW104-2	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - Metals & Inorganics (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Beryllium	26-JUL-2023	26-JUL-2023	SE
Boron	26-JUL-2023	26-JUL-2023	SE
Boron (Hot Water Soluble)	27-JUL-2023	27-JUL-2023	ZK
Cadmium	26-JUL-2023	26-JUL-2023	SE
Chromium	26-JUL-2023	26-JUL-2023	SE
Cobalt	26-JUL-2023	26-JUL-2023	SE
Copper	26-JUL-2023	26-JUL-2023	SE
Lead	26-JUL-2023	26-JUL-2023	SE
Molybdenum	26-JUL-2023	26-JUL-2023	SE
Nickel	26-JUL-2023	26-JUL-2023	SE
Selenium	26-JUL-2023	26-JUL-2023	SE
Silver	26-JUL-2023	26-JUL-2023	SE
Thallium	26-JUL-2023	26-JUL-2023	SE
Uranium	26-JUL-2023	26-JUL-2023	SE
Vanadium	26-JUL-2023	26-JUL-2023	SE
Zinc	26-JUL-2023	26-JUL-2023	SE
Chromium, Hexavalent	25-JUL-2023	25-JUL-2023	DG
Cyanide, WAD	26-JUL-2023	26-JUL-2023	BG
Mercury	26-JUL-2023	26-JUL-2023	SE
Electrical Conductivity (2:1)			XL
Sodium Adsorption Ratio (2:1) (Calc.)			XH
pH, 2:1 CaCl2 Extraction	26-JUL-2023	26-JUL-2023	XL

O. Reg. 153(511) - Metals (Including Hydrides) (Soil) - Lead Re-analysis

Parameter	Date Prepared	Date Analyzed	Initials
Lead	11-AUG-2023	11-AUG-2023	SE

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160060	MW104-3	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	27-JUL-2023	27-JUL-2023	SB
Acenaphthylene	27-JUL-2023	27-JUL-2023	SB
Acenaphthene	27-JUL-2023	27-JUL-2023	SB
Fluorene	27-JUL-2023	27-JUL-2023	SB
Phenanthrene	27-JUL-2023	27-JUL-2023	SB
Anthracene	27-JUL-2023	27-JUL-2023	SB
Fluoranthene	27-JUL-2023	27-JUL-2023	SB
Pyrene	27-JUL-2023	27-JUL-2023	SB

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AGAT WORK ORDER: 23Z049826
PROJECT: CO892.02

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Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160060	MW104-3	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benz(a)anthracene	27-JUL-2023	27-JUL-2023	SB
Chrysene	27-JUL-2023	27-JUL-2023	SB
Benzo(b)fluoranthene	27-JUL-2023	27-JUL-2023	SB
Benzo(k)fluoranthene	27-JUL-2023	27-JUL-2023	SB
Benzo(a)pyrene	27-JUL-2023	27-JUL-2023	SB
Indeno(1,2,3-cd)pyrene	27-JUL-2023	27-JUL-2023	SB
Dibenz(a,h)anthracene	27-JUL-2023	27-JUL-2023	SB
Benzo(g,h,i)perylene	27-JUL-2023	27-JUL-2023	SB
1 and 2 Methlynaphthalene	27-JUL-2023	27-JUL-2023	SYS
Naphthalene-d8	27-JUL-2023	27-JUL-2023	SB
Acridine-d9	27-JUL-2023	27-JUL-2023	SB
Terphenyl-d14	27-JUL-2023	27-JUL-2023	SB
Moisture Content	25-JUL-2023	25-JUL-2023	SS

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 - C10)	24-JUL-2023	24-JUL-2023	VB
F1 (C6 to C10) minus BTEX	24-JUL-2023	24-JUL-2023	SYS
Toluene-d8	24-JUL-2023	24-JUL-2023	VB
F2 (C10 to C16)	26-JUL-2023	26-JUL-2023	CA
F2 (C10 to C16) minus Naphthalene	26-JUL-2023	26-JUL-2023	SYS
F3 (C16 to C34)	26-JUL-2023	26-JUL-2023	CA
F3 (C16 to C34) minus PAHs	26-JUL-2023	26-JUL-2023	SYS
F4 (C34 to C50)	26-JUL-2023	26-JUL-2023	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content	25-JUL-2023	25-JUL-2023	SS
Terphenyl	26-JUL-2023	26-JUL-2023	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	24-JUL-2023	24-JUL-2023	VB
Vinyl Chloride	24-JUL-2023	24-JUL-2023	VB
Bromomethane	24-JUL-2023	24-JUL-2023	VB
Trichlorofluoromethane	24-JUL-2023	24-JUL-2023	VB
Acetone	24-JUL-2023	24-JUL-2023	VB
1,1-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Methylene Chloride	24-JUL-2023	24-JUL-2023	VB
Trans- 1,2-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Methyl tert-butyl Ether	24-JUL-2023	24-JUL-2023	VB

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Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160060	MW104-3	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
1,1-Dichloroethane	24-JUL-2023	24-JUL-2023	VB
Methyl Ethyl Ketone	24-JUL-2023	24-JUL-2023	VB
Cis- 1,2-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Chloroform	24-JUL-2023	24-JUL-2023	VB
1,2-Dichloroethane	24-JUL-2023	24-JUL-2023	VB
1,1,1-Trichloroethane	24-JUL-2023	24-JUL-2023	VB
Carbon Tetrachloride	24-JUL-2023	24-JUL-2023	VB
Benzene	24-JUL-2023	24-JUL-2023	VB
1,2-Dichloropropane	24-JUL-2023	24-JUL-2023	VB
Trichloroethylene	24-JUL-2023	24-JUL-2023	VB
Bromodichloromethane	24-JUL-2023	24-JUL-2023	VB
Methyl Isobutyl Ketone	24-JUL-2023	24-JUL-2023	VB
1,1,2-Trichloroethane	24-JUL-2023	24-JUL-2023	VB
Toluene	24-JUL-2023	24-JUL-2023	VB
Dibromochloromethane	24-JUL-2023	24-JUL-2023	VB
Ethylene Dibromide	24-JUL-2023	24-JUL-2023	VB
Tetrachloroethylene	24-JUL-2023	24-JUL-2023	VB
1,1,1,2-Tetrachloroethane	24-JUL-2023	24-JUL-2023	VB
Chlorobenzene	24-JUL-2023	24-JUL-2023	VB
Ethylbenzene	24-JUL-2023	24-JUL-2023	VB
m & p-Xylene	24-JUL-2023	24-JUL-2023	VB
Bromoform	24-JUL-2023	24-JUL-2023	VB
Styrene	24-JUL-2023	24-JUL-2023	VB
1,1,2,2-Tetrachloroethane	24-JUL-2023	24-JUL-2023	VB
o-Xylene	24-JUL-2023	24-JUL-2023	VB
1,3-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
1,4-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
1,2-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
Xylenes (Total)	24-JUL-2023	24-JUL-2023	SYS
1,3-Dichloropropene (Cis + Trans)	24-JUL-2023	24-JUL-2023	SYS
n-Hexane	24-JUL-2023	24-JUL-2023	VB
Toluene-d8	24-JUL-2023	24-JUL-2023	VB
4-Bromofluorobenzene	24-JUL-2023	24-JUL-2023	VB
Moisture Content	25-JUL-2023	25-JUL-2023	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160062	MW104-31	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials

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Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160062	MW104-31	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	27-JUL-2023	27-JUL-2023	SB
Acenaphthylene	27-JUL-2023	27-JUL-2023	SB
Acenaphthene	27-JUL-2023	27-JUL-2023	SB
Fluorene	27-JUL-2023	27-JUL-2023	SB
Phenanthrene	27-JUL-2023	27-JUL-2023	SB
Anthracene	27-JUL-2023	27-JUL-2023	SB
Fluoranthene	27-JUL-2023	27-JUL-2023	SB
Pyrene	27-JUL-2023	27-JUL-2023	SB
Benz(a)anthracene	27-JUL-2023	27-JUL-2023	SB
Chrysene	27-JUL-2023	27-JUL-2023	SB
Benzo(b)fluoranthene	27-JUL-2023	27-JUL-2023	SB
Benzo(k)fluoranthene	27-JUL-2023	27-JUL-2023	SB
Benzo(a)pyrene	27-JUL-2023	27-JUL-2023	SB
Indeno(1,2,3-cd)pyrene	27-JUL-2023	27-JUL-2023	SB
Dibenz(a,h)anthracene	27-JUL-2023	27-JUL-2023	SB
Benzo(g,h,i)perylene	27-JUL-2023	27-JUL-2023	SB
1 and 2 Methlynaphthalene	27-JUL-2023	27-JUL-2023	SYS
Naphthalene-d8	27-JUL-2023	27-JUL-2023	SB
Acridine-d9	27-JUL-2023	27-JUL-2023	SB
Terphenyl-d14	27-JUL-2023	27-JUL-2023	SB
Moisture Content	25-JUL-2023	25-JUL-2023	SS

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 - C10)	24-JUL-2023	24-JUL-2023	VB
F1 (C6 to C10) minus BTEX	24-JUL-2023	24-JUL-2023	SYS
Toluene-d8	24-JUL-2023	24-JUL-2023	VB
F2 (C10 to C16)	26-JUL-2023	26-JUL-2023	CA
F2 (C10 to C16) minus Naphthalene	26-JUL-2023	26-JUL-2023	SYS
F3 (C16 to C34)	26-JUL-2023	26-JUL-2023	CA
F3 (C16 to C34) minus PAHs	26-JUL-2023	26-JUL-2023	SYS
F4 (C34 to C50)	26-JUL-2023	26-JUL-2023	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content	25-JUL-2023	25-JUL-2023	SS
Terphenyl	26-JUL-2023	26-JUL-2023	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	24-JUL-2023	24-JUL-2023	VB

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ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160062	MW104-31	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Vinyl Chloride	24-JUL-2023	24-JUL-2023	VB
Bromomethane	24-JUL-2023	24-JUL-2023	VB
Trichlorofluoromethane	24-JUL-2023	24-JUL-2023	VB
Acetone	24-JUL-2023	24-JUL-2023	VB
1,1-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Methylene Chloride	24-JUL-2023	24-JUL-2023	VB
Trans- 1,2-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Methyl tert-butyl Ether	24-JUL-2023	24-JUL-2023	VB
1,1-Dichloroethane	24-JUL-2023	24-JUL-2023	VB
Methyl Ethyl Ketone	24-JUL-2023	24-JUL-2023	VB
Cis- 1,2-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Chloroform	24-JUL-2023	24-JUL-2023	VB
1,2-Dichloroethane	24-JUL-2023	24-JUL-2023	VB
1,1,1-Trichloroethane	24-JUL-2023	24-JUL-2023	VB
Carbon Tetrachloride	24-JUL-2023	24-JUL-2023	VB
Benzene	24-JUL-2023	24-JUL-2023	VB
1,2-Dichloropropane	24-JUL-2023	24-JUL-2023	VB
Trichloroethylene	24-JUL-2023	24-JUL-2023	VB
Bromodichloromethane	24-JUL-2023	24-JUL-2023	VB
Methyl Isobutyl Ketone	24-JUL-2023	24-JUL-2023	VB
1,1,2-Trichloroethane	24-JUL-2023	24-JUL-2023	VB
Toluene	24-JUL-2023	24-JUL-2023	VB
Dibromochloromethane	24-JUL-2023	24-JUL-2023	VB
Ethylene Dibromide	24-JUL-2023	24-JUL-2023	VB
Tetrachloroethylene	24-JUL-2023	24-JUL-2023	VB
1,1,1,2-Tetrachloroethane	24-JUL-2023	24-JUL-2023	VB
Chlorobenzene	24-JUL-2023	24-JUL-2023	VB
Ethylbenzene	24-JUL-2023	24-JUL-2023	VB
m & p-Xylene	24-JUL-2023	24-JUL-2023	VB
Bromoform	24-JUL-2023	24-JUL-2023	VB
Styrene	24-JUL-2023	24-JUL-2023	VB
1,1,2,2-Tetrachloroethane	24-JUL-2023	24-JUL-2023	VB
o-Xylene	24-JUL-2023	24-JUL-2023	VB
1,3-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
1,4-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
1,2-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
Xylenes (Total)	24-JUL-2023	24-JUL-2023	SYS
1,3-Dichloropropene (Cis + Trans)	24-JUL-2023	24-JUL-2023	SYS
n-Hexane	24-JUL-2023	24-JUL-2023	VB

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Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160062	MW104-31	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Toluene-d8	24-JUL-2023	24-JUL-2023	VB
4-Bromofluorobenzene	24-JUL-2023	24-JUL-2023	VB
Moisture Content	25-JUL-2023	25-JUL-2023	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160063	BH105-2	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - Metals & Inorganics (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	26-JUL-2023	26-JUL-2023	SE
Arsenic	26-JUL-2023	26-JUL-2023	SE
Barium	26-JUL-2023	26-JUL-2023	SE
Beryllium	26-JUL-2023	26-JUL-2023	SE
Boron	26-JUL-2023	26-JUL-2023	SE
Boron (Hot Water Soluble)	27-JUL-2023	27-JUL-2023	ZK
Cadmium	26-JUL-2023	26-JUL-2023	SE
Chromium	26-JUL-2023	26-JUL-2023	SE
Cobalt	26-JUL-2023	26-JUL-2023	SE
Copper	26-JUL-2023	26-JUL-2023	SE
Lead	26-JUL-2023	26-JUL-2023	SE
Molybdenum	26-JUL-2023	26-JUL-2023	SE
Nickel	26-JUL-2023	26-JUL-2023	SE
Selenium	26-JUL-2023	26-JUL-2023	SE
Silver	26-JUL-2023	26-JUL-2023	SE
Thallium	26-JUL-2023	26-JUL-2023	SE
Uranium	26-JUL-2023	26-JUL-2023	SE
Vanadium	26-JUL-2023	26-JUL-2023	SE
Zinc	26-JUL-2023	26-JUL-2023	SE
Chromium, Hexavalent	25-JUL-2023	25-JUL-2023	DG
Cyanide, WAD	26-JUL-2023	26-JUL-2023	BG
Mercury	26-JUL-2023	26-JUL-2023	SE
Electrical Conductivity (2:1)			XL
Sodium Adsorption Ratio (2:1) (Calc.)			XH
pH, 2:1 CaCl2 Extraction	26-JUL-2023	26-JUL-2023	XL

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	27-JUL-2023	27-JUL-2023	SB
Acenaphthylene	27-JUL-2023	27-JUL-2023	SB
Acenaphthene	27-JUL-2023	27-JUL-2023	SB

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160063	BH105-2	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Fluorene	27-JUL-2023	27-JUL-2023	SB
Phenanthrene	27-JUL-2023	27-JUL-2023	SB
Anthracene	27-JUL-2023	27-JUL-2023	SB
Fluoranthene	27-JUL-2023	27-JUL-2023	SB
Pyrene	27-JUL-2023	27-JUL-2023	SB
Benz(a)anthracene	27-JUL-2023	27-JUL-2023	SB
Chrysene	27-JUL-2023	27-JUL-2023	SB
Benzo(b)fluoranthene	27-JUL-2023	27-JUL-2023	SB
Benzo(k)fluoranthene	27-JUL-2023	27-JUL-2023	SB
Benzo(a)pyrene	27-JUL-2023	27-JUL-2023	SB
Indeno(1,2,3-cd)pyrene	27-JUL-2023	27-JUL-2023	SB
Dibenz(a,h)anthracene	27-JUL-2023	27-JUL-2023	SB
Benzo(g,h,i)perylene	27-JUL-2023	27-JUL-2023	SB
1 and 2 Methlynaphthalene	27-JUL-2023	27-JUL-2023	SYS
Naphthalene-d8	27-JUL-2023	27-JUL-2023	SB
Acridine-d9	27-JUL-2023	27-JUL-2023	SB
Terphenyl-d14	27-JUL-2023	27-JUL-2023	SB
Moisture Content	25-JUL-2023	25-JUL-2023	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160064	BH105-3	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 - C10)	24-JUL-2023	24-JUL-2023	VB
F1 (C6 to C10) minus BTEX	24-JUL-2023	24-JUL-2023	SYS
Toluene-d8	24-JUL-2023	24-JUL-2023	VB
F2 (C10 to C16)	26-JUL-2023	26-JUL-2023	CA
F3 (C16 to C34)	26-JUL-2023	26-JUL-2023	CA
F4 (C34 to C50)	26-JUL-2023	26-JUL-2023	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content			
Terphenyl	26-JUL-2023	26-JUL-2023	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	24-JUL-2023	24-JUL-2023	VB
Vinyl Chloride	24-JUL-2023	24-JUL-2023	VB
Bromomethane	24-JUL-2023	24-JUL-2023	VB
Trichlorofluoromethane	24-JUL-2023	24-JUL-2023	VB

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160064	BH105-3	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Acetone	24-JUL-2023	24-JUL-2023	VB
1,1-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Methylene Chloride	24-JUL-2023	24-JUL-2023	VB
Trans- 1,2-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Methyl tert-butyl Ether	24-JUL-2023	24-JUL-2023	VB
1,1-Dichloroethane	24-JUL-2023	24-JUL-2023	VB
Methyl Ethyl Ketone	24-JUL-2023	24-JUL-2023	VB
Cis- 1,2-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Chloroform	24-JUL-2023	24-JUL-2023	VB
1,2-Dichloroethane	24-JUL-2023	24-JUL-2023	VB
1,1,1-Trichloroethane	24-JUL-2023	24-JUL-2023	VB
Carbon Tetrachloride	24-JUL-2023	24-JUL-2023	VB
Benzene	24-JUL-2023	24-JUL-2023	VB
1,2-Dichloropropane	24-JUL-2023	24-JUL-2023	VB
Trichloroethylene	24-JUL-2023	24-JUL-2023	VB
Bromodichloromethane	24-JUL-2023	24-JUL-2023	VB
Methyl Isobutyl Ketone	24-JUL-2023	24-JUL-2023	VB
1,1,2-Trichloroethane	24-JUL-2023	24-JUL-2023	VB
Toluene	24-JUL-2023	24-JUL-2023	VB
Dibromochloromethane	24-JUL-2023	24-JUL-2023	VB
Ethylene Dibromide	24-JUL-2023	24-JUL-2023	VB
Tetrachloroethylene	24-JUL-2023	24-JUL-2023	VB
1,1,1,2-Tetrachloroethane	24-JUL-2023	24-JUL-2023	VB
Chlorobenzene	24-JUL-2023	24-JUL-2023	VB
Ethylbenzene	24-JUL-2023	24-JUL-2023	VB
m & p-Xylene	24-JUL-2023	24-JUL-2023	VB
Bromoform	24-JUL-2023	24-JUL-2023	VB
Styrene	24-JUL-2023	24-JUL-2023	VB
1,1,2,2-Tetrachloroethane	24-JUL-2023	24-JUL-2023	VB
o-Xylene	24-JUL-2023	24-JUL-2023	VB
1,3-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
1,4-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
1,2-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
Xylenes (Total)	24-JUL-2023	24-JUL-2023	SYS
1,3-Dichloropropene (Cis + Trans)	24-JUL-2023	24-JUL-2023	SYS
n-Hexane	24-JUL-2023	24-JUL-2023	VB
Toluene-d8	24-JUL-2023	24-JUL-2023	VB
4-Bromofluorobenzene	24-JUL-2023	24-JUL-2023	VB
Moisture Content	25-JUL-2023	25-JUL-2023	SS

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160065	Trip Blank	MeOH	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - VOCs (MEOH)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	24-JUL-2023	24-JUL-2023	VB
Vinyl Chloride	24-JUL-2023	24-JUL-2023	VB
Bromomethane	24-JUL-2023	24-JUL-2023	VB
Trichlorofluoromethane	24-JUL-2023	24-JUL-2023	VB
Acetone	24-JUL-2023	24-JUL-2023	VB
1,1-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Methylene Chloride	24-JUL-2023	24-JUL-2023	VB
Trans- 1,2-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Methyl tert-butyl Ether	24-JUL-2023	24-JUL-2023	VB
1,1-Dichloroethane	24-JUL-2023	24-JUL-2023	VB
Methyl Ethyl Ketone	24-JUL-2023	24-JUL-2023	VB
Cis- 1,2-Dichloroethylene	24-JUL-2023	24-JUL-2023	VB
Chloroform	24-JUL-2023	24-JUL-2023	VB
1,2-Dichloroethane	24-JUL-2023	24-JUL-2023	VB
1,1,1-Trichloroethane	24-JUL-2023	24-JUL-2023	VB
Carbon Tetrachloride	24-JUL-2023	24-JUL-2023	VB
Benzene	24-JUL-2023	24-JUL-2023	VB
1,2-Dichloropropane	24-JUL-2023	24-JUL-2023	VB
Trichloroethylene	24-JUL-2023	24-JUL-2023	VB
Bromodichloromethane	24-JUL-2023	24-JUL-2023	VB
Methyl Isobutyl Ketone	24-JUL-2023	24-JUL-2023	VB
1,1,2-Trichloroethane	24-JUL-2023	24-JUL-2023	VB
Toluene	24-JUL-2023	24-JUL-2023	VB
Dibromochloromethane	24-JUL-2023	24-JUL-2023	VB
Ethylene Dibromide	24-JUL-2023	24-JUL-2023	VB
Tetrachloroethylene	24-JUL-2023	24-JUL-2023	VB
1,1,1,2-Tetrachloroethane	24-JUL-2023	24-JUL-2023	VB
Chlorobenzene	24-JUL-2023	24-JUL-2023	VB
Ethylbenzene	24-JUL-2023	24-JUL-2023	VB
m & p-Xylene	24-JUL-2023	24-JUL-2023	VB
Bromoform	24-JUL-2023	24-JUL-2023	VB
Styrene	24-JUL-2023	24-JUL-2023	VB
1,1,2,2-Tetrachloroethane	24-JUL-2023	24-JUL-2023	VB
o-Xylene	24-JUL-2023	24-JUL-2023	VB
1,3-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
1,4-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
1,2-Dichlorobenzene	24-JUL-2023	24-JUL-2023	VB
Xylenes (Total)	24-JUL-2023	24-JUL-2023	SYS

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160065	Trip Blank	MeOH	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - VOCs (MEOH)

Parameter	Date Prepared	Date Analyzed	Initials
1,3-Dichloropropene (Cis + Trans)	24-JUL-2023	24-JUL-2023	SYS
n-Hexane	24-JUL-2023	24-JUL-2023	VB
Toluene-d8	24-JUL-2023	24-JUL-2023	VB
4-Bromofluorobenzene	24-JUL-2023	24-JUL-2023	VB

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5160067	BH105-21	Soil	19-JUL-2023	21-JUL-2023

O. Reg. 153(511) - Metals & Inorganics (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	26-JUL-2023	26-JUL-2023	SE
Arsenic	26-JUL-2023	26-JUL-2023	SE
Barium	26-JUL-2023	26-JUL-2023	SE
Beryllium	26-JUL-2023	26-JUL-2023	SE
Boron	26-JUL-2023	26-JUL-2023	SE
Boron (Hot Water Soluble)	27-JUL-2023	27-JUL-2023	ZK
Cadmium	26-JUL-2023	26-JUL-2023	SE
Chromium	26-JUL-2023	26-JUL-2023	SE
Cobalt	26-JUL-2023	26-JUL-2023	SE
Copper	26-JUL-2023	26-JUL-2023	SE
Lead	26-JUL-2023	26-JUL-2023	SE
Molybdenum	26-JUL-2023	26-JUL-2023	SE
Nickel	26-JUL-2023	26-JUL-2023	SE
Selenium	26-JUL-2023	26-JUL-2023	SE
Silver	26-JUL-2023	26-JUL-2023	SE
Thallium	26-JUL-2023	26-JUL-2023	SE
Uranium	26-JUL-2023	26-JUL-2023	SE
Vanadium	26-JUL-2023	26-JUL-2023	SE
Zinc	26-JUL-2023	26-JUL-2023	SE
Chromium, Hexavalent	25-JUL-2023	25-JUL-2023	DG
Cyanide, WAD	26-JUL-2023	26-JUL-2023	BG
Mercury	26-JUL-2023	26-JUL-2023	SE
Electrical Conductivity (2:1)			XL
Sodium Adsorption Ratio (2:1) (Calc.)			XH
pH, 2:1 CaCl2 Extraction	26-JUL-2023	26-JUL-2023	XL

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Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23Z049826

PROJECT: CO892.02

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO

SAMPLED BY:SP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

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Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23Z049826

PROJECT: CO892.02

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO

SAMPLED BY:SP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID

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Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23Z049826

PROJECT: CO892.02

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO

SAMPLED BY:SP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Dichlorodifluoromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromomethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Acetone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Chloroform	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Toluene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Bromoform	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Styrene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
o-Xylene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
n-Hexane	VOL-91-5002	EPA SW-846 5035 & 8260	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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http://www.agatlabs.com

Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23Z049826

PROJECT: CO892.02

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO

SAMPLED BY:SP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23Z049826

PROJECT: CO892.02

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO

SAMPLED BY:SP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

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Mississauga, Ontario L4Z 1Y2
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webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: Terrapex Environmental Ltd
Contact: Craig Beaton
Address: 1-20 Gurwara Rd
Ottawa, ON, K2E 8B3
Phone: ____ Fax: ____
Reports to be sent to:
1. Email: c.beaton@terrapex.com
2. Email: edd@terrapex.com

Project Information:

Project: CO892.02
Site Location: 1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO
Sampled By: SP
AGAT Quote #: SO RATES PO: ____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company: ____
Contact: ____
Address: ____
Email: ____

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 *Indicate One*
☑ Ind/Com ☐ Res/Park ☐ Agriculture
Soil Texture *(Check One)* ☑ Coarse ☐ Fine

☐ Regulation 406
Table ____ *Indicate One*

☐ Regulation 558

☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm
Region

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
Indicate One

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☑ No

Laboratory Use Only

Work Order #: 2320499826
Cooler Quantity: one - bag ice ice
Arrival Temperatures: 7.6 7.5 7.6 2.1 2.6 2.2
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: ice

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

Sample Matrix Legend

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, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC	O. Reg 153: PAHs	O. Reg 153: PH	O. Reg 153: PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. MW101-2	19/7/23	10:40 AM/PM	2	S			✓				☑							
2. MW101-3	"	10:45 AM/PM	2	"					✓	✓								
3. MW104-4	"	10:49 AM/PM	1	"								✓						
4. MW102-2	"	11:20 AM/PM	2	"			✓				✓							
5. MW102-3	"	11:25 AM/PM	2	"					✓	✓								
6. MW103-2	"	12:15 AM/PM	1	"								✓						
7. MW103-3	"	12:20 AM/PM	2	"			✓				✓							
8. MW103-4	"	12:25 AM/PM	2	"					✓	✓								
9. MW104-2	"	13:05 AM/PM	1	"			✓											
10. MW104-3	"	13:05 AM/PM	3	"					✓	✓	✓							
11. MW104-31	"	13:05 AM/PM	3	"					✓	✓	✓							

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
SREE	21/7/23	14:30		JUL 21 2023	14h30
	JUL 21 2023	15h30	Rhiane C	July 22	1042

Page 1 of 2

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Date Issued: Mar 30, 2023

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Mississauga, Ontario L4Z 1Y2
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webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Laboratory Use Only
Work Order #: 2370498260
Cooler Quantity: one - bagged ice
Arrival Temperatures: 7.6 | 7.5 | 7.6 | 2.1 | 2.6 | 2.2
Custody Seal Intact: ☐Yes ☐No ☐N/A
Notes:

Report Information:
Company: Terrapex Environmental Ltd
Contact: Craig Beaton
Address: 1-20 Gurwara Rd
Ottawa, ON, K2E 8B3
Phone: Fax:
Reports to be sent to:
1. Email: c.beaton@terrapex.com
2. Email: edd@terrapex.com

Regulatory Requirements:
(Please check all applicable boxes)
☑ Regulation 153/04 — Table 3 (Indicate One) — ☑ Ind/Com ☐ Res/Park ☐ Agriculture
Soil Texture *(Check One)*: ☑ Coarse ☐ Fine
☐ Regulation 406 — Table (Indicate One)
☐ Regulation 558
☐ CCME
☐ Sewer Use ☐ Sanitary ☐ Storm — Region
☐ Prov. Water Quality Objectives (PWQO)
☐ Other (Indicate One)

Is this submission for a **Record of Site Condition?** ☑ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☑ No

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: CO892.02
Site Location: 1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO
Sampled By: SP
AGAT Quote #: SO RATES PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:
Bill To Same: Yes ☑ No ☐
Company:
Contact:
Address:
Email:

Sample Matrix Legend
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, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ Mkl ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. BH105-2	19/7/23	14:25 AM/PM	2	S			✓		[redacted]	[redacted]	☑							
2. BH105-3	19/7/23	14:30 AM/PM	2	S					✓	✓								
3. Trip Blank	10/7/23	— AM/PM	1	S						✓								
4. BH105-21	19/7/23	14:25 AM/PM	1	S			✓											
5.		AM/PM																
6.		AM/PM																
7.		AM/PM																
8.		AM/PM																
9.		AM/PM																
10.		AM/PM																
11.		AM/PM																

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
SREE	20/7/23	14:30	C. Griffin	JUL 21 2023	14h30
C. Griffin JUL 21 2023	15h30		Rhiana C	July 22	1042

Page 2 of 2

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http://www.agatlabs.com

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
20 GURDWARA ROAD, UNIT 1
OTTAWA, ON K2E 8B3
613 745 6471

ATTENTION TO: Craig Beaton

PROJECT: CO892.02

AGAT WORK ORDER: 23Z051210

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Jul 31, 2023

PAGES (INCLUDING COVER): 31

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.
- For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.

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Certificate of Analysis

AGAT WORK ORDER: 23Z051210

PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 and 1611 Michael Street, Ottawa, Ontario

SAMPLED BY:SH

O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-07-31

				SAMPLE DESCRIPTION:	MW101	MW102	MW103	MW104	MW115
				SAMPLE TYPE:	Water	Water	Water	Water	Water
				DATE SAMPLED:	2023-07-24 11:12	2023-07-24 13:05	2023-07-24 12:17	2023-07-24 15:22	2023-07-24 15:22
Parameter	Unit	G / S	RDL		5170242	5170246	5170247	5170248	5170249
Naphthalene	µg/L	6400	0.20		<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1.8	0.20		<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	1700	0.20		<0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	400	0.20		<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	580	0.10		<0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	2.4	0.10		<0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	130	0.20		<0.20	<0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	68	0.20		<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	4.7	0.20		<0.20	<0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	1	0.10		<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.75	0.10		<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.4	0.10		<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.81	0.01		<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20		<0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.52	0.20		<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20		<0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	1800	0.20		<0.20	<0.20	<0.20	<0.20	<0.20
Sediment					1	1	1	1	1
Surrogate	Unit	Acceptable Limits							
Naphthalene-d8	%	50-140			81	84	89	60	72
Acridine-d9	%	50-140			105	71	83	76	68
Terphenyl-d14	%	50-140			69	61	112	86	77

Certified By: NPopowkolof

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Certificate of Analysis

AGAT WORK ORDER: 23Z051210

PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 and 1611 Michael Street, Ottawa, Ontario

SAMPLED BY:SH

O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-07-31

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5170242-5170249 Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 23Z051210

PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 and 1611 Michael Street, Ottawa, Ontario

SAMPLED BY:SH

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-07-31

				SAMPLE DESCRIPTION:	MW101	MW102	MW103	MW104	MW115
				SAMPLE TYPE:	Water	Water	Water	Water	Water
				DATE SAMPLED:	2023-07-24 11:12	2023-07-24 13:05	2023-07-24 12:17	2023-07-24 15:22	2023-07-24 15:22
Parameter	Unit	G / S	RDL		5170242	5170246	5170247	5170248	5170249
F1 (C6-C10)	µg/L	750	25		<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25		<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100		<100	<100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100		<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100		<100	<100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100		<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100		<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA	NA	NA	NA	NA
Sediment					1	1	1	1	1
Surrogate	Unit	Acceptable Limits							
Toluene-d8	%	50-140			97	99	102	101	104
Terphenyl	% Recovery	60-140			65	73	76	64	81

Certified By: NPopowich

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Certificate of Analysis

AGAT WORK ORDER: 23Z051210
PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 and 1611 Michael Street, Ottawa, Ontario
SAMPLED BY:SH

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2023-07-26
DATE REPORTED: 2023-07-31

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5170242-5170249 The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popnikolof

AGAT Laboratories

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AGAT WORK ORDER: 23Z051210

PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 and 1611 Michael Street, Ottawa, Ontario

SAMPLED BY:SH

O. Reg. 153(511) - PHCs F1/BTEX (Water)

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-07-31

				SAMPLE DESCRIPTION:	Trip Blank
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-07-24 16:00
Parameter	Unit	G / S	RDL		5170241
Benzene	µg/L	430	0.20		<0.20
Toluene	µg/L	18000	0.20		<0.20
Ethylbenzene	µg/L	2300	0.10		<0.10
m & p-Xylene	µg/L		0.20		<0.20
o-Xylene	µg/L		0.10		<0.10
Xylenes (Total)	µg/L	4200	0.20		<0.20
F1 (C6-C10)	µg/L	750	25		<25
F1 (C6 to C10) minus BTEX	µg/L	750	25		<25
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	60-140			88

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5170241 The C6-C10 fraction is calculated using Toluene response factor.
Total C6-C10 results are corrected for BTEX contributions.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
Extraction and holding times were met for this sample.
NA = Not Applicable

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowich

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AGAT WORK ORDER: 23Z051210

PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 and 1611 Michael Street, Ottawa, Ontario

SAMPLED BY:SH

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-07-31

SAMPLE DESCRIPTION:				MW101	MW102	MW103	MW104	MW115
SAMPLE TYPE:				Water	Water	Water	Water	Water
DATE SAMPLED:				2023-07-24 11:12	2023-07-24 13:05	2023-07-24 12:17	2023-07-24 15:22	2023-07-24 15:22
Parameter	Unit	G / S	RDL	5170242	5170246	5170247	5170248	5170249
Dichlorodifluoromethane	µg/L	4400	0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	1.7	0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	56	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2500	0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	130000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	17	0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	5500	0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	1400	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	3100	0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	1500000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	22	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	12	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	6700	0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	8.4	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	430	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	140	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	85000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	580000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	30	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	82000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.83	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	28	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	630	0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	2300	0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 23Z051210
PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
ATTENTION TO: Craig Beaton
SAMPLING SITE:1591 and 1611 Michael Street, Ottawa, Ontario
SAMPLED BY:SH

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2023-07-26 DATE REPORTED: 2023-07-31

				SAMPLE DESCRIPTION:	MW101	MW102	MW103	MW104	MW115
				SAMPLE TYPE:	Water	Water	Water	Water	Water
				DATE SAMPLED:	2023-07-24 11:12	2023-07-24 13:05	2023-07-24 12:17	2023-07-24 15:22	2023-07-24 15:22
Parameter	Unit	G / S	RDL		5170242	5170246	5170247	5170248	5170249
m & p-Xylene	µg/L		0.20		<0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	770	0.10		<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	9100	0.10		<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	15	0.10		<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10		<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	9600	0.10		<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	67	0.10		<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	9600	0.10		<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	45	0.30		<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	4200	0.20		<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	520	0.20		<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits							
Toluene-d8	% Recovery	50-140			97	99	102	101	104
4-Bromofluorobenzene	% Recovery	50-140			77	79	80	84	87

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5170242-5170249 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 23Z051210
PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 and 1611 Michael Street, Ottawa, Ontario

SAMPLED BY:SH

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

DATE RECEIVED: 2023-07-26

DATE REPORTED: 2023-07-31

		SAMPLE DESCRIPTION:		MW101	MW102	MW103	MW104	MW115
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		2023-07-24 11:12	2023-07-24 13:05	2023-07-24 12:17	2023-07-24 15:22	2023-07-24 15:22
Parameter	Unit	G / S	RDL	5170242	5170246	5170247	5170248	5170249
Dissolved Antimony	µg/L	20000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	1900	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Barium	µg/L	29000	2.0	32.5	84.9	203	92.6	93.4
Dissolved Beryllium	µg/L	67	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	45000	10.0	30.7	26.2	34.8	40.2	38.8
Dissolved Cadmium	µg/L	2.7	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	810	2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Cobalt	µg/L	66	0.50	<0.50	0.77	4.41	1.85	2.49
Dissolved Copper	µg/L	87	1.0	1.0	<1.0	1.7	<1.0	1.1
Dissolved Lead	µg/L	25	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	9200	0.50	12.5	19.9	12.2	20.9	21.3
Dissolved Nickel	µg/L	490	1.0	3.4	9.1	8.9	9.5	11.0
Dissolved Selenium	µg/L	63	1.0	<1.0	1.2	<1.0	<1.0	<1.0
Dissolved Silver	µg/L	1.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	510	0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	420	0.50	0.52	1.06	<0.50	1.43	1.58
Dissolved Vanadium	µg/L	250	0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Dissolved Zinc	µg/L	1100	5.0	5.6	<5.0	<5.0	<5.0	<5.0

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5170242-5170249 Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Iris Verástegui

AGAT Laboratories

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Quality Assurance

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23Z051210

PROJECT: CO892.02

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 and 1611 Michael Street, Ottawa, Ontario

SAMPLED BY:SH

Trace Organics Analysis

RPT Date: Jul 31, 2023			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. 153(511) - PHCs F1/BTEX (Water)															
Benzene	5168955		<0.20	<0.20	NA	< 0.20	104%	60%	140%	99%	60%	140%	111%	60%	140%
Toluene	5168955		<0.20	<0.20	NA	< 0.20	104%	60%	140%	101%	60%	140%	100%	60%	140%
Ethylbenzene	5168955		<0.10	<0.10	NA	< 0.10	104%	60%	140%	91%	60%	140%	112%	60%	140%
m & p-Xylene	5168955		<0.20	<0.20	NA	< 0.20	97%	60%	140%	91%	60%	140%	101%	60%	140%
o-Xylene	5168955		<0.10	<0.10	NA	< 0.10	118%	60%	140%	98%	60%	140%	106%	60%	140%
F1 (C6-C10)	5168955		<25	<25	NA	< 25	95%	60%	140%	113%	60%	140%	89%	60%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)															
F1 (C6-C10)	5172348		<25	<25	NA	< 25	107%	60%	140%	90%	60%	140%	99%	60%	140%
F2 (C10 to C16)	5168826		<100	<100	NA	< 100	109%	60%	140%	65%	60%	140%	76%	60%	140%
F3 (C16 to C34)	5168826		<100	<100	NA	< 100	107%	60%	140%	70%	60%	140%	83%	60%	140%
F4 (C34 to C50)	5168826		<100	<100	NA	< 100	111%	60%	140%	75%	60%	140%	90%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5172348		<0.40	<0.40	NA	< 0.40	119%	50%	140%	94%	50%	140%	109%	50%	140%
Vinyl Chloride	5172348		<0.17	<0.17	NA	< 0.17	100%	50%	140%	101%	50%	140%	114%	50%	140%
Bromomethane	5172348		<0.20	<0.20	NA	< 0.20	92%	50%	140%	96%	50%	140%	104%	50%	140%
Trichlorofluoromethane	5172348		<0.40	<0.40	NA	< 0.40	116%	50%	140%	103%	50%	140%	105%	50%	140%
Acetone	5172348		<1.0	<1.0	NA	< 1.0	112%	50%	140%	95%	50%	140%	92%	50%	140%
1,1-Dichloroethylene	5172348		<0.30	<0.30	NA	< 0.30	71%	50%	140%	115%	60%	130%	83%	50%	140%
Methylene Chloride	5172348		<0.30	<0.30	NA	< 0.30	106%	50%	140%	119%	60%	130%	85%	50%	140%
trans- 1,2-Dichloroethylene	5172348		<0.20	<0.20	NA	< 0.20	102%	50%	140%	103%	60%	130%	119%	50%	140%
Methyl tert-butyl ether	5172348		<0.20	<0.20	NA	< 0.20	70%	50%	140%	100%	60%	130%	94%	50%	140%
1,1-Dichloroethane	5172348		<0.30	<0.30	NA	< 0.30	81%	50%	140%	103%	60%	130%	90%	50%	140%
Methyl Ethyl Ketone	5172348		<1.0	<1.0	NA	< 1.0	120%	50%	140%	95%	50%	140%	78%	50%	140%
cis- 1,2-Dichloroethylene	5172348		<0.20	<0.20	NA	< 0.20	74%	50%	140%	104%	60%	130%	97%	50%	140%
Chloroform	5172348		<0.20	<0.20	NA	< 0.20	89%	50%	140%	110%	60%	130%	101%	50%	140%
1,2-Dichloroethane	5172348		<0.20	<0.20	NA	< 0.20	102%	50%	140%	107%	60%	130%	95%	50%	140%
1,1,1-Trichloroethane	5172348		<0.30	<0.30	NA	< 0.30	83%	50%	140%	102%	60%	130%	91%	50%	140%
Carbon Tetrachloride	5172348		<0.20	<0.20	NA	< 0.20	110%	50%	140%	104%	60%	130%	111%	50%	140%
Benzene	5172348		<0.20	<0.20	NA	< 0.20	112%	50%	140%	105%	60%	130%	105%	50%	140%
1,2-Dichloropropane	5172348		<0.20	<0.20	NA	< 0.20	115%	50%	140%	103%	60%	130%	91%	50%	140%
Trichloroethylene	5172348		1.18	1.08	8.8%	< 0.20	118%	50%	140%	109%	60%	130%	113%	50%	140%
Bromodichloromethane	5172348		<0.20	<0.20	NA	< 0.20	118%	50%	140%	100%	60%	130%	99%	50%	140%
Methyl Isobutyl Ketone	5172348		<1.0	<1.0	NA	< 1.0	70%	50%	140%	100%	50%	140%	73%	50%	140%
1,1,2-Trichloroethane	5172348		<0.20	<0.20	NA	< 0.20	117%	50%	140%	108%	60%	130%	116%	50%	140%
Toluene	5172348		<0.20	<0.20	NA	< 0.20	115%	50%	140%	108%	60%	130%	113%	50%	140%
Dibromochloromethane	5172348		<0.10	<0.10	NA	< 0.10	113%	50%	140%	103%	60%	130%	106%	50%	140%
Ethylene Dibromide	5172348		<0.10	<0.10	NA	< 0.10	112%	50%	140%	102%	60%	130%	112%	50%	140%
Tetrachloroethylene	5172348		<0.20	<0.20	NA	< 0.20	109%	50%	140%	111%	60%	130%	112%	50%	140%

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Quality Assurance

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23Z051210

PROJECT: CO892.02

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 and 1611 Michael Street, Ottawa, Ontario

SAMPLED BY:SH

Trace Organics Analysis (Continued)

RPT Date: Jul 31, 2023			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
1,1,1,2-Tetrachloroethane	5172348		<0.10	<0.10	NA	< 0.10	112%	50%	140%	102%	60%	130%	98%	50%	140%
Chlorobenzene	5172348		<0.10	<0.10	NA	< 0.10	119%	50%	140%	108%	60%	130%	111%	50%	140%
Ethylbenzene	5172348		<0.10	<0.10	NA	< 0.10	108%	50%	140%	100%	60%	130%	99%	50%	140%
m & p-Xylene	5172348		<0.20	<0.20	NA	< 0.20	110%	50%	140%	102%	60%	130%	101%	50%	140%
Bromoform	5172348		<0.10	<0.10	NA	< 0.10	115%	50%	140%	99%	60%	130%	103%	50%	140%
Styrene	5172348		<0.10	<0.10	NA	< 0.10	113%	50%	140%	105%	60%	130%	83%	50%	140%
1,1,2,2-Tetrachloroethane	5172348		<0.10	<0.10	NA	< 0.10	116%	50%	140%	102%	60%	130%	71%	50%	140%
o-Xylene	5172348		<0.10	<0.10	NA	< 0.10	114%	50%	140%	105%	60%	130%	102%	50%	140%
1,3-Dichlorobenzene	5172348		<0.10	<0.10	NA	< 0.10	106%	50%	140%	112%	60%	130%	102%	50%	140%
1,4-Dichlorobenzene	5172348		<0.10	<0.10	NA	< 0.10	90%	50%	140%	114%	60%	130%	105%	50%	140%
1,2-Dichlorobenzene	5172348		<0.10	<0.10	NA	< 0.10	97%	50%	140%	109%	60%	130%	105%	50%	140%
n-Hexane	5172348		<0.20	<0.20	NA	< 0.20	83%	50%	140%	87%	60%	130%	72%	50%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene	5164929		<0.20	<0.20	NA	< 0.20	81%	50%	140%	75%	50%	140%	91%	50%	140%
Acenaphthylene	5164929		<0.20	<0.20	NA	< 0.20	104%	50%	140%	75%	50%	140%	84%	50%	140%
Acenaphthene	5164929		<0.20	<0.20	NA	< 0.20	117%	50%	140%	90%	50%	140%	100%	50%	140%
Fluorene	5164929		<0.20	<0.20	NA	< 0.20	93%	50%	140%	96%	50%	140%	98%	50%	140%
Phenanthrene	5164929		<0.10	<0.10	NA	< 0.10	105%	50%	140%	106%	50%	140%	109%	50%	140%
Anthracene	5164929		<0.10	<0.10	NA	< 0.10	104%	50%	140%	105%	50%	140%	104%	50%	140%
Fluoranthene	5164929		<0.20	<0.20	NA	< 0.20	81%	50%	140%	102%	50%	140%	99%	50%	140%
Pyrene	5164929		<0.20	<0.20	NA	< 0.20	81%	50%	140%	103%	50%	140%	100%	50%	140%
Benzo(a)anthracene	5164929		<0.20	<0.20	NA	< 0.20	96%	50%	140%	77%	50%	140%	99%	50%	140%
Chrysene	5164929		<0.10	<0.10	NA	< 0.10	102%	50%	140%	87%	50%	140%	102%	50%	140%
Benzo(b)fluoranthene	5164929		<0.10	<0.10	NA	< 0.10	98%	50%	140%	76%	50%	140%	88%	50%	140%
Benzo(k)fluoranthene	5164929		<0.10	<0.10	NA	< 0.10	105%	50%	140%	86%	50%	140%	91%	50%	140%
Benzo(a)pyrene	5164929		<0.01	<0.01	NA	< 0.01	111%	50%	140%	98%	50%	140%	93%	50%	140%
Indeno(1,2,3-cd)pyrene	5164929		<0.20	<0.20	NA	< 0.20	96%	50%	140%	87%	50%	140%	96%	50%	140%
Dibenz(a,h)anthracene	5164929		<0.20	<0.20	NA	< 0.20	107%	50%	140%	76%	50%	140%	87%	50%	140%
Benzo(g,h,i)perylene	5164929		<0.20	<0.20	NA	< 0.20	106%	50%	140%	76%	50%	140%	97%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: N Popnikolof

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Quality Assurance

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23Z051210

PROJECT: CO892.02

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 and 1611 Michael Street, Ottawa, Ontario

SAMPLED BY:SH

Water Analysis

RPT Date: Jul 31, 2023			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. 153(511) - Metals (Including Hydrides) (Water)															
Dissolved Antimony	5169742		13.5	13.4	0.7%	< 1.0	108%	70%	130%	109%	80%	120%	109%	70%	130%
Dissolved Arsenic	5169742		3.5	3.6	NA	< 1.0	98%	70%	130%	104%	80%	120%	110%	70%	130%
Dissolved Barium	5169742		39.4	40.6	3.0%	< 2.0	100%	70%	130%	101%	80%	120%	101%	70%	130%
Dissolved Beryllium	5169742		<0.50	<0.50	NA	< 0.50	102%	70%	130%	109%	80%	120%	109%	70%	130%
Dissolved Boron	5169742		233	230	1.3%	< 10.0	96%	70%	130%	106%	80%	120%	95%	70%	130%
Dissolved Cadmium	5169742		<0.20	<0.20	NA	< 0.20	100%	70%	130%	103%	80%	120%	107%	70%	130%
Dissolved Chromium	5169742		<2.0	4.8	NA	< 2.0	96%	70%	130%	99%	80%	120%	100%	70%	130%
Dissolved Cobalt	5169742		<0.50	<0.50	NA	< 0.50	100%	70%	130%	101%	80%	120%	100%	70%	130%
Dissolved Copper	5169742		244	239	2.1%	< 1.0	98%	70%	130%	100%	80%	120%	97%	70%	130%
Dissolved Lead	5169742		<0.50	<0.50	NA	< 0.50	99%	70%	130%	98%	80%	120%	98%	70%	130%
Dissolved Molybdenum	5169742		172	167	2.9%	< 0.50	103%	70%	130%	104%	80%	120%	100%	70%	130%
Dissolved Nickel	5169742		1.3	<1.0	NA	< 1.0	99%	70%	130%	100%	80%	120%	96%	70%	130%
Dissolved Selenium	5169742		<1.0	<1.0	NA	< 1.0	99%	70%	130%	96%	80%	120%	108%	70%	130%
Dissolved Silver	5169742		<0.20	<0.20	NA	< 0.20	101%	70%	130%	101%	80%	120%	104%	70%	130%
Dissolved Thallium	5169742		<0.30	<0.30	NA	< 0.30	100%	70%	130%	98%	80%	120%	101%	70%	130%
Dissolved Uranium	5169742		1.85	1.92	NA	< 0.50	98%	70%	130%	101%	80%	120%	106%	70%	130%
Dissolved Vanadium	5169742		2.10	2.55	19.4%	< 0.40	99%	70%	130%	103%	80%	120%	102%	70%	130%
Dissolved Zinc	5169742		6.6	6.5	NA	< 5.0	100%	70%	130%	100%	80%	120%	100%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By: Iris Verástegui

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170241	Trip Blank	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - PHCs F1/BTEX (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	28-JUL-2023	28-JUL-2023	AG
Toluene	28-JUL-2023	28-JUL-2023	AG
Ethylbenzene	28-JUL-2023	28-JUL-2023	AG
m & p-Xylene	28-JUL-2023	28-JUL-2023	AG
o-Xylene	28-JUL-2023	28-JUL-2023	AG
Xylenes (Total)	28-JUL-2023	28-JUL-2023	SYS
F1 (C6-C10)	28-JUL-2023	28-JUL-2023	AG
F1 (C6 to C10) minus BTEX	28-JUL-2023	28-JUL-2023	SYS
Toluene-d8	28-JUL-2023	28-JUL-2023	AG

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170242	MW101	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	28-JUL-2023	28-JUL-2023	DW
Dissolved Arsenic	28-JUL-2023	28-JUL-2023	DW
Dissolved Barium	28-JUL-2023	28-JUL-2023	DW
Dissolved Beryllium	28-JUL-2023	28-JUL-2023	DW
Dissolved Boron	28-JUL-2023	28-JUL-2023	DW
Dissolved Cadmium	28-JUL-2023	28-JUL-2023	DW
Dissolved Chromium	28-JUL-2023	28-JUL-2023	DW
Dissolved Cobalt	28-JUL-2023	28-JUL-2023	DW
Dissolved Copper	28-JUL-2023	28-JUL-2023	DW
Dissolved Lead	28-JUL-2023	28-JUL-2023	DW
Dissolved Molybdenum	28-JUL-2023	28-JUL-2023	DW
Dissolved Nickel	28-JUL-2023	28-JUL-2023	DW
Dissolved Selenium	28-JUL-2023	28-JUL-2023	DW
Dissolved Silver	28-JUL-2023	28-JUL-2023	DW
Dissolved Thallium	28-JUL-2023	28-JUL-2023	DW
Dissolved Uranium	28-JUL-2023	28-JUL-2023	DW
Dissolved Vanadium	28-JUL-2023	28-JUL-2023	DW
Dissolved Zinc	28-JUL-2023	28-JUL-2023	DW

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	29-JUL-2023	29-JUL-2023	SB
Acenaphthylene	29-JUL-2023	29-JUL-2023	SB
Acenaphthene	29-JUL-2023	29-JUL-2023	SB
Fluorene	29-JUL-2023	29-JUL-2023	SB

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170242	MW101	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Phenanthrene	29-JUL-2023	29-JUL-2023	SB
Anthracene	29-JUL-2023	29-JUL-2023	SB
Fluoranthene	29-JUL-2023	29-JUL-2023	SB
Pyrene	29-JUL-2023	29-JUL-2023	SB
Benzo(a)anthracene	29-JUL-2023	29-JUL-2023	SB
Chrysene	29-JUL-2023	29-JUL-2023	SB
Benzo(b)fluoranthene	29-JUL-2023	29-JUL-2023	SB
Benzo(k)fluoranthene	29-JUL-2023	29-JUL-2023	SB
Benzo(a)pyrene	29-JUL-2023	29-JUL-2023	SB
Indeno(1,2,3-cd)pyrene	29-JUL-2023	29-JUL-2023	SB
Dibenz(a,h)anthracene	29-JUL-2023	29-JUL-2023	SB
Benzo(g,h,i)perylene	29-JUL-2023	29-JUL-2023	SB
2-and 1-methyl Naphthalene	29-JUL-2023	29-JUL-2023	SYS
Naphthalene-d8	29-JUL-2023	29-JUL-2023	SB
Acridine-d9	29-JUL-2023	29-JUL-2023	SB
Terphenyl-d14	29-JUL-2023	29-JUL-2023	SB
Sediment	28-JUL-2023	28-JUL-2023	SG

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6-C10)	29-JUL-2023	29-JUL-2023	MK
F1 (C6 to C10) minus BTEX	29-JUL-2023	29-JUL-2023	SYS
Toluene-d8	29-JUL-2023	29-JUL-2023	MK
F2 (C10 to C16)	28-JUL-2023	28-JUL-2023	JJ
F2 (C10 to C16) minus Naphthalene	29-JUL-2023	29-JUL-2023	SYS
F3 (C16 to C34)	28-JUL-2023	28-JUL-2023	JJ
F3 (C16 to C34) minus PAHs	29-JUL-2023	29-JUL-2023	SYS
F4 (C34 to C50)	28-JUL-2023	28-JUL-2023	JJ
Gravimetric Heavy Hydrocarbons			
Terphenyl	28-JUL-2023	28-JUL-2023	JJ
Sediment	28-JUL-2023	28-JUL-2023	SG

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	29-JUL-2023	29-JUL-2023	MK
Vinyl Chloride	29-JUL-2023	29-JUL-2023	MK
Bromomethane	29-JUL-2023	29-JUL-2023	MK
Trichlorofluoromethane	29-JUL-2023	29-JUL-2023	MK
Acetone	29-JUL-2023	29-JUL-2023	MK

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170242	MW101	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
1,1-Dichloroethylene	29-JUL-2023	29-JUL-2023	MK
Methylene Chloride	29-JUL-2023	29-JUL-2023	MK
trans- 1,2-Dichloroethylene	29-JUL-2023	29-JUL-2023	MK
Methyl tert-butyl ether	29-JUL-2023	29-JUL-2023	MK
1,1-Dichloroethane	29-JUL-2023	29-JUL-2023	MK
Methyl Ethyl Ketone	29-JUL-2023	29-JUL-2023	MK
cis- 1,2-Dichloroethylene	29-JUL-2023	29-JUL-2023	MK
Chloroform	29-JUL-2023	29-JUL-2023	MK
1,2-Dichloroethane	29-JUL-2023	29-JUL-2023	MK
1,1,1-Trichloroethane	29-JUL-2023	29-JUL-2023	MK
Carbon Tetrachloride	29-JUL-2023	29-JUL-2023	MK
Benzene	29-JUL-2023	29-JUL-2023	MK
1,2-Dichloropropane	29-JUL-2023	29-JUL-2023	MK
Trichloroethylene	29-JUL-2023	29-JUL-2023	MK
Bromodichloromethane	29-JUL-2023	29-JUL-2023	MK
Methyl Isobutyl Ketone	29-JUL-2023	29-JUL-2023	MK
1,1,2-Trichloroethane	29-JUL-2023	29-JUL-2023	MK
Toluene	29-JUL-2023	29-JUL-2023	MK
Dibromochloromethane	29-JUL-2023	29-JUL-2023	MK
Ethylene Dibromide	29-JUL-2023	29-JUL-2023	MK
Tetrachloroethylene	29-JUL-2023	29-JUL-2023	MK
1,1,1,2-Tetrachloroethane	29-JUL-2023	29-JUL-2023	MK
Chlorobenzene	29-JUL-2023	29-JUL-2023	MK
Ethylbenzene	29-JUL-2023	29-JUL-2023	MK
m & p-Xylene	29-JUL-2023	29-JUL-2023	MK
Bromoform	29-JUL-2023	29-JUL-2023	MK
Styrene	29-JUL-2023	29-JUL-2023	MK
1,1,2,2-Tetrachloroethane	29-JUL-2023	29-JUL-2023	MK
o-Xylene	29-JUL-2023	29-JUL-2023	MK
1,3-Dichlorobenzene	29-JUL-2023	29-JUL-2023	MK
1,4-Dichlorobenzene	29-JUL-2023	29-JUL-2023	MK
1,2-Dichlorobenzene	29-JUL-2023	29-JUL-2023	MK
1,3-Dichloropropene	29-JUL-2023	29-JUL-2023	SYS
Xylenes (Total)	29-JUL-2023	29-JUL-2023	SYS
n-Hexane	29-JUL-2023	29-JUL-2023	MK
Toluene-d8	29-JUL-2023	29-JUL-2023	MK
4-Bromofluorobenzene	29-JUL-2023	29-JUL-2023	MK

5170246	MW102	Water	24-JUL-2023	26-JUL-2023

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170246	MW102	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	28-JUL-2023	28-JUL-2023	DW
Dissolved Arsenic	28-JUL-2023	28-JUL-2023	DW
Dissolved Barium	28-JUL-2023	28-JUL-2023	DW
Dissolved Beryllium	28-JUL-2023	28-JUL-2023	DW
Dissolved Boron	28-JUL-2023	28-JUL-2023	DW
Dissolved Cadmium	28-JUL-2023	28-JUL-2023	DW
Dissolved Chromium	28-JUL-2023	28-JUL-2023	DW
Dissolved Cobalt	28-JUL-2023	28-JUL-2023	DW
Dissolved Copper	28-JUL-2023	28-JUL-2023	DW
Dissolved Lead	28-JUL-2023	28-JUL-2023	DW
Dissolved Molybdenum	28-JUL-2023	28-JUL-2023	DW
Dissolved Nickel	28-JUL-2023	28-JUL-2023	DW
Dissolved Selenium	28-JUL-2023	28-JUL-2023	DW
Dissolved Silver	28-JUL-2023	28-JUL-2023	DW
Dissolved Thallium	28-JUL-2023	28-JUL-2023	DW
Dissolved Uranium	28-JUL-2023	28-JUL-2023	DW
Dissolved Vanadium	28-JUL-2023	28-JUL-2023	DW
Dissolved Zinc	28-JUL-2023	28-JUL-2023	DW

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	29-JUL-2023	29-JUL-2023	SB
Acenaphthylene	29-JUL-2023	29-JUL-2023	SB
Acenaphthene	29-JUL-2023	29-JUL-2023	SB
Fluorene	29-JUL-2023	29-JUL-2023	SB
Phenanthrene	29-JUL-2023	29-JUL-2023	SB
Anthracene	29-JUL-2023	29-JUL-2023	SB
Fluoranthene	29-JUL-2023	29-JUL-2023	SB
Pyrene	29-JUL-2023	29-JUL-2023	SB
Benzo(a)anthracene	29-JUL-2023	29-JUL-2023	SB
Chrysene	29-JUL-2023	29-JUL-2023	SB
Benzo(b)fluoranthene	29-JUL-2023	29-JUL-2023	SB
Benzo(k)fluoranthene	29-JUL-2023	29-JUL-2023	SB
Benzo(a)pyrene	29-JUL-2023	29-JUL-2023	SB
Indeno(1,2,3-cd)pyrene	29-JUL-2023	29-JUL-2023	SB
Dibenz(a,h)anthracene	29-JUL-2023	29-JUL-2023	SB
Benzo(g,h,i)perylene	29-JUL-2023	29-JUL-2023	SB
2-and 1-methyl Naphthalene	29-JUL-2023	29-JUL-2023	SYS
Naphthalene-d8	29-JUL-2023	29-JUL-2023	SB

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170246	MW102	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Acridine-d9	29-JUL-2023	29-JUL-2023	SB
Terphenyl-d14	29-JUL-2023	29-JUL-2023	SB
Sediment	28-JUL-2023	28-JUL-2023	SG

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6-C10)	29-JUL-2023	29-JUL-2023	MK
F1 (C6 to C10) minus BTEX	29-JUL-2023	29-JUL-2023	SYS
Toluene-d8	29-JUL-2023	29-JUL-2023	MK
F2 (C10 to C16)	28-JUL-2023	28-JUL-2023	JJ
F2 (C10 to C16) minus Naphthalene	29-JUL-2023	29-JUL-2023	SYS
F3 (C16 to C34)	28-JUL-2023	28-JUL-2023	JJ
F3 (C16 to C34) minus PAHs	29-JUL-2023	29-JUL-2023	SYS
F4 (C34 to C50)	28-JUL-2023	28-JUL-2023	JJ
Gravimetric Heavy Hydrocarbons			
Terphenyl	28-JUL-2023	28-JUL-2023	JJ
Sediment	28-JUL-2023	28-JUL-2023	SG

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	29-JUL-2023	29-JUL-2023	MK
Vinyl Chloride	29-JUL-2023	29-JUL-2023	MK
Bromomethane	29-JUL-2023	29-JUL-2023	MK
Trichlorofluoromethane	29-JUL-2023	29-JUL-2023	MK
Acetone	29-JUL-2023	29-JUL-2023	MK
1,1-Dichloroethylene	29-JUL-2023	29-JUL-2023	MK
Methylene Chloride	29-JUL-2023	29-JUL-2023	MK
trans- 1,2-Dichloroethylene	29-JUL-2023	29-JUL-2023	MK
Methyl tert-butyl ether	29-JUL-2023	29-JUL-2023	MK
1,1-Dichloroethane	29-JUL-2023	29-JUL-2023	MK
Methyl Ethyl Ketone	29-JUL-2023	29-JUL-2023	MK
cis- 1,2-Dichloroethylene	29-JUL-2023	29-JUL-2023	MK
Chloroform	29-JUL-2023	29-JUL-2023	MK
1,2-Dichloroethane	29-JUL-2023	29-JUL-2023	MK
1,1,1-Trichloroethane	29-JUL-2023	29-JUL-2023	MK
Carbon Tetrachloride	29-JUL-2023	29-JUL-2023	MK
Benzene	29-JUL-2023	29-JUL-2023	MK
1,2-Dichloropropane	29-JUL-2023	29-JUL-2023	MK
Trichloroethylene	29-JUL-2023	29-JUL-2023	MK

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170246	MW102	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Bromodichloromethane	29-JUL-2023	29-JUL-2023	MK
Methyl Isobutyl Ketone	29-JUL-2023	29-JUL-2023	MK
1,1,2-Trichloroethane	29-JUL-2023	29-JUL-2023	MK
Toluene	29-JUL-2023	29-JUL-2023	MK
Dibromochloromethane	29-JUL-2023	29-JUL-2023	MK
Ethylene Dibromide	29-JUL-2023	29-JUL-2023	MK
Tetrachloroethylene	29-JUL-2023	29-JUL-2023	MK
1,1,1,2-Tetrachloroethane	29-JUL-2023	29-JUL-2023	MK
Chlorobenzene	29-JUL-2023	29-JUL-2023	MK
Ethylbenzene	29-JUL-2023	29-JUL-2023	MK
m & p-Xylene	29-JUL-2023	29-JUL-2023	MK
Bromoform	29-JUL-2023	29-JUL-2023	MK
Styrene	29-JUL-2023	29-JUL-2023	MK
1,1,2,2-Tetrachloroethane	29-JUL-2023	29-JUL-2023	MK
o-Xylene	29-JUL-2023	29-JUL-2023	MK
1,3-Dichlorobenzene	29-JUL-2023	29-JUL-2023	MK
1,4-Dichlorobenzene	29-JUL-2023	29-JUL-2023	MK
1,2-Dichlorobenzene	29-JUL-2023	29-JUL-2023	MK
1,3-Dichloropropene	29-JUL-2023	29-JUL-2023	SYS
Xylenes (Total)	29-JUL-2023	29-JUL-2023	SYS
n-Hexane	29-JUL-2023	29-JUL-2023	MK
Toluene-d8	29-JUL-2023	29-JUL-2023	MK
4-Bromofluorobenzene	29-JUL-2023	29-JUL-2023	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170247	MW103	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	28-JUL-2023	28-JUL-2023	DW
Dissolved Arsenic	28-JUL-2023	28-JUL-2023	DW
Dissolved Barium	28-JUL-2023	28-JUL-2023	DW
Dissolved Beryllium	28-JUL-2023	28-JUL-2023	DW
Dissolved Boron	28-JUL-2023	28-JUL-2023	DW
Dissolved Cadmium	28-JUL-2023	28-JUL-2023	DW
Dissolved Chromium	28-JUL-2023	28-JUL-2023	DW
Dissolved Cobalt	28-JUL-2023	28-JUL-2023	DW
Dissolved Copper	28-JUL-2023	28-JUL-2023	DW
Dissolved Lead	28-JUL-2023	28-JUL-2023	DW
Dissolved Molybdenum	28-JUL-2023	28-JUL-2023	DW

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Time Markers

AGAT WORK ORDER: 23Z051210
PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170247	MW103	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Nickel	28-JUL-2023	28-JUL-2023	DW
Dissolved Selenium	28-JUL-2023	28-JUL-2023	DW
Dissolved Silver	28-JUL-2023	28-JUL-2023	DW
Dissolved Thallium	28-JUL-2023	28-JUL-2023	DW
Dissolved Uranium	28-JUL-2023	28-JUL-2023	DW
Dissolved Vanadium	28-JUL-2023	28-JUL-2023	DW
Dissolved Zinc	28-JUL-2023	28-JUL-2023	DW

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	29-JUL-2023	29-JUL-2023	SB
Acenaphthylene	29-JUL-2023	29-JUL-2023	SB
Acenaphthene	29-JUL-2023	29-JUL-2023	SB
Fluorene	29-JUL-2023	29-JUL-2023	SB
Phenanthrene	29-JUL-2023	29-JUL-2023	SB
Anthracene	29-JUL-2023	29-JUL-2023	SB
Fluoranthene	29-JUL-2023	29-JUL-2023	SB
Pyrene	29-JUL-2023	29-JUL-2023	SB
Benzo(a)anthracene	29-JUL-2023	29-JUL-2023	SB
Chrysene	29-JUL-2023	29-JUL-2023	SB
Benzo(b)fluoranthene	29-JUL-2023	29-JUL-2023	SB
Benzo(k)fluoranthene	29-JUL-2023	29-JUL-2023	SB
Benzo(a)pyrene	29-JUL-2023	29-JUL-2023	SB
Indeno(1,2,3-cd)pyrene	29-JUL-2023	29-JUL-2023	SB
Dibenz(a,h)anthracene	29-JUL-2023	29-JUL-2023	SB
Benzo(g,h,i)perylene	29-JUL-2023	29-JUL-2023	SB
2-and 1-methyl Naphthalene	29-JUL-2023	29-JUL-2023	SYS
Naphthalene-d8	29-JUL-2023	29-JUL-2023	SB
Acridine-d9	29-JUL-2023	29-JUL-2023	SB
Terphenyl-d14	29-JUL-2023	29-JUL-2023	SB
Sediment	28-JUL-2023	28-JUL-2023	SG

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6-C10)	29-JUL-2023	29-JUL-2023	MK
F1 (C6 to C10) minus BTEX	29-JUL-2023	29-JUL-2023	SYS
Toluene-d8	29-JUL-2023	29-JUL-2023	MK
F2 (C10 to C16)	28-JUL-2023	28-JUL-2023	JJ
F2 (C10 to C16) minus Naphthalene	29-JUL-2023	29-JUL-2023	SYS

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170247	MW103	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F3 (C16 to C34)	28-JUL-2023	28-JUL-2023	JJ
F3 (C16 to C34) minus PAHs	29-JUL-2023	29-JUL-2023	SYS
F4 (C34 to C50)	28-JUL-2023	28-JUL-2023	JJ
Gravimetric Heavy Hydrocarbons			
Terphenyl	28-JUL-2023	28-JUL-2023	JJ
Sediment	28-JUL-2023	28-JUL-2023	SG

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	29-JUL-2023	29-JUL-2023	MK
Vinyl Chloride	29-JUL-2023	29-JUL-2023	MK
Bromomethane	29-JUL-2023	29-JUL-2023	MK
Trichlorofluoromethane	29-JUL-2023	29-JUL-2023	MK
Acetone	29-JUL-2023	29-JUL-2023	MK
1,1-Dichloroethylene	29-JUL-2023	29-JUL-2023	MK
Methylene Chloride	29-JUL-2023	29-JUL-2023	MK
trans- 1,2-Dichloroethylene	29-JUL-2023	29-JUL-2023	MK
Methyl tert-butyl ether	29-JUL-2023	29-JUL-2023	MK
1,1-Dichloroethane	29-JUL-2023	29-JUL-2023	MK
Methyl Ethyl Ketone	29-JUL-2023	29-JUL-2023	MK
cis- 1,2-Dichloroethylene	29-JUL-2023	29-JUL-2023	MK
Chloroform	29-JUL-2023	29-JUL-2023	MK
1,2-Dichloroethane	29-JUL-2023	29-JUL-2023	MK
1,1,1-Trichloroethane	29-JUL-2023	29-JUL-2023	MK
Carbon Tetrachloride	29-JUL-2023	29-JUL-2023	MK
Benzene	29-JUL-2023	29-JUL-2023	MK
1,2-Dichloropropane	29-JUL-2023	29-JUL-2023	MK
Trichloroethylene	29-JUL-2023	29-JUL-2023	MK
Bromodichloromethane	29-JUL-2023	29-JUL-2023	MK
Methyl Isobutyl Ketone	29-JUL-2023	29-JUL-2023	MK
1,1,2-Trichloroethane	29-JUL-2023	29-JUL-2023	MK
Toluene	29-JUL-2023	29-JUL-2023	MK
Dibromochloromethane	29-JUL-2023	29-JUL-2023	MK
Ethylene Dibromide	29-JUL-2023	29-JUL-2023	MK
Tetrachloroethylene	29-JUL-2023	29-JUL-2023	MK
1,1,1,2-Tetrachloroethane	29-JUL-2023	29-JUL-2023	MK
Chlorobenzene	29-JUL-2023	29-JUL-2023	MK
Ethylbenzene	29-JUL-2023	29-JUL-2023	MK
m & p-Xylene	29-JUL-2023	29-JUL-2023	MK

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

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Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170247	MW103	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Bromoform	29-JUL-2023	29-JUL-2023	MK
Styrene	29-JUL-2023	29-JUL-2023	MK
1,1,2,2-Tetrachloroethane	29-JUL-2023	29-JUL-2023	MK
o-Xylene	29-JUL-2023	29-JUL-2023	MK
1,3-Dichlorobenzene	29-JUL-2023	29-JUL-2023	MK
1,4-Dichlorobenzene	29-JUL-2023	29-JUL-2023	MK
1,2-Dichlorobenzene	29-JUL-2023	29-JUL-2023	MK
1,3-Dichloropropene	29-JUL-2023	29-JUL-2023	SYS
Xylenes (Total)	29-JUL-2023	29-JUL-2023	SYS
n-Hexane	29-JUL-2023	29-JUL-2023	MK
Toluene-d8	29-JUL-2023	29-JUL-2023	MK
4-Bromofluorobenzene	29-JUL-2023	29-JUL-2023	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170248	MW104	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	28-JUL-2023	28-JUL-2023	DW
Dissolved Arsenic	28-JUL-2023	28-JUL-2023	DW
Dissolved Barium	28-JUL-2023	28-JUL-2023	DW
Dissolved Beryllium	28-JUL-2023	28-JUL-2023	DW
Dissolved Boron	28-JUL-2023	28-JUL-2023	DW
Dissolved Cadmium	28-JUL-2023	28-JUL-2023	DW
Dissolved Chromium	28-JUL-2023	28-JUL-2023	DW
Dissolved Cobalt	28-JUL-2023	28-JUL-2023	DW
Dissolved Copper	28-JUL-2023	28-JUL-2023	DW
Dissolved Lead	28-JUL-2023	28-JUL-2023	DW
Dissolved Molybdenum	28-JUL-2023	28-JUL-2023	DW
Dissolved Nickel	28-JUL-2023	28-JUL-2023	DW
Dissolved Selenium	28-JUL-2023	28-JUL-2023	DW
Dissolved Silver	28-JUL-2023	28-JUL-2023	DW
Dissolved Thallium	28-JUL-2023	28-JUL-2023	DW
Dissolved Uranium	28-JUL-2023	28-JUL-2023	DW
Dissolved Vanadium	28-JUL-2023	28-JUL-2023	DW
Dissolved Zinc	28-JUL-2023	28-JUL-2023	DW

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	29-JUL-2023	29-JUL-2023	SB

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170248	MW104	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Acenaphthylene	29-JUL-2023	29-JUL-2023	SB
Acenaphthene	29-JUL-2023	29-JUL-2023	SB
Fluorene	29-JUL-2023	29-JUL-2023	SB
Phenanthrene	29-JUL-2023	29-JUL-2023	SB
Anthracene	29-JUL-2023	29-JUL-2023	SB
Fluoranthene	29-JUL-2023	29-JUL-2023	SB
Pyrene	29-JUL-2023	29-JUL-2023	SB
Benzo(a)anthracene	29-JUL-2023	29-JUL-2023	SB
Chrysene	29-JUL-2023	29-JUL-2023	SB
Benzo(b)fluoranthene	29-JUL-2023	29-JUL-2023	SB
Benzo(k)fluoranthene	29-JUL-2023	29-JUL-2023	SB
Benzo(a)pyrene	29-JUL-2023	29-JUL-2023	SB
Indeno(1,2,3-cd)pyrene	29-JUL-2023	29-JUL-2023	SB
Dibenz(a,h)anthracene	29-JUL-2023	29-JUL-2023	SB
Benzo(g,h,i)perylene	29-JUL-2023	29-JUL-2023	SB
2-and 1-methyl Naphthalene	29-JUL-2023	29-JUL-2023	SYS
Naphthalene-d8	29-JUL-2023	29-JUL-2023	SB
Acridine-d9	29-JUL-2023	29-JUL-2023	SB
Terphenyl-d14	29-JUL-2023	29-JUL-2023	SB
Sediment	28-JUL-2023	28-JUL-2023	SG

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6-C10)	29-JUL-2023	29-JUL-2023	MK
F1 (C6 to C10) minus BTEX	29-JUL-2023	29-JUL-2023	SYS
Toluene-d8	29-JUL-2023	29-JUL-2023	MK
F2 (C10 to C16)	28-JUL-2023	28-JUL-2023	JJ
F2 (C10 to C16) minus Naphthalene	29-JUL-2023	29-JUL-2023	SYS
F3 (C16 to C34)	28-JUL-2023	28-JUL-2023	JJ
F3 (C16 to C34) minus PAHs	29-JUL-2023	29-JUL-2023	SYS
F4 (C34 to C50)	28-JUL-2023	28-JUL-2023	JJ
Gravimetric Heavy Hydrocarbons			
Terphenyl	28-JUL-2023	28-JUL-2023	JJ
Sediment	28-JUL-2023	28-JUL-2023	SG

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	29-JUL-2023	29-JUL-2023	MK
Vinyl Chloride	29-JUL-2023	29-JUL-2023	MK

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170248	MW104	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Bromomethane	29-JUL-2023	29-JUL-2023	MK
Trichlorofluoromethane	29-JUL-2023	29-JUL-2023	MK
Acetone	29-JUL-2023	29-JUL-2023	MK
1,1-Dichloroethylene	29-JUL-2023	29-JUL-2023	MK
Methylene Chloride	29-JUL-2023	29-JUL-2023	MK
trans- 1,2-Dichloroethylene	29-JUL-2023	29-JUL-2023	MK
Methyl tert-butyl ether	29-JUL-2023	29-JUL-2023	MK
1,1-Dichloroethane	29-JUL-2023	29-JUL-2023	MK
Methyl Ethyl Ketone	29-JUL-2023	29-JUL-2023	MK
cis- 1,2-Dichloroethylene	29-JUL-2023	29-JUL-2023	MK
Chloroform	29-JUL-2023	29-JUL-2023	MK
1,2-Dichloroethane	29-JUL-2023	29-JUL-2023	MK
1,1,1-Trichloroethane	29-JUL-2023	29-JUL-2023	MK
Carbon Tetrachloride	29-JUL-2023	29-JUL-2023	MK
Benzene	29-JUL-2023	29-JUL-2023	MK
1,2-Dichloropropane	29-JUL-2023	29-JUL-2023	MK
Trichloroethylene	29-JUL-2023	29-JUL-2023	MK
Bromodichloromethane	29-JUL-2023	29-JUL-2023	MK
Methyl Isobutyl Ketone	29-JUL-2023	29-JUL-2023	MK
1,1,2-Trichloroethane	29-JUL-2023	29-JUL-2023	MK
Toluene	29-JUL-2023	29-JUL-2023	MK
Dibromochloromethane	29-JUL-2023	29-JUL-2023	MK
Ethylene Dibromide	29-JUL-2023	29-JUL-2023	MK
Tetrachloroethylene	29-JUL-2023	29-JUL-2023	MK
1,1,1,2-Tetrachloroethane	29-JUL-2023	29-JUL-2023	MK
Chlorobenzene	29-JUL-2023	29-JUL-2023	MK
Ethylbenzene	29-JUL-2023	29-JUL-2023	MK
m & p-Xylene	29-JUL-2023	29-JUL-2023	MK
Bromoform	29-JUL-2023	29-JUL-2023	MK
Styrene	29-JUL-2023	29-JUL-2023	MK
1,1,2,2-Tetrachloroethane	29-JUL-2023	29-JUL-2023	MK
o-Xylene	29-JUL-2023	29-JUL-2023	MK
1,3-Dichlorobenzene	29-JUL-2023	29-JUL-2023	MK
1,4-Dichlorobenzene	29-JUL-2023	29-JUL-2023	MK
1,2-Dichlorobenzene	29-JUL-2023	29-JUL-2023	MK
1,3-Dichloropropene	29-JUL-2023	29-JUL-2023	SYS
Xylenes (Total)	29-JUL-2023	29-JUL-2023	SYS
n-Hexane	29-JUL-2023	29-JUL-2023	MK
Toluene-d8	29-JUL-2023	29-JUL-2023	MK

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170248	MW104	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
4-Bromofluorobenzene	29-JUL-2023	29-JUL-2023	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170249	MW115	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	28-JUL-2023	28-JUL-2023	DW
Dissolved Arsenic	28-JUL-2023	28-JUL-2023	DW
Dissolved Barium	28-JUL-2023	28-JUL-2023	DW
Dissolved Beryllium	28-JUL-2023	28-JUL-2023	DW
Dissolved Boron	28-JUL-2023	28-JUL-2023	DW
Dissolved Cadmium	28-JUL-2023	28-JUL-2023	DW
Dissolved Chromium	28-JUL-2023	28-JUL-2023	DW
Dissolved Cobalt	28-JUL-2023	28-JUL-2023	DW
Dissolved Copper	28-JUL-2023	28-JUL-2023	DW
Dissolved Lead	28-JUL-2023	28-JUL-2023	DW
Dissolved Molybdenum	28-JUL-2023	28-JUL-2023	DW
Dissolved Nickel	28-JUL-2023	28-JUL-2023	DW
Dissolved Selenium	28-JUL-2023	28-JUL-2023	DW
Dissolved Silver	28-JUL-2023	28-JUL-2023	DW
Dissolved Thallium	28-JUL-2023	28-JUL-2023	DW
Dissolved Uranium	28-JUL-2023	28-JUL-2023	DW
Dissolved Vanadium	28-JUL-2023	28-JUL-2023	DW
Dissolved Zinc	28-JUL-2023	28-JUL-2023	DW

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	29-JUL-2023	29-JUL-2023	SB
Acenaphthylene	29-JUL-2023	29-JUL-2023	SB
Acenaphthene	29-JUL-2023	29-JUL-2023	SB
Fluorene	29-JUL-2023	29-JUL-2023	SB
Phenanthrene	29-JUL-2023	29-JUL-2023	SB
Anthracene	29-JUL-2023	29-JUL-2023	SB
Fluoranthene	29-JUL-2023	29-JUL-2023	SB
Pyrene	29-JUL-2023	29-JUL-2023	SB
Benzo(a)anthracene	29-JUL-2023	29-JUL-2023	SB
Chrysene	29-JUL-2023	29-JUL-2023	SB
Benzo(b)fluoranthene	29-JUL-2023	29-JUL-2023	SB
Benzo(k)fluoranthene	29-JUL-2023	29-JUL-2023	SB

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170249	MW115	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Benzo(a)pyrene	29-JUL-2023	29-JUL-2023	SB
Indeno(1,2,3-cd)pyrene	29-JUL-2023	29-JUL-2023	SB
Dibenz(a,h)anthracene	29-JUL-2023	29-JUL-2023	SB
Benzo(g,h,i)perylene	29-JUL-2023	29-JUL-2023	SB
2-and 1-methyl Naphthalene	29-JUL-2023	29-JUL-2023	SYS
Naphthalene-d8	29-JUL-2023	29-JUL-2023	SB
Acridine-d9	29-JUL-2023	29-JUL-2023	SB
Terphenyl-d14	29-JUL-2023	29-JUL-2023	SB
Sediment	28-JUL-2023	28-JUL-2023	SG

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6-C10)	29-JUL-2023	29-JUL-2023	MK
F1 (C6 to C10) minus BTEX	29-JUL-2023	29-JUL-2023	SYS
Toluene-d8	29-JUL-2023	29-JUL-2023	MK
F2 (C10 to C16)	28-JUL-2023	28-JUL-2023	JJ
F2 (C10 to C16) minus Naphthalene	29-JUL-2023	29-JUL-2023	SYS
F3 (C16 to C34)	28-JUL-2023	28-JUL-2023	JJ
F3 (C16 to C34) minus PAHs	29-JUL-2023	29-JUL-2023	SYS
F4 (C34 to C50)	28-JUL-2023	28-JUL-2023	JJ
Gravimetric Heavy Hydrocarbons			
Terphenyl	28-JUL-2023	28-JUL-2023	JJ
Sediment	28-JUL-2023	28-JUL-2023	SG

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	29-JUL-2023	29-JUL-2023	MK
Vinyl Chloride	29-JUL-2023	29-JUL-2023	MK
Bromomethane	29-JUL-2023	29-JUL-2023	MK
Trichlorofluoromethane	29-JUL-2023	29-JUL-2023	MK
Acetone	29-JUL-2023	29-JUL-2023	MK
1,1-Dichloroethylene	29-JUL-2023	29-JUL-2023	MK
Methylene Chloride	29-JUL-2023	29-JUL-2023	MK
trans- 1,2-Dichloroethylene	29-JUL-2023	29-JUL-2023	MK
Methyl tert-butyl ether	29-JUL-2023	29-JUL-2023	MK
1,1-Dichloroethane	29-JUL-2023	29-JUL-2023	MK
Methyl Ethyl Ketone	29-JUL-2023	29-JUL-2023	MK
cis- 1,2-Dichloroethylene	29-JUL-2023	29-JUL-2023	MK
Chloroform	29-JUL-2023	29-JUL-2023	MK

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Time Markers

AGAT WORK ORDER: 23Z051210
PROJECT: CO892.02

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Craig Beaton

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5170249	MW115	Water	24-JUL-2023	26-JUL-2023

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
1,2-Dichloroethane	29-JUL-2023	29-JUL-2023	MK
1,1,1-Trichloroethane	29-JUL-2023	29-JUL-2023	MK
Carbon Tetrachloride	29-JUL-2023	29-JUL-2023	MK
Benzene	29-JUL-2023	29-JUL-2023	MK
1,2-Dichloropropane	29-JUL-2023	29-JUL-2023	MK
Trichloroethylene	29-JUL-2023	29-JUL-2023	MK
Bromodichloromethane	29-JUL-2023	29-JUL-2023	MK
Methyl Isobutyl Ketone	29-JUL-2023	29-JUL-2023	MK
1,1,2-Trichloroethane	29-JUL-2023	29-JUL-2023	MK
Toluene	29-JUL-2023	29-JUL-2023	MK
Dibromochloromethane	29-JUL-2023	29-JUL-2023	MK
Ethylene Dibromide	29-JUL-2023	29-JUL-2023	MK
Tetrachloroethylene	29-JUL-2023	29-JUL-2023	MK
1,1,1,2-Tetrachloroethane	29-JUL-2023	29-JUL-2023	MK
Chlorobenzene	29-JUL-2023	29-JUL-2023	MK
Ethylbenzene	29-JUL-2023	29-JUL-2023	MK
m & p-Xylene	29-JUL-2023	29-JUL-2023	MK
Bromoform	29-JUL-2023	29-JUL-2023	MK
Styrene	29-JUL-2023	29-JUL-2023	MK
1,1,2,2-Tetrachloroethane	29-JUL-2023	29-JUL-2023	MK
o-Xylene	29-JUL-2023	29-JUL-2023	MK
1,3-Dichlorobenzene	29-JUL-2023	29-JUL-2023	MK
1,4-Dichlorobenzene	29-JUL-2023	29-JUL-2023	MK
1,2-Dichlorobenzene	29-JUL-2023	29-JUL-2023	MK
1,3-Dichloropropene	29-JUL-2023	29-JUL-2023	SYS
Xylenes (Total)	29-JUL-2023	29-JUL-2023	SYS
n-Hexane	29-JUL-2023	29-JUL-2023	MK
Toluene-d8	29-JUL-2023	29-JUL-2023	MK
4-Bromofluorobenzene	29-JUL-2023	29-JUL-2023	MK

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Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23Z051210

PROJECT: CO892.02

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 and 1611 Michael Street, Ottawa, Ontario

SAMPLED BY:SH

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			N/A
F1 (C6-C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Benzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23Z051210

PROJECT: CO892.02

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 and 1611 Michael Street, Ottawa, Ontario

SAMPLED BY:SH

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F1 (C6-C10)	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23Z051210

PROJECT: CO892.02

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 and 1611 Michael Street, Ottawa, Ontario

SAMPLED BY:SH

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23Z051210

PROJECT: CO892.02

ATTENTION TO: Craig Beaton

SAMPLING SITE:1591 and 1611 Michael Street, Ottawa, Ontario

SAMPLED BY:SH

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS

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Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Laboratory Use Only

Work Order #: 23705210

Cooler Quantity: one - no ice/packs

Arrival Temperatures: 13.1 | 13.0 | 13.1 / 3.9 | 3.4 | 3.7

Custody Seal Intact: ☐ Yes ☐ No ☒ N/A

Notes: 1 Large (bagged ice)

Report Information:

Company: Terrapex Environmental Ltd
Contact: Craig Beaton
Address: 1-20 Gurwara Rd
Ottawa, ON, K2E 8B3
Phone: ____ Fax: ____
Reports to be sent to:
1. Email: c.beaton@terrapex.com
2. Email: edd@terrapex.com

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 — Table 3 (Indicate One) — ☒ Ind/Com ☐ Res/Park ☐ Agriculture
Soil Texture (Check One): ☐ Coarse ☒ Fine
☐ Regulation 406 — Table ____ (Indicate One)
☐ Regulation 558
☐ CCME
☐ Sewer Use ☐ Sanitary ☐ Storm — Region ____
☐ Prov. Water Quality Objectives (PWQO)
☐ Other ____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

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: CO892.02
Site Location: 1591 AND 1611 MICHAEL STREET, OTTAWA, ONTARIO
Sampled By: SH
AGAT Quote #: SO RATES PO: ____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company: ____
Contact: ____
Address: ____
Email: ____

Sample Matrix Legend

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, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	PHC F1						Potentially Hazardous or High Concentration (Y/N)
1. Trip Blank	24 JUL 23	16:00 AM/PM	3	GW		N				☑														
2. MW101	24 JUL 23	11:12 AM/PM	8	GW		Y	X		X	X	X													
3. MW102	24 JUL 23	13:05 AM/PM	8	GW		Y	X		X	X	X													
4. MW103	24 JUL 23	12:17 AM/PM	8	GW		Y	X		X	X	X													
5. MW104	24 JUL 23	15:22 AM/PM	8	GW		Y	X		X	X	X													
6. MW105	24 JUL 23	15:22 AM/PM	8	GW		Y	X		X	X	X													
7.		AM/PM																						
8.		AM/PM																						
9.		AM/PM																						
10.		AM/PM																						
11.		AM/PM																						

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
Seba H	26/7/23	10:30 am	C. Cuttitta	JUL 26 2023	10h30
C. Beaton to Pick up	JUL 26 2023	15h30	T. R	JUL 27	8:35 AM
Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time

Page 1 of 1

N°:

APPENDIX VII
QUALIFICATIONS OF ASSESSORS

APPENDIX VIII
PHASE TWO CONCEPTUAL SITE MODEL

PHASE TWO CONCEPTUAL SITE MODEL

1591 – 1611 Michael Street in Ottawa, Ontario

A preliminary Conceptual Site Model was developed as part of the Phase One ESA, which is discussed in Section 4.3. Following the completion of the Phase Two ESA field program, the CSM has been updated to present the current Site characteristics and identify actual or potential sources of contamination, pathways, release mechanisms, receptors, and exposure routes.

Based on the results of the Phase Two ESA, no soil or groundwater contaminants of concern were found exceeding MECP Table 3 SCS. Accordingly, no additional works are required to support the filing of a Record of Site Condition.

Additional inputs to the CSM include:

- stratigraphy observed during this Phase Two ESA work program;
- results of chemical testing for the current soil and groundwater conditions; and,
- groundwater levels and interpreted groundwater flow direction.

A narrative summary of the Phase Two CSM is provided below.

OVERVIEW

Site Description: The Site occupies an area of approximately 0.92 hectares (9171 m^2) and comprises the northern and eastern portions of the lands at 1591 & 1611 Michael Street, and a portion of 1601 Michael Street, Ottawa, Ontario. The Site was last used as a vehicle storage yard, and presently vacant. At the time of the Phase Two ESA investigations, the Site was vacant with an overgrown vegetation and mature trees along the northern property boundary and the south-central portion of the Site was gravel-covered with a small single-storey modular building in the southwest portion.

The Site location is shown on Figure 1. The general Site layout is shown on Figure 2. The Phase One Study Area, illustrating the Site and surrounding land use is shown on Figure 3.

Assessment Criteria: The generic full-depth Ministry of the Environment, Conservation and Parks (MECP) Site Condition Standards (SCS) determined to be applicable to the intended use of the Site are those for residential/parkland/institutional property use, coarse-textured soils, in a non-potable groundwater condition (the "Table 3 SCS"). The Site is not environmentally sensitive per the definition of Ontario Regulation (O. Reg.) 153/04.

PCAs AND APECs

Potential Contaminating Activity: During the Phase One ESA conducted by Terrapex, 129 Potentially Contaminating Activities (PCAs) were identified within the Phase One Study Area and summarized below.

PCA	ADDRESS AND PROXIMITY TO THE SITE	DESCRIPTION	DATA SOURCE	YEARS	POTENTIALLY CONTAMINATING ACTIVITY (AS SET OUT IN COLUMN A OF TABLE 2 IN SCHEDULE D OF O. REG. 153/04)	LIKELIHOOD TO AFFECT THE SITE
PCA1A	1591 - 1611 Michaels Street, Site	Fill of unknown quality, stockpiled material, containers, etc.	Air Photos	1965	Importation of Fill Material of Unknown Quality	Possible
PCA1B	1591 - 1611 Michaels Street, Site	Tow truck storage yard, parked vehicles	Air Photos	2017	Salvage Yard, including automobile wrecking	Possible
PCA2A	1550 - 1570 Liverpool Crt, Adjacent Northeast	Plate work and structural product manufacturing	ERIS SCT	Est. 1996	Metal Treatment, Coating, Plating and Finishing	Possible
PCA2B	1550 - 1570 Liverpool Crt, Adjacent Northeast	Waste Oil Furnace	ERIS CA	Issued 1995	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA2C	1550 - 1570 Liverpool Crt, Adjacent Northeast	20L waste oil to ditch	ERIS SPL	2004	-	Possible
PCA2D	1550 - 1570 Liverpool Crt, Adjacent Northeast	Auto wrecker	ERIS AUWR	NA	Salvage Yard, including automobile wrecking	Possible
PCA2E	1550 - 1570 Liverpool Crt, Adjacent Northeast	Propane explosion	ERIS INC	2016	-	Possible
PCA2F	1550 - 1570 Liverpool Crt, Adjacent Northeast	Aromatic, aliphatic, halogenated solvents, lab chemicals, petroleum distillates, PCBs, and waste oil (various enterprises)	ERIS GEN	1986 - 2022	-	Possible
PCA2G	1550 - 1570 Liverpool Crt, Adjacent Northeast	Vehicle body manufacturing	ERIS SCT	Est. 1982	Vehicles and Associated Parts Manufacturing	Possible

PCA	ADDRESS AND PROXIMITY TO THE SITE	DESCRIPTION	DATA SOURCE	YEARS	POTENTIALLY CONTAMINATING ACTIVITY (AS SET OUT IN COLUMN A OF TABLE 2 IN SCHEDULE D OF O. REG. 153/04)	LIKELIHOOD TO AFFECT THE SITE
PCA2H	1550 - 1570 Liverpool Crt, Adjacent Northeast	Aromatic, aliphatic, lab chemicals, petroleum distillates, PCBs, and waste oil (various enterprises)	ERIS GEN	1997 - 2021	-	Possible
PCA2I	1570 Liverpool Court, Adjacent Northeast	Laundries and Cleaners	HLUI	2005	Operation of Dry Cleaning Equipment (where chemicals are used)	Possible
PCA2J	1570 Liverpool Court, Adjacent Northeast	Motor Vehicle repair / dealer	HLUI	1980 - 2012	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA2K	1570 Liverpool Court, Adjacent Northeast	Automotive repair	Directories	1976 - 2007	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA2L	1570 Liverpool Court, Adjacent Northeast	Steel manufacturing	Directories	2001 - 2002	Metal Fabrication	Possible
PCA2M	1570 Liverpool Court, Adjacent Northeast	Dry Cleaner	Directories	2001 - 2002	Operation of Dry Cleaning Equipment (where chemicals are used)	Possible
PCA3A	1580 - 1590 Liverpool Crt, Adjacent east	Halogenated solvents (dry cleaner)	ERIS GEN	1994 - 2001	Operation of Dry Cleaning Equipment (where chemicals are used)	Possible
PCA3B	1580 - 1590 Liverpool Crt, Adjacent east	Printer	ERIS SCT	Est. 1965	Ink Manufacturing, Processing and Bulk Storage	Possible
PCA3C	1580 - 1590 Liverpool Crt, Adjacent east	Metal door manufacturing	ERIS SCT	- Est. 1994	- Metal Treatment, Coating, Plating and Finishing	Possible
PCA3D	1580 - 1590 Liverpool Crt, Adjacent east	Petroleum distillates and waste oil (various enterprises)	ERIS GEN	1986 - 2021	- Gasoline and Associated Products Storage in Fixed Tanks	Possible

PCA	ADDRESS AND PROXIMITY TO THE SITE	DESCRIPTION	DATA SOURCE	YEARS	POTENTIALLY CONTAMINATING ACTIVITY (AS SET OUT IN COLUMN A OF TABLE 2 IN SCHEDULE D OF O. REG. 153/04)	LIKELIHOOD TO AFFECT THE SITE
PCA3E	1580 Liverpool Court, Adjacent east	Automotive repair	Directories	1987 - 2011	- Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA3F	1580 Liverpool Court, Adjacent east	Dry Cleaner	Directories	1996 - 1997	- Operation of Dry Cleaning Equipment (where chemicals are used)	Possible
PCA3G	1580 Liverpool Court, Adjacent east	Electronic motors	Directories	2001 - 2011	-	Possible
PCA3H	1580 Liverpool Court, Adjacent east	Laundries and Cleaners	HLUI	2005	- Operation of Dry Cleaning Equipment (where chemicals are used)	Possible
PCA3I	1580 - 1590 Liverpool Court, Adjacent east	Motor vehicle, wholesale & parts, Truck and Bus Bodies, Trailers	HLUI	1990 - 2012	- Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA3J	1590 Liverpool Court, Adjacent east	Printers	Directories	1981 - 2007	- Ink Manufacturing, Processing and Bulk Storage	Possible
PCA3K	1590 Liverpool Court, Adjacent east	Dry Cleaner	Directories	2001 - 2011	- Operation of Dry Cleaning Equipment (where chemicals are used)	Possible
PCA4A	1600 Liverpool Crt, Adjacent east	Light fuels and waste oil	ERIS GEN	1989 - 1997	- Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA5A	1569 Michael Street, Adjacent north	Heavy Equipment	Directories	1981 - 1987	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA5B	1569 Michael Street, Adjacent north	Paint, petroleum distillates, waste oil, lab chemicals	ERIS GEN	2005 - 2009	-	Possible

PCA	ADDRESS AND PROXIMITY TO THE SITE	DESCRIPTION	DATA SOURCE	YEARS	POTENTIALLY CONTAMINATING ACTIVITY (AS SET OUT IN COLUMN A OF TABLE 2 IN SCHEDULE D OF O. REG. 153/04)	LIKELIHOOD TO AFFECT THE SITE
PCA6A	1580 Michael Street, Adjacent north	Metal product manufacturing	ERIS SCT	Est. 1996	Metal Fabrication	Possible
PCA6B	1580 Michael Street, Adjacent north	Transfer station	ERIS WDS	Issued 2009 & 2017	-	Unlikely
PCA6C	1580 Michael Street, Adjacent north	Pathological waste	ERIS GEN	2013 - 2018	-	Unlikely
PCA7A	1556 Michael Street, Adjacent northwest	Motor vehicle parts, repair	HLUI	1994 - 2000	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA7B	1556 Michael Street, Adjacent northwest	Metals, paint, waste oil	ERIS GEN	1992 - 2013	-	Possible
PCA8A	1621 Michael Street, Adjacent south	Truck repair	HLUI	1980 - 2017	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA8B	1621 Michael Street, Adjacent south	Truck and trailer manufacturing	Directories	1961 - 2011	Vehicles and Associated Parts Manufacturing	Possible
PCA8C	1621 Michael Street, Adjacent south	Truck and Trailer Manufacturing	ERIS SCT	Est. 1950	Vehicles and Associated Parts Manufacturing	Possible
PCA8D	1621 Michael Street, Adjacent south	Unspecified waste generator	ERIS GEN	1986 - 1994	-	Possible
PCA8E	1621 Michael Street, Adjacent south	Keyes Auto Supply	FIPs	1963	-	Unlikely

PCA	ADDRESS AND PROXIMITY TO THE SITE	DESCRIPTION	DATA SOURCE	YEARS	POTENTIALLY CONTAMINATING ACTIVITY (AS SET OUT IN COLUMN A OF TABLE 2 IN SCHEDULE D OF O. REG. 153/04)	LIKELIHOOD TO AFFECT THE SITE
PCA8F	1621 Michael Street, Adjacent south	unspecified liquid containers (1956 FIP)	HLUI	inst. 1961	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA9A	1145 Newmarket Street, Adjacent southeast	Printers	Directories	1976 - 1982	Dye Manufacturing, Processing and Bulk Storage	Possible
PCA10A	1604 Michael Street, 20m southwest	Textile and fabric finishing, printing	ERIS SCT	Est. 1996	Textile Manufacturing and Processing	Possible
PCA10B	1604 Michael Street, 20m southwest	Waste oil	ERIS GEN	2011	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA10C	1604 Michael Street, 20m southwest	two 9,080 L and one 13,620 L gasoline tanks and a 4,450 L waste oil tank	HLUI	inst. 1971 - 1973	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA10D	1604 Michael Street, 20m southwest	Commercial printing industries	HLUI	2001 - 2012	Ink Manufacturing, Processing and Bulk Storage	Possible
PCA10E	1604 Michael Street, 20m southwest	Dealer garage (1990) Truck Industries	HLUI	2005 - 2017	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA10F	1604 Michael Street, 20m southwest	Transport company	Directories	1976	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA10G	1604 Michael Street, 20m southwest	Boat Manufacturing	Directories	1987	Vehicles and Associated Parts Manufacturing	Possible
PCA10H	1604 Michael Street, 20m southwest	Truck Centre	Directories	1993 - 1997	Vehicles and Associated Parts Manufacturing	Possible

PCA	ADDRESS AND PROXIMITY TO THE SITE	DESCRIPTION	DATA SOURCE	YEARS	POTENTIALLY CONTAMINATING ACTIVITY (AS SET OUT IN COLUMN A OF TABLE 2 IN SCHEDULE D OF O. REG. 153/04)	LIKELIHOOD TO AFFECT THE SITE
PCA10I	1604 Michael Street, 20m southwest	Sign and printing	Directories	1996 - 2011	Ink Manufacturing, Processing and Bulk Storage	Possible
PCA11A	1601 Michael Street, Adjacent west	Metal products	Directories	1961 - 1982	Metal Fabrication	Possible
PCA11B	1601 Michael Street, Adjacent west	Light Fuels	ERIS GEN	2017	-	Possible
PCA11C	1601 Michael Street, Adjacent west	Rosco Metal Products	FIPs	1963	Metal Fabrication	Possible
PCA11D	1601 Michael Street, Adjacent west	Fuel oil tank up to 1000 gal	HLUI	inst. 1960	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA11E	1601 Michael Street, Adjacent west	Rosco Metals	HLUI	1963 - 1980	Metal Treatment, Coating, Plating and Finishing	Possible
PCA11F	1601 Michael Street, Adjacent west	Storage Containers- Other Plastic Industries	HLUI	2005	-	Possible
PCA12A	1568 Michael Street, 20m west	Rug Cleaners	Directories	1966 - 1982	Operation of Dry Cleaning Equipment (where chemicals are used)	Possible
PCA13A	1580 Michael Street, 20m west	Steel manufacturing	Directories	1996 - 2007	Metal Fabrication	Possible
PCA14A	1135 Newmarket Street, 60m south	Furniture manufacturing (upholstered)	ERIS SCT	NA	Textile Manufacturing and Processing	Possible

PCA	ADDRESS AND PROXIMITY TO THE SITE	DESCRIPTION	DATA SOURCE	YEARS	POTENTIALLY CONTAMINATING ACTIVITY (AS SET OUT IN COLUMN A OF TABLE 2 IN SCHEDULE D OF O. REG. 153/04)	LIKELIHOOD TO AFFECT THE SITE
PCA14B	1135 Newmarket Street, 60m south	Halogenated solvents	ERIS GEN	1992 - 2001	Operation of Dry Cleaning Equipment (where chemicals are used)	Possible
PCA15A	1555 Michael Street, 60m north	Motor vehicle repair	HLUI	2001 - 2017	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA15B	1555 Michael Street, 60m north	Waste oil	ERIS GEN	2018 - 2022	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA16A	1117 - 1123 Newmarket Street, 70 m south	Automotive repair	Directories	1996 - 2002	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA16B	1117 Newmarket Street, 70 m south	Busing	HLUI	2001 - 2012	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA16C	1133 Newmarket Street, 70 m south	Automotive repair	Directories	2006 - 2007	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA17A	1550 Michael Street, 70 m northwest	Automotive, service station, or garage	HLUI	2006 - 2012	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA17B	1550 Michael Street, 70 m northwest	Laundries and Cleaners	HLUI	1960	Operation of Dry Cleaning Equipment (where chemicals are used)	Possible
PCA17C	1550 Michael Street, 70 m northwest	2,600 L tanks	ERIS PRT	1993, 95	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA17D	1550 Michael Street, 70 m northwest	Petroleum distillates, waste oil	ERIS GEN	1988 - 1998	Gasoline and Associated Products Storage in Fixed Tanks	Possible

PCA	ADDRESS AND PROXIMITY TO THE SITE	DESCRIPTION	DATA SOURCE	YEARS	POTENTIALLY CONTAMINATING ACTIVITY (AS SET OUT IN COLUMN A OF TABLE 2 IN SCHEDULE D OF O. REG. 153/04)	LIKELIHOOD TO AFFECT THE SITE
PCA17E	1550 Michael Street, 70 m northwest	Therien Rug Cleaners	FIPs	1963	Operation of Dry Cleaning Equipment (where chemicals are used)	Possible
PCA18A	1547 Lagan Way, 80m west	Petroleum distillates, light fuel, waste oil, solvents	ERIS GEN	1988 - 2021	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA18B	1547 Triole Street (now Logan Way), 80m west	one 22,700 L gasoline tank	HLUI	inst. 1961	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA18C	1547 Triole Street (now Logan Way), 80m west	one 22,700L fuel oil tank	HLUI	inst. 1961	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA18D	1547 Triole Street (now Logan Way), 80m west	one 2,270 waste oil tank	HLUI	inst. 1963	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA18E	1547 Triole Street (now Logan Way), 80m west	two 9,080L gasoline tanks	HLUI	inst. 1963 replaced 1972	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA18F	1547 Triole Street (now Logan Way), 80m west	one 2,270L gasoline tank	HLUI	inst. 1963	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA18G	1575 Triole Street (now Logan Way), 80m west	Dominion Building Materials and oil storage building and UST	FIPs	1963	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA19A	1599 St Laurent Boul, 80m west	Waste oil and lubricants	ERIS GEN	2018 - 2022	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA20A	1543 Michael Street, 100m north	Automotive, service station, or garage	HLUI	1980 - 2017	Gasoline and Associated Products Storage in Fixed Tanks	Possible

PCA	ADDRESS AND PROXIMITY TO THE SITE	DESCRIPTION	DATA SOURCE	YEARS	POTENTIALLY CONTAMINATING ACTIVITY (AS SET OUT IN COLUMN A OF TABLE 2 IN SCHEDULE D OF O. REG. 153/04)	LIKELIHOOD TO AFFECT THE SITE
PCA21A	1551 Michael Street, 100m north	Automobile repair, service	HLUI	1980 - 2017	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA21B	1551 Michael Street, 100m north	Pipe fitting and metal fabrication	ERIS SCT	Est. 1946	Metal Fabrication	Possible
PCA21C	1551 Michael Street, 100m north	Petroleum distillates, waste oil (garage)	ERIS GEN	1990 - 2015	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA21D	1551 Michael Street, 100m north	Dominion Iron and Welding	FIPs	1963	Metal Fabrication	Possible
PCA22A	1611 Liverpool Crt, 100m east	Waste oil tank	ERIS RST	NA	Gasoline and Associated Products Storage in Fixed Tanks	Possible
PCA22B	1611 Liverpool Crt, 100m east	Metals, solvents, petroleum distillates, waste oil	ERIS GEN	1996 - 2021	-	Possible
PCA22C	1611 Liverpool Crt, 100m east	Env. Ass. Contact drilling	ERIS SCT	Est. 1988	-	Unlikely
PCA22D	1611 Liverpool Crt, 100m east	10L Diesel to road	ERIS SPL	2003	-	Unlikely
PCA22E	1611 Liverpool Crt, 100m east	3L oil to ditch	ERIS SPL	2011	-	Unlikely
PCA22F	1611 Liverpool Crt, 100m east	25L diesel to road	ERIS SPL	2018	-	Unlikely

PCA	ADDRESS AND PROXIMITY TO THE SITE	DESCRIPTION	DATA SOURCE	YEARS	POTENTIALLY CONTAMINATING ACTIVITY (AS SET OUT IN COLUMN A OF TABLE 2 IN SCHEDULE D OF O. REG. 153/04)	LIKELIHOOD TO AFFECT THE SITE
PCA22G	1611 Liverpool Crt, 100m east	64.8kg PERC	ERIS CDRY	2007	Operation of Dry Cleaning Equipment (where chemicals are used)	Possible
PCA23A	1171 - 1185 Newmarket Street, 110m east	Transmission manufacturing	ERIS SCT	1930	Vehicles and Associated Parts Manufacturing	Unlikely
PCA23B	1171 - 1185 Newmarket Street, 110m east	9L PERC to concrete	ERIS SPL	2011	Operation of Dry Cleaning Equipment (where chemicals are used)	Unlikely
PCA23C	1171 - 1185 Newmarket Street, 110m east	Metals, halogenated solvents	ERIS GEN	1992 - 2001	-	Unlikely
PCA23D	1171 - 1185 Newmarket Street, 110m east	Aliphatic solvents, waste pigment	ERIS GEN	2002 - 2022	-	Unlikely
PCA23E	1171 Newmarket Street, 110m east	Commercial printing	HLUI	1980 - 1990	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA23F	1185 Newmarket Street, 110m east	Automotive, service station, or garage	HLUI	1998 - 2016	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA24A	1571 Liverpool Court, 110m east	two 22,700L gasoline tanks and two pump islands	HLUI	inst. 1973	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA24B	1571 Liverpool Crt, 110m east	Waste Oil Furnace	ERIS CA	1998	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA24C	1571 Liverpool Street, 110m east	Dealer / garage	HLUI	1990 - 2017	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely

PCA	ADDRESS AND PROXIMITY TO THE SITE	DESCRIPTION	DATA SOURCE	YEARS	POTENTIALLY CONTAMINATING ACTIVITY (AS SET OUT IN COLUMN A OF TABLE 2 IN SCHEDULE D OF O. REG. 153/04)	LIKELIHOOD TO AFFECT THE SITE
PCA25A	1060 Belfast Street, 115m north	Industrial Machinery	HLUI	2001	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA26A	1525 Michael Street, 140m north	Automotive, service station, or garage	HLUI	1980 - 2017	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA27A	1151 Newmarket Street, 160m south	Dry cell battery manufacturing	HLUI	1998 - 2017	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA28A	1515 Michael Street, 175m north	Truck transport industries	HLUI	2000 - 2017	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA29A	1550 Triole Street (now Logan Way), 180m west	Motor Vehicle Repair Shop	HLUI	1980 - 2005	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA30A	1571 St. Laurent Boulevard, 180m west	Tire service and oil dealer with USTs	FIPs, HLUI	1963	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA31A	1520 Michael Street, 190m north	Automotive, service station, or garage	HLUI	2017	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA32A	1195 Newmarket, 200m east	Truck transport industries	HLUI	2005	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA33A	1508 Michael Street, 200m north	Motor Vehicle Repair Shop	HLUI	1980 - 2005	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA34A	1555 - 1557 St. Laurent Boulevard, 200m west	Aluminum Manufacturing	FIPs	1963	Metal Fabrication	Unlikely

PCA	ADDRESS AND PROXIMITY TO THE SITE	DESCRIPTION	DATA SOURCE	YEARS	POTENTIALLY CONTAMINATING ACTIVITY (AS SET OUT IN COLUMN A OF TABLE 2 IN SCHEDULE D OF O. REG. 153/04)	LIKELIHOOD TO AFFECT THE SITE
PCA34B	1555 St Laurent Boulevard, 200m west	Motor vehicle repair shop	HLUI	2001 - 2012	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA36A	1199 Newmarket Street, 280m east	New Holland Machine Co. with rail siding	FIPs	1963	Rail Yards, Tracks and Spurs	Unlikely
PCA37A	1038 Belfast Road, 120m northwest	Motor vehicle, wholesale, garage	HLUI	1963 - 2017	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA37B	1038 Belfast Road, 120m northwest	Garage	FIPs	1963	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA37C	1038 Belfast Road, 120m northwest	13,620L gasoline tank with pump	HLUI	inst. 1972	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA37D	1038 Belfast Road, 120m northwest	one 9,080L diesel tank	HLUI	1960	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA37E	1038 Belfast Road, 120m northwest	one 4,450L gasoline tank	HLUI	1960	Gasoline and Associated Products Storage in Fixed Tanks	Unlikely
PCA38A	CNR rail corridor, 170m northeast	Rail line in an east-southeast, west-northwest orientation	FIPs	1963	Rail Yards, Tracks and Spurs	Unlikely
PCA39A	Railways and Spurs, 110m southwest	Abandoned Spur	HLUI		Rail Yards, Tracks and Spurs	Unlikely
PCA40A	Railways and Spurs, 180m east	Abandoned Spur	HLUI		Rail Yards, Tracks and Spurs	Unlikely

[1] As shown on Figure 4 and 5.1

[2] As set out in Table 2 in Schedule D of O. Reg. 153/04

Areas of Potential Environmental Concern: 84 Areas of Potential Environmental Concern (APECs) associated with the PCAs were identified on the Phase Two Property as per below:

APEC	LOCATION OF APEC ON PHASE ONE PROPERTY	POTENTIALLY CONTAMINATING ACTIVITY (as set out in Column A of Table 2 in Schedule D of O. Reg. 153/04)	ASSOCIATED PCA IDs	CONTAMINANTS OF POTENTIAL CONCERN	MEDIA POTENTIALLY IMPACTED (Groundwater, Soil, and/or Sediment)
APEC1A	Entire Site	Importation of Fill Material of Unknown Quality	PCA1A	Inorganics, PAHs, BTEX and PHCs	Soil
APEC1B	1611 Michael St	Salvage Yard, including automobile wrecking	PCA1B	Inorganics, PAHs, BTEX and PHCs	Soil and Groundwater
APEC2A	Northeast corner	Metal Treatment, Coating, Plating and Finishing	PCA2A	Inorganics	Soil
APEC2B	Northeast corner	Gasoline and Associated Products Storage in Fixed Tanks	PCA2B	BTEX and PHCs	Soil and Groundwater
APEC2C	Northeast corner		PCA2C	BTEX and PHCs	Soil and Groundwater
APEC2D	Northeast corner	Salvage Yard, including automobile wrecking	PCA2D	Inorganics, PAHs, BTEX and PHCs	Soil and Groundwater
APEC2E	Northeast corner		PCA2E	PAHs	Soil
APEC2F	Northeast corner		PCA2F	BTEX, PHCs, VOCs	Soil and Groundwater
APEC2G	Northeast corner	Vehicles and Associated Parts Manufacturing	PCA2G	BTEX, PHCs, VOCs	Groundwater
APEC2H	Northeast corner		PCA2H	BTEX, PHCs, VOCs	Soil and Groundwater
APEC2I	Northeast corner	Operation of Dry Cleaning Equipment (where chemicals are used)	PCA2I	VOCs	Groundwater
APEC2J	Northeast corner	Gasoline and Associated Products Storage in Fixed Tanks	PCA2J	BTEX and PHCs	Soil and Groundwater
APEC2K	Northeast corner	Gasoline and Associated Products Storage in Fixed Tanks	PCA2K	BTEX and PHCs	Soil and Groundwater
APEC2L	Northeast corner	Metal Fabrication	PCA2L	Inorganics, PAHs, BTEX and PHCs	Soil
APEC2M	Northeast corner	Operation of Dry Cleaning Equipment (where chemicals are used)	PCA2M	VOCs	Groundwater

APEC	LOCATION OF APEC ON PHASE ONE PROPERTY	POTENTIALLY CONTAMINATING ACTIVITY (as set out in Column A of Table 2 in Schedule D of O. Reg. 153/04)	ASSOCIATED PCA IDs	CONTAMINANTS OF POTENTIAL CONCERN	MEDIA POTENTIALLY IMPACTED (Groundwater, Soil, and/or Sediment)
APEC3A	Eastern portion	Operation of Dry Cleaning Equipment (where chemicals are used)	PCA3A	VOCs	Groundwater
APEC3B	Eastern portion	Ink Manufacturing, Processing and Bulk Storage	PCA3B	VOCs	Groundwater
APEC3C	Eastern portion	Metal Treatment, Coating, Plating and Finishing	PCA3C	Inorganics	Soil
APEC3D	Eastern portion	Gasoline and Associated Products Storage in Fixed Tanks	PCA3D	BTEX and PHCs	Soil and Groundwater
APEC3E	Eastern portion		PCA3E	BTEX and PHCs	Soil and Groundwater
APEC3F	Eastern portion	Operation of Dry Cleaning Equipment (where chemicals are used)	PCA3F	VOCs	Groundwater
APEC3G	Eastern portion		PCA3G	VOCs	Soil and Groundwater
APEC3H	Eastern portion	Operation of Dry Cleaning Equipment (where chemicals are used)	PCA3H	VOCs	Groundwater
APEC3I	Eastern portion	Gasoline and Associated Products Storage in Fixed Tanks	PCA3I	BTEX and PHCs	Soil and Groundwater
APEC3J	Eastern portion	Ink Manufacturing, Processing and Bulk Storage	PCA3J	VOCs	Groundwater
APEC3K	Eastern portion	Operation of Dry Cleaning Equipment (where chemicals are used)	PCA3K	VOCs	Groundwater
APEC4A	Eastern portion	Gasoline and Associated Products Storage in Fixed Tanks	PCA4A	BTEX and PHCs	Soil and Groundwater

APEC	LOCATION OF APEC ON PHASE ONE PROPERTY	POTENTIALLY CONTAMINATING ACTIVITY (as set out in Column A of Table 2 in Schedule D of O. Reg. 153/04)	ASSOCIATED PCA IDs	CONTAMINANTS OF POTENTIAL CONCERN	MEDIA POTENTIALLY IMPACTED (Groundwater, Soil, and/or Sediment)
APEC5A	Northern portion	Gasoline and Associated Products Storage in Fixed Tanks	PCA5A	BTEX and PHCs	Soil and Groundwater
APEC5B	Northern portion		PCA5B	Inorganics, BTEX, PHCs, VOCs	Soil and Groundwater
APEC6A	Northern portion	Metal Fabrication	PCA6A	Inorganics, PAHs, BTEX and PHCs	Soil
APEC7A	Northwest corner	Gasoline and Associated Products Storage in Fixed Tanks	PCA7A	BTEX and PHCs	Soil and Groundwater
APEC7B	Northwest corner		PCA7B	Inorganics, BTEX, PHCs, VOCs	Soil and Groundwater
APEC8A	Southern portion	Gasoline and Associated Products Storage in Fixed Tanks	PCA8A	BTEX and PHCs	Soil and Groundwater
APEC8B	Southern portion	Vehicles and Associated Parts Manufacturing	PCA8B	Inorganics, PAHs, BTEX, PHCs and VOCs	Soil and Groundwater
APEC8C	Southern portion	Vehicles and Associated Parts Manufacturing	PCA8C	Inorganics, PAHs, BTEX, PHCs and VOCs	Soil and Groundwater
APEC8D	Southern portion		PCA8D	Inorganics, BTEX, PHCs, VOCs	Soil and Groundwater
APEC8F	Southern portion	Gasoline and Associated Products Storage in Fixed Tanks	PCA8F	BTEX and PHCs	Soil and Groundwater
APEC9A	Southeast corner	Dye Manufacturing, Processing and Bulk Storage	PCA9A	VOCs	Groundwater
APEC10A	Southwest corner	Textile Manufacturing and Processing	PCA10A	VOCs	Groundwater
APEC10B	Southwest corner	Gasoline and Associated Products Storage in Fixed Tanks	PCA10B	BTEX and PHCs	Soil and Groundwater
APEC10C	Southwest corner	Gasoline and Associated Products Storage in Fixed Tanks	PCA10C	BTEX and PHCs	Soil and Groundwater
APEC10D	Southwest corner	Ink Manufacturing, Processing and Bulk Storage	PCA10D	VOCs	Groundwater
APEC10E	Southwest corner	Gasoline and Associated Products Storage in Fixed Tanks	PCA10E	BTEX and PHCs	Soil and Groundwater

APEC	LOCATION OF APEC ON PHASE ONE PROPERTY	POTENTIALLY CONTAMINATING ACTIVITY (as set out in Column A of Table 2 in Schedule D of O. Reg. 153/04)	ASSOCIATED PCA IDs	CONTAMINANTS OF POTENTIAL CONCERN	MEDIA POTENTIALLY IMPACTED (Groundwater, Soil, and/or Sediment)
APEC10F	Southwest corner	Gasoline and Associated Products Storage in Fixed Tanks	PCA10F	BTEX and PHCs	Soil and Groundwater
APEC10G	Southwest corner	Vehicles and Associated Parts Manufacturing	PCA10G	Inorganics, PAHs, BTEX, PHCs and VOCs	Soil and Groundwater
APEC10H	Southwest corner	Vehicles and Associated Parts Manufacturing	PCA10H	Inorganics, PAHs, BTEX, PHCs and VOCs	Soil and Groundwater
APEC10I	Southwest corner	Ink Manufacturing, Processing and Bulk Storage	PCA10I	VOCs	Groundwater
APEC11A	Entire Site	Metal Fabrication	PCA11A	Inorganics, PAHs, BTEX and PHCs	Soil
APEC11B	Entire Site		PCA11B	BTEX and PHCs	Soil and Groundwater
APEC11C	Entire Site	Metal Fabrication	PCA11C	Inorganics, PAHs, BTEX and PHCs	Soil
APEC11D	Entire Site	Gasoline and Associated Products Storage in Fixed Tanks	PCA11D	BTEX and PHCs	Soil and Groundwater
APEC11E	Entire Site	Metal Treatment, Coating, Plating and Finishing	PCA11E	Inorganics, PAHs, BTEX and PHCs	Soil
APEC11F	Entire Site		PCA11F	Inorganics, BTEX, PHCs, VOCs	Soil and Groundwater
APEC12A	Northwest corner	Operation of Dry Cleaning Equipment (where chemicals are used)	PCA12A	VOCs	Groundwater
APEC13A	Northwest corner	Metal Fabrication	PCA13A	Inorganics, PAHs, BTEX and PHCs	Soil
APEC14A	Southern portion	Textile Manufacturing and Processing	PCA14A	VOCs	Groundwater
APEC14B	Southern portion	Operation of Dry Cleaning Equipment (where chemicals are used)	PCA14B	VOCs	Groundwater
APEC15A	Northern portion	Gasoline and Associated Products Storage in Fixed Tanks	PCA15A	BTEX and PHCs	Soil and Groundwater
APEC15B	Northern portion	Gasoline and Associated Products Storage in Fixed Tanks	PCA15B	BTEX and PHCs	Soil and Groundwater

APEC	LOCATION OF APEC ON PHASE ONE PROPERTY	POTENTIALLY CONTAMINATING ACTIVITY (as set out in Column A of Table 2 in Schedule D of O. Reg. 153/04)	ASSOCIATED PCA IDs	CONTAMINANTS OF POTENTIAL CONCERN	MEDIA POTENTIALLY IMPACTED (Groundwater, Soil, and/or Sediment)
APEC16A	Southern portion	Gasoline and Associated Products Storage in Fixed Tanks	PCA16A	BTEX and PHCs	Soil and Groundwater
APEC16B	Southern portion	Gasoline and Associated Products Storage in Fixed Tanks	PCA16B	BTEX and PHCs	Soil and Groundwater
APEC16C	Southern portion	Gasoline and Associated Products Storage in Fixed Tanks	PCA16C	BTEX and PHCs	Soil and Groundwater
APEC17A	Northwest Corner	Gasoline and Associated Products Storage in Fixed Tanks	PCA17A	BTEX and PHCs	Soil and Groundwater
APEC17B	Northwest Corner	Operation of Dry Cleaning Equipment (where chemicals are used)	PCA17B	VOCs	Groundwater
APEC17C	Northwest Corner	Gasoline and Associated Products Storage in Fixed Tanks	PCA17C	BTEX and PHCs	Soil and Groundwater
APEC17D	Northwest Corner	Gasoline and Associated Products Storage in Fixed Tanks	PCA17D	BTEX and PHCs	Soil and Groundwater
APEC17E	Northwest Corner	Operation of Dry Cleaning Equipment (where chemicals are used)	PCA17E	VOCs	Groundwater
APEC18A	Northwest and southwest portions	Gasoline and Associated Products Storage in Fixed Tanks	PCA18A	BTEX and PHCs	Soil and Groundwater
APEC18B	Northwest and southwest portions	Gasoline and Associated Products Storage in Fixed Tanks	PCA18B	BTEX and PHCs	Soil and Groundwater
APEC18C	Northwest and southwest portions	Gasoline and Associated Products Storage in Fixed Tanks	PCA18C	BTEX and PHCs	Soil and Groundwater
APEC18D	Northwest and southwest portions	Gasoline and Associated Products Storage in Fixed Tanks	PCA18D	BTEX and PHCs	Soil and Groundwater
APEC18E	Northwest and southwest portions	Gasoline and Associated Products Storage in Fixed Tanks	PCA18E	BTEX and PHCs	Soil and Groundwater

APEC	LOCATION OF APEC ON PHASE ONE PROPERTY	POTENTIALLY CONTAMINATING ACTIVITY (as set out in Column A of Table 2 in Schedule D of O. Reg. 153/04)	ASSOCIATED PCA IDs	CONTAMINANTS OF POTENTIAL CONCERN	MEDIA POTENTIALLY IMPACTED (Groundwater, Soil, and/or Sediment)
APEC18F	Northwest and southwest portions	Gasoline and Associated Products Storage in Fixed Tanks	PCA18F	BTEX and PHCs	Soil and Groundwater
APEC18G	Northwest and southwest portions	Gasoline and Associated Products Storage in Fixed Tanks	PCA18G	BTEX and PHCs	Soil and Groundwater
APEC19A	Northwest and southwest portions	Gasoline and Associated Products Storage in Fixed Tanks	PCA19A	BTEX and PHCs	Soil and Groundwater
APEC20A	Northern portion	Gasoline and Associated Products Storage in Fixed Tanks	PCA20A	BTEX and PHCs	Soil and Groundwater
APEC21A	Northern portion	Gasoline and Associated Products Storage in Fixed Tanks	PCA21A	BTEX and PHCs	Soil and Groundwater
APEC21B	Northern portion	Metal Fabrication	PCA21B	Inorganics, PAHs, BTEX and PHCs	Soil
APEC21C	Northern portion	Gasoline and Associated Products Storage in Fixed Tanks	PCA21C	BTEX and PHCs	Soil and Groundwater
APEC21D	Northern portion	Metal Fabrication	PCA21D	Inorganics, PAHs, BTEX and PHCs	Soil
APEC22A	Eastern portion	Gasoline and Associated Products Storage in Fixed Tanks	PCA22A	BTEX and PHCs	Soil and Groundwater
APEC22B	Eastern portion		PCA22B	Inorganics, BTEX, PHCs, VOCs	Soil and Groundwater
APEC22G	Eastern portion	Operation of Dry Cleaning Equipment (where chemicals are used)	PCA22G	VOCs	Groundwater

* Per Section 49.1 of O. Reg. 153/04, assessment of this APEC is not warranted.

BTEX: *Benzene, toluene, ethylbenzene, xylene*
PHCs: *Petroleum hydrocarbons (fractions F1 to F4)*
PAHs: *Polycyclic aromatic hydrocarbons*
VOCs: *Volatile Organic Compounds*
As, Sb, Se: *Hydride forming metals*
EC: *Electrical conductivity*
SAR: *Sodium absorption ratio*
ORPs *Other regulated parameters, including hot water soluble boron (soil only), hexavalent chromium, cyanide, and mercury*

Subsurface Structures and Utilities That May Affect Contaminant Distribution and Transport: During the Phase Two ESA work program, local utility companies were contacted in order to obtain stake outs and clearance with respect to buried services under the Phase Two Property. A private locating company (USL-1) was also retained to provide clearance with respect to buried services in the drill areas.

Subsurface structures and underground utilities were not identified at the Site, with the exception of a water service line in the southwest portion of the Site. The Phase Two ESA findings suggests that these features did not influence the distribution/ migration of contaminants at the Site. The depth of groundwater was observed to be at least 0.76 m bg grade and the results of the Phase Two ESA indicate that the groundwater conditions at the Phase Two Property meet MECP Table 3 SCS.

PHYSICAL SETTING OF THE PHASE TWO ESA PROPERTY

Stratigraphy

Based on findings from the environmental drilling investigation, which included five boreholes (MW101, MW102, MW103, MW104, and BH105) to depths ranging between 4.5 m and 5.9 m bg. The soil stratigraphy encountered in the boreholes drilled at the Site generally consisted of a 100 to 200 mm layer of topsoil or a 200mm layer of asphalt and granular sub-base underlain by fill material consisting of sand containing varying gravel fractions ranging from some gravel to gravelly, trace silt, and organics. The fill materials were underlain by a deposit of native brownish grey, greyish brown, and grey fine sand soil with some silt. The colour of the native sand becomes brownish grey or grey at depths between 0.5 and 1.5 m bgs, brown soil between 1.5 – 2.0 and changes to grey towards the end of borehole. The boreholes were terminated within the finer sand deposit at depths between 4.5 to 6.1 m bgs, which represents the maximum depth of investigation.

Hydrogeological Characteristics

Based on the review of the aerial photographs, satellite images, and topographic maps completed as part of the previous Phase One ESA, the Site does not include, and is not adjacent to, or within 30 m of a water body, as defined in O. Reg. 153/04. There are no major water bodies within the Phase One Study Area. The nearest identified watercourse is Rideau River located approximately 3 km west and an unknown creek located approximately 1.5 km east of the Site.

Depth to Bedrock

Bedrock was not encountered in the boreholes during this drilling program with the exception of MW101 where weathered shale was encountered at a depth of 4.5 m bgs.

Depth to Water Table

Depths to groundwater in the monitoring wells, measured on July 24, 2023, were 0.81 m (MW101), 0.98 m (MW102), 1.64 m (MW103), and 0.76 m (MW104) from ground surface. No evidence of either light, non-aqueous phase liquid (LNAPL) or dense, non-aqueous phase liquid (DNAPL) was observed during monitoring, purging, or sampling of the monitoring wells during the Phase Two ESA work program.

Applicability of Section 35, 41 or 43.1 of O. Reg. 153/04

The Site and all other properties located, in whole or in part, within 250 metres of the boundaries of the property, are supplied by a municipal drinking water system. The study documented herein is being undertaken for the purposes of supporting a site plan agreement with the City of Ottawa, the generic full-depth Ministry of the Environment, Conservation and Parks (MECP) Site Condition Standards (SCS) applicable to industrial/commercial property use in a non-potable groundwater condition with medium- fine-textured soil (the "Table 3 SCS") was selected to evaluate soil and groundwater quality at the Site.

Generic Ministry of the Environment, Conservation and Parks (MECP) Site Condition Standards for evaluating laboratory analytical results were selected from the April 15, 2011, *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* (MOE, 2011) document on the basis of the criteria specified in O. Reg. 153/04.

- the Site is not within or adjacent to an area of natural significance as defined within Section 1 (1) of O. Reg. 153/04, does not include any land within 30 m of an area of natural significance, and is not otherwise considered "potentially sensitive";
- neither the Site nor any property located (in whole or in part) within 250 m of the Site has a well that is used or intended for use as a source of water for human consumption or for agriculture other than two domestic supply wells drilled to the west of Michael Street in 1953 and one domestic supply well at 1188 Newmarket Street in 2002.
- the Site is not located in an area designated in the official plan as a well-head protection area, or any other area identified by the municipality for the protection of groundwater; and,
- Terrapex submitted a notification to City of Ottawa of its intent to use non-potable SCS (notification dated September 6, 2023), a response has not been received at the time of reporting.

Section 35 of O. Reg. 153/04 describes conditions, which when present, can require the use of certain Site Condition Standards. Specifically, if the groundwater condition of a property may be considered non-potable or potable. Based on the information available for the Site and requests made to the City of Ottawa, the Site meets all of the circumstances described in subsection 35.(3), and as a result, non-potable groundwater Site Condition Standards may be applied.

Section 41 of O. Reg. 153/04 describes conditions, which when present, can constitute an "environmentally sensitive site". They include the presence of areas of natural significance (such as wetlands, provincial parks, nature reserves and valuable animal habitats) within 30 m of the Site, and sites where soil pH lies outside the range of 5 to 9 for surface soil and 5 to 11 for subsurface soil.

The Site does not contain any areas of natural significance, nor are there any within 30 m of Site. The Site does not display any conditions, which would classify the Site as environmentally sensitive. Soil pH values are within the required ranges.

Section 43.1 of O. Reg. 153/04 describes conditions, which when present, can require the use of certain Site Condition Standards. Section 43.1 specifies Site Condition Standards for properties that have more than one-third of the area with less than 2 m of soil. However, overburden depths at the Site were greater than 2 m for the entire Site. Section 43.1 also specifies Site Condition Standards for properties where there is a water body within 30 m of the site. However, there is no water body within 30 m of the Site.

As a result of the above, Sections 41 and 43.1 of O. Reg. 153/04 are not considered to apply to this Site and the applicable full-depth generic Site Condition Standards may be used in the submission of a Record of Site Condition for the Site.

Areas on, in or under the Phase Two Property where excess soil is finally placed

No soil was excavated for reuse on the Phase Two Property, nor were excess soils brought from another property during or following completion of the Phase Two ESA. As such, confirmation sampling of imported soil was not conducted.

Locations of Proposed Buildings and Structures

At the time of the investigation, there were no commercial buildings on the Phase Two Property. It our understanding a new proposed building is planned to be in the centre of the property.

CONTAMINATION

Investigation of Potential Areas of Contamination

The Phase Two ESA investigative scope was designed to provide full Site coverage and to investigate each of the identified APECs using boreholes and groundwater monitoring wells.

As summarized in the table below, the sampling programs described above have adequately investigated all contaminants of potential concern within each APEC at the Site***.***

SUMMARY OF SAMPLING LOCATIONS

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SOIL SAMPLING LOCATIONS	GROUNDWATER SAMPLING LOCATIONS
APEC 1A	Soil & Groundwater	Metals & Inorganics	MW101-2, MW102-2, MW103-3, MW104-4, BH105-2	MW101, MW102, MW103, MW104
		PAHs	MW101-2, MW102-2, MW103-3, MW104-3, BH105-2	MW101, MW102, MW103, MW104
		PHCs F1-F4	MW101-3, MWMW102-3, MW103-4, MW104-3, BH105-3	MW101, MW102, MW103, MW104
		BTEX	MW101-3, MWMW102-3, MW103-4, MW104-3, BH105-3	MW101, MW102, MW103, MW104
		VOCs	MW101-3, MWMW102-3, MW103-4, MW104-3, BH105-3	MW101, MW102, MW103, MW104
APEC 1B	Soil & Groundwater	Metals & Inorganics	MW102-2, MW104-2, BH105-2	MW102, MW104
		PAHs	MW102-2, MW104-3, BH105-2	MW102, MW104
		PHCs F1-F4	MW102-3, MW104-3, BH105-3	MW102, MW104
		BTEX	MW102-3, MW104-3, BH105-3	MW102, MW104
		VOCs	MW102-3, MW104-3, BH105-3	MW102, MW104
APEC 2	Soil & Groundwater	Metals & Inorganics	MW103-3, MW104-2	MW103, MW104
		PAHs	MW103-3, MW104-3	MW103, MW104
		PHCs F1-F4	MW103-4, MW104-3	MW103, MW104
		BTEX	MW103-4, MW104-3	MW103, MW104
		VOCs	MW103-4, MW104-3	MW103, MW104
APEC 3	Soil & Groundwater	Metals & Inorganics	MW103-3, MW104-2	MW103, MW104
		PAHs	MW103-3, MW104-3	MW103, MW104
		PHCs F1-F4	MW103-4, MW104-3	MW103, MW104
		BTEX	MW103-4, MW104-3	MW103, MW104
		VOCs	MW103-4, MW104-3	MW103, MW104
APEC 4	Soil & Groundwater	Metals & Inorganics	MW103-3, MW104-2	MW103, MW104
		PAHs	MW103-3, MW104-2	MW103, MW104
		PHCs F1-F4	MW103-4, MW104-3	MW103, MW104
		BTEX	MW103-4, MW104-3	MW103, MW104
		VOCs	MW103-4, MW104-3	MW103, MW104

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SOIL SAMPLING LOCATIONS	GROUNDWATER SAMPLING LOCATIONS
APEC 5	Soil & Groundwater	Metals & Inorganics	MW103-3, MW104-2	MW103, MW104
		PAHs	MW103-3, MW104-3	MW103, MW104
		PHCs F1-F4	MW103-4, MW104-3	MW103, MW104
		BTEX	MW103-4, MW104-3	MW103, MW104
		VOCs	MW103-4, MW104-3	MW103, MW104
APEC 6	Soil & Groundwater	Metals & Inorganics	MW103-3, MW104-2	MW103, MW104
		PAHs	MW103-3, MW104-3	MW103, MW104
		PHCs F1-F4	MW103-4, MW104-3	MW103, MW104
		BTEX	MW103-4, MW104-3	MW103, MW104
		VOCs	MW103-4, MW104-3	MW103, MW104
APEC 7	Soil & Groundwater	Metals & Inorganics	MW103-3	MW103
		PAHs	MW103-3	MW103
		PHCs F1-F4	MW103-4	MW103
		BTEX	MW103-4	MW103
		VOCs	MW103-4	MW103
APEC 8	Soil & Groundwater	Metals & Inorganics	MW101-2, MW102-2	MW101, MW102
		PAHs	MW101-2, MW102-2	MW101, MW102
		PHCs F1-F4	MW101-3, MW102-3	MW101, MW102
		BTEX	MW101-3, MW102-3	MW101, MW102
		VOCs	MW101-3, MW102-3	MW101, MW102
APEC 9	Soil & Groundwater	Metals & Inorganics	MW101-2, MW102-2	MW101, MW102
		PAHs	MW101-2, MW102-2	MW101, MW102
		PHCs F1-F4	MW101-3, MW102-3	MW101, MW102
		BTEX	MW101-3, MW102-3	MW101, MW102
		VOCs	MW101-3, MW102-3	MW101, MW102
APEC 10	Soil & Groundwater	Metals & Inorganics	MW101-2	MW101
		PAHs	MW101-2	MW101
		PHCs F1-F4	MW101-3	MW101
		BTEX	MW101-3	MW101
		VOCs	MW101-3	MW101
APEC 11	Soil & Groundwater	Metals & Inorganics	MW101-2, MW102-2, MW103-3, MW104-4, BH105-2	MW101, MW102, MW103, MW104
		PAHs	MW101-2, MW102-2, MW103-2, MW104-3, BH105-2	MW101, MW102, MW103, MW104

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SOIL SAMPLING LOCATIONS	GROUNDWATER SAMPLING LOCATIONS
		PHCs F1-F4	MW101-3, MWMW102-3, MW103-4, MW104-3, BH105-3	MW101, MW102, MW103, MW104
		BTEX	MW101-3, MWMW102-3, MW103-4, MW104-3, BH105-3	MW101, MW102, MW103, MW104
		VOCs	MW101-3, MWMW102-3, MW103-4, MW104-3, BH105-3	MW101, MW102, MW103, MW104
APEC 12	Soil & Groundwater	Metals & Inorganics	MW103-3	MW103
		PAHs	MW103-3	MW103
		PHCs F1-F4	MW103-4	MW103
		BTEX	MW103-4	MW103
		VOCs	MW103-4	MW103
APEC 13	Soil & Groundwater	Metals & Inorganics	MW103-3	MW103
		PAHs	MW103-3	MW103
		PHCs F1-F4	MW103-4	MW103
		BTEX	MW103-4	MW103
		VOCs	MW103-4	MW103
APEC 14	Soil & Groundwater	Metals & Inorganics	MW101-2, MW102-2	MW101, MW102
		PAHs	MW101-2, MW102-2	MW101, MW102
		PHCs F1-F4	MW101-3, MW102-3	MW101, MW102
		BTEX	MW101-3, MW102-3	MW101, MW102
		VOCs	MW101-3, MW102-3	MW101, MW102
APEC 15	Soil & Groundwater	Metals & Inorganics	MW103-3, MW104-2	MW103, MW104
		PAHs	MW103-3, MW104-3	MW103, MW104
		PHCs F1-F4	MW103-4, MW104-3	MW103, MW104
		BTEX	MW103-4, MW104-3	MW103, MW104
		VOCs	MW103-4, MW104-3	MW103, MW104
APEC 16	Soil & Groundwater	Metals & Inorganics	MW101-2, MW102-2	MW101, MW102
		PAHs	MW101-2, MW102-2	MW101, MW102
		PHCs F1-F4	MW101-3, MW102-3	MW101, MW102
		BTEX	MW101-3, MW102-3	MW101, MW102
		VOCs	MW101-3, MW102-3	MW101, MW102
APEC 17	Soil & Groundwater	Metals & Inorganics	MW103-3	MW103
		PAHs	MW103-3	MW103
		PHCs F1-F4	MW103-4	MW103

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SOIL SAMPLING LOCATIONS	GROUNDWATER SAMPLING LOCATIONS
		BTEX	MW103-4	MW103
		VOCs	MW103-4	MW103
APEC 18	Soil & Groundwater	Metals & Inorganics	MW101-2, MW103-3	MW101, MW103
		PAHs	MW101-2, MW103-3	MW101, MW103
		PHCs F1-F4	MW101-3, MW103-4	MW101, MW103
		BTEX	MW101-3, MW103-4	MW101, MW103
		VOCs	MW101-3, MW103-4	MW101, MW103
APEC 19	Soil & Groundwater	Metals & Inorganics	MW101-2, MW103-3	MW101, MW103
		PAHs	MW101-2, MW103-3	MW101, MW103
		PHCs F1-F4	MW101-3, MW103-4	MW101, MW103
		BTEX	MW101-3, MW103-4	MW101, MW103
		VOCs	MW101-3, MW103-4	MW101, MW103
APEC 20	Soil & Groundwater	Metals & Inorganics	MW103-3, MW104-2	MW103, MW104
		PAHs	MW103-3, MW104-3	MW103, MW104
		PHCs F1-F4	MW103-4, MW104-3	MW103, MW104
		BTEX	MW103-4, MW104-3	MW103, MW104
		VOCs	MW103-4, MW104-3	MW103, MW104
APEC 21	Soil & Groundwater	Metals & Inorganics	MW103-3, MW104-2	MW103, MW104
		PAHs	MW103-3, MW104-3	MW103, MW104
		PHCs F1-F4	MW103-4, MW104-3	MW103, MW104
		BTEX	MW103-4, MW104-3	MW103, MW104
		VOCs	MW103-4, MW104-3	MW103, MW104
APEC 22	Soil & Groundwater	Metals & Inorganics	MW104-2	MW104
		PAHs	MW104-3	MW104
		PHCs F1-F4	MW104-3	MW104
		BTEX	MW104-3	MW104
		VOCs	MW104-3	MW104

BTEX: *Benzene, toluene, ethylbenzene, xylene*
PHCs: *Petroleum hydrocarbons (fractions F1 to F4)*
PAHs: *Polycyclic aromatic hydrocarbons*
VOCs: *Volatile Organic Compounds*
As, Sb, Se: *Hydride forming metals*
EC: *Electrical conductivity*
SAR: *Sodium absorption ratio*
ORPs Other regulated parameters, including hot water soluble boron (soil only), hexavalent chromium, cyanide, and mercury

Identification of Contaminants of Concern*:*

Soil

All of the soil analytical results were less than the applicable MECP Table 3 SCS.

Groundwater

All of the groundwater results were less than the applicable MECP Table 3 SCS.

Environmental Media of Concern

Based on the findings of the Phase One ESA by Terrapex, the Phase Two ESA work program included investigation of the environmental quality of soil and groundwater at the Site.

Based on this investigation, no environmental impacts were found in soil or groundwater at the Site.

Details of Contaminated Areas: As soil and groundwater impacts were not identified at the Site, an estimated amount of impacted soil and groundwater was not calculated for the Site.

Origin, Extent, Distribution and Delineation of Contaminants: Impacted soil and/or groundwater was not identified on the Site.

Migration of Contaminants: Impacted soil and/or groundwater was not identified on the Site.

Climatic or Meteorological Impacts on Contaminant Migration: Considering the depth to groundwater, less than 1.64 mbg, seasonal fluctuation in water levels is expected and regional in nature. However, strictly speaking, meteorological conditions themselves have not directly influenced any contaminant migration at the Site.

Soil Vapour Intrusion of Contaminants into Buildings: No volatile contaminants have been identified at the Site; as a result, there are no concerns related to the intrusion of vapours into the existing or future buildings at the Phase Two Property.

CROSS-SECTIONS

Lateral and Vertical Distribution of Contaminants: Impacted soil and/or groundwater was not identified on the Site.

Depth to Water in Contaminated Areas: Impacted soil and/or groundwater was not identified on the Site.

Stratigraphy in Contaminated Areas: Impacted soil and/or groundwater was not identified on

the Site.

Subsurface Structures and Utilities in Contaminated Areas: Impacted soil and/or groundwater was not identified on the Site.

RISK ANALYSIS

Risk assessment, in the context of properties potentially impacted by contaminants, is the process of estimating the likelihood of undesirable effects on human and ecological health resulting from exposure to chemical contaminants. Three components must be present for risks to human or ecological health to exist at sites impacted by contaminants:

- the contaminant must be present at concentrations sufficient to cause a possible adverse effect;
- a receptor (human or ecological) must be present; and,
- there must be a complete exposure pathway by which the receptor can come into contact with the contaminant.

As shown, since no contaminants were identified, there are no potential human or ecological receptors and exposure routes. Groundwater is not used for potable purposes at the Site, and will not be, given its location in the City of Ottawa.

Subsequent Remedial Activities and Current Site Conditions

Based on the results, no remedial activities are required at the current Site.